Report No. SRE1137/PS
Date: November 2023

PLANNING STATEMENT
LAMBEETH BATTERY ENERGY STORAGE SYSTEM

LAND ADJACENT TO GREENLINK CONVERTER STATION| OFF GOLDBOROUGH ROAD | PEMBROKE

PREPARED BY

Sirius Planning | 4245 Park Approach | Thorpe Park | Leeds | LS15 8GB

PREPARED FOR

Sirius Renewable Energy | 4245 Park Approach | Thorpe Park | Leeds | LS15 8GB

REPORT NUMBER	REPORT STATUS	REVISION	REPORT DATE
SRE1137/PS	Final	-	November 2023

WRITTEN & PREPARED BY

Francesca Wray | Senior Planner

REVIEWED & APPROVED BY

Dan Elvin | Principal Planner

AUTHORISED BY

Sirius Planning

CONTENTS

DRAWING SCHEDULE

Drawing Number	Drawing Title	Scale
SRE1137/04/01	Site Location Plan	1:20,000/1:10000
SRE1137/04/02	Planning Application Boundary	1:2500
SRE1137/04/03	Topographical Survey	1:1000
SRE1137/04/04	Site Layout	1:1000
SRE1137/04/05	General Arrangement	1:500
SRE1137/04/06	Aerial Overview	1:1000
SRE1137/04/07	Site Sections	1:1000
SRE1137/04/08	Battery Unit Details	1:100
SRE1137/04/09	PCS and MV Skid Details	1:100
SRE1137/04/10	Switchgear Cabin Details	1:50
SRE1137/04/11	Spares/Storage Cabin Details	1:50
SRE1137/04/12	Welfare Cabin Details	1:50
SRE1137/04/13	DNO Cabin Details	1:100
SRE1137/04/14	132kV Substation Details	1:100
SRE1137/04/15	CCTV Details	1:500
SRE1137/04/16	Paladin Fencing Details	1:25
SRE1137/04/17	Palisade Fencing Details	1:25

SRE1137/04/18	Fire Water Tanks Details	1:50
SRE1137/04/19	Fire Water Pumphouse Details	1:50
SRE1137/04/20	Temporary Set Down Area	1:500

APPENDIX SCHEDULE

Appendix No.	Title
1.1	Scoping Opinion
Environmental Considerations not Considered to be Significantly Affected by the Proposal	
6.1	Construction Traffic Method Statement
6.2	Flood Consequence Assessment
6.3	Noise Assessment
6.4	Phase 1 Land Contamination Assessment
Landscape and Visual	
7.1	LVIA Methodology Drawings Viewpoints Visual Assessment Tables
Ecology	
8.1	Ecological Survey Report
Cultural Heritage	
9.1	Heritage Desk-Based Assessment
9.2	Historic Asset Settings Assessment
9.3	ASIDOHL
9.4	References

1. INTRODUCTION

1.1 FOREWORD

1.1.1 Climate change is generally considered to be the greatest existential threat to the environment, our way of living and humanity in general. Addressing this huge challenge requires a sea change in how we live our lives in the future and the decisions we make.

1.1.2 In October 2021, the UK Government launched Its Net Zero Strategy: Build Back Greener, which includes the target for decarbonising the electricity grid by 2035. To deliver the strategy, overall electricity demand is expected to increase 40-60% by 2035, all met from low carbon sources.

1.1.3 As we move forward and aim to achieve a carbon neutral economy and mitigate the risks and effects of climate change, cleaner and more sustainable methods of power generation are being brought online which are intermittent in character (e.g. wind a solar PV) and place certain demands on the electricity grid due to fluctuations in power generation and demand.

1.1.4 The National Grid experiences a large fluctuation of demand throughout the day and throughout different times of the year. During periods of high demand, National Grid aim to increase supply to maintain a 20% supply margin which is essential in eliminating, as far as possible, the risk of power shortages and blackouts, when there is an unexpected change in demand, or a sudden loss of supply. Historically, conventional power stations could be operated with some certainty. However, as the UK moves towards a more environmentally sustainable energy supply system, with an increase in renewable energy sources, there is a heightened risk of electricity supply fluctuations, depending on prevailing weather conditions, and therefore an increased need for facilities to store energy, in order to try and match the supply to the demand. Such storage facilities include Battery Energy Storage Systems (BESS).

1.1.5 BESS do not create carbon emissions or generate electricity but provide a balancing mechanism drawing electricity (charging) when levels on the network are above that of demand. When levels of electricity on the grid are below that of demand the electricity stored in the batteries can be fed back (discharged) onto the network to meet the demand so that there is no loss of power to end users. Smooth grid operation relies on the provision of rapid reactive power services either by generation or dedicated facilities to enable frequency stabilisation. BESS provides sub-second response times, so offer a reliable solution to a number of the Grid's balancing issues thus supporting the development and deployment of low carbon intermittent energy technologies upon which society must increasingly rely on to satisfy its energy requirements.

1.1.6 The Department for Business, Energy and Industrial Strategy stated in a press release in July 2020 that:

> *"…flexible technologies like batteries will form part of the UK's smarter electricity grid, supporting the integration of more low-carbon power, heat and transport technologies…*
>
> *The key to capturing the full volume of renewables is in ensuring homes and businesses can still be powered by green energy when the sun is not shining, or the wind has stopped blowing[1]".*

1.1.7 The National Grid note:

> *"Battery storage technologies are essential to speeding up the replacement of fossil fuels with renewable energy. Battery storage systems will play an increasingly pivotal role between green energy supplies and responding to electricity supplies[2]".*

1.1.8 Sirius Renewable Energy seeks to support the increase in renewable energy generation and its transition to a lower carbon energy supply system through developing a BESS on the site.

[1] Battery storage boost to power greener electricity grid - GOV.UK (www.gov.uk)

[2] https://www.nationalgrid.com/stories/energy-explained/what-is-battery-storage

1.2 PURPOSE OF THIS STATEMENT

1.2.1 This Planning Statement has been prepared by Sirius Planning on behalf of Sirius Renewable Energy in support of a planning application for a 49.9MW battery energy storage system on land adjacent to the Greenlink Converter Station off Goldborough Road, south of Pembroke Power Station.

1.3 THE APPLICANT

1.3.1 The applicant, Sirius Renewable Energy is developing an expanding portfolio of low carbon energy projects throughout the UK, including solar, wind and battery energy storage systems.

1.4 OUTLINE DESCRIPTION OF THE SITE AND PROPOSAL

1.4.1 It is proposed to construct a Battery Energy Storage System across 3.5ha of agricultural land adjacent to the Greenlink Converter Station off Goldborough Road, south of Pembroke Power Station. The site area includes the access track and cable route to the proposed point (an electricity pole in the field to the north-east of the proposed battery compound).

1.4.2 The site is situated 500m south of Pembroke Power Station, c.1.5k north-east of the existing Wallaston Green Solar Farm, c. 2.3km south-east of the Valero Oil Refinery and c.3km south-west of Pembroke Dock. Pembrokeshire Coast National Park lies c.2.2km to the south-west of the application site, and is separated from the site by woodland, roads, hedgerows and fields.

1.4.3 The site sits in a semi-rural setting, with several farms in the locality and agricultural fields, however the landscape is strongly influenced by Pembroke Power Station and Valero Oil Refinery. The site is irregular in shape and encompasses several agricultural fields, currently used for grazing. The fields are divided by established hedgerows interspersed with trees. The battery compound is to be positioned between two parallel rows of overhead power lines. Appropriate stand-off distances between the overhead lines have been built into the design of the site.

1.4.4 The BESS and associated infrastructure will have a maximum export capacity of 49.9MW. The proposed development will comprise of 46 no. battery container units (arranged in pairs), 23 PCS/MV skids which will contain transformers and control equipment, 2no. spares/storage cabins, 1no. switchgear cabin, 3no. fire water storage tanks, 1no. fire water pumphouse and a 132kv substation, together with internal access roads, perimeter fencing, and associated infrastructure and equipment. The proposed development will connect into the point of connection at an electricity pole in the field to the north-east of the proposed battery compound.

1.4.5 The facility will deliver significant environment benefits with the capacity to store and supply over 72,869,875kWh of electricity per year as an enabling technology for renewable generation and a replacement for gas fired power generation in providing rapid response power to satisfy peak demand. In performing these roles, the development has the ability to reduce carbon dioxide emissions by over 20,499 metric tonnes annually whilst also providing electricity storage equivalent to supplying over 20,819 homes.

1.4.6 A site location plan is shown on Drawing No. **SRE1137/04/01** and the site layout is provided on Drawing No. **SRE137/04/04**.

1.5 BACKGROUND

Pre-Application Discussions

1.5.1 Initial pre-application advice was sought from Pembrokeshire County Council on 23rd December 2021 regarding the key issues of a solar farm and battery energy storage system proposal. However following pre-application discussions, the solar farm element was removed from the proposal.

Scoping Request

1.5.2 Battery Energy Storage facilities are not specifically listed under either Schedule 1 or Schedule 2

developments of the EIA Regulations. However, Schedule 2 refers to *'Energy Industry'* categories and it is therefore considered that the proposals falls within the category of *'industrial installations for the production of electricity, steam and hot water (unless included in Schedule 1)'*. The applicable threshold for consideration of Schedule 3 criteria is if the site exceeds 0.5 hectares.

1.5.3 Sirius Renewable Energy have volunteered this application as EIA development. Regulation 5 of the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 confirms that where an applicant submits a statement referred to as an Environmental Statement for the purposes of the Regulations, then that development is EIA development.

1.5.4 A Scoping Request was submitted to Pembrokeshire County Council on 7th July 2023. Pembrokeshire County Council issued a Scoping Opinion on 30th August 2023 which is presented in **Appendix 1.1**.

Pre-Application Consultation

1.5.5 The Town and Country Planning (Development Management Procedure) (Wales) (Amendment) Order 2016, requires pre-application consultation to be undertaken for all planning applications for 'major' development. Given the planning application area is larger than one hectare the proposal falls within the 'major' development category therefore pre-application consultation is required.

1.6 PLANNING STATEMENT STRUCTURE

1.6.1 This Planning Statement has been organised into the following chapters:

- The Site and Surroundings;
- The Proposed Development;
- Environmental Considerations;
- Policy Context;
- Planning Policy Appraisal; and
- Summary and Conclusions.

1.6.2 Accompanying the Planning Statement is an Environmental Statement (Volumes 1 – 3) and a Design and Access Statement.

2. THE SITE AND SURROUNDINGS

2.1 INTRODUCTION

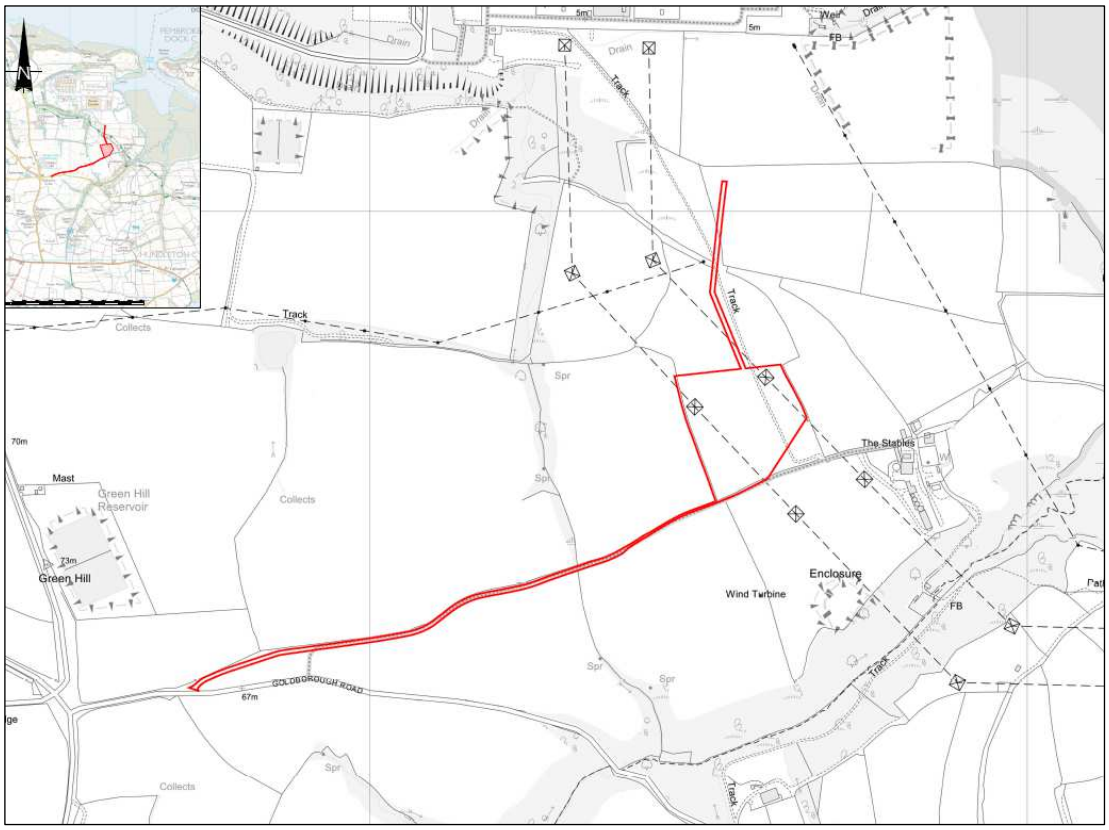
2.1.1 This chapter provides a description of the application site in terms of location, history, and surrounding land uses.

2.2 LOCATION

2.2.1 The application site is located on approximately 3.5ha of agricultural land off Goldborough Road. The site area includes the access track, the battery compound and the cable run to the proposed point of connection (an electricity pole in the field to the north-east of the proposed battery compound). The cable will run from the battery compound below ground before connecting into the point of connection.

2.2.2 The site is situated to the east of the newly constructed Greenlink Converter Station, 500m south of Pembroke Power Station, c.1.5km north-east of the existing Wallaston Green Solar Farm, c.2.3km south-east of the Valero Oil Refinery and c.3km south-west of Pembroke Dock. Pembrokeshire Coast National Park lies c.2.2km to the south-west of the application site, and is separated from the site by woodland, roads, hedgerows and fields. The site location is illustrated on Drawing No. **SRE1137/04/01** and **Figure 2.1** below.

Figure 2.1 – Site Location



2.3 SITE AND SURROUNDINGS

2.3.1 The site sits in a semi-rural setting, with several farms in the locality and agricultural fields. However the landscape is strongly influenced by a Converter Station which is currently being constructed immediately to the west, Pembroke Power Station to the north and Valero Oil Refinery to the north-west. A solar farm lies 1.4km south-west of the site, beyond which is a second solar farm. Two sets of power lines and telegraph poles run in parallel across the site (in a south-east to north-west alignment). These uses serve to partly industrialise the area with the surrounding land being utilised for a mixture of energy generation and food production purposes. Lambeeth Farm is located to the south-east.

Figure 2.2: Photograph taken from land southeast of the Site Looking North West towards the Site

Figure 2.3: Photograph of the Site Looking North West

2.4 SITE ACCESS

2.4.1 Access to the site is from the south-west off Goldborough Road via a tarmacked access track which runs to Lambeeth Farm. This access track is utilised as the sole access to Lambeeth Farm (and another residential property) and therefore accommodates large farm vehicles. In addition, it is understood that this access road was utilised for the construction of the Greenlink Converter Station on the adjacent field to the west of the application site accommodating HGV's. **Figure 2.4** below illustrates the site access off Goldborough Road.

2.4.2 Further details in respect of construction traffic are presented in the Construction Traffic Management Statement (**Appendix 6.1**) which is submitted as a standalone document with the application.

Figure 2.4:Photograph looking north west along part of the access track

2.5 IDENTIFIED RECEPTORS AND DESIGNATIONS

2.5.1 The nearest residential receptor to the application site is Lambeeth Farm to the east which is financially connected to the proposal. There is a further property within 500m of the site and another c. 5 properties within 1km of the site. There is also a lodge west of Lambeeth Farm owned by a third party.

2.5.2 Drawing No. **SRE1137/07/02** identifies the environmental setting and constraints of land in and surrounding the proposal site.

2.5.3 The benign nature of the proposed development combined with the existing and proposed vegetation and surrounding built structures means there Is limited opportunity to create significant environmental effects on identified receptors.

2.5.4 Under the adopted Local Development Plan Policies Map, the site is identified as located outside any settlement boundaries and is therefore located within the 'open countryside'. In addition, the site is identified as being within an area of Hard Rock Resource.

2.5.5 Within the Zone of Influence (ZOI) there are 8no. statutory designated sites; Pembrokeshire Marine SAC (0.38km east), Milford Haven Waterway SSSI (0.28km east), Gweunydd Somerton Meadows SSSI (0.89km south), Pembrokeshire Bat Sites and Boscherton Lakes SAC (and Orielton Stables and Cellars SSSI) (3.1km south), Orielton Stables and Cellars SSSI (3.1km south), Limestone Coast of South West Wales SAC (3.5km west), Castlemartin Coast SPA (3.6km west), West Wales Marine and Bristol Channel Approaches SAC (5.5km west).

2.5.6 There is one non-statutory designated site within the ZOI (B-Lines (LWS)) which is partially on site in the north east. This covers a large part of the Welsh coastline and is designed to act as a connecting habitat for insects.

2.5.7 The Dyfed Historic Environment Record identifies 38 non-designated monuments within 1.0km of the Site but none lie within the Site boundary.

2.5.8 The National Monuments Record records 51 non-designated monuments within 1.0km of the Site but none lie within the Site boundary.

2.5.9 Cadw records one Listed Building within 1.0km of the Site (but this does not lie within the Site) and two Scheduled Monuments (within 1.0km of the Site but neither lies within the Site).

2.5.10 Cadw also records that the Site lies within the Milford Haven Waterway Registered Landscape of Outstanding Historic Interest. Specifically, it lies within the Rhoscrowther Historic Landscape Character Area (HLCA). Cadw records that no Registered Historic Parks and Gardens within 1.0km of the Site boundary. The nearest Registered Historic Park and Garden to the Site is that of the grade II Orielton historic garden located approximately 2.2km to the southeast.

2.5.11 The Inventory of Historic Battlefields in Wales. Records no battlefields within 1km of the Site boundary.

2.5.12 Natural Resource Wales's Development Advice Map identifies the site as being at low risk of flooding.

2.5.13 There are two Public Rights of Way within 500m of the application site. A Public Right of Way runs to the south along Goldborough Road and the Wales Coastal Path runs to the north-east of the site.

2.6 SITE HISTORY

2.6.1 Aside from the recent Scoping Opinion (ref. 23/0330/SO) issued by Pembrokeshire County Council on 30th August 2023, there is no relevant planning history for the proposal site from a search on Pembrokeshire County Council's Public Access system.

3. THE PROPOSED DEVELOPMENT

3.1 INTRODUCTION

3.1.1 The proposed development is for the construction and operation of a 49.9MW Battery Energy Storage System (BESS) and associated infrastructure on a parcel of agricultural land off Goldborough Road. The site is situated to the east of the newly constructed Greenlink Converter Station and 500m south of Pembroke Power Station.

3.1.2 The National Grid owns and operates the national electricity transmission network. They are obliged to ensure that the electricity supply system runs within specified limits. Many factors change these operating conditions, but none more so than the balance between the electricity being demanded by customers connected to the national network and the electricity generators available to produce the electricity they require.

3.1.3 The proposed BESS will have a capacity to charge, store and export 49.9MW of electricity to the local distribution network. The facility will provide balancing services to National Grid to ensure the future security of the country's electricity supply. The facility will provide power to the local distribution network in a short space of time when demand is greater than available supply. The BESS will therefore deliver significant environmental benefits, enabling technology for renewable generation, replacing the requirement or gas fired power generation and providing rapid response power to satisfy peak demand.

3.1.4 The facility will be in operation for a temporary period of 40 years, following which all equipment will be removed.

3.2 PROPOSED LAYOUT

3.2.1 The total proposed BESS development covers an area of circa 3.5ha, as shown on Drawing No. **SRE1137/04/01** and will consist of the following:

- 46no. Battery Container Units (arranged in no. 23pairs);
- 23no. Power Conversion System (PCS) and MV Skids located adjacent to each battery unit pair;
- 132kV Developer and Distribution Network Operator (DNO) substation compound and Customer substation compound along with associated infrastructure surrounded by a c.2.4m high palisade fencing;
- Underground cable to the point of connection with the local distribution network;
- 1 No. Switchgear cabins;
- 2 No. spare / storage cabins;
- Fire water storage tanks and fire water pumphouse;
- 2 No. DNO cabins;
- Perimeter paladin fencing 2.4m high and inward facing infra-red CCTV;
- Internal service road and vehicle turning area;
- Site access; and
- Landscaping.

3.2.2 **Figure 3.1** below and Drawing No. **SRE1137/04/04** show the associated infrastructure with the proposed BESS development.

3.2.3 The BESS will comprise 46 battery container units arranged in 23 pairs. Each battery container will measure typically 6.1m long, 2.5m wide and 3.1m in height from ground level. **Figure 3.2** below and Drawing No. **SRE1137/04/08** provides details of the battery containers.

3.2.4 The batteries will operate when called upon by the National Grid. But as electrical demand is greatest in the morning and early evening this is when the facility is most likely to be delivering power to the grid.

3.2.5 A 132kV DNO substation is proposed which will enable the battery electricity to be released onto the wider distribution network. The point of connection will be an electricity pole in the field to the north-east of the proposed battery compound.

Figure 3.1: Indicative Site Layout

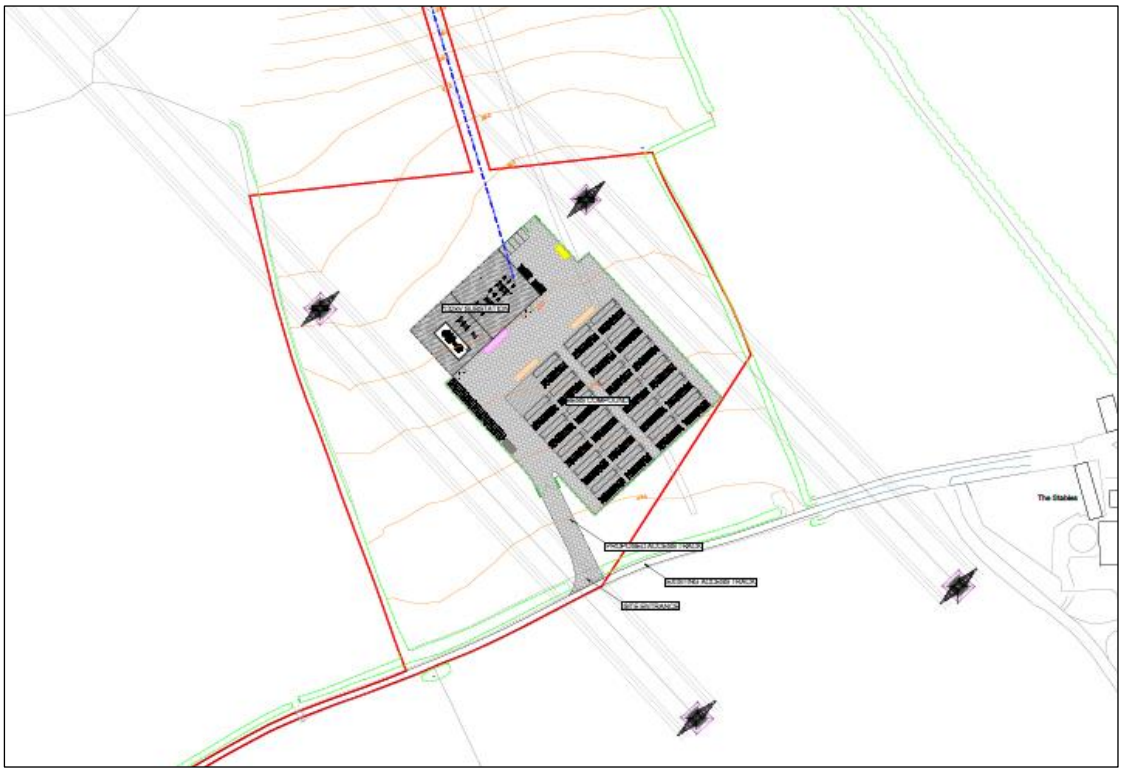
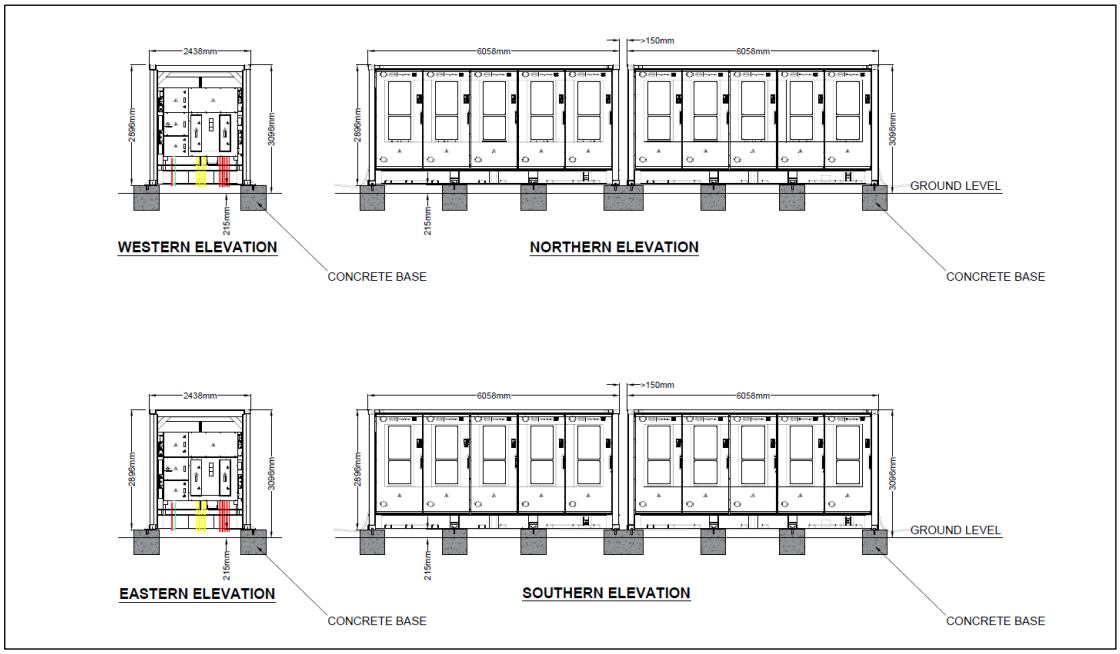


Figure 3.2: Battery Container Details



3.2.6 Other proposed equipment includes the Power Conversion Systems (PCS) and MV Skids which act as

transformers and measure approximately 12.2m long, 2.4m wide and 3.1m in height from ground level. Drawing No. **SRE1137/04/09** provides details of the PCS and MV Skids. The batteries and PCS and MV Skids will be mounted off the ground on outdoor high resistance concrete columns.

3.2.7 The tallest structure on site will be the 132kV substation which measures approximately 52.5m in length and 23.5m in width with the highest piece of equipment being approximately 5.8m as illustrated on Drawing No. **SRE1137/04/14**. The 132kV substation will be enclosed within a 2.4m palisade fence, details of which are provided on Drawing No. **SRE1137/04/17**. The appearance of the 132kV substation is decided by the DNO operator.

3.2.8 Additional equipment proposed on site include 1 no. switchgear cabins, 2 No. spare / storage cabins, fire water storage tanks and fire water pumphouse and 2 No. DNO cabins. Drawing No's. **SRE1137/04/10** – **SRE1137/04/13 and SRE1137/04/18** – **SRE1137/04/19** all provide details on these additional structures.

3.3 POINT OF CONNECTION

3.3.1 The proposed development will connect into the point of connection at a an electricity pole in the field to the north-east of the proposed battery compound. The planning application boundary includes the proposed underground cable route to the point of connection.

3.4 CONSTRUCTION PROGRAMME

3.4.1 Subject to the granting of planning permission, construction activity for the development would last approximately 6 months.

3.4.2 A secure temporary set down area will be established within the site for the construction phase as illustrated on Drawing No. **SRE1137/04/20**. The set down area will accommodate site materials for the construction works and there will be car parking for the site construction operatives.

3.4.3 Construction is expected to take place during the hours of 0730 to 1800 (Monday to Friday) and 0800 to 1600 hours (Saturday).

3.4.4 An Outline Construction Traffic Method Statement (CTMS) accompanies the application (**Appendix 6.1**). The CTMS provides details of proposed access arrangements, the anticipated build programme, construction vehicle numbers and type, construction worker numbers and the proposed construction hours.

3.5 SITE SECURITY

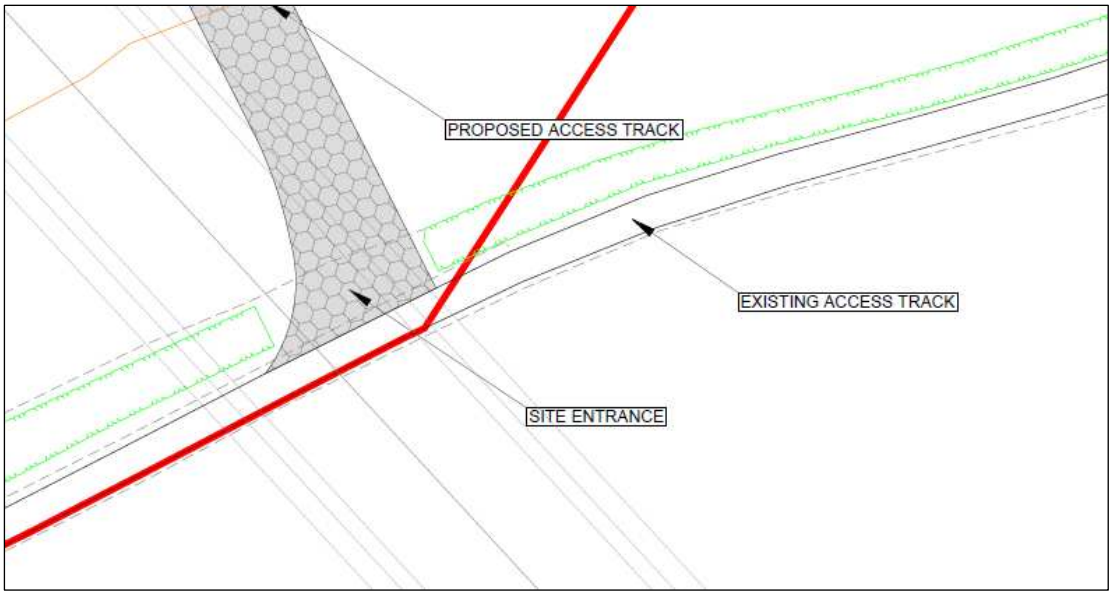
3.5.1 The BESS compound will be secured by a 2.4m high paladin security perimeter fence and inward facing infra-red CCTV will be included for security reasons around the battery storage area as illustrated on Drawing No. **SRE1137/04/16**.

3.6 SITE ACCESS

3.6.1 Access to the site is from the south-west off Goldborough Road via a tarmacked access track which runs to Lambeeth Farm. Access into the site during the construction and operational phases will utilise this existing access point. Vehicles entering the site will turn left into the site from the existing access track. Upon exiting the site, vehicles will turn right onto the access track before turning right onto Goldborough road and left to re-join the B4320.

3.6.2 The proposal utilises an existing well-functioning vehicle access track currently utilised as the sole access to Lambeeth Farm (plus an additional residential property) and therefore accommodates large farm vehicles. In addition, it is understood that part of this access was utilised for the construction of the Greenlink Converter Station on the adjacent field to the west of the application site accommodating HGV's.

Figure 3.3: Access Details



3.6.3 The proposed development will have restricted public access. In designing the proposed development emphasis will be placed on security. The design ensures the site is secure and not readily accessible to the public through the installation of security fencing and infra-red CCTV. Access to the site will be through invitation only.

3.6.4 Details of the proposed access arrangements during construction are presented in the Outline CTMS (**Appendix 6.1**). Once operational, the proposal will generate minimal traffic from monthly inspections and maintenance. The CTMS will be subject to final approval by the LPA post-consent under the terms of an appropriately worded planning condition.

Car Parking

3.6.5 During construction of the development, it is expected that the site will provide sufficient available land for temporary parking, storage and lay-down for the construction phase. Once operational, the site will be manned remotely offsite. However, the site will be required to have monthly maintenance checks. Five car parking spaces have been provided within the site as illustrated on Drawing No. **SRE1137/04/04**.

3.7 PUBLIC RIGHTS OF WAY

3.7.1 There are two Public Rights of Way within 500m of the application site. A Public Right of Way runs to the south along Goldborough Road and the Wales Coastal Path runs to the north-east of the site.

3.8 BIODIVERSITY ENHANCEMENT AND LANDSCAPING

3.8.1 Landscape and visual mitigation seek to integrate the development into the local landscape, screen and filter views to the site from sensitive receptors and provide landscape (and often ecological) enhancement using un-utilised land within the site.

3.8.2 The Landscape and Visual Impact Assessment and Ecology and Nature Conservation Chapters (ES Chapters 7 & 8) provide full details of the enhancement proposals, in summary these include:

- A native hedgerow with hedge trees is proposed to the north of the site compound which will provide screening to nearby PROW. Species selected include fruiting and flowering species suitable for supporting nesting and foraging birds, insects and small mammals.
- A native scrub planting block is proposed to the south of the site compound which will provide screening to nearby PROW and filter views to the Lambeeth Farm grouping. Species selected

include fruiting and flowering species suitable for supporting nesting and foraging birds, insects and small mammals.

- Wildflower seeding to the remaining areas of the field around the BESS compound will enhance the existing biodiversity and species mix in comparison to the existing pasture coverage. This will attract a range of wildlife including birds, bats and invertebrates to the site as well as compensating for the temporary loss of farmland.

3.9 SURFACE WATER MANAGEMENT

3.9.1 A Flood Consequence Assessment and Drainage Strategy (**Appendix 6.2**) concludes that the site is not at risk of flooding from all sources of flooding and is located within Development Advice Map (DAM) Zone A and Flood Zone 1, with less than a 1 in 1000 (0.1%) annual probability of flooding in a given year, including the effects of climate change. In addition, there will be no net loss in flood storage capacity or impact on movement of floodwater across the site.

3.9.2 At this stage, ground conditions suggest that infiltration methods would provide a suitable option on site for surface water management. The equipment will sit on concrete columns, with the apron in front of the equipment to be constructed from compacted impermeable surfaces. These areas, where possible, will be constructed to shed water to any adjacent permeable areas. The rest of the site will be constructed from free draining stone or grass which will allow infiltration of rainfall.

3.9.3 The majority of the substation compound will comprise crushed aggregate, with small concrete pads utilised where necessary.

3.10 LIGHTING

3.10.1 It is envisaged that a lighting scheme will be low level, minimal and incorporate light units of low lux levels around the entrances to the units and transformer. Lights will be infrared motion activated sensors and will shine downwards to avoid light pollution and disturbance to nocturnal animals. The lights will only be activated by human presence, and will not be activated by animals.

3.10.2 During construction works it may be necessary to utilise floodlights during hours of darkness. These will only be in operation during normal construction hours or in the event of an emergency.

3.11 DECOMMISSIONING

3.11.1 After 40 years of operation, the BESS and associated infrastructure will be removed from site and the land returned to agricultural use. The Outline CTMS (**Appendix 6.1**) will detail the programme and anticipated vehicle movements associated with this phase of proposal.

4. POLICY CONTEXT

4.1 INTRODUCTION

4.1.1 This section sets out the national and local planning policies as well as material considerations which are relevant, both to the application site, and the type of development proposed.

4.1.2 Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires planning applications to be determined in accordance with the provisions of the Development Plan unless material considerations indicate otherwise.

4.1.3 The following section considers the relevant national strategies, policy and guidance, and development plans as far as they are relevant to the proposed development. This relates to matters of energy and planning.

4.2 NATIONAL ENERGY CONTEXT

Climate Change Act

4.2.1 The Climate Change Act 2008 required long term targets for the UK to achieve an 80% reduction in greenhouse gases by 2050 against 1990 levels. In June 2019, the Climate Change Act 2008 (2050 target Amendment) Order came into effect which required the net UK carbon account for the year 2050 to be 100% of 1990 levels.

4.2.2 The UK Act requires governments to set legally binding 'carbon budgets'. Each budget provides a five-year cap on total greenhouse emissions; in order to meet the UK's emission reduction commitments caps should not be exceeded.

4.2.3 The first carbon budget (2008-12) and the second (2013-17) have been met and the UK is on track to outperform the third (2018-22). However, it is not on track to meet the fourth (2023-27) or the fifth (2028-32).

COP26 and the Net Zero Strategy

4.2.4 As highlighted during the recent COP26 event in Glasgow, *"We cannot afford to wait to act against the threat of climate change. We must work together to protect our planet and people and ensure a greener, more resilient future for us all"*.

4.2.5 The UK Government have set a target of decarbonising the electricity grid by 2035. To deliver the strategy overall electricity demand is expected to increase 40-60% by 2035, all met from low carbon sources.

4.2.6 This strategy sets out the objective of transforming the UKs power system so that it will consist of abundant, cheap British renewables, *"underpinned by flexibility including storage"*, and ensure reliable power is always there at the flick of a switch.

4.2.7 A key stated Policy in the Net Zero Strategy is the *"deployment of new flexibility measures including storage to help smooth out future price spikes".*

4.2.8 There is a real emphasis on the importance of decarbonising the electricity grid by central government and schemes such as this help to support the rollout of renewable energy.

4.2.9 It is noted by the former Minister for Energy and Clean Growth (Kwasi Karteng) now Secretary of State for Business, Energy and Industrial Strategy that:

> *"The key to capturing the full value of renewables is in ensuring homes and businesses can still be powered by green energy even when the sun is not shining or the wind has stopped blowing Removing barriers in the planning system will help us build bigger and more powerful batteries, creating more green-collar jobs and a smarter electricity network".*
>
> *"Flexible technologies like batteries will form part of the UK's smarter electricity grid, supporting the integration of more low-carbon power, heat and transport technologies, which it is estimated could save the UK energy system up to £40 billion by 2050."*

4.2.10 As we move forward and aim to achieve a carbon neutral economy and mitigate the risks and effects of climate change, cleaner and more sustainable methods of power generation are being brought online which are intermittent in character (e.g. wind and solar PV) and place certain demands on the electricity grid due to fluctuations in power generation and demand.

4.2.11 The National Grid operates a balancing service to balance supply and demand and to ensure the security and quality of the electricity supply across its transmission system.

4.2.12 The BESS will assist towards controlling the balancing service by providing the National Grid with access to extra power which is stored 'off grid' in batteries when demand outstrips supply.

4.2.13 When levels of electricity on the grid are below that of demand the electricity stored in the batteries can be fed back (discharged) onto the network to meet the demand so that there is no loss of power to end users. Smooth grid operation relies on the provision of rapid reactive power services either by generation or dedicated facilities to enable frequency stabilisation. BESS provides sub-second response times, so offer a reliable solution to a number of the Grid's balancing issues thus supporting the development and deployment of low carbon intermittent energy technologies upon which society must increasingly rely on to satisfy its energy requirements.

4.2.14 Delivering a secure energy supply is a priority for the Government and this is dully reflected in the NPPF whereby local authorities must coordinate with providers to meet the demand. In this instance, the energy balancing requirements have been identified by the Applicant and the power will be stored during times of oversupply and released (supplied) when demand outweighs supply.

4.2.15 The development has the capacity to store and supply over 72,869,875kWh of electricity per year as an enabling technology for renewable generation and a replacement for gas fired power generation in providing rapid response power to satisfy peak demand. In performing these roles the development has the ability to reduce carbon dioxide emissions by over 20,499 metric tonnes annually whilst also providing electricity storage equivalent to supplying over 20,819 homes.

4.2.16 The proposed BESS can therefore be considered as development which would support the operation of existing and development of proposed renewable energy projects, essential to delivering the Net Zero Strategy of decarbonising the electricity grid by 2035 and meeting the nations carbon reduction targets.

4.2.17 Based on the above, it is clear that there is an identified and urgent need for developments such as this as clearly outlined in the Government's energy strategy and in national planning policy. The proposal will contribute to meeting this requirement and this should carry significant weight.

4.2.18 On 14th July 2020 the Government announced that planning legislation is to be relaxed to make it easier to construct large battery schemes to store renewable energy[3].

Environmental (Wales) Act 2016

4.2.19 The Act provides the necessary legislation to improve planning and management of natural resources in Wales. Part 2 of the Act relates to Climate Change and places an obligation on Welsh Ministers to reduce greenhouse gas emissions such that in the year 2050 they are at least 80% lower than baseline figures for 1990 or 1995, depending on the type of GHG.

Advice Report: Path to a Net Zero Wales

4.2.20 Required under the Environmental (Wales) Act 2016, the report provides ministers with advice on Wales' climate targets between now and 2050 and assesses progress on reducing emissions to date. Prepared in December 2020 by the Climate Change Committee (an independent statutory body) the report states that meeting the Net Zeo target in Wales requires action across four key areas; Reducing

[3] https://www.gov.uk/government/news/battery-storage-boost-to-power-greener-electricity-grid

demand for carbonintensive activities; Take-up of low-carbon solutions; Expansion of low-carbon energy supplies; Land; and Flexibility to meet Net Zero.

4.2.21 In April 2019, the Welsh Government Minister for the Environment, Energy and Rural Affairs, Lesley Griffiths AM declared a climate change emergency in Wales. The Welsh Government initially committed to a 95% reduction in emissions by 2050, but in February 2021 amended this to a legal commitment to achieve net zero emissions by 2050, with a stated ambition *"get there sooner".* Pembrokeshire County Council declared a climate emergency in 2019.

Prosperity for All: A Low Carbon Wales

4.2.22 The Environment (Wales) Act 2016 requires Welsh Government to reduce emissions of greenhouse gases (GHGs) in Wales by at least 80% for the year 2050 from 1990 levels with a system of interim emissions targets and carbon budgets. The Plan 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 Well-being of Future Generations (Wales) Act 2015

4.2.23 In addition to the policy provisions outlined above, under the Well-being of Future Generations (Wales) Act 2015 all public bodies in Wales have a duty to secure sustainable development by improving the economic, social, environmental and cultural well-being of Wales to achieve the 7 'well-being goals'. All planning applications in Wales need to demonstrate how they align with the seven well-being goals:

- A Prosperous Wales
- A Resilient Wales
- A More Equal Wales
- A Healthier Wales
- A Wales of Cohesive Communities
- A Wales of Vibrant Culture and Thriving Welsh Language
- A Globally Responsible Wales

4.2.24 One of the well-being goals set in the Act is for a globally responsible Wales. Statutory guidance on the Act (Shared Purpose: Shared Future 1: Core Guidance) explains that action on climate change benefits both people and communities in Wales, whilst also contributing to the wider global effort to tackle the causes of climate change and reduce its effects.

4.3 NATIONAL CONTEXT

Planning Policy Wales Edition 11

4.3.1 The Welsh Government published Planning Policy Wales Edition 11 (PPW) in February 2021. This provides the overarching national level source of planning policy for Wales and is a material consideration. It has been updated to take into account Futures Wales and the Wellbeing of Futures Generations Act which incorporates 7 wellbeing goals. It seeks to support the requirement for sustainable development via the planning system whereby the presumption in favour of sustainable development forms the overarching role together with a firm view on improving population wellbeing.

4.3.2 PPW sets out the specific planning policies for achieving sustainable development across Wales. Figure 4 sets out the key planning principles of this national policy, stating that:

"The planning system has a vital role to play in making development resilient to climate change, decarbonising society and developing a circular economy for the benefit of both the built and national environments and to contribute to the achievement of well-being goals".

4.3.3 Chapter 5 (Providing and Enterprising Places) of the PPW sets out the Welsh Government's policies regarding Enterprising Placemaking and Wellbeing across Wales. One of the key aims in relation to energy is for Wales to generate 70% of its electricity consumption from renewable generation by 2030.

4.3.4 Chapter 5 of the PPW outlines the importance of the planning system to deliver these targets, paragraph 5.7.15 states:

"The planning system has an active role to help ensure the delivery of these targets, in terms of new renewable energy generating capacity and the promotion of energy efficiency measures in buildings".

4.3.5 PPW makes specific reference to renewable energy generation in paragraph 5.7.7 that:

"The benefits of renewable and low carbon energy, as part of the overall commitment to tackle the climate emergency and increase energy security, is of paramount importance…The planning system should:

- *Integrate development with the provision of additional electricity grid network infrastructure;*
- *Optimise energy storage…".*

4.3.6 Paragraph 5.7.12 relates to energy storage and 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".

4.3.7 Paragraph 5.9.19 states that:

"In determining applications for a range of renewable and low carbon energy technologies, planning authorities should take into account:

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

4.3.8 Paragraph 5.9.20 continues stating:

"Planning authorities should also 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. In doing so, consider whether measures to adapt to climate change impacts give rise to additional impacts".*

4.3.9 Chapter 5 also outlines that before an application is submitted *"…developments should, where possible,*

consider how to avoid, or otherwise minimise, adverse impacts through careful consideration of location, scale, design and other measures". Furthermore, active engagement with the local community should be undertaken at pre-application stage.

Future Wales: The National Plan 2040

4.3.10 Future Wales: The National Plan (2040) adopted February 2021) is the national plan that sets out the direction of development in Wales to 2040. It states:

"Wales can become a world leader in renewable energy technologies. Our wind and tidal resources, our potential for solar generation, our support for both large and community scaled projects and our commitment to ensuring the planning system provides a strong lead for renewable energy development, mean we are well placed to support the renewable sector, attract new investment and reduce carbon emissions".

4.3.11 Furthermore, Future Wales sets ambitious targets for the generation of renewable energy including for 70% of electricity consumption to be generated from renewable energy by 2030.

4.3.12 In relation to energy storage, Future Wales states that:

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

The Welsh Government wishes to see energy generation, storage and management play a role in supporting the South West economy".

4.3.13 Policy 17 demonstrates the Welsh Government's support in principle for all renewable energy projects and technologies. Proposals should ensure there is no significant unacceptable detrimental impact on the surrounding natural environment and local communities and that the development delivers positive social, environmental, cultural and economic benefits. Policy 17 Renewable and Local Carbon Energy and Associated Infrastructure 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 and our target to generate 70% of consumed electricity by renewable means by 2030 in order to combat the climate emergency…

Proposals should describe the net benefits the scheme will bring in terms of social, economic, environmental and cultural improvements to local communities…".

4.4 LOCAL CONTEXT

4.4.1 The proposed development site falls within the administrative boundaries of Pembrokeshire County Council. The adopted Development Plan for the application site comprises:

- Pembrokeshire County Council Local Development Plan (2013)

4.4.2 Whilst Pembrokeshire County Council are preparing a New Local Development Plan, this is currently at an early stage and therefore has not been considered further.

4.4.3 Pembrokeshire County Council declared a climate emergency in 2019.

Pembrokeshire County Council Local Development Plan

4.4.4 The Pembrokeshire County Council Local Development Plan was formally adopted in February 2013 and establishes a vision based development strategy and policies to guide development and use of land in Pembrokeshire.

4.4.5 The adopted Policies Map identifies the site is located outside any settlement boundaries and is

therefore located within the 'open countryside'. In addition, the site is identified as being within an area of Hard Rock Resource.

4.4.6 Whilst there are no specific policies relating to battery energy storage the following policies are considered relevant to the proposed development.

4.4.7 Policy SP1 relates to sustainable development and states that:

"All development proposals must demonstrate how positive economic, social and environmental impacts will be achieved and adverse impacts minimised".

4.4.8 Policy SP 6 relates to Minerals and states that:

"A contribution to the national, regional and local need for a continuous supply of minerals will be met by:

1. *Maintaining a reserve of hard rock and sand and gravel during the Plan period…".*

4.4.9 Policy SP16 relates to the Countryside and states that:

"The essential requirements of people who live and work in the countryside will be met whilst protecting the landscape and natural and built environment of Pembrokeshire and adjoining areas. Development which minimises visual impact on the landscape and relates to one of the following will be promoted:

1. *Enterprises for which a countryside location is essential;*
2. *Opportunities for rural enterprise workers to be housed in suitable accommodation that supports their employment; and*
3. *The re-use of appropriate existing buildings".*

4.4.10 Policy GN.1 is a General Development policy and states that:

"Development will be permitted where the following criteria are met:

1. *The nature, location, siting and scale of the proposed development is compatible with the capacity and character of the site and the area within which it is located;*
2. *It would not result in a significant detrimental impact on local amenity in terms of visual impact, loss of light or privacy, odours, smoke, fumes, dust, air quality or an increase in noise or vibration levels;*
3. *It would not adversely affect landscape character, quality or diversity, including the special qualities of the Pembrokeshire Coast National Park and neighbourhing authorities;*
4. *It respects and protects the natural environment including protected habitats and species;*
5. *It would take place in an accessible location, would incorporate sustainable transport and accessibility principles and would not result in a detrimental impact on highway safety or in traffic exceeding the capacity of the highway network;*
6. *Necessary and appropriate service infrastructure, access and parking can be provided;*
7. *It would not cause or result in unacceptable harm to health and safety;*
8. *It would not have a significant adverse impact on water quality; and*
9. *It would neither contribute to the coalescence of distant settlements nor create or consolidate ribbon development".*

4.4.11 Policy GN.2 relates to Sustainable Design and states that:

"Development will be permitted where relevant criteria are met:

1. *It is of good design which pays due regard to local distinctiveness and contributes positively to the local context;*
2. *It is appropriate to the local character and landscape / townscape context in terms of layout, scale, form, siting, massing, height, density, mix, detailing, use of materials, landscaping and access arrangements / layout;*
3. *It incorporates a resource efficient and climate responsive design through location, orientation, density, layout, land use, materials, water conservation and the use of sustainable drainage systems and waste management solutions;*
4. *It achieves a flexible and adaptable design;*
5. *It creates an inclusive and accessible environment for users that addresses community safety;*
6. *It provides a good quality, vibrant public realm that integrates well with adjoining streets and spaces; and*
7. *It contributes to delivering well-designed outdoor space with good linkages to adjoining streets, spaces and other green infrastructure".*

4.4.12 Policy GN.4 relates to Resource Efficiency and Renewable and Low-Carbon Energy Proposals and states that:

"Development proposals should seek to minimise resource demand, improve resource efficiency and seek power generated from renewable resources, where appropriate. They will be expected to be well designed in terms of energy use.

Developments which enable the supply of renewable energy through environmentally acceptable solutions will be supported".

4.4.13 Policy GN.22 relates to Prior Extraction of the Mineral Resource and states that:

"Where new development is permitted in an area of mineral resource, prior extraction of any economic reserves of the mineral must be achieved, wherever appropriate in terms of economic feasibility and environmental and other planning considerations, prior to the commencement of development".

4.4.14 Policy GN.37 relates to the Protection and Enhancement of Biodiversity and states that:

"All development should demonstrate a positive approach to maintaining and, wherever possible, enhancing biodiversity. Development that would destroy or otherwise harm protected species or their habitats, or the integrity of other habitats, sites or features of importance to wildlife and individual species, will only be permitted in exceptional circumstances where the effects are minimised or mitigated through careful design, work scheduling or other appropriate measures".

4.4.15 Policy GN.38 relates to the Protection and Enhancement of the Historic Environment and states that:

"Development that affects sites and landscapes of architectural and /or historical merit or archaeological importance, or their setting, will only be permitted where it can be demonstrated that it would protect or enhance their character and integrity".

Pembrokeshire Renewable Energy Supplementary Planning Guidance 2016

4.4.16 The Pembrokeshire Renewable Energy Supplementary Planning Guidance (SPG) gives information about Pembrokeshire's approach to renewable and low carbon energy and sets out the relevant matters that will need to be taken into consideration when developments are being planned in the Country Borough.

4.4.17 The Council's planning policy in relation to the various types of renewable and low carbon energy is set out in the Pembrokeshire Local Development Plan Policy GN.4 (Resource Efficiency and Renewable and

Low-carbon Energy Proposals).

4.4.18 This SPG elaborates on Plan policies seeking to balance the benefits that renewable energy development can have against the need to protect the natural and historic environment. It focuses primarily on solar, wind and biomass energy, however states that many of the planning principles and considerations are equally applicable to other renewable energy technologies.

Pembrokeshire Biodiversity Supplementary Planning Guidance 2021

4.4.19 The Pembrokeshire Biodiversity SPG provides further guidance to developers and others involved in the development process on legal responsibilities, obligations and the protection, conservation and enhancement of biodiversity during the development process. It supports the policies contained within the Local Development Plan and sets out policies on how biodiversity should be protected and enhanced.

4.5 SUMMARY & CONCLUSION

4.5.1 This section of the Planning Statement outlines the policy context for the determination of Lambeeth BESS.

4.5.2 Whilst policy takes a positive approach to the renewables sector and enabling technologies, development proposals need to be mindful of local constraints, communities and natural resources.

4.5.3 A full suite of surveys have been undertaken which identify local constraints and natural resources and which recommend mitigation measures where appropriate.

5. PLANNING POLICY APPRAISAL

5.1 INTRODUCTION

5.1.1 This section provides an appraisal of the proposed development against the development plan and other material considerations, to determine if planning permissions should be granted. The structure of the chapter is as follows:

- Principle of Development
- Landscape and Visual
- Ecology and Biodiversity
- Historic Environment
- Noise
- Traffic and Transport
- Hydrology and Flood Risk.

5.2 PRINCIPLE OF DEVELOPMENT

5.2.1 National and local planning policy is overwhelmingly supportive of renewable energy developments. Whilst the proposal is not a renewable or low carbon energy project in the strictest sense, it is a related development in that it supports the drive to renewable forms of energy generation, given that it will improve the resilience of the electricity network. Therefore, the 'in principle' acceptability of the proposed development is considered to be established.

5.2.2 The UK Government have set a target of decarbonising the electricity grid by 2035. To deliver the strategy overall electricity demand is expected to increase 40-60% by 2035, all met from low carbon sources.

5.2.3 In April 2019, the Welsh Government Minister for the Environment, Energy and Rural Affairs, Lesley Griffiths AM declared a climate change emergency in Wales. The Welsh Government initially committed to a 95% reduction in emissions by 2050, but in February 2021 amended this to a legal commitment to achieve net zero emissions by 2050, with a stated ambition *"get there sooner".* Pembrokeshire County Council declared a climate emergency in 2019.

5.2.4 The proposed battery energy storage system will provide balancing requirements essential to support the grid as UK electricity generation shifts to more intermittent renewable energy sources such as wind and solar. In addition, the batteries will have zero emissions to the atmosphere, are quieter than other energy storage facilities and require minimal traffic movements to site once constructed.

5.2.5 The development has the capacity to store and supply over 72,869,875kWh of electricity per year as an enabling technology for renewable generation and a replacement for gas fired power generation in providing rapid response power to satisfy peak demand. In performing these roles the development has the ability to reduce carbon dioxide emissions by over 20,499 metric tonnes annually whilst also providing electricity storage equivalent to supplying over 20,819 homes.

5.2.6 Policy GN.4 of the Pembrokeshire Local Plan relates to Resource Efficiency and Renewable and Low-Carbon Energy Proposals and states that:

Developments which enable the supply of renewable energy through environmentally acceptable solutions will be supported".

5.2.7 The proposed BESS can therefore be considered as development which would support the operation of existing and development of proposed renewable energy projects, essential to delivering the Net Zero Strategy of decarbonising the electricity grid by 2035 and meeting the nations carbon reduction targets.

5.2.8 The application is accompanied by an Environmental Statement which demonstrates the significant benefits of the proposals and that the identified adverse impacts can be addressed through thoughtful design and mitigation, a careful approach to construction and the reversible nature of the proposal.

5.2.9 The proposal will provide economic, social and environmental enhancements. Economic benefits will include the creation of temporary jobs, supporting supply chains during the construction phase and support the roll out of renewable energy projects in Pembrokeshire.. Social benefits will be realised through supporting growth and prosperity in the energy sector and improve energy security by diversifying the area's energy supply mix and help to protect the local communities from potential black outs. Environmental gains would be secured through carbon reduction and local biodiversity enhancements.

5.2.10 Therefore, the proposal demonstrates that the requirements of national and local planning policies would be satisfied and that the principle of development is supported.

5.3 LANDSCAPE AND VISUAL AMENITY

Landscape

5.3.1 The Landscape and Visual Impact Assessment demonstrates that the proposed BESS (Battery Energy Storage System) could be successfully integrated into the local landscape of Pembrokeshire without causing significant and wide scale harm to the landscape character. No significant landscape effects are concluded upon the identified landscape receptors. The development allows for opportunities for on-site mitigation within the host field and retention of its defining characteristics, namely hedgerows enclosing the site on all sides. At the end of the project's lifecycle the decommissioning of the BESS and associated infrastructure will cause minimal impact and allow for the existing field conditions to be reinstated and therefore its agricultural use could be continued. The landscape effects are judged to be effects that would not be a material factor in the decision-making process.

5.3.2 The proposed development would result in limited landscape effects within the site and its immediate context and would be much less perceptible outside of the site area from the remainder of the rolling arable landscape VS area PMBRKVS061 Castlemarton.

5.3.3 The combined landscape effects which range from a 'Low' magnitude of change for the study area to a 'Low-Medium' magnitude of change for the site and its immediate context would result in 'Minor' level of effect on the receiving landscape of both the site and surrounding study area at Year 1. Following the establishment of mitigation planting at Years 5 - 10 the level of effect would remain at 'Minor' for the site and immediate context and reduce to 'Minor-Neutral' for the wider study area. These are 'Not Significant' landscape effects.

5.3.4 With regard to residential receptors, the two residential receptors identified to experience theoretical visibility would in reality experience very low levels of visibility to the new BESS proposal. The properties have limited windows facing the site, are greater than 800m away and both are surrounded by vegetation. This combined with intermediate hedgerows between the site and the properties substantially reduces the level of visibility, both are considered to be at 'Not Significant' levels.

5.3.5 With regard to PROW, a range of views to the BESS site will be possible from the Wales Coast Path although large areas are screened, particularly those close to the site, as illustrated by Viewpoint 2 (in part) and Viewpoint 3. Despite the range of visibility, due to the separation distances and intervening features, and the near infrastructure context, visual effects upon users of the route are considered to be no greater than Moderate, 'Not Significant' effects.

5.3.6 Only one viewpoint is considered to experience visual effects of a 'significant' nature, the PROW (PROW SP34/6/1), Viewpoint 1. This is as expected due to the location, set close to the site's southern boundary, near to the site entrance in an existing gap in the path side hedgerow. Mitigation planting

upon the site's southern boundary would reduce visual effects to a level of Moderate 'Not Significant' within c.5 – 10 years. It however highlighted that this view (and level of effect) represents a 'worst case' from the path corridor directly to the south of the site boundary. In most situations upon this PROW the BESS would be screened either by mature path side hedgerows or the very large adjacent Convertor Station building.

5.3.7 All of the other selected viewpoints would experience visual effects of a 'Not Significant' nature. The viewpoints serve to demonstrate the overall restricted visibility to the BESS site from a range of receptors and distances. In many cases visibility is filtered by hedgerows and vegetation around the site boundary and in the intermediate areas. The recently constructed Converter Station is now a main infrastructure feature beside the site area, this development from certain aspects screens visibility to the proposed BESS area. Where limited visibility to the BESS site is concluded, it also considered that following the establishment of the mitigation planting and management of perimeter hedgerows, views would be generally all screened with c.5 – 10 years.

5.3.8 The proposed development will provide the following landscape and biodiversity enhancements:

- A native hedgerow with hedge trees is proposed to the north of the site compound which will provide screening to nearby PROW. Species selected include fruiting and flowering species suitable for supporting nesting and foraging birds, insects and small mammals.
- A native scrub planting block is proposed to the south of the site compound which will provide screening to nearby PROW and filter views to the Lambeeth Farm grouping. Species selected include fruiting and flowering species suitable for supporting nesting and foraging birds, insects and small mammals.
- Wildflower seeding to the remaining areas of the field around the BESS compound will enhance the existing biodiversity and species mix in comparison to the existing pasture coverage. This will attract a range of wildlife including birds, bats and invertebrates to the site as well as compensating for the temporary loss of farmland.

5.4 ECOLOGY AND BIODIVERSITY

5.4.1 A field survey was conducted on 17th August 2022 of habitats. The Phase 1 Habitat and preliminary protected species survey was conducted using the methodology outlined in the Handbook for Phase 1 Habitat Survey (JNCC 2010) . Hedgerows were also assessed.

5.4.2 Consultation responses were received from the Planning Ecologist and Conservation Team Leader of Pembrokeshire County Council and Senior Advisor – Development Planning at Natural Resources Wales in August 2023.

5.4.3 Within the Zone of Influence (ZOI) there are 8no. statutory designated sites; Pembrokeshire Marine SAC (0.38km east), Milford Haven Waterway SSSI (0.28km east), Gweunydd Somerton Meadows SSSI (0.89km south), Pembrokeshire Bat Sites and Boscherton Lakes SAC (and Orielton Stables and Cellars SSSI) (3.1km south), Orielton Stables and Cellars SSSI (3.1km south), Limestone Coast of South West Wales SAC (3.5km west), Castlemartin Coast SPA (3.6km west), West Wales Marine and Bristol Channel Approaches SAC (5.5km west).

5.4.4 There is one non-statutory designated site within the ZOI (B-Lines (LWS)) which is partially on site in the north east. This covers a large part of the Welsh coastline and is designed to act as a connecting habitat for insects.

5.4.5 Of the statutory sites identified within the ZoI of the scheme, Limestone Coast of West Wales SAC, Castlemartin Coast SPA and West Wales Marine and Bristol Channel Approaches SAC are considered very highly unlikely to be affected by the scheme due to their significant distance from the Site together with the scale and nature of the proposed works being unlikely to generate effects over these distances in particular when considered in the context of the designation / qualifying features of the three sites.

5.4.6 There is potential for the habitats within the site to provide suitable habitat for overwintering birds associated with estuarine habitat of Pembrokeshire Marine SAC and Milford Haven Waterways SSSI although given the small size of the Site and the low levels of disturbance likely to be generated by construction, operation and decommissioning phases of the proposed development, this is considered very highly unlikely. Works are therefore not expected to affect these sites either directly or indirectly and the magnitude of effect is therefore not applicable.

5.4.7 Wintering/SPA bird surveys are currently being conducted in order to provide a robust evidence base to support the assessment that the proposed development will have no likely significant effect upon the integrity of either site.

5.4.8 Gweunydd Somerton Meadows Site of Special Scientific Interest (SSSI) lies approximately 890m south of the Application Site. Works are not anticipated to affect this woodland either directly or indirectly and the magnitude of effect is therefore not applicable.

5.4.9 Pembrokeshire Bat Sites and Bosherston Lakes SAC (including Orielton Stables and Cellars SSSI as a component of the former) lie 3.1km south of the Application Site. Works are not anticipated to affect the Annex I habitats for which the SAC is designated, either directly or indirectly and the magnitude of effects is therefore not applicable. However, the Application Site does fall within the 3-4km roost sustenance zone of Annex II lesser horseshoe bat nursery roost at Orielton Stables and Cellars SSSI, a component site of Pembrokeshire Bats and Bosherston Lakes SAC and further consideration of the potential likely significant effects upon Annex II bat populations is detailed in **Chapter 8** of the Environmental Statement.

5.4.10 The Site covers (or crosses) three large fields; one arable, one improved pasture the other, species poor semi improved grassland. Some boundaries are formed by hedgerows with the site also crossing a narrow section of broadleaved scrub that continues offsite connecting to a larger area of contiguous, established, broadleaved scrub.

5.4.11 Habitats on site are considered to be sub-local to local importance.

5.4.12 A total of six hedgerows were surveyed. All hedgerows comprised >80% indigenous woody canopy species. They are considered to be of County importance.

5.4.13 Mitigation and enhancement measures inherent to the design of the proposed BESS include the buffering of all retained linear habitat features with species rich wildflower grassland, indigenous shrub/scrub planting and new, species rich hedgerows.

5.4.14 When considering the mitigation and enhancement measures inherent to the design of the proposed BESS scheme, specifically the enhancement of significant areas of current improved grassland to species rich wildflower meadow, the provision of substantial areas of indigenous shrub/scrub and provision of a new, species rich hedgerow that will represent a change in the composition of baseline conditions, an effect of medium magnitude on receptors of low-medium sensitivity, the impact is likely to be significant minor-moderate beneficial in the long-term.

5.4.15 No specific mitigation has been proposed for the scheme. It is considered that the scheme will have minimal impacts on the ecological features identified within the ZoI that will largely be mitigated for through inherent project design measures and therefore specifically designed measures are not required to be implemented.

5.4.16 The proposed inherent mitigation and enhancement measures are anticipated to improve the condition of retained habitats within the Site and increase the overall biodiversity value of the Site.

5.4.17 However, standard, actionable mitigation or measures to be implemented will include the following:

- Provision of a Construction Environment Management Plan (CEMP): Ecology. The CEMP will

include detail of standard mitigation measures for pollution prevention as well as protection measures to safeguard any existing retained habitat during the construction phase. In addition, the CEMP will detail specific measures to be taken on Site during the construction phase to avoid and mitigate effects upon identified faunal resources i.e. methods and timings of sensitive vegetation removal, covering of excavations at night time, positioning of site offices, compounds and associated infrastructure.

- A detailed Landscape and Environmental Management Plan will also be in place. The LEMP will provide detail of the habitat creation, set out clear objectives and prescriptions for the long-term management of all habitats on site in order to maximise their biodiversity value, specifically but not exclusively to the benefit of the identified ecological resources within this ES.

5.4.18 Both the above CEMP and LEMP will be adequately secured through an appropriately worded condition attached to planning consent.

5.4.19 The Ecology and Conservation ES Chapter has identified no significant adverse residual effects from the scheme on any ecological features.

5.5 HYDROLOGY AND FLOOD RISK

5.5.1 The Flood Consequence Assessment identifies and assesses the risk of all forms of flooding to and from the site. The proposed development is classified as 'less vulnerable'. The site is within Flood Zone 1 (lowest risk). There are no constraints relating to flooding from rivers or the sea.

5.5.2 There will be no net loss in flood storage capacity or impact on movement of floodwater across the site. The overall direction of the movement of water will be maintained within the site and surrounding area. The conveyance routes (flow paths) will not be blocked or obstructed.

5.5.3 Ground conditions suggest that infiltration methods will work at the site. The infrastructure will sit on concrete rafts and the apron in front will be constructed from compacted impermeable surfaces. These areas, where possible, will be constructed to shed water to any adjacent permeable areas. The rest of the site will comprise free draining stone or grass to allow for infiltration of rainfall.

5.5.4 All areas drained have been designed to accommodate the 1 in 100 year (+40%) event.

5.5.5 The site would be expected to remain dry in all but the most extreme conditions. Providing recommendations made in the Flood Consequences Assessment are instigated, flood risk from all sources would be minimised, the consequences of flooding are deemed acceptable and the development would be in accordance with the requirements of the TAN15.

5.5.6 The proposed development would be operated with minimal risk from flooding, would not increase flood risk elsewhere and is compliant with the requirements of T1N5. The development should not therefore be precluded on the grounds of flood risk.

5.6 HISTORIC ENVIRONMENT

5.6.1 The likely significance of the effects of the Proposed Development on the historic environment which comprises historic assets including archaeological remains (both buried and upstanding), historic landscape elements and structures within the built environment has been assessed.

5.6.2 In order to assess the potential environmental effects on the archaeological assets a comprehensive assessment of the archaeological assets was undertaken using a 1.0km search area assessment radius centred on the Site. Data was sourced from the Dyfed Historic Environment Record (HER), the Pembrokeshire Record Office, Haverfordwest, Cadw, the Royal Commission on the Ancient and Historic Monuments in Wales (RCAHMW) National Monuments Record (NMR) and the Wesh Government's Cartographic Department.

5.6.3 The DHER identifies 38 non-designated monuments within 1.0km of the Site but none lie within the Site boundary.

5.6.4 The NMR records 51 non-designated monuments within 1.0km of the Site but none lie within the Site boundary.

5.6.5 Cadw records one Listed Building within 1.0km of the Site (but this does not lie within the Site) and two Scheduled Monuments (within 1.0km of the Site but neither lies within the Site).

5.6.6 Cadw also records that the Site lies within the Milford Haven Waterway Registered Landscape of Outstanding Historic Interest. Specifically, it lies within the Rhoscrowther Historic Landscape Character Area (HLCA). Cadw records that no Registered Historic Parks and Gardens within 1.0km of the Site boundary. The nearest Registered Historic Park and Garden to the Site is that of the grade II Orielton historic garden located approximately 2.2km to the southeast.

5.6.7 The Inventory of Historic Battlefields in Wales. Records no battlefields within 1km of the Site boundary. The nearest recorded battlefield site is that at Pwllchrochan. In March 1648, Parliamentary combatants landed at Pwllchrochan Royalist forces from Pembroke attacked and the Parliamentarian forces withdrew to Church of St. Mary, Pwllchrochan and eventually sailed away.

5.6.8 There are no World Heritage Sites within 1.0km of the Site boundary. The nearest World Heritage Site is that of Blaenavon Industrial Landscape (UNESCO ref: 984) located approximately 130km to the north-east

5.6.9 The research for the Archaeological Assessment (particularly examination of historic maps) and the walk-over survey of the Site identified five hitherto unrecorded archaeological assets within the Site: a trackway from Goldborough Road to Lambeeth Farm, two hedgerow field boundaries, a clawdd field boundary, and a trackway from Lambeeth Farm to Pwllcrochan.

5.6.10 Inherent mitigation measures are embedded within the design of the proposed development. Broadly, impacts have been avoided because the proposed development has been carefully considered to minimise the level of adverse effects on archaeological assets. This consideration includes the best and most effective use of land available at an expedient location aligning with the technical requirements of the proposed development; a realistic and deliverable outcome using the minimum quantum of development, arranged in the most compact configuration possible. The combination of these considerations with a capacity for the receiving environment to absorb development of the type and scale that is proposed has the consequential benefit of embedding mitigation for archaeological assets within the design.

5.6.11 Nevertheless, there is some impact to archaeological assets which is not environmentally significant but which, under applicable planning policies and best practice would attract the deployment of mitigation responses. In this instance the recommended mitigation for the hedgerow field boundary which would be directly impacted upon during the construction stage is the completion of a basic record and the recommended mitigation for the trackway from Lambeeth Farm to Pwllcrochan which would be directly impacted upon during the construction stage is the completion of a basic record. These records have been completed in order to contribute to the environmental impact assessment process. Therefore, the recommended archaeological mitigation has been completed.

5.6.12 In the light of the inherent mitigation measures there would be no adverse residual or consequential effects for archaeological assets.

5.6.13 Assessment of the proposed development has shown that the potential effects of the development on the historic landscape are not environmentally significant.

5.6.14 Assessment of the proposed development has shown that the potential effects of the development on designated historic assets are not environmentally significant, and no mitigation is required.

5.7 NOISE

5.7.1 The application Is accompanied by a Noise Impact Assessment.

5.7.2 The proposed BESS site, has been assessed in terms of noise impact during maximum operational conditions.

5.7.3 The results of baseline noise monitoring over a weekday and weekend monitoring period at two locations (in areas representing typical background sound levels) indicate that modal (i.e. most common place value) or average background sound levels are 34dB LA90 during the daytime and night-time.

5.7.4 Typical site operating noise levels have been established from empirical data obtained from Technology Providers taken from other sites in the UK to provide input data for the noise model.

5.7.5 The results show that the noise contribution from maximum site rating noise levels would not exceed the representative background sound level during daytime and night-time periods.

5.7.6 The Local Authority are able to condition the site in terms of noise, to ensure noise levels and mitigation measures achieve a reasonable level of amenity in accordance with relevant guidance and standards.

5.7.7 Predictions of construction noise would indicate no significant impacts and `best practicable means' would be applied in accordance with BS5228-1:2009+A1:2014.

5.7.8 The assessment concludes that the site can be designed to operate such that it complies with all appropriate and relevant noise standards and guidance. There is, therefore, no reason to refuse the proposed development on the grounds of noise.

5.8 TRAFFIC AND TRANSPORT

5.8.1 The application is accompanied by a Construction (Traffic) Method Statement site Is to be accessed from the existing access road to the south (which itself is accessed from Goldborough Road to the south west).

5.8.2 An estimated 10 staff will be on site during the construction period, depending on the phases of the construction schedule. It is envisaged that staff trips will be mainly made by private, small vehicles. All vehicles parking will be provided within the temporary construction compound, there will be no parking on public highway.

5.8.3 Assuming a worst-case scenario of all staff members arriving by single-occupancy private vehicle during the peak construction period, a total of 10 vehicles will arrive on site prior to the AM peak and an equal number will depart after the PM peak.

5.8.4 Once the site is operational, there will be no staff based on the site. However, monthly routine checks will be required, this will be carried out via LGVs.

5.8.5 Assuming a 6 month construction period and a 6 day working week (216 days total) on average this equates to 5 deliveries a day. Although the number of deliveries on average appears low, this is because the deliveries are to be phased to reflect when materials and equipment are needed (based on a just in time approach), to avoid having to store materials and equipment on site for unnecessarily long periods.

5.8.6 The majority of deliveries will be made during the beginning of construction works as site preparation works are carried out, and towards the end when the electrical infrastructure and equipment is delivered.

5.8.7 HGV movements will be generated through the import of fencing, cabling, crushed stone for the tracks and passing places, inverters, transformers, control cabins, battery containers and customer substation. The largest vehicles across the site will be a 15.4m articulated lorry. There is sufficient space within the

site for these vehicles to manoeuvre.

5.8.8 On completion of the BESS and associated infrastructure, all temporary works and the construction compound will be removed off site, and use of the staging area is terminated. It is anticipated that this may take up to 1 month.

5.8.9 Once operational, the BESS will be unmanned and access for occasional maintenance will be typically made by light goods vehicles, e.g. vans or 4x4 vehicles. Maintenance will likely occur once a month. The impact on the road network during the operational period will therefore be negligible.

5.8.10 BESS sites require little maintenance, monitoring of such sites will be done remotely and will not need for everyday inspection of the site.

5.8.11 There will be no public access into the site.

5.8.12 The internal access road will be maintained throughout the life of the BESS.

5.8.13 After 40 years of operational life the BESS will be decommissioned, and the site returned to its existing use. It is anticipated that a similar amount of time will be required to decommission the facility as that to construct it. Furthermore, the level of vehicle movements to decommission the site will be similar to the number of deliveries to site for the construction phase.

5.8.14 On the basis of the trip generation outlined above and given the temporary nature of the construction works, it is expected that the construction of the proposed BESS will have minimal impact on the local highway network.

6. SUMMARY AND CONCLUSIONS

6.1 SUMMARY

6.1.1 This Planning Statement describes a proposal by Sirius Renewable Energy in support of a planning application for a 49.9MW battery energy storage system on land adjacent to the Greenlink Converter Station off Goldborough Road, south of Pembroke Power Station.

6.1.2 The site area includes the access track and cable route to the proposed point (an electricity pole in the field to the north-east of the proposed battery compound).

6.2 ENVIRONMENTAL EFFECTS

6.2.1 The proposed development will support the operation of existing and development of proposed renewable energy projects, essential to delivering the Net Zero Strategy objective of decarbonising the electricity grid by 2035 and meeting the nations carbon reduction targets. The proposal would support growth and prosperity in the energy sector and improve energy security by diversifying the area's energy supply mix and help to protect the local communities from potential black outs. The proposed development will support the operation and development of renewable energy power generation and will contribute towards reducing the causes of climate change by reducing CO2 emissions, thereby ensuring future generations have access to low carbon energy and a high-quality environment.

6.2.2 Of the environmental topic areas considered as part of the EIA, the significance of impacts from the proposal considered to be greater than negligible are limited to:

- Landscape and Visual;
- Ecology; and
- Heritage

2.5.14 With regards to landscape and visual matters, a **Minor adverse** impact on landscape character and visual impact is predicted to occur during the construction and decommissioning phases. However, this is only a temporary (6 months) impact. Once operational, the impact on landscape character is judged to be Minor for the site and **Minor-Negligible** for the immediate context following the establishment of mitigation planting which are **'Not Significant'** landscape effects. In terms of visual impact, viewpoint 1 is subject to a moderate **'Not Significant'** level of effect following mitigation planting. The remaining viewpoints are considered to experience at most a **Minor** level of effect with many experiencing no change in the view.

2.5.15 In relation to ecology, provision of newly created habitat of greater value within the proposed scheme; specifically the enhancement of significant areas of current improved grassland to species rich wildflower meadow, the provision of substantial areas of indigenous shrub/scrub and provision of a new, species rich hedgerow will provide a **Minor** to **Moderate Beneficial** level of effect. All other effects reduce to negligible following implementation of mitigation.

2.5.16 In terms of heritage, the assessment of the proposed development has shown that the potential effects of the development on the historic landscape are not environmentally significant. The effect on one Historic Landscape Character Area is **Minor Adverse** during construction and **Slight / Moderate** during operation which is a **'Not Significant'** effect. No significant effects are considered and therefore there is no requirement for additional mitigation. It should be noted that there is inherent mitigation in the design of the proposed development which has contributed to this neutral outcome. This takes the form of the equipment being dark green to help assimilate the scheme into the landscape. The site already benefits from screening to the south, east and west by established tall hedgerows. The addition of scrub planting to the south-east and east, and a new native hedgerow along the northern boundary will provide further visual containment and limit the detectability of the proposed development. It should also be remembered that the proposed development would be screened by the recently constructed Greenlink Converter Station, to the south-west of the site which establishes a presence of

built form in the surrounding landscape. The proposed BESS will appear subservient to the Greenlink Converter.

2.5.17 There is limited potential for the proposed development to create cumulative effects with schemes that have been consented but not yet implemented or have become operational. **No significant effects** are predicted in this regard.

2.5.18 There are no topic areas where there will be an adverse residual impact which is greater than slight / moderate. It is considered that when the adverse impacts are combined across topic areas there would be no synergistic effects which would mean that the effects would be greater than minor.

6.3 PLANNING POLICY

6.3.1 This policy appraisal has considered the key planning issues associated with the proposed development. The principle of development is supported strongly by national and local planning policy.

6.4 CONCLUSION

6.4.1 It has been demonstrated that, on balance, the proposal accords the provisions of relevant planning policy and will not result in any significant adverse environmental impacts. Consequently, it is considered that planning permission should be granted.


SIRIUS
Renewable Energy


SIRIUS
Planning