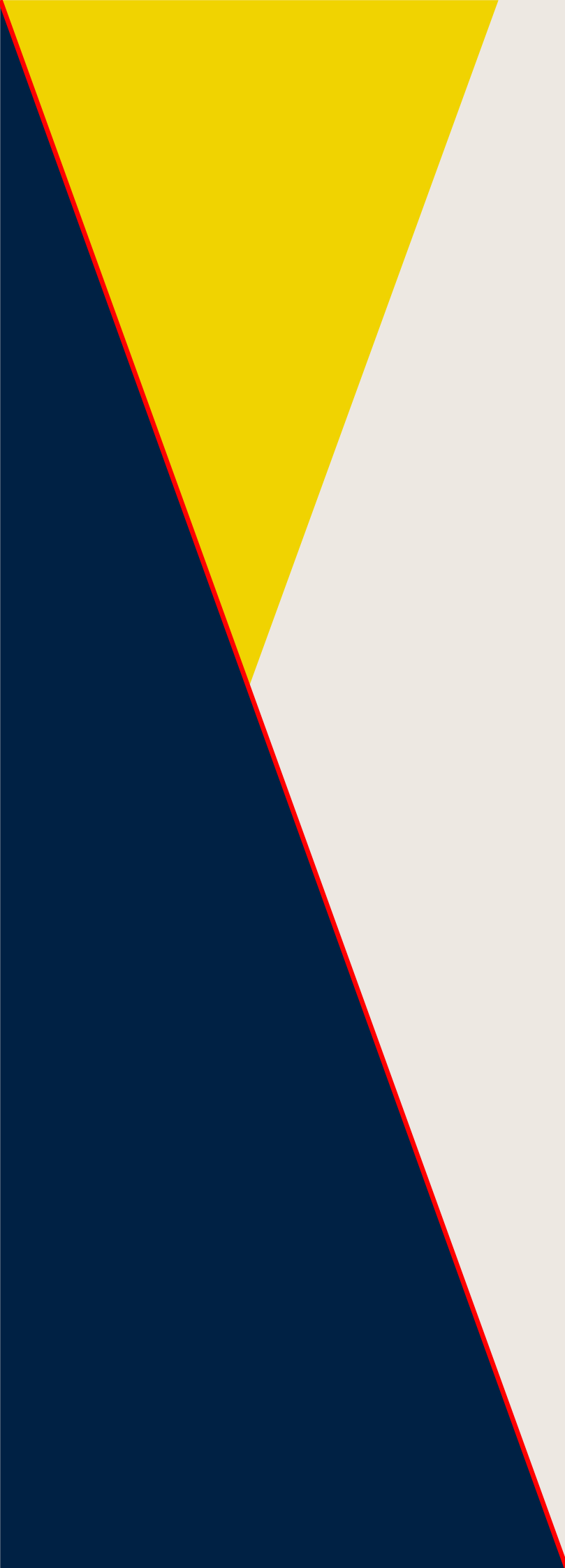




Goldborough Road Battery Energy Storage System

EIA Scoping Report

October 2023

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1 Introduction

1.1 Introduction

Background

- 1.1.1 Pembroke Green Limited ('the Applicant') intends to submit an application to Pembrokeshire County Council ('the Council' / PCC) seeking planning consent for the installation of a Battery Energy Storage System (BESS) with associated infrastructure on land south of Goldborough Road, Wallaston Cross, Pembroke, near SA71 5SH. This report is provided in support of a request for the Environmental Impact Assessment (EIA) scoping opinion of the Council as the local planning authority.

EIA Scoping

- 1.1.2 Before submitting a planning application, the Applicant will undertake an EIA for the Proposed Development. The EIA will be undertaken in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the 'EIA Regulations').
- 1.1.3 To ensure that its EIA focuses on relevant considerations, the Applicant wishes to establish the scope of the EIA. Regulation 15 of the EIA Regulations enables a person to ask the relevant planning authority to confirm in writing their opinion as to the scope, and the level of detail, of the information that should be provided in the Environmental Statement (ES). This report accompanies a request for the Council to adopt an EIA scoping opinion under Regulation 15 of the EIA Regulations.
- 1.1.4 In order to determine the likely scope of the EIA, this report identifies:
- the key characteristics of the site and the environmental baseline;
 - further survey work that is proposed;
 - the extent and scope of the Proposed Development;
 - initial consideration of the potential sources and nature of environmental impacts; and
 - the assessment methodologies proposed to be used in each study area.

Report Structure

- 1.1.5 Regulation 15(2) of the EIA Regulations identifies that a request seeking a scoping opinion must include:
- (i) a plan sufficient to identify the land;*
- (ii) a brief description of the nature and purpose of the development, including its location and technical capacity;*
- (iii) an explanation of the likely significant effects of the development on the environment; and*
- (iv) such other information or representations as the person making the request may wish to provide or make.'*
- 1.1.6 This information is contained in this scoping report, which is structured into chapters as follows:

- Chapter 2 - describes the site, the surrounding context, and identifies sensitive receptors;
- Chapter 3 - provides information about the development proposed;
- Chapter 4 – describes the alternatives and design evolution;
- Chapter 5 - outlines the approach that will be undertaken in preparing the EIA, including the approach to the assessment of cumulative effects;
- Chapter 6 – identifies the environmental considerations considered to be insignificant, and therefore ‘scoped out’ of the EIA;
- Chapters 7-8 - provides a review of the relevant baseline, the potential environmental effects and the proposed scope of the assessment, under individual topic headings of those environmental considerations that have the potential to give rise to significant effects; and
- Chapter 9 – sets out the conclusions of this EIA scoping opinion request and presents a summary and the proposed structure of the ES.

1.1.7 On receipt of this report, the Council will consult with statutory bodies (Regulation 2(1)) before adopting their formal EIA Scoping Opinion. The Scoping Opinion will confirm the key environmental considerations to be assessed.

The EIA project Team

1.1.8 Table 1-1 identifies the team working on this project. These consultants and the sub consultants and individuals that they assign to the project, will constitute ‘competent experts’ for the purposes of Regulation 18(5)(a) of the Regulations.

Table 1-1: The EIA Project Team

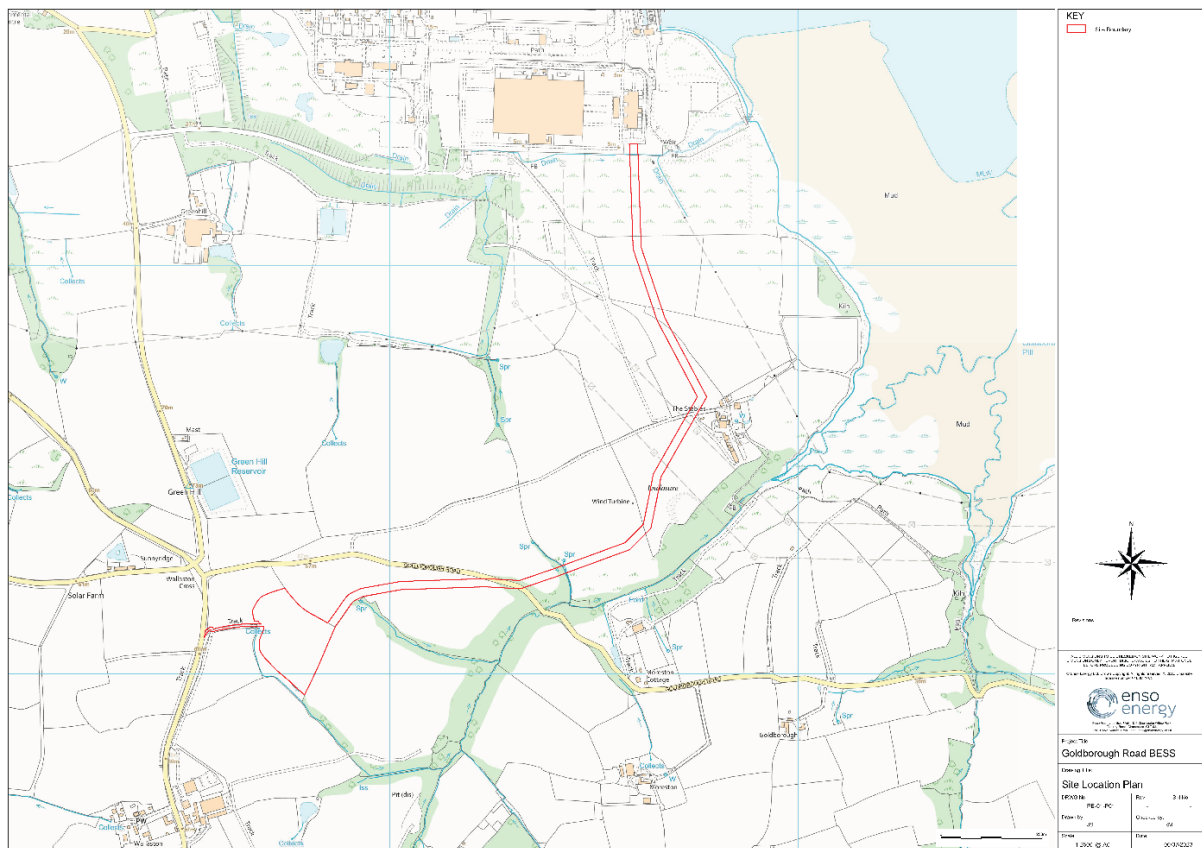
Title	Responsibility
EIA Coordination	Savills
Ecology	RPS
Landscape and Visual	Pegasus Group

2 Site Description

2.1 Site Context

- 2.1.1 The proposed BESS site is comprised of a main site (containing the batteries and substation), as well as access from the public highway and cable corridor to the point of connection (Figure 2-1). The BESS site is located to the northeast of Wallaston Green, approximately 5.5km west of Pembroke and 6.1km southeast of Angle, within Pembrokeshire County Council area. The BESS site occupies approximately 6.8 hectares (ha) of land and sits within an irregularly shaped agricultural field, with the cable route to the point of connection crossing agricultural land, Goldborough Road, and land south of Pembroke Power Station. The grid reference for the proposed BESS site is SM 92762 01061.

Figure 2-1: Site Location Plan



- 2.1.2 With regards to topography, the main site has a southerly aspect, sloping gently from approximately 60m above ordnance datum (AOD) on the northern boundary to 55m AOD on the southern boundary.
- 2.1.3 The immediate surrounding area is agricultural in nature, set within agricultural fields which have strong hedgerow boundaries. The southern and western boundaries of the site are bounded by a belt of trees. The eastern and northern boundaries comprise hedgerow planting. There is a small gap in planting on the north-western boundary.
- 2.1.4 Agricultural land and the settlement of Wallaston Green are located to the south; The C3101, agricultural land and two solar farms (Hoplass Solar Farm and Wogaston Solar Farm) are

located to the west; Green Hill Reservoir is located to the north with the Valero Oil Refinery approximately 1.75km away in the same direction; Pembroke Power Station lies immediately adjacent to the northernmost end of cable corridor; agricultural land and Lambeth Farm are located to the east. Pembroke Dock is located approximately 3.5km to the north-east of the site. Milford Haven is located approximately 5km to the north-west of the site.

2.2 Site Environmental Considerations

Heritage

- 2.2.1 There are no built heritage constraints on the BESS site. The nearest listed building is Somerton Farmhouse (Grade II) located approximately 700m to the south of the main site. The nearest Designated Heritage Asset is the Wallaston Round Barrows Scheduled Ancient Monument, located approximately 600m to the south of the main site.
- 2.2.2 The BESS site is located within the 'Milford Haven Waterway' Landscape of Outstanding Historic Interest. This historic landscape is included in the non-statutory Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales.
- 2.2.3 There are no World Heritage Sites within 5 km of the BESS site.

Flood Risk

- 2.2.4 A small ditch/stream is located on the southern and western boundary of the site, leading towards Goldborough Pill. According to the Natural Resource Wales (NRW) online maps, the site is located within Flood Zone A *"Considered to be at little or no risk of fluvial or coastal/tidal flooding"*.
- 2.2.5 There are some small areas of surface water flood risk within the site associated with areas of hardstanding.

Ecology

- 2.2.6 There are no designated ecological sites or features within the BESS site.
- 2.2.7 The main site is agricultural land used for grazing. According to the Predictive Land Classification (ALC) Map for Wales, the main site is comprised of 2 (good quality) and 3b (moderate quality). While the field boundary planting may offer some ecological value, most of the main site is considered to be of low ecological value.
- 2.2.8 The cable route crosses a variety of land uses, including agricultural land used for grazing, which has the following ALCs: 2 (good quality); 3a (good to moderate quality); 3b (moderate quality); and 4 (poor quality).
- 2.2.9 The BESS site is within 5km proximity to the following ecological designations:
- Pembrokeshire Marine / Sir Benfro Forol Special Area of Conservation (SAC) (0.30km east of cable corridor)
 - Limestone Coast of South West Wales / Arfordir Calchfaen De Orllewin Cymru SAC (2.47km west)
 - Pembrokeshire Bat Sites and Bosherton Lakes / Safleodd Ystlum Sir Benfro a Llynnoedd Bosheerton SAC (3.19km southeast)
 - West Wales Marine / Gorllewin Cymru Forol SAC (4.77km southwest)

- Castlemartin Coast Special Protection Area (SPA) (2.54km southwest)
- Somerton Meadows / Gweunydd Site of Special Scientific Interest (SSSI) (0.39km southeast)
- Milford Haven Waterway SSSI (0.46km east of cable corridor)
- Broomhill Burrows SSSI (2.64km west)
- Castlemartin Corse SSSI (2.76km southwest)
- Castlemartin Range SSSI (3.25km southwest)
- Orielton Stable Block and Cellars SSSI (3.16km southeast)

2.2.10 The Pembrokeshire Marine / Sir Benfro Forol SAC is located encompasses almost the entire Milford Haven waterway to tidal limits and partially overlaps the Milford Haven Waterway SSSI. Both the Pembrokeshire Marine / Sir Benfro Forol SAC and Milford Haven Waterway SSSI are considered to support a significant number of habitat types and species including sandbanks, mudflats, coastal lagoons, inlets and bays, reefs, sea caves and Atlantic salt meadows suitable for migratory birds, fish and mammals.

Landscape

2.2.11 The BESS site is located within National Landscape Character Area 47: South Pembrokeshire Coast (NLCA). This area is described as:

“A spectacular coastal landscape of rugged cliffs, headlands and golden sandy bays and dunes and forms some of the finest scenery in southern Britain.”

2.2.12 The landscape of the Angle Peninsula, in which the BESS site is located, is described as:

“The gently undulating limestone plateau of Angle in the west is framed by views of the industry at Milford Haven and Pembroke Dock to the north. The Chimneys from the nearby oil refinery and power station serve as a reminder of the close proximity of these industrial ports. Overall though, this area retains its strongly rural and coastal identity, which is a defining feature of the National Park in which it lies.”

2.2.13 The Pembrokeshire Coast National Park (*Parc Cenedlaethol Arfordir Penfro*) is located to the south and west of the BESS site, approximately 1.1km from the site at its closest point.

2.2.14 Any views that can be achieved of the BESS site from the National Park are set within an industrial landscape of the Valero Oil Refinery and the Pembroke Combined Cycle Gas Turbine (‘CCGT’) Power Station with overhead electricity transmission power lines. Within the broader setting, the Dragon LNG terminal and South Hook LNG terminal are visually prominent features within the landscape.

2.2.15 The final layout of the BESS is subject to detailed design.

Other matters

2.2.16 There are no Public Rights of Way on the BESS site. The Wales Coast Path, which runs around and through the Angle Peninsula is located approximately 1km to the east of the BESS site at its closest point; and footpath SP34/6 is located approximately 100m to the northeast of the BESS site.

2.2.17 The Cable route passes under the Wales Coast Path and footpath SP34/6 to the west of Lambeeth Farm.

- 2.2.18 The BESS site is not within or near any existing or proposed Air Quality Management Area (AQMA).
- 2.2.19 The Coal Authority's Interactive Map confirms the BESS site does not fall within a Coal Mining Reporting Area, a Development High Risk Area, or a Surface Coal Resource Area.

3 The Proposed Development

3.1 Overview

3.1.1 The description of development will be as follows:

“Installation of a Battery Energy Storage System with Associated Infrastructure”.

3.1.2 The proposal is for the construction, operation, maintenance and decommissioning of a 120MW Battery Energy Storage System for distribution of electricity to the National Grid. The Proposed Development would operate for a time limited period of 40 years. The main components of the Proposed Development comprise:

- Battery storage facility comprising batteries housed within shipping containers or similar;
- Inverter/transformer stations and associated electrical infrastructure distributed evenly across the site housed within metal containers;
- Underground cabling to connect the battery containers and inverters/transformer stations to the proposed on-site substation and control room;
- Underground cabling from the BESS site to the point of connection at Pembroke Substation;
- Security fencing and monitoring CCTV/infra-red cameras mounted along the perimeter of the BESS site;
- Landscape planting, biodiversity enhancements and surface water attenuation measures (to be designed as part of the evolving design); and
- Temporary construction laydown area and site access from the public highway.

3.1.3 The final layout would be subject to detailed design.

3.1.4 The connection to the grid will be made to the Pembroke Substation, located approximately 1.3km north-east of the BESS site. The cable would run below ground from the boundary of the site directly to the point of connection.

3.1.5 While the site extends to 6.8 ha, the BESS site (excluding access and cable route) occupies approximately 1.7 ha.

3.2 Mitigation and controls

3.2.1 Inherent mitigation will be designed into the scheme where possible to avoid what otherwise might be significant effects. This will include retention of all trees and hedgerows within the field margins (apart from a small 5m strip for cable installation, which will be replanted). A Landscape Management Plan will outline the proposed landscaping strategy for new trees to provide screening and for ecology purposes. This will be secured through a suitably worded planning condition.

Procedure for dealing with contaminated material

3.2.2 Historically the main site has been used for agricultural purposes, which has a low risk associated with the potential for contamination. In the event that contaminated material is identified during site preparation, the contractor would follow standard procedures to:

- Notify the Environmental Health department of the discovery;
- Secure the area / take action to prevent the release of contamination;
- Appoint a specialist to carry out the necessary analysis to identify the substance and appropriate containment/disposal options;
- Dispose of the material in accordance with applicable legislation after obtaining the necessary consents and / or licenses; and
- Record waste transfer / disposal certificates.

Construction

Control of construction activities

3.2.3 The ES will provide an outline of the anticipated demolition and construction programme and related activities and aspects (i.e. enabling works substructure works, etc., construction material quantities, HGV movements and HGV routing).

3.2.4 The assessment of effects prior to the adoption of additional mitigation measures will assume that construction will proceed in accordance with industry standard best practice techniques and that all legislative requirements will be met. Standard measures can be secured through planning conditions and will therefore not be repeated as mitigation in the ES. These include site waste management; construction and environment management; construction traffic management.

Construction phase duration

3.2.5 It is anticipated that site preparation and construction would commence in 2025 and complete in 2026, with some elements of the Proposed Development being phased during this period.

Construction Environmental Management Plan (CEMP)

3.2.6 Details of measures to protect the environment during the construction of the Proposed Development will be set out in a CEMP. Measures will address hours of working, noise, vibration, dust, light spill, wheel washing and control of runoff. It is anticipated that the implementation of the CEMP will be a condition of the planning permission and that it will be regularly monitored.

3.2.7 Once finalised and approved, the CEMP would be held on-site. All site personnel would be made aware of its existence and undertake to adhere to the guidance.

Plant and Equipment

3.2.8 Consideration will be given to the types of plant and equipment that are likely to be used during the construction works. An indication of the typical types of plant and equipment associated with each key element of the works will be set out in the ES.

Hoarding / Fencing

- 3.2.9 The contractor will ensure site security measures around the construction zone are maintained. More detailed plans will be developed to prior commencement, to ensure minimal environmental impact in providing the required control measures to mitigate anticipated security risks.

Hours and Method of Working

- 3.2.10 Construction activities and deliveries will be carried out Monday to Friday 08:00-1800 and between 08:00 and 13:30 on Saturdays. No construction activities or deliveries will occur on Sunday or Public Holidays. Where possible, construction deliveries will be coordinated to avoid construction vehicle movements during the traditional AM peak hour (08:00-09:00) and PM peak hour (17:00-18:00).

4 Consultation, Site Selection and Alternatives

4.1 Development Alternatives

4.1.1 Schedule 4, paragraph 2 of the EIA Regulations requires Environmental Statements to include:

“A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.”

4.1.2 As there are no suitable alternative sites within the Applicants' control, alternative sites will not be considered by the Applicant or assessed in the EIA.

4.1.3 Given the nature and purpose of the Proposed Development, the assessment of alternatives to the development that will be presented in the ES will consider options within the following categories.

- 'Do Nothing': under this scenario no development is implemented at the site and baseline conditions continue in their current trends.
- A different design: under this scenario the Proposed Development is realised with alternative scales and layouts, often in the context of developmental constraints present at the BESS site.

4.2 Consultation

4.2.1 In the lead up to the planning application, a programme of consultation will be undertaken with statutory and non-statutory consultees and with members of the public. Further technical consultation will also be undertaken as part of the ongoing EIA process, including consultation with the Environment Agency and authority officers. The formal pre-application consultation for all planning submissions in Wales will also be undertaken.

4.2.2 A summary of relevant consultation will be presented in the introductory sections of the ES. This will provide details of any environmental issues raised and provide an audit trail of how the EIA process has responded to these issues. Consultation that is specific to ecology and landscape will be reported, where relevant, within the corresponding chapters of the ES.

4.2.3 Details of technical consultation, directly related to the production of this Scoping Report are provided in the methodology and baseline sections of the ecology and landscape.

5 Approach to assessment

5.1 EIA screening

- 5.1.1 The EIA Regulations require that before consent is granted for certain types of development, an EIA must be undertaken. The EIA Regulations set out the types of development which must always be subject to an EIA (Schedule 1 development) and other developments which will only require assessment if they are likely to give rise to significant environmental effects (Schedule 2 developments). Guidance and thresholds are available to help to decide whether EIA is required for a Schedule 2 development. This decision process is known as 'screening'.
- 5.1.2 The selection criteria for screening Schedule 2 development are provided in Schedule 3 of the EIA Regulations. Schedule 2 projects require EIA if they are likely to have significant effects on the environment by virtue of their nature, size or location. The potential for likely significant effects on 'sensitive areas', as defined in Regulation 2(1) of the EIA Regulations, is a particularly important consideration.
- 5.1.3 The Proposed Development is not within a "*sensitive area*" as defined in the EIA Regulations.
- 5.1.4 The Proposed Development relates to the Energy Industry (Part 3 of Schedule 2) and is one for the storage of energy. Whilst battery storage projects are not specifically referenced in Schedule 2, such projects are a subset of energy generation. In determining whether a particular proposal for development is included within one of the categories of development, local planning authorities (LPA) should have regard to The European Court of Justice which has ruled that project categories are to be interpreted widely because of the broad scope and purpose of the EIA Directive.
- 5.1.5 Given this, and the fact that the overall area of the Proposed Development exceeds 0.5 hectares, it is therefore considered that the development is a subset of and constitutes Schedule 2 development under Section 3(a) "*Industrial installations for the production of electricity, steam and hot water*".
- 5.1.6 Given that the Proposed Development falls within Schedule 2, a Screening Request (Appendix 5.1) was submitted to the Council, which was considered and returned as EIA development, as detailed in the Screening Opinion (Appendix 5.2). The views expressed in the Screening Opinion from the Council have provided a basis to frame the technical scope of the assessment, i.e. those effects that are likely to be significant and are therefore scoped into the EIA and those effects not likely to be significant and can therefore be scoped out from further detailed assessment in the EIA. As set out in Appendix 5.2, the Council identified potential significant effects relating to ecology and landscape and visual impacts and the potential for cumulative effects and therefore these topics have been scoped into the assessment.

5.2 The proposed EIA

- 5.2.1 EIA is a process through which the likely significant environmental effects of a development proposal can be identified and, where possible, adverse effects avoided or mitigated. This process is reported in an ES, which is submitted with a planning application.
- 5.2.2 This Chapter of the Scoping Report sets out the scope of the proposed EIA and identifies the proposed structure for the chapters of the ES. The ES will consider various environmental parameters as required by Schedule 4 of the EIA Regulations.

- 5.2.3 Environmental Statements are required to identify those aspects of the environment likely to be 'significantly affected' both directly and indirectly by the development proposed. An ES should then describe the nature of those significant effects taking account of the magnitude of the impact and sensitivity of the receptor. These assessments will identify mitigation where appropriate and evaluate residual effects with this in place.
- 5.2.4 The environmental effects of the Proposed Development will be considered during both the construction and operational phases. The findings of the EIA will be presented in a main written statement, supported by figures and appendices. A non-technical summary of the ES will be provided as a separate document.

Study area and temporal scope

- 5.2.5 Each assessment topic will define its study area geographically and indicate the timescales over which the environmental effects will be considered. The temporal scope will consider the construction phase, and thereafter when the development is completed and occupied (often referred to as the 'operational' phase). For example, the assessment of landscape and visual assessment will consider residual effects at a future time when the landscaping within the scheme has had a period of 15 years to mature.
- 5.2.6 It is envisaged that construction will commence in 2025. For the purpose of the assessment, a working assumption has been made that the Proposed Development has an operational lifespan of approximately 40-years. However, it should be noted that it is common for such developments to be operational for longer periods. It is anticipated that the process of decommissioning would involve the termination of operational activity, following which there would be electrical and process isolation and demolition activities. The BESS site would be left in a clear and secure condition in accordance with a Decommissioning Plan. The decommissioning process is anticipated to last for one year.

Unless otherwise indicated in the environmental topic chapters ES, the environmental effects associated with the decommissioning phase would be of a similar level to those reported for the construction phase works.

Technical scope

- 5.2.7 In order to determine the likely scope of the EIA, the process has identified:
- The key characteristics of the site and the establishment of the environmental baseline through a series of desk and field studies;
 - Gaps in the baseline and the further survey work required to address this;
 - Initial consideration of the potential sources and nature of environmental impacts; and
 - Definition of the assessment methodologies to be used in each study area (where available).
- 5.2.8 A series of baseline studies have been undertaken to establish the baseline environment for this Scoping Report. Where necessary, studies are ongoing or are being undertaken and can be tailored to advice offered in response to this scoping request. The baseline and assessment work undertaken as part of preparing this Scoping Report is set out within the following Sections.
- 5.2.9 In Schedule 4, Paragraph 4 of the EIA Regulations require an ES to provide "*A description of the factors specified in regulation 4(2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land*

take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydro morphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.”

- 5.2.10 As part of the EIA scoping process, issues within the topic areas above that are identified as unlikely to give rise to significant environmental effects can be omitted ('scoped out') from the EIA and, where justified, it is reasonable to propose a reduced scope of topic areas where initial assessment clearly indicates significant effects are unlikely. Furthermore, the Screening Opinion received from PCC provided clear feedback on the topic areas that have potential to give rise to significant effects and therefore this feedback has been used to inform the scope of the ES.

Assessment methodology

- 5.2.11 The ES will include the assessment methodology used for the specific assessment topic, using relevant industry standard guidance where this is in place, and wherever possible, predict environmental effects in a standard framework.
- 5.2.12 Each ES chapter will identify those receptors relevant to the topic and they will be assessed to determine their sensitivity to change as a result of the project from the known baseline. The receptors will be attributed a sensitivity level ranging from high to negligible as set out in the table below.

Table 5-1: Sensitivity of a generic environmental receptor to change

Sensitivity	Receptor type
High	Receptors of high importance with a high susceptibility to change and limited potential for substitution or replacement.
Medium	Receptors with some sensitivity to change and medium importance. Often have relevance at a regional scale with some opportunity for substitution or replacement.
Low	Receptors with low importance and sensitivity to change, often of relevance at a local scale.
Negligible	The receptor has very low importance / is not sensitive to change.

- 5.2.13 The magnitude of impact affecting each receptor will then be considered. This can be positive or negative as well as temporary or permanent. The nature of each will be analysed based on quantitative and qualitative techniques and a magnitude of change ranging from negligible to high, as set out below.

Table 5-2: Criteria for the magnitude of environmental impact

Magnitude	Description of criteria
High	Effects will be of a consistently high magnitude and frequency and cause severe damage to key characteristics, features and elements or even total loss; or Major improvement to characteristics, features and elements of receptor.
Medium	Adverse loss of resource or damage to characteristics, features or elements but limited impact on integrity; or Benefit or addition to characteristics, features and elements that improve the receptor.
Low	Some measurable changes that are noteworthy and material. Minor benefit or minor loss/detrimental change to the receptors characteristics, features or elements.
Negligible	Very minor changes that are not noteworthy or material.

5.2.14 Having identified the sensitivity of the receptor and the magnitude of the impact, the type of matrix set out below will be used as appropriate to indicate the predicted level of effect. For the purposes of the ES, unless specifically defined otherwise in an ES chapter, effects of moderate and higher are considered to be significant effects.

Table 5-3: Framework for identifying environmental effects

		Magnitude of Impact			
		High	Medium	Low	Negligible
Receptor Sensitivity	High	Substantial	Major	Moderate	Negligible
	Medium	Major	Moderate	Minor	Negligible
	Low	Moderate	Minor	Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

5.2.15 The definition for each level of effect will be set out within each assessment chapter of the ES.

5.2.16 The likely effects of the Proposed Development will be described as:

- Adverse / beneficial;
- Direct / indirect;
- Temporary / permanent;
- Reversible / irreversible.

Baseline assessment

- 5.2.17 Each topic-based chapter of the ES will identify the current baseline scenario, and where relevant the future scenario, against which the environmental effects of the Proposed Development will be measured. The baseline assessment will involve describing the current state and circumstances of the identified receptors and changes that might be expected to occur as a result of the Proposed Development.

Assessment of environmental effects

- 5.2.18 Having identified receptors that are likely be affected (taking into account inherent mitigation), the assessments will outline the potential impacts that could arise in the absence of any additional mitigation. Where adverse effects are identified, the ES will set out the mitigation measures considered necessary to minimise the potential effect. Residual effects will be evaluated and their significance will be reported based upon the magnitude of impact against the sensitivity of the receptor.

Assumptions and limitations

- 5.2.19 In the preparation of the ES, it is assumed that all legislative requirements will be met and the Proposed Development will be constructed in accordance with industry standard techniques and best practice methods implemented on-site. It is therefore not necessary to re-consider this as mitigation that will be evaluated in the assessment of residual effects.

Assessment of cumulative effects

- 5.2.20 The requirement for cumulative effects assessment is set out in Schedule 4 of the EIA Regulations. At Schedule 4(5), the EIA Regulations require *"A description of the likely significant effects of the development on the environment resulting from, inter alia: ... (e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;"*
- 5.2.21 Cumulative impact comprises the combined effects of the Proposed Development with other existing and/or approved development. It is proposed that the EIA will consider other planning permissions that are not yet constructed or operational (PPG Reference ID 4-024-20170728), along with allocated schemes where there is a reasonable degree of certainty that they will proceed within 3 years (PPG Reference ID: 42-014-20140306). A list of cumulative developments has been compiled using planning register searches and from the screening opinion provided by the Council.
- 5.2.22 The potential for cumulative effects needs to be considered with regard to specific environmental receptors, the characteristics of the natural environment as well as the neighbouring communities. The ES will consider which other developments have the potential for cumulative effects when the construction and operational phases could be concurrent, and where there are sensitive receptors common to both developments within a defined geographical area known as the Zone of Influence (Zol), the Zol will be bespoke for each topic and clearly defined in the ES. Identified cumulative developments that will be assessed in relation to the Proposed Development are shown in the table below.
- 5.2.23 An update for as-yet unidentified projects will be undertaken during the preparation of the ES. The Council are requested as part of this scoping consultation to confirm the list of developments that would be expected to be included in the cumulative assessment.

Table 5-4: Cumulative schemes

Ref.	Site Address	Application Reference	Description	Distance from Site (m)
1	Land at Lambeeth, Pembrokeshire	23/0330/SO	Construction of a Batter Energy Storage System across a total area of approximately 1.39ha including access track and cable run.	1,000 ^a
2	Land south of Pembroke Power Station	23/0497/SC	Development comprising a battery energy storage facility and ancillary equipment with a grid import and export capacity of 350MW and an area to connect it to the electricity substation.	719 ^a
3	Land to the south of Pembroke Power Station, Lambeeth Farm, Pembroke (Wollaston Cross)	20/0041/PA	Development of a converter station and upgraded permanent access road from Wollaston Cross to the converter station. Plus associated landscaping, drainage and other supporting infrastructure associated with the development.	500 ^a
4	Lambeeth Farm access road	20/0044/PA	Installation of underground electricity cables (including below ground jointing bays and three above ground link pillars) and underground fibre optic cables; temporary construction compound and construction haul roads; and permanent upgrade to existing Lambeeth Farm access road.	850 ^a
5	Green hydrogen project at Pembroke Power Station	n/a	Part of the plans comprising Pembroke Net Zero Centre. A screening and scoping request, and an application are yet to be submitted.	Unknown
6	Intelligent alternatives	n/a	A screening and scoping request, and an application are yet to be submitted.	Unknown

Notes

a – Distance measured between the main site of the Proposed Development and the equivalent main site of cumulative scheme (i.e. not cable routes or red line boundary of cumulative schemes)

Greenhouse gas emissions and climate change

5.2.24 Climate change is identified as one of the defining environmental policy drivers and the greenhouse gas emissions from all projects can contribute to climate change, or potentially deliver reductions. It is vital to ensure that all future development is resilient to the potential effects of climate change and that proposals do not exacerbate the effects of climate change affecting humans or natural systems.

Climate risks and in-combination climate effects

- 5.2.25 IEMA has published an 'EIA Guide to Climate Change Resilience and Adaptation' (2020) which provides a framework for the effective consideration of climate change resilience and adaption in the EIA process. It explains that there are two 'key strands': risks from climatic change to the development, and its resilience or adaptation in response; and the in-combination effects where a changing climate may modify and exacerbate other environmental impacts of the development. The guidance states that the scoping of a project, taking into account climate change, should focus on general considerations rather than detailed, quantitative analysis. This is because EIAs consider proposals for specific sites, whereas climate change models are prepared at a regional or national-level model.
- 5.2.26 It is proposed that the specific in-combination climate change considerations will be scoped in and covered to the extent it is relevant in each topic chapter, such as ecology and landscape and visual. This will be a high-level assessment of how potential climate change may alter the predicted effects. It is not considered likely that completely new direct impacts will arise as a result of climate change, but the scale of potential impacts might change when considered against the future baseline conditions.
- 5.2.27 The in-combination effects will be considered using the UKCP18 climate change projections for a high emissions scenario (RCP8.5), in line with Appendix 4 of the 2020 IEMA guidance.
- 5.2.28 The main potential climate risk to the proposed development would be flooding. As set out in Section 6.6, a Flood Consequences Assessment and Drainage Strategy will be prepared for the development. Under good-practice guidance, these will include appropriate allowances for the risk of increased rainfall, pluvial and (if applicable) fluvial flooding as a result of climate change. Higher peak summer temperatures and/or sustained heatwave conditions could place higher demands on the cooling system for the BESS, affecting its efficiency or even posing a risk to its operation. However, BESS are designed to be able to operate under a range of environmental conditions, and it is considered that this risk can be adequately controlled through design. Assessment of climate risks is therefore proposed to be scoped out of the EIA.

Greenhouse gas emissions

- 5.2.29 The UK has legally binding greenhouse gas (GHG) reduction targets which are set at a macro level, with Government having set ambitious targets to move to a low carbon economy through a range of mechanisms, including decarbonising energy generation, road transport, buildings and food production. Energy storage to provide grid balancing and aid the deployment of intermittent renewable generation will play a role in the national decarbonisation strategy.
- 5.2.30 IEMA has published an EIA Guide to 'Assessing Greenhouse Gas Emissions and Evaluating their Significance' (2022). This sets out the recommended approach to screening and scoping a GHG emissions assessment in EIA, the methodology to follow where assessment is scoped in, and how the significance of effects should be determined. The guidance notes that . It emphasises the importance of early design engagement with GHG emissions mitigation on a lifecycle basis, which may be facilitated through following standards such as PAS2080.
- 5.2.31 In Section 4, on scoping, the guidance explains that "*The approach [to scoping and assessment of GHG emissions] should be proportionate to the proposed project and may, in some cases, not require an ES chapter where it can be justified that GHGs can be addressed within upfront sections of the ES*". It refers to subsequent sections on methodology, significance and communication for further guidance.
- 5.2.32 Section 5, on methodology, explains that GHG emissions should be assessed on a life-cycle basis, typically covering all of the lifecycle modules illustrated in Figure 4 of the guidance. This

therefore includes, as applicable, the manufacturing/construction, use stage, and end of life stage. Other emissions beyond the boundary of the specific asset should also be considered where relevant.

- 5.2.33 Section 6, on evaluating significance, states that *“To meet the 2050 target and interim budgets [for net zero in the UK], action is required to reduce GHG emissions from all sectors, including projects in the built and natural environment. EIA for any proposed project must therefore give proportionate consideration to whether and how that project will contribute to or jeopardise the achievement of these targets.”*
- 5.2.34 Section 7, on communication in the Environmental Statement, re-confirms that if a topic-specific climate change or GHG emissions chapter is not proposed, *“It may be proportionate for a section in the project description or an appendix to provide information on GHG emissions to support a conclusion about whether these are significant, without a full ES Chapter.”* However, it emphasises that in line with the goals of EIA and wider good practice guidance, *“regardless of where GHG emissions are reported within the ES chapter, it is crucial that the assessment is transparent and a conclusion on the significance of effects is reached and clearly stated.”*
- 5.2.35 The proposed development would have no direct GHG emissions from its operation. Its role providing energy storage, shifting energy from times of low demand to times of peak demand, is likely to indirectly reduce GHG emissions by enabling greater utilisation of renewable generation in the electricity grid and reducing the need for more carbon-intense generation (such as gas-fired peaking generation) at high demand times. Given the 120 MW scale of the proposed development, this indirect beneficial effect is likely to be significant. Indirect operational emissions, for example from staff access and periodic maintenance, are likely to be minor.
- 5.2.36 The manufacturing, delivery and construction of the BESS and supporting infrastructure will be a material source of GHG emissions. Given the development scale and relatively high carbon intensity of battery manufacturing, the adverse effect of these emissions has the potential to be significant, though it also has the potential to be outweighed on a full-life basis by the operational benefits. Early design mitigation of manufacturing/construction-stage emissions would be possible through lifecycle assessment and engagement with the supply chain.
- 5.2.37 Decommissioning of the BESS and supporting infrastructure also has the potential to be a material source of GHG emissions, but also amenable to mitigation via recycling and re-use. A substantial transition to use of battery technology in electricity grids and electric vehicles is occurring and the global supply chains for these are developing rapidly. It is likely that by the end of life stage of the proposed development, techniques for decommissioning and recycling BESS components to mitigate GHG emissions will have improved.
- 5.2.38 The proposed development is not expected to have other significant GHG emission or reduction impacts outside the BESS and supporting infrastructure boundary. Landscape planting is proposed, which offers the opportunity for carbon sequestration (and climate resilience), but this is anticipated to be a minor impact.
- 5.2.39 With consideration to the potential magnitude of GHG impacts and significance of effects at each lifecycle stage as set out above, assessment of GHG emissions is proposed to be scoped in to the EIA. Given that the purpose of a BESS development is to play a role in facilitating decarbonisation of the UK electricity grid and renewable generation roll-out, in line with the UK’s national decarbonisation strategy, its lifetime effect is likely to be beneficial but with further opportunities to mitigate its manufacturing and construction-stage emissions. In line with the IEMA guidance, it is therefore considered proportionate to report the assessment of GHG emission effects within the Project Description chapter of the ES rather than in a topic-specific

climate change chapter. As the guidance advises, with respect to mitigation, methodology and communication, the GHG emissions will be reported on a lifecycle basis, will set out the GHG mitigation commitments that can be secured by the applicant through early design engagement, and will provide a conclusion on the significance of GHG emission effects.

6 Effects not considered to be significant

6.1 Overview

- 6.1.1 As part of the EIA scoping process, issues that are identified as unlikely to give rise to significant environmental effects can be covered in a reduced scope of study, or scoped out of the assessment. This section of the report identifies the topic areas proposed to be scoped out from the EIA.

6.2 Accidents, Fire and Natural Disasters

Screening Report

- 6.2.1 As stated in the Screening Report, there would be a low risk of accidents during the temporary construction period. The Transport Assessment submitted with the Planning Application would set out the appropriate access routes to BESS site and an assessment of access points for the construction and operational phase.
- 6.2.2 There are no Public Rights of Way within the BESS site. Any impact to Public Rights of Way caused by the installation of the cable route will be temporary and fully reversible.
- 6.2.3 No failures to meet environmental quality standards relevant to this project are anticipated; and battery energy storage project safety is controlled by several non-planning regulatory regimes.

Screening Opinion

- 6.2.4 The Screening Opinion, provided by Pembrokeshire County Council, notes there *“is no evidence that there is likely to be a risk of major accidents/disasters.”* And that *“Environmental impacts during the construction phase are unlikely to be significant subject to control via a Construction Environmental Management Plan (CEMP)”*.

Conclusion

- 6.2.5 In the absence of recognised guidance on this subject in the context of EIA, a range of sources providing guidance related to the topic has been reviewed, including:
- Cabinet Office National Risk Register (NRR) of Civil Emergencies 2017 Edition¹;
 - UK Government Emergency Response & Recovery Guidance²; and
 - International Federation of Red Cross & Red Crescent Societies Disaster and Crisis Management Guidance³.
- 6.2.6 A disaster can be defined as *“a sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses*

¹ Cabinet Office. (2017) National Risk Register of Civil Emergencies. [Online].
<https://www.gov.uk/government/publications/national-risk-register-of-civil-emergencies-2017-edition>.

² International Federation of Red Cross and Red Crescent Societies, "The Red Cross Red Crescent approach to disaster and crisis management: Position paper," <http://www.ifrc.org/PageFiles/91314/1209600-DM-Position-Paper-EN.pdf> 2011.

³ International Federation of Red Cross and Red Crescent Societies, "What is a disaster?," <http://www.ifrc.org/en/what-we-do/disaster-management/about-disasters/what-is-a-disaster/> 2017.

that exceed the community's or society's ability to cope using its own resources. Though often caused by nature, disasters can have human origins".⁴ An accident can be defined as "an unfortunate incident that happens unexpectedly and unintentionally, typically resulting in damage or injury".

- 6.2.7 The site's location within the UK is such that natural disasters are not considered to represent a likely risk to the Proposed Development. For example, it is considered that the likelihood of an earthquake with a magnitude sufficient to cause damage to equipment and/or loss of life occurring and impacting the site is extremely low. Furthermore, the topography of the site is not considered to be sufficiently steep such that a major mass movement disaster could arise.
- 6.2.8 It is therefore considered that whilst there is always a potential risk that an accident, fire or natural disaster could result in a significant environmental impact, this risk can be appropriately mitigated through embedded design measures and through compliance with statutory design guidelines. As such, significant effects related to Health and Safety and as a result of major accidents and/or disasters associated with the Proposed Development are not considered likely. Consequently, it is proposed that the EIA will not include major accidents and disasters as a specific chapter.

6.3 Agricultural land and soils, including ground conditions

Screening Report

- 6.3.1 The main site in which the Proposed Development is located is currently classified as Grade 2 (good quality) and 3b (moderate quality) according to the Predictive Land Classification (ALC) Map for Wales.

Screening Opinion

- 6.3.2 In relation to agricultural land, soils and ground conditions, the Screening Opinion provided by Pembrokeshire County Council notes that "*Matters relating to contamination are unlikely to be significant.*"

Conclusion

- 6.3.3 An Agricultural Land Condition report will be submitted as part of the suite of documents for the planning application.
- 6.3.4 Standard best practice and mitigation methods secured through a CEMP would ensure that potential impacts from the Proposed Development at the construction phase are mitigated to ensure no significant effects arise. As such, significant effects are not considered likely to result and therefore it is proposed to scope it out.

6.4 Air quality

Screening Report

- 6.4.1 As stated in the Screening Report, the Proposed Development will not lead to any risk to human health via the generation of air pollution; there will be no harmful pollutants or odours because of the Proposed Development.

⁴ Oxford English Dictionary. 2022. [Online]. <https://en.oxforddictionaries.com/definition/accident>.

6.4.2 Any disturbance arising from construction of the Proposed Development (including, but not limited to dust) and associated traffic movements will be short term. Dust suppression measures would be set out within the planning application and methods to reduce impacts during the construction period will be detailed within the CEMP.

6.4.3 During the operational phase, the Proposed Development will not generate any emissions to air.

Screening Opinion

6.4.4 The Screening Opinion, provided by Pembrokeshire County Council, notes that *“Impacts in relation to natural resources and human health are unlikely to be significant and this includes the effects from pollution (including... air...). Any adverse effects are likely to be satisfactorily mitigated.”* And that *“Environmental impacts during the construction phase are unlikely to be significant subject to control via a Construction Environmental Management Plan”*.

Conclusion

6.4.5 During the construction phase, there would be potential for air quality effects arising from the construction works (such as dust from construction processes and emissions from construction vehicles). Such pollutions will be appropriately controlled such that any potential negative impacts are sufficiently mitigated through a detailed CEMP.

6.4.6 In operation, the Proposed Development will not give rise to significant air pollution as limited operational vehicle movements are expected and the operational process does not generate emissions.

6.4.7 Given the above, the Proposed Development will not lead to any risk to human health via the generation of air pollution; this stance is echoed by PCC. Consequently, therefore air quality is scoped out of the EIA.

6.5 Human health

Screening Report

6.5.1 As stated in the Screening Report, the Proposed Development will not lead to any risk to human health, nor will it involve the use, storage, transport, handling or production of substances or materials which could be harmful to human health or the environment.

Screening Opinion

6.5.2 Likewise, the Screening Opinion provided by PCC notes that *“Impacts in relation to natural resources and human health are unlikely to be significant and this includes the effects from pollution (including noise, air and water quality).”*

Conclusion

6.5.3 The Proposed Development is not considered to be of the nature and scale to result in a risk to human health or the local population. During the construction phase, there would be potential for minor pollution or nuisance typical of construction works (dust, noise and lighting from construction processes and construction vehicles). The CEMP will ensure any potential negative impacts on health during construction are controlled and managed.

6.5.4 Once operational, the Proposed Development will not give rise to significant noise pollution or air pollutions. The use of batteries (including lithium-ion and other compositions of battery) as

a means of energy storage is a maturing technology and emerging practice in the global renewable energy sector, but is based on technological advances and development of energy storage at smaller scales used for decades.

- 6.5.5 Moreover, public access amongst the battery and substation compound will be restricted by security fencing and security cameras will surveil the main site during operation.
- 6.5.6 In addition, risk of accidents and disasters will be minimised through embedded design measures and through compliance with statutory design guidelines. Therefore, it is proposed to scope out human health from the EIA.

6.6 Heritage

Screening Report

- 6.6.1 The Screening Report sets out that there are no designated historic assets within the site, with the nearest listed assets being Somerton Farmhouse (Grade II) located approximately 700m to the south of the Site and Wallaston Round Barrows Scheduled Monument approximately 600m to the south of the Site.

Screening Opinion

- 6.6.2 The Screening Opinion states that the development is likely to have adverse environmental effects by reason of visual and landscape impacts (and potentially related impacts on the historic environment).

Conclusion

Archaeology

- 6.6.3 Construction work, such as preliminary ground works, site strip, movement of vehicles, excavation for the cable route, and all other intrusive groundworks during the construction phase will have the potential to impact on currently unknown archaeological receptors that may be present within the Site or along the proposed cable route. The Heritage Statement prepared to accompany the planning application will identify the archaeological potential in consultation with relevant third parties such as the LPA Archaeological Advisors and Cadw, this will determine the requirement for any further archaeological works and mitigation to ensure that effects upon archaeology are not significant.
- 6.6.4 There will be no post-construction effects on archaeology within the Site as any remains within the site will have been preserved in situ or preserved by record if necessary (by process of archaeological fieldwork mitigation) before this stage of the proposed development.

Designated assets

- 6.6.5 It is not anticipated that the construction phase will have an impact on the majority of the designated heritage assets due to their distance from the Site. The Heritage Statement will review the potential effects upon the Heritage Assets.
- 6.6.6 Once constructed it is possible that the setting of some of the designated heritage assets, including Listed Buildings and Scheduled Monuments will be affected, primarily due to visual changes within the landscape, potentially to and from the designated heritage assets. The Heritage Statement will review these impacts and in conjunction with the landscape and visual assessment specify any measures required to protect the setting.

- 6.6.7 On the basis of the above, and given that a Heritage Statement will be submitted alongside the planning application, it is proposed that Heritage is scoped out as a topic in the EIA.

6.7 Hydrology, flood risk and drainage

Screening Report

- 6.7.1 As stated in the Screening Report, the Proposed Development will not lead to any risk to human health via water pollution; there will be no contamination of water and the safety of the water environment will be preserved.
- 6.7.2 The BESS site is located within Flood Zone A and is *“considered to be at little or no risk of fluvial or coastal/tidal flooding”*, although there are some small areas of flood risk identified under the new TAN15 Flood Map for planning associated with a historical drainage ditch originating in the north west portion of the site. The presence of the aforementioned ditch, however, is not confirmed through review of aerial photography and topographic survey information..
- 6.7.3 The proposals include the provision of a Flood Consequences Assessment and Drainage Strategy to demonstrate how runoff will be managed, that the Proposed Development is safe, that it will not increase flood risk elsewhere and will not have a negative impact on fluvial or marine environments.
- 6.7.4 The drainage design will comply with National Standards for Sustainable Drainage and the appropriate approvals will be sought from the approving bodies.

Screening Opinion

- 6.7.5 The Screening Opinion provided by PCC makes no reference to hydrology, flood risk and drainage.

Conclusion

- 6.7.6 Given that the BESS site is located within Flood Zone A, and that a Flood Consequences Assessment and Drainage Strategy will be provided as part of the application, significant impacts on hydrology, flood risk and drainage arising from the Proposed Development are considered unlikely. It is therefore proposed that hydrology, flood risk and drainage are scoped out of the EIA.

6.8 Noise and vibration

- 6.8.1 A baseline sound measurement exercise is set to be undertaken at locations in and around the site deemed representative of identified Noise Sensitive Receptors. The image below identifies the receptor locations (NSR) and the approximate proposed Measurement Positions (MP).

Figure 6-1: Location of noise sensitive receptors



Screening Report

- 6.8.2 As noted in the Screening Report, disturbance arising from construction of the Proposed Development (noise, dust, emissions) and associated traffic movements will be short term and methods to reduce impacts during the construction period will be detailed within the CEMP.
- 6.8.3 The operational noise impacts are anticipated to be limited from the inverter/transformer stations, on-site substation and batteries. During the operational phase, noise levels will typically be below background noise levels. As a result, these are not likely to be perceptible to sensitive receptors above background noise levels.

Screening Opinion

- 6.8.4 As previously mentioned, the Screening Opinion provided by PCC notes that *“Impacts in relation to natural resources and human health are unlikely to be significant and this includes the effects from pollution (including noise...). Any adverse effects are likely to be satisfactorily mitigated.”* And that *“Environmental impacts during the construction phase are unlikely to be significant subject to control via a Construction Environmental Management Plan”*.

Conclusion

- 6.8.5 Given that the Proposed Development will not lead to any risk to human health via the generation of noise pollution, and that any potential impacts will be reduced during the construction period through a detailed CEMP, significant effects related to noise and vibration associated with the Proposed Development are not considered likely; this stance is echoed by the Council.
- 6.8.6 To support the planning application, a noise assessment will also be submitted. The effects of noise during the operation of the Proposed Development will be assessed in accordance with

British Standard 4142: 2014 +A1: 2019 '*Method for rating industrial and commercial noise*'⁵. This standard requires an assessment of operational noise against the prevailing background sound environment for both daytime and night-time periods and will inform the acoustic specifications and locations of the noise-generating plant items to be included, such that the amenity of existing receptors in the area will not be significantly adversely affected.

6.8.7 It has been assumed that the noise-generating plant associated with the Proposed Development will be typical for this type of development, consisting of inverters, BESS, transformers and substation that will be of a typical specification as utilised at other, similar developments.

6.8.8 Consequently, it is proposed that noise and vibration are scoped out the EIA.

6.9 Transport and access

Screening Report

6.9.1 As noted in the Screening Report, a Construction Traffic Management Plan (CTMP) will be prepared and submitted with the planning application and be implemented during the construction phase. The aim of the CTMP is to set out traffic management measures that would be adopted during the construction phase to reduce the effect of the construction phase on the highway network. It will contain all the required information for the construction phase, including construction vehicle access, construction vehicle routing as well as package of agreed mitigation measures.

6.9.2 Once operational the Proposed Development would be unmanned and only require limited vehicle movements for routine maintenance by the Site operatives (a handful of movements per month by transit van or similar).

Screening Opinion

6.9.3 The Screening Opinion provided by PCC notes that "*Transportation impacts are unlikely to result in significant environmental effects subject to a Construction Traffic Management Plan being implemented.*"

Conclusion

6.9.4 As a CTMP will be provided as part of the proposals for Proposed Development, significant effects related to transport and access are not considered likely. As such, transport and access are scoped out of the EIA.

6.10 Waste

Screening Report

6.10.1 As stated in the Screening Report, any waste produced during the construction and decommissioning process would be reused and recycled where possible in accordance with best practice measures, thereby reducing volumes of waste spoil.

6.10.2 During the operational phase, the Proposed Development will not lead to the active production of waste.

⁵ British Standard 4142: 2014+A1:2019 *Method for rating and assessing commercial sound*. BSI

- 6.10.3 There may be the occasional requirement to replace / repair equipment, however the waste produced would be negligible and best practice measure to re-use / recycle will further reduce this impact.
- 6.10.4 Dust suppression measures would be set out within the planning application.
- 6.10.5 At the end of the operational period, all equipment will be removed from site and recycled where possible.

Screening Opinion

- 6.10.6 The Screening Opinion provided by PCC is in agreement with the Screening Report; it notes that *"The generation of waste would be limited."*

Conclusion

- 6.10.7 Given the above, it is considered unlikely that impacts related to waste arising from the Proposed Development will be significant. Measures to control and manage waste at the construction phase will be set out within the CEMP. On this basis, it is proposed that waste is to be scoped out of the EIA.

7 Ecology

7.1 Introduction

- 7.1.1 This chapter of the ES Scoping Report has been produced by RPS.
- 7.1.2 At this stage in advance of the desk study, completion of site surveys and the evaluation of the results a conservative approach has been taken in considering the elements of biodiversity that will be scoped into the assessment.
- 7.1.3 The potential effects on habitats and species will be subject to detailed assessment through technical survey work.
- 7.1.4 An iterative scoping of issues will continue through the detailed design stage along with definition of primary and secondary mitigation.

7.2 Existing Baseline

- 7.2.1 The BESS development site is approximately 3ha area of agriculturally improved pasture bounded by managed hedgerows under 3m in height with a 20m wide wooded boundary to the south-west. The new access road will be constructed through part of the pasture field between an unclassified road and the proposed BESS.
- 7.2.2 The c1.8km cable route connecting the BESS to the Pembroke substation crosses a series of agriculturally improved pasture fields and dissects field boundary hedgerows. Two fields at the northern end of the cable route closest to the substation are less intensively managed.
- 7.2.3 There are five internationally designated nature conservation sites located within 10km of the site each comprising component SSSIs as detailed on Table 1.1. At the closet point Milford Haven Waterway SSSI / Pembrokeshire Marine SAC lies 260m to the east of the cable route and 1.12km east of the BESS. One other SSSI lies within a radius of 2km of site, Gweundydd Meadows SSSI located 400m to the south-east.

Table 7-1: Statutory Designated Sites

International designated sites within 10km and component nationally designated sites	Distance and direction from the Proposed Development
Pembrokeshire Marine SAC	<u>BESS</u> - 1.12km E <u>Cable route</u> - 0.26km E
Milford Haven Waterway SSSI	<u>BESS</u> - 1.12km E; 1.62km N; 3.1km W <u>Cable route</u> - 0.26km E
Angle Peninsula Coast SSSI	<u>BESS</u> - 4.7km W
Castlemartin Coast SPA	<u>BESS</u> - 2.63km W
Broomhill Burrows SSSI (Part)	<u>BESS</u> - 2.34km W
Castlemartin Range SSSI	<u>BESS</u> - 3.15km W
Stackpole SSSI (Part)	<u>BESS</u> - 6.07km SE
Limestone Coast of South Wales SAC	<u>BESS</u> - 2.47km W
Broomhill Burrows SSSI	<u>BESS</u> - 2.47km W
Stackpole SSSI	<u>BESS</u> - 6.07km SE

International designated sites within 10km and component nationally designated sites	Distance and direction from the Proposed Development
Stackpole Quay to Trewent SSSI	<u>BESS</u> - 8.26km SE
Pembrokeshire Bat Sites and Bosherton Lakes SAC <i>Component SSSIs within 10 km</i>	<u>BESS</u> - 3.19km SE
Orielton stable block and cellars SSSI	<u>BESS</u> - 3.19km SE
Stackpole SSSI	<u>BESS</u> - 6.07km SE
Stackpole Courtyard and Flats and Walled Garden SSSI	<u>BESS</u> - 6.84km SE
Park House Outbuildings SSSI	<u>BESS</u> - 7.17km SE <u>Cable route</u> - 6.87km SE
Skomer, Skokholm and the Seas of Pembrokeshire SPA	<u>BESS</u> - 6.5km SSW
West Wales Marine SAC	<u>BESS</u> - 4.8km W
Other Nationally Designated Sites with 5km	
Gweunydd (Somerton) Meadows SSSI	<u>BESS</u> - 0.40km SE
Castlemartin Corse SSSI	<u>BESS</u> - 2.72km SW
Scoveston Castle SSSI	<u>BESS</u> - 5.48km N <u>Cable route</u> - 4.26km N
Distances are provided for the cable route where closer to the designated site than the BESS	
Abbreviations SAC – Special Area of Conservation SPA – Special Protection Area SSSI – Site of Special Scientific Interest	

7.2.4 Information on non-statutory designated sites within 2km of the site will be obtained as part of the desk study. Baseline habitat surveys and relevant species surveys will be completed as described in Section 1.4 below.

7.3 EIA Study Area

7.3.1 The Site comprises the proposed BESS scheme, associated new access road and a c1.8km cable route connecting the Proposed Scheme the national grid sub-station to the north.

7.3.2 The study areas varies for different ecological receptors as defined in Table 1.2. The study areas relate to the potential Zones of Influence (Zol) for each type of the receptor and reflect maximum zone of impact. The review of potential impacts will be considered which receptors within these zones have the potential to be affected by the Proposed Scheme. The zones will be used to inform the baseline position and the identification of potential receptors.

Table 7-2: Ecology Receptors Zone of Influence

Types of Ecological Receptors	Maximum Zone of Impact from the Site Boundary
Statutory international designated sites and functionally linked land e.g. Special Areas of Conservation, Special Protection Areas, Ramsar sites.	10km

Types of Ecological Receptors	Maximum Zone of Impact from the Site Boundary
Statutory national designated sites (including any faunal species which included as a reason for designation), e.g. SSSIs and National Nature Reserves (NNRs)	5km
Statutory locally designated sites e.g. Local Nature Reserves	2km
Non-statutory designated sites – SINC, ancient woodland	2km
Past species records within the last 10 years (excluding bats): legally protected species, Section 7 species of principal importance, birds of conservation concern, RDB species and locally important species ⁶	2km
Past records of bat roosts and activity within the last 10 years	5km
Protected and notable species Habitats of principal importance	Within and adjacent to the Site 50m either side of the centre of the cable route corridor
Great crested newts	250m from the Site boundary and cable route
Non-native Invasive Species (Plants)	Within and immediately adjoining the Site and cable route

7.4 Proposed Method

Baseline Surveys

Desk Study

- 7.4.1 A desk study will be prepared to support the EIA. Information on designated sites will be derived from the following sources; MAGIC: Nature on the Map; Natural Resources Wales (NRW): Designated Sites Search; and Natural Resources Wales Ancient Woodland Inventory. Past species records will be obtained from West Wales Biodiversity Information Centre (WWBIC) and the National Biodiversity Network (NBN).

Habitat Survey, Protected Species Audit and Mapping

- 7.4.2 A habitat survey will be undertaken for the proposed development in early October 2023 broadly following the Phase 1 habitat survey method. The survey area will cover the Proposed Development including the site access and land 50m on either side of the route. The walkover will collect detailed information on the extent, diversity, structure and context of the habitats

present and include searches for invasive non-native plant species including Himalayan balsam, giant hogweed and Japanese knotweed.

- 7.4.3 The potential for the habitats to support faunal species will be assessed. Specific consideration will be given to legally protected species, species of principal importance in Wales listed under Section 7, BoCC Red and Amber list species, and Red Data Book species. The results will be presented in a Preliminary Ecological Appraisal (PEA) report which will form an appendix to the ES Chapter.

Phase 2 Surveys

- 7.4.4 Relevant Phase 2 species surveys will be carried out to inform the impact assessment. The need for specific surveys to be covered will be directly informed by the habitat survey and desk study and any pre-application discussions with the LPA ecologist.
- 7.4.5 Species / species groups would be covered where the Proposed Scheme has the potential to cause an impact during either the construction and/or operation of the BESS development or through the temporary works associated with the cable route.

Environment Impact Assessment (Ecology)

Assessment Methodology of Effects Likely / Significant

- 7.4.6 The ecology chapter of the ES will be prepared with reference to the methodology referred to in Guidelines for Ecological Impact Assessment - Third Edition' GLVIA3 (Chartered Institute of Ecology and Environmental Management (CIEEM), 2016) will consider all potentially significant effects on terrestrial ecology receptors.
- 7.4.7 The following legislation will be referenced in the assessment of effects within ecology Chapter:
- The Conservation of Habitats and Species Regulations 2017;
 - The Environment (Wales) Act 2016;
 - The Countryside and Rights of Way Act 2000;
 - Wildlife and Countryside Act 1981 (as amended);
 - The Natural Environment and Rural Communities (NERC) Act 2006; and
 - The Well-being of Future Generations Act (Wales) 2015.
- 7.4.8 The following national and local planning policies and guidance documents will help inform the assessment where relevant to the proposed development,
- Planning Policy Wales 11;
 - Technical Advice 5: Nature Conservation and Planning;
 - Pembrokeshire County Council Adopted Local Development Plan 2016
 - Pembrokeshire County Council Biodiversity Supplementary Planning Guidance 2021
 - The Nature Recovery Plan for Wales 2020;
 - Biodiversity Duty Plan 2017;
 - Action Plan for Pollinators in Wales; and
 - Future Wales – The National Plan 2040.
 - The Nature Recovery Plan 2020 ;
 - Planning Policy Wales: Technical Advice 5: Nature Conservation and Planning ; and
 - The Action Plan for Pollinators in Wales.

7.4.9 Each habitat, species population or species assemblage will be assigned a sensitivity/value/importance with reference to its distribution and status (including a consideration of trends based on available historical records). The sensitivity of each important receptor will then be defined on a scale of high, medium, low and negligible. In line with CIEEM guidance the sensitivity of the receptor will be cross-referenced to a geographic scale, as follows:

- High – national context;
- Medium - district / county context;
- Low – local context; and
- Negligible – up to site context.

7.4.10 The assessment will identify and characterise impacts in order to assess potential adverse (and beneficial) effects and consider the construction stage and operational stages of the Proposed Scheme.

7.4.11 For each relevant ecological receptor, the impact magnitude will be derived from an assessment of the extent, scale, duration, reversibility and timing/frequency. Further consideration will be given to the fragility or stability of the habitats, sensitivity of the species and conservation status. The magnitude of the impact will be assigned on a scale of large, medium, small and negligible.

7.4.12 All effects will be classified as adverse, beneficial or no change and be defined on a scale of major, moderate, minor, and negligible and will be referenced to relevant geographic context of the effect.

7.4.13 The assessment of impacts will consider primary mitigation measures (i.e. those built into the Proposed Scheme) that help to avoid and reduce impacts and incorporate opportunities for ecological and biodiversity enhancement. Where necessary following assessment, additional mitigation measures will be defined. Furthermore, enhancement measures (delivering net biodiversity benefit) will be defined in addition to the mitigation and compensation measures. This assessment of effects will also reference extent, diversity, condition and connectivity in the final development and the overall net outcome for biodiversity.

7.4.14 The significance of effects will be determined following this through professional judgment. Under the CIEEM guidance on assessment, a 'significant effect' is an effect that either supports or undermines conservation objectives for 'important ecological features'.

7.5 Potential effects

Construction of BESS and Access Road

7.5.1 The construction of the BESS and access road will result in the loss of the agriculturally improved pasture located within the development footprint. The potential for direct and/or indirect effects on species utilising the fields, boundary hedgerows and adjoining habitats will be assessed with reference to baseline surveys and any precautionary assumptions.

Cable Installation

7.5.2 The installation of the cable will involve temporary works over a linear 1.8km route. The working area will be up to 15m in width. The route is primarily aligned through agriculturally improved pasture. The level of effect will be directly influenced by the working methods that are selected. There is potential for temporary damage to sections of hedgerows and the associated fragmentation of field boundaries if trenching is adopted. Directionally drilling beneath the two narrow sections of woodland crossed by the cable route will minimise any effect on this habitat.

- 7.5.3 Features in the Milford Haven Waterway SSSI/Pembrokeshire Marine SAC will be considered for any potential impact pathways resulting from the installation of the cable route with 'Estuarine habitat' and/or 'large shallow inlets and bays' both Annex I habitats that are primary reasons for the selection of this SAC.
- 7.5.4 The potential for temporary effects to arise on faunal species during the installation of the linear cable route will be assessed including indirect effects on habitats adjacent to the working corridor of value to one or more species. For the otter population, a qualifying feature of this SAC, the woodland habitats have the potential to be functionally linked to the SAC and this potential connectivity will be reviewed as part of the assessment.

Operational BESS

- 7.5.5 The operation of the BESS is expected to have negligible impacts on habitats and species. The BESS lies a substantial distance from Milford Haven Waterway SSSI and the features within and adjoining the BESS development are not considered to be functionally linked to Pembrokeshire Marine SAC. It is anticipated that all potential operational effects on habitats and species will be scoped out of the ES Chapter

7.6 Proposed Mitigation

- 7.6.1 Primary mitigation incorporated into the Proposed Development will include elements of biodiversity value in the landscape scheme and environmentally sensitive lighting design/strategy.
- 7.6.2 Site design will aim to maintain the context of the boundary hedgerows as functional corridors as part of the network of linear habitats and enhance their value through environmentally sensitive management over the lifetime of the development.
- 7.6.3 Environmental and species protection measures will be specified as additional mitigation measures that will be implemented during construction activities. The information will be presented in a Construction Environmental Management Plan (CEMP) prepared in conjunction lead site contractor team who will have ultimate responsibility for its full implementation of the control measures to ensure that the predicted outcomes detailed in the ES are achieved.
- 7.6.4 Environmental protection will address pollution avoidance and emergency responses, dust control and surface water management. The results of the baseline surveys will inform the species protection measures to be incorporated into the enabling works, construction, cable and installation.
- 7.6.5 Works will be undertaken outside of the breeding season and where not possible protection measures will be adopted for all active bird nests. Other avoidance / mitigation requirements for legally protected species could include stand offs/exclusion areas from badger setts, otter resting places, and bat roosts.
- 7.6.6 Principles that will be fundamental to the Proposed Development would be protection of woodland, minimisation of damage to hedgerows and the re-instatement of habitats affected by the cable route.

7.7 Cumulative effects

- 7.7.1 The cumulative impact assessment will assess the ecology related interactions between the Proposed Development and other relevant approved developments and pending planning applications. This will include other battery energy storage systems, the green hydrogen

project, and cable and sub-stations associated. The zone of influence for the assessment of cumulative effects on receptors will be as detailed in Table 1.1.

- 7.7.2 A review of key technical information available for approved projects will define which habitats and species receptors and inform if there are common receptors / common effects within the zone of influence shared with the Proposed Development.
- 7.7.3 Professional judgement will be applied in completing the qualitative assessment of in combination effects with reference to duration and reversibility of effects which will inform the combined magnitude of change. Specific consideration will be given to overlapping construction periods. All adverse effects on ecological receptors are likely to exceed what is reported for the Proposed Development in isolation will be specified.
- 7.7.4 The assessment will define the level of combined effect and if significant taking account of primary mitigation and if the predicted residual impact remains significant following proposed secondary mitigation.

7.8 Conclusion

- 7.8.1 The proposed scheme is considered to have the potential to give rise to environmental effects on ecology receptors.
- 7.8.2 The biodiversity receptors that have the potential to be affected and included in the ES Chapter include
- Statutory designated sites (including Pembrokeshire Marine Special Area of Conservation (SAC) / Milford Haven Waterway Site of Special Scientific Interest (SSSI) located 260m from the cable route and potentially Gweunydd (Somerton) Meadows SSSI located 400m from the BESS)
 - Non-statutory designated sites (subject to results of the desk study)
 - Habitats including Section 7 habitats of principal importance (hedgerows)
 - Legally protected species including breeding birds, bats (activity), otter, and badgers, (where confirmed or assumed to be present within or adjoining the development)
 - Species listed under Section 7 of the Environment (Wales) Act 2016 and Birds of Conservation Concern in Wales (BoCCW).
- 7.8.3 There is potential for species of principal importance, birds of conservation concern and legally protected species are expected to utilise habitats with the Proposed Development including on the alignment of the cable route. Potential adverse effects during the construction phase will be assessed using survey data and detailed design specifications.
- 7.8.4 Based on the geographic location and the nature of the habitats within and adjacent to the BESS development there is a reasonable likelihood that potentially significant impacts on the following species groups/receptors during construction and operation will be scoped out of the ES Chapter.
- Great crested newts
 - Bat roosts
 - Dormice
 - Invertebrates
- 7.8.5 It is anticipated that all potential significant effects during the operational life of the BESS will be scoped out of the ES ecology chapter.

- 7.8.6 The Scoping Report seeks to establish an overall framework for the potential effects on habitats and species these will be subject to detailed assessment through technical survey work. An iterative 're-scoping' will continue through the detailed design stage in advance of submission.

8 Landscape and Visual

8.1 Introduction

- 8.1.1 This chapter of the EIA Scoping Report has been produced by Pegasus Group.
- 8.1.2 It is acknowledged from the outset that, in common with almost all commercial energy developments that some landscape and visual effects would occur as a result of the Proposed Development.
- 8.1.3 A key principle of the European Landscape Convention is that all landscapes matter and should be managed appropriately. It is also acknowledged that landscapes provide the surroundings for people's daily lives and often contribute positively to the quality of life and economic performance of an area.
- 8.1.4 It is therefore proposed that a Landscape and Visual Impact Assessment (LVIA) is undertaken as part of the EIA and an LVIA Chapter be included in the ES. The LVIA will be undertaken by Chartered Landscape Architects, who are experienced in the assessment of all types of energy projects, including BESS.
- 8.1.5 It is proposed that the LVIA will consider the potential effects of the Proposed Development upon:
- Individual landscape features and elements;
 - Landscape character; and
 - Visual amenity and the people who view the landscape.

8.2 Existing Baseline

- 8.2.1 The Site is centred at approximately OS Grid Reference 192760, 201061, just to the south-east of the Wallaston Cross roads junction. Pembroke lies around 5km to the east. The site lies within a pastoral agricultural field, bounded by hedgerows. The topography of the site is gently undulating, with levels ranging between around 55m AOD and 65m AOD.
- 8.2.2 Initial studies have been undertaken to identify the potential landscape and visual receptors to be considered within the LVIA. The key receptors are outlined in turn below. For the final LVIA detailed baseline information on the landscape and visual resource will be gathered through a combination of desk-studies, consultation and field surveys.

Landscape Character

- 8.2.3 Natural Resources Wales (NRW) published a series of National Character Area descriptions in 2013/2014. The site lies towards the southwestern edge of the National Landscape Character Area 48 (NLCA): Milford Haven. The key characteristics of LCA48 are summarised by NRW as follows:
- *Complex geology*
 - *Large ria*
 - *Estuaries extending inland*

- *Coastal and intertidal species and habitats*
- *Mixed fields and hedgerows*
- *Mixed and conifer plantations fringe the upper ria and estuaries*
- *Historic port defences*
- *Towns and villages*
- *Industry by the lower ria*
- *Tranquil rural upper ria and estuaries*
- *Renowned scenic qualities*

8.2.4 LANDMAP is the formally adopted five-tiered landscape evaluation baseline tool developed by NRW. It comprises five nationally consistent spatial datasets, referred to as Aspect Layers:

- *Geological Landscape;*
- *Landscape Habitats;*
- *Visual and Sensory;*
- *Historic Landscape; and*
- *Cultural Landscape Services.*

8.2.5 These five aspect layers are divided into Aspect Areas that have been assessed by a NRW assessor. The Overall Evaluation of the Aspect Area is key to understanding its value in terms of sensitivity, rarity or importance. The site lies within a landscape which is defined as 'Rolling Lowland' in LANDMAP's Visual & Sensory aspect, with an evaluation of 'moderate'.

8.2.6 A draft Pembrokeshire County Landscape Character Assessment was prepared in 2022. This identified the site as being located with Landscape Character Area 25: Hundleton and Lamphey. This area lies to the south of Pembrokeshire and wraps around Pembroke separating it from Pembroke Dock. It also lies south of the Valero refinery and gas fired power station on the Milford Haven waterway and is bounded by the Pembrokeshire Coast National Park to the north, south and west.

Landscape Designations

8.2.7 The Proposed Development is not located within a nationally or locally designated landscape. The Pembrokeshire Coast National Park lies around 1km from the site at its closest point. The Pembrokeshire Coast National Park Management Plan 2020-2024 sets out the special qualities of the National Park, as follows:

- *accessibility*
- *coastal splendour*
- *cultural heritage*
- *distinctive settlement character*
- *diverse geology*

- *diversity of landscape*
- *islands*
- *remoteness, tranquillity and wildness*
- *rich historic environment*
- *richness of habitats and species*
- *space to breathe*
- *the diversity of experiences and combination of individual qualities*

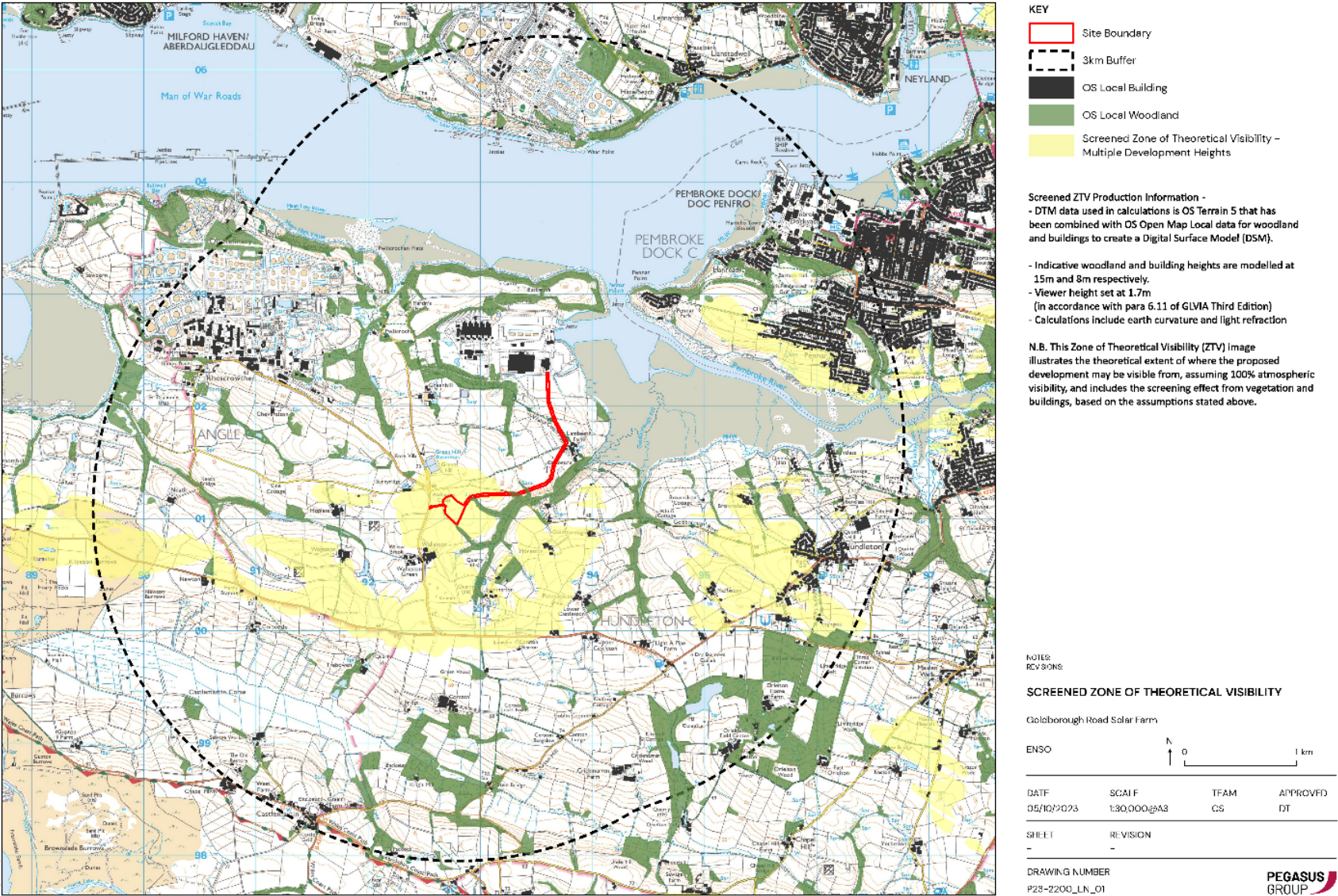
Visual Receptors

- 8.2.8 Visual receptors in the vicinity of the site comprise individual residential properties, settlements, footpath users, cycle routes and road users. In particular, this includes the users of various roads which meet at the Wallaston Cross junction and also the B4320 to the south. Pembroke lies around 5km to the east.

8.3 EIA Study Area

- 8.3.1 In order to assist with defining the study area, a digital Zone of Theoretical Visibility (ZTV) model has been produced as a starting point to illustrate the geographical area within which views of development on the Site are theoretically possible. This was based on a 'screened' scenario, whereby the screening effect of areas of existing vegetation and built features in the landscape is taken into account. The ZTV is presented at Figure 8-1.

Figure 8-1: Zone of theoretical visibility



- 8.3.2 The ZTV illustrates that visibility would be limited with large areas of no ZTV coverage to the north, east, south and west. Therefore, it is proposed that the LVIA will consider an initial 3km radius study area, which it is considered represents a proportionate area and the limit within which any potential significant effects might occur.

8.4 Proposed Method

- 8.4.1 The LVIA will be prepared in accordance with the principles of best practice, as outlined in published guidance documents, notably the third edition of the Guidelines for Landscape and Visual Assessment (GLVIA3)⁷.

- 8.4.2 The methodology and assessment criteria proposed for the LVIA will be developed in accordance with the principles established in this best practice document. It should be acknowledged that GLVIA3 establishes guidelines, not a specific methodology. The preface to GLVIA3 states:

“This edition concentrates on principles and processes. It does not provide a detailed or formulaic ‘recipe’ that can be followed in every situation – it remains the responsibility of the professional to ensure that the approach and methodology adopted are appropriate to the task in hand.”

- 8.4.3 The approach has therefore been developed specifically for this assessment to ensure that the methodology is fit for purpose. Consideration has also been given to the following documents:

- *Landscape Institute (2021) Assessing landscape value outside national designations, Technical Guidance Note 02/21*
- *Landscape Institute (2019) Technical Guidance Note 06/19, Visual Representation of Development Proposals*
- *Landscape Institute (2019) Technical Guidance Note 02/19, Residential Visual Amenity Assessment*
- *Future Wales. The National Plan 2040 (February 2021)*
- *Pembrokeshire Coast National Park Management Plan 2020-2024*
- *Natural Resources Wales (NRW) LANDMAP Information System*
- *Cadw for information regarding designated historic assets*
- *Digital Terrain Model (DTM) at 5m spatial resolution*
- *Ordnance survey mapping at 1:25,000 scale*
- *Aerial and street view imagery available on Google Earth*

- 8.4.4 Full details of the methodology will be provided within the LVIA chapter of the ES.

- 8.4.5 In accordance with the published guidance, landscape and visual effects will be assessed separately, although the procedure for assessing each of these is closely linked. A clear distinction has been drawn between landscape and visual effects as described below:

- *landscape effects relate to the effects of the Proposed Development on the physical and perceptual characteristics of the landscape and its resulting character and quality; and*

⁷ Landscape Institute and the Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, 3rd Edition

- *visual effects relate to the effects on specific views experienced by visual receptors and on visual amenity more generally.*

Proposed Viewpoints

8.4.6 It is proposed that the 9 locations set out in Table 8-1 are included as assessment viewpoints in the LVIA. The viewpoints represent visual receptors, LCTs and landscape designations at a range of distances and directions from the site. The viewpoints have been selected based on the initial ZTV and knowledge of the area surrounding the Site.

Table 8-1: Proposed Viewpoint Locations

Viewpoint Number	Location	OS Grid Reference
VP1	Wallaston Cross	192543, 201264
VP2	Goldborough Road	192906, 201292
VP3	Minor Road south of Wallaston Cross	192550, 201096
VP4	Bridleway north of Hoplass	191635, 201261
VP5	Bridleway/B4320	191682, 200113
VP6	B4320 junction with minor road to Wallaston Cross	192602, 199994
VP7	Goldborough Road, west of Hundleton	195423, 200763
VP8	Military Road, Pembroke Dock	195142, 202860
VP9	B4320 junction with minor road to Rhoscrowther	190837, 200414

- 8.4.7 Each of the representative viewpoints will be visited to evaluate the sensitivity of views. In addition, the study area will also be extensively visited to consider visibility of the Proposed Development as receptors move through the landscape.
- 8.4.8 The viewpoints will be used as the basis for determining the effects on visual receptors within the study area. The sensitivity of different receptor groups will be set out in the LVIA methodology. The level of effect experienced by different visual receptors will be determined by considering the sensitivity of the receptors with the magnitude of change resulting from the introduction of the Proposed Development.
- 8.4.9 It is proposed that photomontage visualisations are prepared for 2no of the assessment viewpoints to further illustrate the nature of the proposals. The visualisations would illustrate two time periods, to show the scheme both at Year 1 and Year 15 when any mitigation planting will have matured.

8.5 Potential effects

8.5.1 The LVIA will consider the potential effects of the Proposed Development upon:

- *individual landscape features and elements;*
- *landscape character;*
- *visual amenity and the people who view the landscape; and*
- *landscape designations as appropriate.*

8.5.2 The LVIA will consider the effects during construction of the Proposed Development and also during the operational lifetime of the Proposed Development.

8.5.3 Effects during the first of these phases are considered to be temporary and would have a short duration. Effects associated with the operational phase of the Proposed Development are considered to be long term effects.

8.5.4 Following the judgement of the sensitivity of the landscape or visual receptor, the LVIA will provide a judgement as to the magnitude of change and the level of the effect experienced by each receptor, along with a statement to clarify whether the effect resulting from the Proposed Development is significant or not.

8.6 Proposed mitigation

8.6.1 Mitigation measures may include:

- *avoidance of effects;*
- *reduction in magnitude of effects; and*
- *compensation for effects (which may include enhancements to offset any adverse effects).*

8.6.2 The primary mitigation adopted in relation to landscape and visual matters is likely to be embedded within the design of the Proposed Development and will comprise the consideration given to the siting and design of the proposals, along with the provision of mitigation planting to further minimise effects.

8.7 Cumulative effects

8.7.1 The cumulative effect of the Proposed Development in association with other energy developments will also be considered. It is proposed that the same 3km detailed study area be adopted as the cumulative ZoI to consider cumulative effects, which is considered represents a proportionate extent of the study area and the limit within which any potential significant cumulative effects might occur.

8.8 Conclusion

8.8.1 It is understood that the proposed development has the potential to give rise to significant landscape and visual effects and therefore it is proposed that a landscape and visual impact assessment is scoped into the EIA.

9 Conclusions and ES Structure

9.1.1 Based upon the information presented in the above sections it is considered that the following topics will be scoped out from further assessment as individual chapters in the ES, but will still be addressed through the EIA either in the form of the front end chapters or within topic assessments:

- Greenhouse gases and climate change;
- Accidents, fires and natural disasters;
- Agricultural land and ground conditions;
- Air quality;
- Human health;
- Heritage;
- Hydrology, flood risk and drainage;
- Noise and vibration;
- Transport and access; and,
- Waste.

9.1.2 The remaining topics as presented in the sections above are scoped into the ES and will form individual topic assessment chapters within the ES.

ES Structure

9.1.3 The EIA will be compiled into an ES document which will be produced in accordance with the 2017 EIA Regulations and will comprise three main components.

VOLUME 1: ENVIRONMENTAL STATEMENT – TEXT AND FIGURES

Chapter 1	Introduction
Chapter 2	Site and Local Context
Chapter 3	Proposed Development
Chapter 4	Consultation, site selection and alternatives
Chapter 5	Approach to assessment
Chapter 6	Ecology
Chapter 7	Landscape and visual impact
Chapter 8	Summary of mitigation, residual and interaction effects

VOLUME 2: TECHNICAL APPENDICES

NON-TECHNICAL SUMMARY