Great Harmeston Solar Farm

Environmental Statement

Technical Appendix 2.1
Applicant's Scoping Request Report

Development of National Significance
Pre-Application Consultation

March 2026

Environmental Impact Assessment Scoping Report

Great Harmeston Solar Farm, Pembrokeshire.

On behalf of Arise Renewable Energy UK Ltd.

Date: 12/12/2025 | Pegasus Ref: P24-1037

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1. Introduction

1.1. Overview

1.1.1. This Environmental Impact Assessment (EIA) Scoping Report has been prepared on behalf of ASUK HoldCo 4 Ltd ("the Applicant", a subsidiary of Arise Renewable Energy UK Ltd. in respect of a proposal on land near Great Harmeston Buildings, Pembrokeshire (the "Application Site or Site"), which is proposed for an installation and operation of ground mounted solar photovoltaic arrays with all associated works, equipment and necessary infrastructure (the "Proposed Development").

1.1.2. By virtue of its potential generating capacity of between 10MW-350MW, this Proposed Development constitutes a Development of National Significance ("DNS") under section 4 of the Developments of National Significance (Specified Criteria and Prescribed Secondary Consents) (Wales) Regulations 2016 , for the purposes of section 62 (D) of the Planning (Wales) Act 2015 ("the Wales Act").

1.1.3. Provision in the Wales Act came into force in March 2016 which requires the Welsh Minister to determine DNS projects, with applications being made directly to them. The process for applying for a DNS is set out by the Development of National Significance (Procedure) (Wales) Order 2016 and subsequent Regulations. The DNS application process is managed by Planning Inspectorate Wales on behalf of the Welsh Government.

1.1.4. Environmental Impact Assessment (EIA) is not required for all developments. A Screening Direction request was sent to Welsh Ministers on 27th August 2025. A Screening Direction was issued on 3rd October 2025 concluding the Proposed Development is EIA development. The Screening Direction confirmed an EIA would be required as queries had been raised by consultees about the potential effects of the proposed development in relation to the historic environment, ecology, as well as landscape and visual impacts on nearby sensitive receptors. In their Screening Direction, PEDW stated the potential for cumulative effects is also considered to be significant as within 3km of the site there are a number of solar farms as well as construction of 56 holiday lodges. The Screening Direction also refers to there being no evidence provided at that stage to demonstrate that any potential impacts from glint and glare would not be significant on the amenity of residents and in relation to the nearby roads and railway.

1.1.5. This EIA Scoping Report has been prepared to identify the likely significant environmental effects of the Proposed Development which will need to be assessed in detail in the EIA and reported within the Environmental Statement (ES), which will accompany the DNS planning application.

1.1.6. The EIA Scoping Report seeks to confirm agreement with the Welsh Ministers on the content of the forthcoming ES and provide information to the Welsh Ministers to enable an EIA Scoping Direction to be made under Regulation 33 of the Town and Country Planning (Environmental Impact Assessment) Wales Regulations 2017 (the "EIA Regulations"). The ES will accompany a full DNS planning application to be submitted to the Welsh Ministers. Therefore, this EIA Scoping Report has been submitted to the Welsh Ministers to assist in providing its Scoping Direction for the Proposed Development.

1.1.7. This EIA Scoping Report has been produced on behalf of the Applicant by Pegasus Group. Pegasus is registered to the ISEP EIA Quality Mark, a scheme operated by the Institute of

Sustainability and Environmental Professionals (ISEP), formerly known as the Institute of Environmental Management and Assessment (IEMA) which allows consultancies that lead the co-ordination of statutory EIAs in the UK to make a commitment to excellence in their EIA activities and have this commitment independently reviewed.

1.2. Requirements of the Environmental Impact Assessment Process

1.2.1. The Environmental Impact Assessment (EIA) process is the mechanism by which development proposals are appraised in terms of environmental and socio-economic criteria, in addition to the engineering and technical considerations. The EIA process ultimately assists in assessing the likely significant effects arising from a development (beneficial and adverse) and defines the context of the Proposed Development and its construction/decommissioning, and examines the issues considered pertinent.

1.2.2. The purpose of the EIA is to establish the nature of the existing Application Site and its surroundings (i.e. the baseline) and the nature of the Proposed Development and compare the baseline with the scenario once the proposals are in place, so to identify the likely significant effects that may arise as a result. This requires consideration of effects during construction, including any demolition or enabling works, effects once operational and at the time of decommissioning. The document produced as a result of the EIA process is known as the Environmental Statement (ES).

1.2.3. The ES will be prepared in accordance with Regulation 17 (3) and (4), and Schedule 4 of the EIA Regulations and the advice in Welsh Office Circular 11/99: Environmental Impact Assessment and the Local Planning Authorities Local Development Plan, as relevant to each of the technical disciplines and EIA.

1.3. Purpose of the Scoping Report

1.3.1. The process of identifying the matters to consider within an ES (establishing the scope of the assessment) is known as scoping. Scoping is not a mandatory requirement under the EIA Regulations. However, it is recognised that through the scoping exercise, the key environmental matters are identified at an early stage, which permits subsequent work to concentrate on those environmental topics for which significant effects may arise as a result of a proposed development

1.3.2. This EIA Scoping Report has been prepared to accompany a formal EIA Scoping Request under Regulation 33 of EIA Regulations. The purpose of the EIA Scoping Report is to set out details of the Proposed Development at Great Harmeston Solar Farm, Pembrokeshire, the proposed EIA methodology and the proposed scope of technical assessments, reasoned justification will also be provided within this report on topics which are proposed to be 'scoped out' of the EIA process.

1.3.3. Comments from Welsh Ministers and its consultees regarding the scope of works are invited. The intention of this scoping exercise is to gain agreement from all key parties regarding the proposed methodology and scope of the forthcoming assessments in the ES.

1.3.4. This EIA Scoping Report sets out the views of the Applicant, which have been informed by the advice and supporting assessments of specialist technical consultants, as to the proposed scope of the environmental issues to be considered in the EIA and as to the method by which assessment will be undertaken. This is especially relevant where integral measures as part of the Proposed Development or its construction will reduce adverse

impacts, and also in the light of ensuring the ES is proportionate. Separate 'non-ES' reports will however still be undertaken, where necessary, covering those issues considered to be less than significant, outside the EIA process.

1.3.5. This is in line with advice in Welsh Office Circular 11/99: Environmental Impact Assessment, paragraph 82 – ***"Whilst every ES should provide a full factual description of the development, the emphasis of Schedule 4 is on the 'main' or 'significant' environmental effects to which a development is likely to give rise. In many cases, only a few of the effects will be significant and will need to be discussed in the ES in any great depth. Other impacts may be of little or no significance for the particular development in question and will need only very brief treatment to indicate that their possible relevance has been considered. While each ES must comply with the requirements of the Regulations, it is important that they should be prepared on a realistic basis and without unnecessary elaboration"***

1.3.6. In accordance with Regulation 33 the EIA Regulations this EIA Scoping Report contains:

a. a plan sufficient to identify the land;

b. a brief description of the nature and purpose of the development including its location and technical capacity;

c. a description of the likely significant effects of the development on the environment;

d. a statement that the request is made in relation to a development of national significance for the purposes of section 62D of the 1990 Act; and

e. such other information or representations as the person making the request may wish to provide or make

1.4. The Applicant

1.4.1. Arise is a leading independent renewable energy company operating across UK, Sweden, Finland, Norway and Ukraine. Arise manage the full value chain, from exploration and permitting to financing, construction, sales, and long-term management of renewable electricity production. Arise has a growing portfolio which exceeds 8,500 MW, including wind, solar, and battery storage projects. The company currently manages around 2,000 MW of wind power and own 11 wind farms in southern Sweden. Arise is listed on Nasdaq Stockholm and employs around 70 people.

1.5. Structure of the Scoping Report

1.5.1. The remainder of this EIA Scoping Report is divided into the following Sections:

- Section 2: The Site and Project Overview
    - An overview of the Application Site and the Proposed Development.
- Section 3: Legislative Requirements and the General Approach to EIA Process
    - A summary of the relevant EIA legislation and EIA process which will be undertaken, and the proposed structure and format of the ES is set out.

- Section 4: Scope of Assessment
    - A summary of the work undertaken and the environmental topics considered in the Scoping Report.
- Section 5: Topics to be 'Scoped Out'
    - Each environmental topic not proposed to be considered in the ES is discussed in turn.
- Section 6: Topics to be 'Scoped In'
    - Technical topics to be included in the ES with methodologies and approach set out

1.5.2. The Applicant has appointed a team of specialist consultants to consider planning and environmental matters in relation to the Proposed Development and to provide input into the production of this EIA Scoping Report where necessary, as listed in **Table 1.1** below. Available technical assessment work undertaken by consultants has informed the consideration of likely significant effects within their respective disciplines.

Table 1.1 - Consultant Team

Discipline	Company	Contributed to Scoping Report
Planning	Pegasus Group	
Environmental Impact Assessment	Pegasus Group	Yes
Landscape and Visual	Pegasus Group	Yes
Transport	Pegasus Group	Yes
Cultural Heritage	Pegasus Group	Yes
Flood Risk & Drainage	Pegasus Group	Yes
Socio Economics	Pegasus Group	Yes
Ecology	Tyler Grange	Yes
Ground Conditions	Geo Environmental Group	
Noise	LFAcoustics	
Glint and Glare	Pager Power	Yes
Agricultural Circumstances	Kernon Countryside Consultants and Amet Property	

2. The Site and Project Overview

2.1. Site Context

2.1.1. The boundary of the Proposed Development extends to approximately 128 hectares across a number of land parcels (see Site Location Plan in Appendix A). The Site is located entirely within the administrative boundary of Pembrokeshire County Council (PCC), on land near Great Harmeston Buildings, Pembrokeshire, SA62 3HM. The village of Johnston lies immediately north, village of Steynton (1.1km) south and Milford Haven (2.9km) south of the Site. The Site comprises of fields predominantly for arable use, bound by a mixture of mature woodland, trees, hedgerows, fencing, tracks, road and a railway line.

2.1.2. The Site is segregated by two 'A' roads and a railway line, a number of land parcels are located to the west of the A4076 Milford Road, with further land located between the A4076 and A477 (which is bisected by the Transport for Wales (TfW) railway line), and additional fields located on land to the west of the A477 (also bisected by the TfW railway line). There will be a number of separate access points owing to the presence of the TfW railway line.

2.1.3. The surrounding landscape is a mixed rural and urbanising setting, within the immediate area agricultural fields are interspersed with pockets of urban features. This includes the village of Johnston to the north of the Site, the local road network (A4076 Milford Road and A477). A Solar Farm is located south of Tiers Cross, 0.5km west of the Site. The adjoining area to the Site primarily consists of non-built-up land and agricultural land. The Site is surrounded by multiple unused artificial landscapes and industrial/manufacturing units located to the southeast and east. Residential buildings are located to the southeast, east, south, and northeast. Nearby, the Johnston Community Primary School is 0.94 km to the east, and Milford Haven School is 1.72 km to the south.

2.1.4. The Site will be served from the A4076 Milford Road to the north via Haverfordwest for construction, operation and decommissioning purposes which has onward connections to the A40/A48 and M4. There will be a number of separate access points into the Site owing to the land parcels being segregated by the A4076 and A477.

2.1.5. The Site is not in or adjacent to an environmentally sensitive area, as defined by Regulation 2(1) of the EIA Regulations (i.e., sites designated as Sites of Special Scientific Interest (SSSI), National Parks, World Heritage Sites, Scheduled Monuments, Area of Outstanding Natural Beauty, and sites covered by international conservation designations) (see Environmental Designations Plan in Appendix B). The majority of the Site is located within Flood Zone 1 (the zone with the lowest probability of flooding), small areas of Flood Zone 2 and 3 are limited to the Site boundary and one section within the southwest of the Site associated with an unnamed stream in this area.

2.1.6. The terrain of the Site features a gentle slope descending from the east to the southwest, with the lowest altitude being 40 meters above ordnance datum (mAOD) and the highest altitude at 70 mAOD.

2.1.7. There is only one Public Right of Way (PRoW), PP81/1 which lies adjacent to the red line boundary in the southern-eastern parcel of the Site and comes inside the Site boundary for a very small section along its route.

2.2. Project Overview

2.2.1. The Proposed Development is for the installation of ground mounted solar photovoltaic arrays (with a capacity of up to 65MWac) together with all associated work, equipment, infrastructure and onsite point of connection via underground cable.

2.2.2. Through the utilisation of sunlight, the facility will generate renewable energy for distribution onto the National Grid network. This will support local and national renewable energy targets and ultimately reduce the reliance on finite fossil fuel based sources as a form of energy.

2.2.3. Ground mounted solar PV is both temporary and reversible, allowing the Site to be restored to its former agricultural use. The Proposed Development is proposed for a 40 year period. The Proposed Development is likely to consist of the following elements:

- Photovoltaic (PV) panels based on a simple metal framework ('table') to form an 'array' which is pile driven into the ground, avoiding the need for substantial foundations. The arrays will operate on a fixed panel system to make efficient use of the sun's energy and would have a maximum height of approximately 3m above original ground level and will be spaced circa 3.5m in rows, and an angle of 10-25degrees;
- Underground cable point of connection into an existing overhead powerline pole, to the south of the Site boundary;
- Substation within the Site boundary;
- A number of central inverters (inverters and transformers housed together in prefabricated containers) at various locations around the arrays;
- Boundary fencing (e.g. deer fencing) around the edge of the solar farm at a maximum height of 2.4m above original ground level;
- A CCTV system, either pole or fence-mounted, located at strategic points around the site perimeter for security and maintenance reasons, maximum height of 4m;
- Associated internal service tracks;
- Relevant communications (potential communications mast up to 15m) and monitoring equipment in substation area;
- Landscaping and biodiversity enhancements;
- Temporary construction areas; and
- A number of separate access points into the Site for construction, operation and decommissioning purposes, predominantly utilising existing farm access points.

2.2.4. The point of connection is on-site, through a buried underground cable connecting to an overhead power line pole within the Site boundary. The underground cabling will be laid via surface dug trenches of approximately 1m deep and 50cm wide, and backfilled. Directional drilling will be employed in the vicinity of the railway line to route the internal cable

connecting the fields. Due to the nature of the cable route as below ground infrastructure, once the cable route is operational, effects would be minor or negligible.

2.2.5. Several existing access points will be used for access for the construction, maintenance and decommissioning of the solar farm. If necessary, some minor modifications to enable access to the site by all vehicles anticipated to visit it will be undertaken. Existing farm tracks will be used for internal access within the Site wherever possible. New access tracks, where required, will be formed, using a layer permeable crushed stone. Visibility splays will need to be designed and agreed in accordance with the requirements of the local highway authority.

3. Legislative Requirements and the General Approach to EIA Process

3.1. Legislative Requirements

3.1.1. The EIA process will be undertaken in accordance with the requirements of the Town and Country Planning (Environmental Impact Assessment) Wales Regulations 2017, which are referred to in this document as the 'EIA Regulations'. Specifically, Schedule 4 (Regulation 17 (3)), sets out the information for inclusion in ES's and is summarised as follows:

1. *Description of the development, including in particular—*

(a) a description of the location of the development;

(b) a description of the physical characteristics of the whole development, including, where relevant, requisite demolition works and the land-use requirements during the construction and operational phases;

(c) a description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used;

(d) an estimate, by type and quantity, of expected residues and emissions (such as water, air, oil and subsoil pollution, noise, vibration, light, heat, radiation) and quantities and types of waste produced during the construction and operational phases.

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

3. *A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.*

4. *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 hydromorphological 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. *A description of the likely significant effects of the development on the environment resulting from, inter alia—*

(a) *the construction and existence of the development, including, where relevant, demolition works;*

(b) *the use of natural resources in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;*

(c) *the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances and the disposal and recovery of waste,*

(d) *the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);*

(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;*

(f) *the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;*

(g) *the technologies and the substances used.*

The description of the likely significant effects on the factors specified in regulation 4(2) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development. This description should take into account the environmental protection objectives established at European Union level as they were immediately before IP completion day (including in particular those established under Council Directive 92/43/EEC and Directive 2009/147/EC) or at national level].

6. *A description of the forecasting methods or evidence used to identify and assess the effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.*

7. *A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.*

8. *A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to [assimilated] law such as any law which implemented] Directive 2012/18/EU of the European Parliament and of the Council or Council Directive 2009/71/Euratom or relevant assessments carried out pursuant to national legislation may be used for this purpose provided that the requirements of [any law which implemented] the Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.*

9. *A non-technical summary of the information provided under paragraphs 1 to 8.*

10. *A reference list detailing the sources used for the descriptions and assessments included in the environmental statement.*

3.2. Structure of the Environmental Statement

3.2.1. The ES will report the findings of the EIA and will address the requirements of Schedule 4 of the EIA Regulations, as set out above.

3.2.2. The ES is anticipated to include 3 volumes:

- Volume 1 - Main Text and Figures: sets out the findings to each of the environmental disciplines and figures (i.e. plans/drawings) supporting the main assessments;
- Volume 2 - Technical Appendices: supports the main assessments within Volume 1 with accompanying technical reports;
- Non-Technical Summary (NTS) would also be provided as a separate document

3.2.3. The anticipated structure and content of Volume 1 (and Volume 2 where applicable) of the ES is likely to be as follows:

- Chapter 1 Introduction
- Chapter 2 EIA Assessment Scope and Methodology
- Chapter 3 The Application Site
- Chapter 4 Proposed Development and Alternatives
- Chapter 5 Landscape and Visual
- Chapter 6 Cultural Heritage Assessment
- Chapter 7 Ecology
- Chapter 8 Glint and Glare
- Chapter 9 Socio Economics
- Chapter 10 Summary
- A separate Non-Technical Summary will also be provided

3.2.4. It is relevant to acknowledge the extent of the environmental information that has previously been provided in relation to the Site which has assisted in determining what the potential likely significant effects of the Proposed Development may be, and in turn, what matters need to be considered as part of the EIA.

3.3. Overarching EIA Methodology

3.3.1. The first four chapters of the ES would be introductory and provide essential information for the subsequent technical chapters. Further information on these chapters is set out below.

Chapter 1 - Introduction

3.3.2. This chapter of the ES will provide an introduction to the document and present details of the ES's structure and context, in addition to how consultees and members of the public can comment on the document or obtain additional copies.

Chapter 2 - EIA Scope and Methodology

3.3.3. This chapter provides a summary of the agreed scope of assessments to be considered within the ES, with reference to consultation responses and explains the general methodology used to prepare the technical chapters, including reference to the general approach in determining significance. Information in relation to cumulative impacts is also set out within this chapter, along with any limitations or assumptions used throughout the ES.

3.3.4. Each topic chapter will provide bespoke details of the methodology for baseline data collection, approach to the assessment of effects and limitations and assumptions. Each identified environmental topic will be considered by a specialist in that area. The identification and evaluation of effects will take into account relevant topic-specific guidance where available.

Environmental Baseline Conditions Methodology

3.3.5. The existing and likely future environmental conditions in the absence of the project are known as 'baseline conditions'. Each topic based chapter will include a description of the current (baseline) environmental conditions. The baseline conditions at the Site and within the study area form the basis of the assessment, enabling the likely significant effects to be identified through a comparison with the baseline conditions.

3.3.6. The baseline for the assessment of environmental effects will primarily be drawn from existing conditions during the main period of the EIA work. Consideration will also be given to any likely changes between the time of survey and the future baseline for the construction and operation of the project. In some cases, these changes may include the construction or operation of other planned developments in the area. Where such developments are built and operational at the time of writing and data collection, these will be considered to form part of the baseline environment.

3.3.7. Where sufficient and robust information is available, such as expected traffic growth figures, other future developments will be considered as part of the future baseline conditions. In all other cases, planned future developments will be considered within the assessment of cumulative effects.

3.3.8. The consideration of future baseline conditions will also take into account the likely effects of climate change, as far as these are known at the time of writing. This will be based on information available from the UK Climate Projections project (UKCP18), which provides information on plausible changes in climate for the UK (Environment Agency and Met Office, 2018) and on published documents such as the UK Climate Change Risk Assessment 2017 (Committee on Climate Change, 2016)

Assessment of Effects

3.3.9. Generically, the significance of an environmental effect is determined by the interaction of magnitude and sensitivity, whereby the effects can be positive or negative. Generic criteria to be used in carrying out this process are detailed below. Some technical chapters will use discipline specific criteria with their own terms for magnitude, sensitivity and significance. This will be explained in the relevant chapter.

General Criteria for Receptor Sensitivity

3.3.10. Receptors are defined as the physical resource or user group that would be affected by a proposed development. The baseline studies will identify potential environmental receptors for each topic and will evaluate their sensitivity to the proposed development. The sensitivity or importance of a receptor may depend, for example, on its frequency or extent of occurrence at an international, national, regional or local level. **Table 3.1** below sets out the general methodology for determining the sensitivity of a receptor

Table 3.1 - General Criteria Matrix for Receptor Sensitivity

Significance Criteria	Description of Criteria
High	The receptor / resource has little ability to absorb change without fundamentally altering its present character or is of international or national importance.
Medium	The receptor / resource has moderate capacity to absorb change without significantly altering its present character or is of high and more than local (but not national or international) importance.
Low	The receptor / resource is tolerant of change without detrimental effect, is of low or local importance.
Negligible	The receptor / resource can accommodate change without material effect, is of limited importance.

General Criteria for Magnitude of Change

3.3.11. Impacts are defined as the physical changes to the environment attributable to the project. For each topic, the likely environmental impacts will be identified, and the magnitude of change is a consideration of how much the impact alters the baseline condition. The magnitude of the impact will be described using defined criteria within each topic chapter. **Table 3.2** below sets out the general methodology for determining the magnitude of change.

Table 3.2 - General Criteria Matrix for Magnitude of Change

Significance Criteria	Description of Criteria
High	Total loss or major/substantial alteration to elements / features of the baseline (pre-development) conditions such that the post development character / composition / attributes will be fundamentally changed.
Medium	Loss or alteration to one or more elements / features of the baseline conditions such that post development character / composition / attributes of the baseline will be materially changed.
Low	A minor shift away from baseline conditions. Change arising from the loss/alteration will be discernible / detectable, but the underlying character / composition / attributes of the baseline condition will be similar to the pre-development.
Negligible	Very little change from baseline conditions. Change not material, barely distinguishable or indistinguishable, approximating to a 'no change' situation.

Significance of Effect

3.3.12. The significance of the effect is determined by cross referencing the sensitivity of the receptor with the magnitude of change on the receptor. **Table 3.3** below sets out the general methodology for determining the significance of effect. The shading indicates those significance ratings that are deemed to be 'significant' effects i.e. 'Major' and 'Moderate'.

Table 3.3 -General Significance of Effect Matrix

Magnitude of Change	Sensitivity of Receptor				
		High	**Medium**	**Low**	**Negligible**
	High	Major	Major	Moderate	Negligible
	Medium	Major	Moderate	Minor to Moderate	Negligible
	Low	Moderate	Minor to Moderate	Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

Nature of Impact

3.3.13. The categorisation of the impact may take into account the following four factors:

- Extent;
- Duration;
- Frequency; and
- Reversibility.

3.3.14. Impacts will be defined as either adverse or beneficial. Depending on discipline, they may also be described as:

- Direct: Arise from activities associated with the project. These tend to be either spatially or temporally concurrent;
- Indirect: Impacts on the environment which are not a direct result of the project, often produced away from the project site or as a result of a complex pathway.

3.3.15. Impacts will be divided into those occurring during the construction, operational and decommissioning phase. Often construction and decommissioning phase impacts are assessed as similar in nature. Where appropriate, some chapters may refer to these as temporary and permanent impacts.

Mitigation Measures and Residual Effects

3.3.16. The EIA Regulations require that where significant effects are identified *'a description of any features of the proposed development, or measures envisaged in order to avoid, prevent or reduce or, if possible, offset likely significant adverse effects on the environment'* should be included in the ES.

3.3.17. The development of mitigation measures is part of an iterative EIA process. Therefore, measures will be developed throughout the EIA process in response to the findings of initial assessments. The project that forms the subject of the DNS planning application will include a range of measures designed to reduce or prevent significant adverse environmental effects arising, where practicable. In some cases, these measures may result in enhancement of environmental conditions. The assessment of effects will therefore take into account all measures that form part of the project and to which the Applicant are committed.

3.3.18. The topic chapters will therefore take into account all measures that form part of the Proposed Development, including:

- Measures included as part of the integrated project design (referred to as embedded mitigation); and
- Measures to be adopted during construction to avoid and minimise environmental effects, such as pollution control measures. These measures would be implemented through the Construction Environmental Management Plan (referred to as additional mitigation)

3.3.19. In some cases, monitoring measures may be appropriate, for example, to ensure that proposed planting becomes established. Where appropriate, monitoring measures will be set out.

3.3.20. Any residual effects following the implementation of mitigation measures will be determined accordingly. The residual effects represent the overall likely significant effect of the Proposed Development on the environment having taken account of practicable/available mitigation measures.

Cumulative and In-combination Effects

3.3.21. The ES will respond to the requirement in the Regulations to assess the cumulative effects of the Proposed Development which will specifically consider two types of effect:

- Cumulative Effects: The combined effects of development schemes which may, on an individual basis be insignificant but, cumulatively, have significant effect; and
- In-combination effects: The combined effect of individual effects (for example noise, airborne dust or traffic) on a single receptor where deemed potentially significant.

3.3.22. With respect to cumulative effects, the EIA Regulations state that consideration should be given to *"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"* (Schedule 4, 5e).

3.3.23. Regard will therefore be had to relevant *"existing and/or approved projects",* which alongside the development of the proposals and the Application Site, could potentially result in cumulative significant effects (discussed further below). It is relevant to note however that not all these projects will necessarily have the potential for cumulative impacts.

3.3.24. It is also acknowledged that there may be other proposals which are considered as *"reasonably foreseeable"* as referred to within the European Guidance[1] in relation to the definition of cumulative impacts. It is important to recognise that it is not the role of the ES to assess all these types of potential developments and a staged approach in identifying which 'other sites' are relevant to consider is appropriate.

3.3.25. A preliminary search of cumulative development within Pembrokeshire County Council has been undertaken with a 3km search radius around the Proposed Development. Proposals for any major existing, pending or approved applications within the vicinity of the Site, which may give rise to significant cumulative effects has been assessed. The identifiable sites have been outlined in **Table 3.4** below and are shown in Appendix D Cumulative Sites Plan.

[1] European Commission (EC) 1999 – Adapted from Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions

Table 3.4 –List of Cumulative Sites

WIND					
ID	Planning Ref	Address	Status	Distance From Site (km)	Bearing
1	10/0038/PA	Castle Pill Farm, Castle Pill Road, Steynton	Operational	2.13	1.9
2	10/1272/PA	Steynton C+F	Operational	2.16	5.3
3	11/0831/PA / 12/1149/PA	Lower Scoveston Farm	Operational	2.05	19.5
4	11/0166/PA	Lower Solbury Farm, WALWYNS CASTLE	Operational	2.85	130.7
5	11/0166/PA	Lower Solbury Farm, WALWYNS CASTLE	Operational	2.75	131.6
6	12/0363/PA	South East of Solbury Farm	Operational	2.19	130.9
7	12/0363/PA	South East of Solbury Farm	Operational	1.96	143.6
8	11/0878/PA	Norton Farm, Rosemarket	Operational	1.85	319.5
9	13/0047/PA	Harmeston Farm, Steynton	Operational	0.00	90.0
10	13/0222/PA	Scoveston Park, Scoveston, Milford Haven	Operational	1.66	21.5
11	14/1045/PA	Scoveston Park,Steynton, Milford Haven	Operational	1.75	14.0
12	15/0457/PA	Upper Dredgeman Hill Farm, Merlins Bridge, Haverfordwest	Operational	2.83	194.0
13	12/1206/PA	Lawrence Landfill	Operational	2.58	191.1
14	12/1206/PA	Lawrence Landfill	Operational	2.58	186.8
15	05/1292/PA	Steynton 1	Operational	1.72	33.8
16	05/0394/PA	Steynton 2	Operational	1.94	28.2
17	07/1567/PA	Steynton 3	Operational	2.50	21.3
18	10/0946/PA	RO Vine Cottage, Blackbridge	Operational	2.70	26.9
19	SC/0846/12	The Byre, Woodson	Screening Opinion	1.30	95.6
20	SC/0987/12	Land south of New House Farm,	Screening Opinion	2.72	168.8
21	SC/0020/13	Bolton Hill Quarry, Tiers	Screening Opinion	0.87	183.6
22	SC/0089/13	Bolton Hill Quarry, Tiers Cross	Screening Opinion	2.35	239.3

23	SC/0200/13	Meadow View, Leonardston Road, Llanstadwell, Milford Haven	Screening Opinion	2.42	334.5
24	SC/0260/PA	Hayston Farm, Johnston	Screening Opinion	0.38	26.3
25	SC/0350/13	Land to the west of Great Westfield Farm, Thurston Lane, Sardis	Screening Opinion	2.40	283.3
26	SC/0377/12	Steynton Farm, Thornton Road, Steynton	Screening Opinion	1.00	38.9
27	SC/0093/11	Lower Scoveston Farm	Screening Opinion	2.01	21.4
28	SC/0471/14	Land at Hayston Farm north of Neyland Road, Neyland	Screening Opinion	0.38	26.3
29	SO/0667/15	Tierson, Lower Thornton, Milford Haven	Screening Opinion	0.63	82.6
30	SC/0037/17	Lower Scoveston Farm,Scoveston Road, SCOVESTON, Milford Haven	Screening Opinion	2.13	337.3
31	SO/0285/17	Land adjoining Milford Haven Refinery, Robeston West	Screening Opinion	2.16	85.8
32	SO/0109/21	Bolton Hill WTW	Screening Opinion	0.81	180.3
33	13/0527/PA	Barretts Hill, Neyland Road, Steynton	Appeal Dismissed	0.64	49.1
34	14/0390/PA	Land at Jordonston Farm, Milford Haven	Appeal Dismissed	1.31	312.0
35	14/0410/PA	Woodson, Lower Thornton, Milford Haven	Appeal Dismissed	1.30	94.7
36	10/0322/PA	Copy Bush Farm, Waterston	Expired Approval	2.75	10.7
37	12/1068/PA	Land to the South West of upper dredgeman hill farm, Merlins Bridge	Refused	2.85	193.7
38	12/1151/PA	Rose Cottage	Refused	1.52	97.0
39	13/0545/PA	Studdolph Hall, Steynton	Refused	0.45	97.9
40	14/0412/PA	Rose Cottage Farm, Robetston West, Milford Haven	Refused	1.52	96.6
41	13/0117/PA	Barretts Hill, Neyland Road, Steynton	Withdrawn	0.80	38.3

SOLAR					
ID	PlanningRef	Address	Status	Distance From Site (km)	Bearing
A	12/0614/PA	Land to the South East of Court Road, Liddeston (Solar)	Operational	2.69	28.8
B	13/0214/PA	Rose Cottage Farm; Woodson Farm; Tierson Farm, Tiers Cross (Solar)	Operational	0.41	140.6
C	15/0443/PA	Land east of A4076 (T) at Pope Hill, Johnston (Solar)	Operational	2.33	208.1
D	23/0560/PA	Land to rear of The Larder, Vine Road (Holiday Lodges)	Operational	0.89	202.0
E	15/0451/PA	Firstone House, Walwyns Castle, Haverfordwest (Solar)	Operational	2.85	117.9
F	18/0386/PA	Bolton Hill WTW, Tiers Cross (Solar)	Pending Planning Permission	0.79	170.2
G	18/0367/PA	Johnston Sewage Treatment Works, Kiln Road (Solar)	Pending Planning Permission	1.24	201.2
H	CAS_03107_C5X9W1	White House Farm Solar Farm (Solar & BESS)	Pending Planning Permission	1.80	204.9
I	CAS-03072-D7X6N7	Alleston Solar Farm (Solar)	Pending Planning Permission	10.09	324.0

3.3.26. Additionally, a search will be undertaken on the PEDW website to identify any other Developments of National Significance that may interact with the Proposed Development. Major application projects are developments that are one or more of the following:

"a) the winning and working of minerals or the use of land for mineral-working deposits;

(b) waste development;

(c) the provision of dwellinghouses where—

(i) the number of dwellinghouses to be provided is 10 or more; or

(ii) the development is to be carried out on a site having an area of 0.5 hectares or more and it is not known whether the development falls within sub-paragraph (c)(i);

(d) the provision of a building or buildings where the floor space to be created by the development is 1,000 square metres or more; or

(e) development carried out on a site having an area of 1 hectare or more."[2]

3.3.27. Projects that fall outside the above criteria and those listed individually will only be included in the assessment if specifically identified by stakeholders and agreed as material to the ES.

3.3.28. Each has been considered in relation to how certain the development is in coming forward as per UK Planning Inspectorate (PINS) 2024 – Guidance. Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment; although specific to Nationally Significant Infrastructure Projects, is also of relevance to the best practice approach of cumulative effects assessment in DNS Applications.

3.3.29. The following categories of certainty levels include - 'certain' (development under construction), 'likely' (permitted applications not under construction), 'potential' (undetermined applications which are identified in relevant local plan) or 'uncertain' (undetermined applications with no other status). The assessment determines whether certainty levels may influence the baseline or have the potential for significant cumulative effects with the Proposed Development; thus, identifying what 'other developments' are considered appropriate to consider in any cumulative scenario within the resultant ES.

3.3.30. Where developments are already operational, these will be included in the baseline; and those which are currently under construction but likely to be completed prior to the Proposed Development (and sufficient environmental information known) will be considered as part of the future baseline for the non-cumulative effects assessment for each discipline chapter. The non-cumulative assessment of effects will have full regard to the presence of such schemes when arriving at any conclusions.

3.3.31. Whilst this EIA Scoping Report seeks to identify relevant schemes to be considered, it is to be acknowledged that the extent to which schemes need to be considered within each environmental discipline will inevitably vary. Each topic author will review the overall list of cumulative developments and identify those relevant to their topic.

3.3.32. The forthcoming ES will not include a separate cumulative effects chapter, instead each topic chapter will consider the potential for significant cumulative effects with other proposed developments.

3.3.33. Comments are invited on the content of the cumulative schemes. It is noted, however, that the Scoping Direction issued by PEDW on 3rd October 2025 did not refer to any additional potential cumulative developments required to be assessed.

Chapter 3 - Application Site

3.3.34. This chapter will describe the Application Site's location, context, existing use and features.

Chapter 4 - Proposed Development and Alternatives

[2] The Town and Country Planning (Development Management Procedure) (Wales) Order 2012

3.3.35. This chapter will provide a comprehensive description of the Proposed Development, including the construction process, and any relevant details on assumed timescales and phasing.

3.3.36. The EIA will be based upon a set of defined parameters, which will identify the extent of different land use areas (e.g. residential, open space, roads etc), maximum heights of buildings/ equipment and proposed ground levels and key landscape mitigation proposals integral to the scheme.

3.3.37. The parameters approach ensures that subsequent approvals and/or reserved matters will remain the same as that assessed within the ES. These parameters and controls define those aspects of the Proposed Development capable of having significant effects, as defined in the EIA Regulations. This ensures that key elements are assessed accordingly, however allows some flexibility for detail post submission.

3.3.38. The chapter will also provide 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, and an indication of the main reasons for selecting the chosen option.

Discipline Specific Chapters

3.3.39. Each discipline will be covered in an individual chapter. Further information on disciplines to be included and assessment methodologies are provided below in Section 6.

3.3.40. Within each of the assessment chapters the main structure of the information presented, although not exclusively, will be as per the following headings in **Table 3.5** below:

Table 3.5 – Technical Chapter Format and Content

Sub Heading	Content
Introduction	This section will introduce the assessment discipline and the purpose for which it is being undertaken.
Assessment Approach	This section will provide an explanation of methods used in undertaking the technical study with reference to published standards, guidelines and best practice. The application of significance criteria will also be discussed. It will also outline any limitations and assumptions encountered in compiling the required information. A summary of national, regional and local policies of relevance to the environmental discipline and assessment will be provided. Where applicable, relevant legislation will also be summarised.
Baseline Conditions	This will include a description of the environment as it is currently (2025) and as it is expected to change given the project were not to proceed (i.e. 'do-nothing' scenario). The method used to obtain baseline information will be clearly identified. Baseline data will be collected in such a

	way that the importance of the particular subject area to be affected can be placed in its context and surroundings so that the effects of the proposed changes can be predicted.
Assessment of Likely Significant Effects	This section will identify the likely significant effects on the environment resulting from the construction, operational and decommissioning phases of development.
Mitigation, Enhancement and Residual Effects	Adverse effects will be considered for mitigation and specific mitigation measures put forward, where practicable. Mitigation measures considered may include modification of the project, compensation and the provision of alternative solutions (including alternative technology) as well as pollution control, where appropriate. The extent of the mitigation measures and how these will be effective will be discussed. Where the effectiveness is uncertain or depends upon assumptions about operating procedures, data will be introduced to justify the acceptance of these assumptions. Clear details of when and how the mitigation measures will be carried out will be given. When certainty of impact magnitude and/or effectiveness of mitigation over time exists, monitoring programmes will be proposed to enable subsequent adjustment of mitigation measures, as necessary. The opportunity for enhancement measures will also be considered, where appropriate. Information will be included on the mechanism by which the mitigation will be secured (e.g. by planning condition) with outline arrangements for monitoring and responsibilities for doing so, where necessary. The residual effects, i.e. the effects of the proposed development assuming implementation of proposed mitigation, will be determined. The residual effects represent the overall likely significant effect of the development on the environment having taken account of practicable/available mitigation measures.
Cumulative and In-Combination Effects	The cumulative effects of the proposed development and the identified committed developments will be assessed. The in-combination effects of multiple environmental effects from the Proposed Development that could cause a potential significant effect on the same receptor or resource will be assessed.

Summary	A summary of the assessment and conclusions will be provided at the end of each technical chapter.

Summary Chapter and Non-Technical Summary

3.3.41. A chapter summarising the above discipline findings will be presented. A separate Non-Technical Summary will also be provided in accordance with the EIA Regulations.

3.4. Preparation of the ES

3.4.1. In accordance with the Regulations, the ES will be prepared by "competent experts", as listed at the outset of this report. A statement outlining the relevant experience of the experts who have undertaken the assessment and drafted the technical chapters within the ES will be provided. It is also noted the Regulations now require decision makers to ensure they have 'necessary skills in house'.

4. Scope of Assessment

4.1. Work Undertaken to Date

4.1.1. The following studies have been undertaken or are currently ongoing in relation to the Proposed Development.

Ecology

4.1.2. The study area was determined based on best practice guidance documents, including Chartered Institute of Ecology and Environmental Management CIEEM Guidelines[3] [4], and species-specific best practice guidance documents as appropriate.

4.1.3. Desk based studies were undertaken in November 2024 for a 10km radius around the Proposed Development for international statutory sites, and a 2km radius for national statutory and non-statutory sites and protected and priority species records.

4.1.4. An 'extended' Phase I habitat survey[5] and UK Habitat Classification survey was undertaken by suitably qualified Ecologist with over 16 years' experience in October 2024. A follow up visit was conducted in July 2025, during the optimal botanical season by an ecologist with 20 years' experience. The methods used during the walkover survey broadly followed methods used in an 'extended' Phase I habitat survey and entailed recording the main plant species, assessing the suitability of habitats for protected/notable species and classifying and mapping habitat types with reference to the Habitat Definitions provided by the UK Habitat Classification Working Group[6].

4.1.5. A badger survey was undertaken in October 2024 in accordance with standard best-practice methodologies[7] [8]. The survey comprised a walkover of all accessible habitats within the Site and a 30m buffer, recording field signs including setts, latrines, paths, snuffle holes, prints and hair. One active badger sett entrance was identified just south of the Site boundary, but no setts or other definitive signs were recorded within the red line boundary. Suitable foraging habitats such as hedgerows, field margins and grassland are present across the Site, and badgers are therefore considered likely to use the area for commuting and foraging, although no direct constraint to the Proposed Development has been identified.

4.1.6. Non-breeding (wintering) bird surveys were undertaken by a third party (Logika Group[9]) in the 2024/2025 winter season to assess the presence and distribution of bird species across the Proposed Development Area. The survey methodology was an adapted version of the

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[3] CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management, Winchester.

4 CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

5 Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey - a technique for environmental audit. JNCC, Peterborough.

6 Butcher, B., Carey, P., Edmons, R., Norton, L. and Treweek, J. (2020). UK Habitat Classification – Habitat Definitions V1.1

7 Harris S., Cresswell, P., Jefferies, D. (1989) Surveying Badgers. The Mammal Society, London.

8 Cresswell, P., S. Harris, D. J. Jefferies (1990) The history, distribution, status and habitat requirements of the badger in Britain. Nature Conservancy Council, Peterborough, England.

[9] Logika Group (2025). Great Harmeston Solar Farm: Winter Bird Report 2024/2025. Document No. 15936A-30-R03-02. Prepared for Arise SE, dated 21 July 2025

Winter Farmland Bird Survey (Atkinson et al. 2006)[10]. The survey followed the "winter walks" component of the methodology, considered the most appropriate for the Sites habitats and land parcels. The objective of the surveys was to identify the diversity and abundance of wintering bird species across the terrestrial habitats within the Site, and to identify areas used consistently, or for a significant part of the non-breeding season.

4.1.7. Breeding bird surveys have been conducted in 2024 to assess the presence and distribution of bird species across the Proposed Development area. This method for Breeding bird surveys is based on a territory mapping methodology in accordance with published guidance. The identity and activity of all birds, either seen or heard inside the Proposed Development Area or within 50m of its boundary, is then recorded on maps of a suitable scale.

4.1.8. Great Crested Newt (GCN) environmental DNA (eDNA) surveys of four ponds (ponds 1, 2, 3 and 12) was undertaken in 2024. The sampling was undertaken in July 2024 and the samples analysed by SureScreen Scientifics [11]. All other on site ponds were dry and it was not possible to obtain samples. An effort was made to visit ponds outside the site boundary but access was not granted by third party landowners and therefore no survey was possible on these ponds. The survey aimed to determine whether great crested newt are present/likely absent in the Proposed Development area.

4.1.9. Bat activity surveys have been undertaken with a total of fourteen static bat detectors being deployed across the site in April, May, June and July in 2024 and August, September and October in 2025. Data was collected for a minimum of five consecutive nights in each month in appropriate weather conditions in line with the BCT Best Practice guidance. Dusk night-time bat walkover (NBW) surveys were also conducted in May (spring), August (summer) and September (autumn) in 2024. The surveys followed standard methodologies set out in the Bat Mitigation Guidelines [12], the Bat Workers Manual [13] and Bat Surveys for Professional Ecologists- Good Practice Guidelines 4th Edition[14]

Agriculture

4.1.10. Planning Policy Wales (PPW) 12, paragraph 3.58 emphasises the importance of conserving the Best and Most Versatile (BMV) agricultural land, specifically grades 1, 2, and 3a, as a finite resource for the future. Paragraph 3.59 clarifies that development on such land should only be considered if there is an overriding need, and lower-grade or previously developed land is unavailable or has overriding environmental value.

4.1.11. An Agricultural Land Classification survey (ALC) has been carried out verified by LQAS confirming the Site consists of a mix of Grades 2, 3a, 3b, 4 and non-agricultural land although the Site is predominantly low grade (Grade 3) agricultural land. The ALC calculations confirm

10 Atkinson, P.W., Fuller, R.J. & Vickery, J.A. (2006). Winter Farmland Bird Survey Methodology. British Trust for Ornithology.
11 Followed the protocol stated in DEFRA WC1067 'Analytical and methodological development for improved surveillance of the Great Crested Newt Appendix 5' (Biggs et al. 2014).
[12] Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield.
[13] Mitchell-Jones, A.J, & McLeish, A.P. (eds). (2004) 3rd Edition Bat Workers' Manual., JNCC, Peterborough, ISBN 1 86107 558 8
[14] Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition). The Bat Conservation Trust, London. ISBN-978-1-7395126-0-6

the majority of the development footprint within the Site consists of Grade 3b and Grade 4 (non BMV) land which constitutes almost 80% of the Site.

Heritage

4.1.12. A full desk-based assessment has been carried out considering all designated historic assets within a minimum 1km radius of the site, these will then be subject to an appropriate and proportionate level of heritage setting assessment in accordance with the methodology presented in Cadw's guidance document 'Setting of Historic Assets in Wales' (2017).

4.1.13. A site visit took place in June 2025 and a walkover survey of the Scoping boundary will be undertaken. This will review the condition and nature of any known assets or HER entries. The walkover will also aim to identify any unrecorded assets. All assets noted during the walkover will be subject to a basic record (e.g. photography) which will be used to inform the Historic Environment Desk Based Assessment (HEDBA). Assets identified as susceptible to effects related to setting change will also be subject to field visits to understand their setting. Selected images from the walkover and setting surveys will be used to illustrate the HEDBA

Landscape

4.1.14. Preliminary desk-based research was conducted in summer 2025 establishing the existing baseline conditions and likely sensitive landscape and visual receptors that would be affected by the Proposed Development.

4.1.15. A review of relevant published landscape character assessments, both at the national and local level, alongside reference to planning policy and guidance as it relates to landscape and visual matters and renewable energy development has been undertaken to ensure a thorough understanding of likely sensitive receptors, and relevant policy. This included LANDMAP character assessment, National Landscape Character Area reports and reference to the relevant local and national development plans, including Planning Policy Wales Edition 12 and Future Wales – The National Plan 2040.

4.1.16. As part of the preliminary works in early 2025, Pegasus prepared a preliminary bare earth Zone of Theoretical Visibility (ZTV) plan and so called 'screened' ZTV (taking into account screening features such as built form and vegetation) which can be found in Appendix E based on the layout available at the time.

4.1.17. Baseline studies have been carried out to identify high sensitivity receptors and these were verified against the ZTV and SZTV plans as part of desktop research. As part of desktop studies, a set of preliminary viewpoints has been identified.

4.1.18. Following this, Pegasus' Landscape team has carried out a two-day preliminary site visit in early June to verify the extent of the SZTV, determine the relationship of the landscape associated with the Site with its surroundings and ascertain the visibility of the Site from the identified sensitive receptors and other publicly accessible locations within the wider landscape.

4.1.19. The identified preliminary viewpoints were verified during the on-site survey with site photographs undertaken to capture so-called 'summer' views and to inform any subsequent written assessment work.

4.1.20. The preliminary viewpoints were selected and visited to inform the Screening and Scoping stage and early layout design. It is acknowledged that further site visits and additional viewpoints may be necessary to inform the subsequent LVIA, and the location of these viewpoints and other relevant receptors will be identified through the discussion with the Pembrokeshire County Council.

4.1.21. In late summer 2025, Pegasus' Landscape team reviewed the emerging layout and advised on the potential mitigation strategy identifying areas of heightened visibility and opportunities for mitigation planting. This led to further design changes with the currently proposed layout illustrated in Appendix C.

Flood Risk

4.1.22. Desk based work has taken place with regards to hydrology and flood risk with reference to a number of key policy and guidance documents listed in section 5.3 below. Baseline conditions at the Site and surrounding area have been considered up to 2km from the Site and include consideration of waterbodies, flood risk, geology and water quality.

4.1.23. Preliminary consultation has been undertaken with NRW and Pembrokeshire LLFA/ SAB (SuDS Approval Body). The NRW consultation and NRW Discretionary Advice inquiry requested guidance on any flood risk and drainage requirements that should be considered for a solar farm development. The NRW responded in November 2025 and stated that "*as such a small area of the site is within flood zones relating to fluvial or tidal flooding, I don't think we could add much value to a pre-application at this stage*".

4.1.24. The SAB consultation requested guidance relating to surface water flood risk and drainage requirements for solar farm developments in Pembrokeshire. A response was received from the SAB in October 2025 which provided guidance on drainage strategy guidance, greenfield runoff methodologies, infiltration testing requirements and the advice to undertake a Pre-App once the initial draft drainage strategy has been prepared.

Transport

4.1.25. Initial access work has been carried out and a Construction Traffic Management Plan is being prepared in order to address the traffic and transportation issues associated with the construction of the development. It will set out the controls and measures that will be implemented to mitigate the impact of site traffic on the local highway network during the temporary construction period.

4.2. A Construction Method Statement is also being prepared in order to address the impacts of the installation of the cable route. It will set out the controls and measures that will be implemented to mitigate the impact of the installation of the cable route on the local highway and Public Right of Way network, as appropriate.

Environmental Topics

4.2.1. **Table 4.1** lists the environmental topics specified within the EIA Regulations as to potentially be considered as part of the EIA process. The table also summarises whether these topics are considered relevant to include within the EIA process, and where such topics will be considered within the ES where applicable. Where a topic has been scoped out, the reasoning is fully explained within Section 5.

Table 4.1 - Environmental Topics as per EIA Regulations

EIA Topic	**Scoped In / Out**	**Where Addresses with ES** (if applicable)
Population	Scoped In	To be considered within 'Chapter 9 - Socio Economics (including Population)'.
Human Health	Scoped out	No significant impacts likely and therefore not proposed to be considered within the ES.
Biodiversity (e.g. flora and fauna)	Scoped in	To be considered within 'Chapter 7 - Ecology'
Land (e.g. geology)	Scoped out	No significant impacts likely and therefore not proposed to be considered within the ES.
Soil	Scoped out	No significant impacts likely and therefore not proposed to be considered within the ES.
Water	Scoped out	No significant impacts likely and therefore not proposed to be considered within the ES.
Air	Scoped out	No significant impacts likely and therefore not proposed to be considered within the ES.
Climate	Scoped out	No significant impacts likely and therefore not proposed to be considered within the ES.
Noise and Vibration	Scoped out	No significant impacts likely and therefore not proposed to be considered within the ES.
Risk of Major Accident and Disaster	Scoped out	No significant impacts likely and therefore not proposed to be considered within the ES.
Material Assets	Scoped out	No significant impacts likely and therefore not proposed to be considered within the ES.
Traffic and Transport	Scoped out	No significant impacts likely and therefore not proposed to be considered within the ES.
Waste	Scoped out	No significant impacts likely and therefore not proposed to be considered within the ES.

Landscape	Scoped in	To be considered within 'Chapter 5 – Landscape and Visual'
Cultural Heritage	Scoped In	To be considered within 'Chapter 6 – Cultural Heritage and Archaeology'8
Glint and Glare	Scoped in	To be considered within 'Chapter 8 – Glint and Glare'
Interrelationship between above factors	Scoped In	Within each topic chapter and / or in Summary chapter

5. Topics to be 'Scoped Out'

5.1. Human Health

5.1.1. During the construction phase there will be some potential for minor pollution or nuisance consistent with ongoing construction works, which include the following; lighting of external works, security lighting, dust and noise emissions generated from plant, vehicles and other construction processes, surface water run-off from stockpiles, plant noise etc. However, construction activities would be appropriately controlled to an acceptable level through the adoption of a Construction Environmental Management Plan (CEMP) as well as best practice techniques and appropriate safety measures.

5.1.2. The activities associated with the Proposed Development during all development phases are not typically associated with hazardous substances or toxic emissions to air. Operation of the solar farm can have a corresponding reduction in electricity produced from fossil fuels, reducing air pollution and aiding air quality.

5.1.3. With regards to transport, during construction, there will be a Transport Statement and Construction Traffic Management Plan which will ensure the safety of all road users. There will be minimal operational traffic associated with the Site and therefore, not create any risks to human health. During operation, the Proposed Development will be of a type and scale not anticipated to cause any significant effects on human health. There will be very limited operational traffic associated with the Site and therefore risks from air pollution are anticipated to be negligible.

5.1.4. Once operational there will be no unusual risk to human health. The development relies on well-established, safe modern technology and responsible operators who will utilise Construction Quality Assurance (CQA) Plans as necessary. Appropriate Health and Safety signage will be displayed on Site, to warn of the potential risk from working near electrical equipment and to prevent illegal access and trespass

5.1.5. It is anticipated there should be no unusual risks to human health and significant adverse impacts are not anticipated.

5.2. Ground Conditions and Land

5.2.1. The Site is not within a Source Protection Zone, however, is within an area identified as 'high' for groundwater vulnerability. The nature of the Proposed Development will reduce the need for any fertilizers or other polluting chemicals that could affect the groundwater that is already noted to be vulnerable. The proposals therefore protect the groundwater from potential pollution, providing a benefit to the local environment. Potential contaminants during the construction and decommissioning periods will be controlled through a site specific CEMP as outlined above.

5.2.2. The Site is not known to have any contaminated land although there is a landfill named Hayston covering a small proportion of the southeast area of the Site. A Phase 1 geo-environmental survey and ground conditions report has been carried out, which concludes no potentially significant geo-environmental hazards or abnormals have been identified across the majority of the Site. However, a detailed Phase II geo-environmental intrusive investigation has been recommended to consider targeted features for further assessment

within the desk study. It is unlikely the nature of the development would lead to any potential, significant hazardous contaminants buried escaping.

5.2.3. Contamination risks and mitigation measures to ensure that groundwater below is protected, will be controlled during construction through appropriate planning conditions to ensure any risks are fully addressed. Furthermore, most of the soil will not be physically impacted or disturbed by the proposals and therefore its degradation is considered unlikely during construction.

5.2.4. It is anticipated the Proposed Development will not lead to contamination of land or water and therefore no significant effects are anticipated leading, on this basis Ground Conditions and Land have been scoped out of the EIA.

5.3. Soil

5.3.1. The construction of the Proposed Development will involve the temporary use of approximately 128ha of agricultural land (the actual development footprint will be less (see Appendix C Site Plan)) during the operational life of the development (40 years).

5.3.2. An Agricultural Land Classification (ALC) survey has been carried out confirming the Site consists of a mix of Grades 2, 3a, 3b, 4 and non-agricultural land although the Site is predominantly low grade (Grade 3) agricultural land.

5.3.3. Avoidance of use of higher grade agricultural land has been a critical early stage site selection and design consideration. ALC Surveys have been undertaken at an early stage, as confirmed by LQAS, to inform the design evolution. The design of the Proposed Development has sought to avoid the use of areas of Best and Most Versatile (BMV) agricultural land as defined in Planning Policy Wales (PPW) 12 where possible. ALC calculations for the soil type within the developable area of the Site are as follows:

- Grade 1 – 0ha
- Grade 2 – 4.92ha
- Grade 3a – 10.93ha
- Grade 3b – 50.05ha
- Grade 4 – 10.55ha
- Non-agricultural land – 0.04ha

5.3.4. From the above calculations the majority of the Site consists of Grade 3b and Grade 4 non BMV land which constitutes almost 80% of the Site, the total BMV land usage is 15.85ha. It is therefore unlikely the development will lead to a significant loss of natural resources and significant impacts are not anticipated on the land. The proposals enable the Site to be developed in conjunction with the retention of trees, hedgerows and other marginal habitats.

5.3.5. The layout of the Proposed Development has sought to avoid the majority of BMV agricultural land as defined by PPW 12, paragraph 3.58 and the design iteration process has refined the layout to make the best available use of the lower grade (non BMV) land areas

5.3.6. The Proposed Development offers the opportunity, once renewable electricity generation has ceased, to return the land back to agricultural use as the development is reversible. With the land having a period of time to rest following intensive agricultural activity it is considered the soil health of the Site will generally improve greatly over the lifetime of the solar farm. Within the areas of the Site which are grazing land it is also possible to still retain agricultural activities such as sheep grazing alongside the solar panels, thus maintain the existing agricultural land use in this part of the Site

5.3.7. Due to the nature of solar farms, it is unlikely that the construction of the Proposed Development would lead to the loss of soils as appropriate construction techniques will be implemented to reduce intrusive ground preparation works, in addition a soil resource management plan will be submitted as part of the planning application. Therefore, this area of land is considered suitable in relation to soil for a solar farm development. The ALC Report will be submitted with the planning application documents. Therefore, significant effects are not considered likely in this regard and soils are scoped out of the EIA.

5.4. Water Environment

Introduction

5.4.1. The need for Hydrology and Flood Risk Environmental Impact Assessment (EIA) input has been considered by Pegasus Group. Following a review of the baseline conditions at the Site and surrounding area (up to 2km from the site), this topic is proposed to be '**scoped out**' of the EIA for all phases of the development (construction, operational and decommissioning phases), with the information reviewed to inform this decision detailed within this Scoping Report.

5.4.2. The review of Hydrology and Flood Risk has been undertaken with reference to the following key policy and guidance documents:

- Technical Advice Note 15 (TAN 15) (July 2004, updated in March 2025);
- Schedule 3 of the Flood and Water Management Act (2010) and the Sustainable Drainage (Approval and Adoption Procedure) (Wales) Regulations 2018;
- Pembrokeshire County Council Local Development Plan (LPD) – up to 2021 (adopted 2013)15;
- Carmarthenshire & Pembrokeshire Stage 1 Strategic Flood Consequence Assessment (SFCA) (2019);
- South West Wales Stage 1 Strategic Flood Consequences Assessment (November 2022)16;
- Land Drainage Act (1991);

[15] Plans adopted prior to 4 January 2016 will remain the LDP for determining planning applications until replaced by a further LDP.
[16] Commissioned by: Six Local Planning Authorities in South West Wales – Swansea Council, Carmarthenshire County Council, Neath-Port Talbot Council, Pembrokeshire County Council, Brecon Beacons National Park Authority and Pembrokeshire Coast National Park Authority

- Water Framework Directive (WFD, 2017); and
- Other relevant planning policy and guidance documents as appropriate.

5.4.3. This section presents the baseline conditions of the Site and details measures that will be implemented as part of the planning application which ensures Hydrology and Flood Risk can be scoped out of the EIA.

5.4.4. The impacts associated with groundwater and groundwater quality has been covered separately in the Ground Conditions section of this EIA Scoping Report.

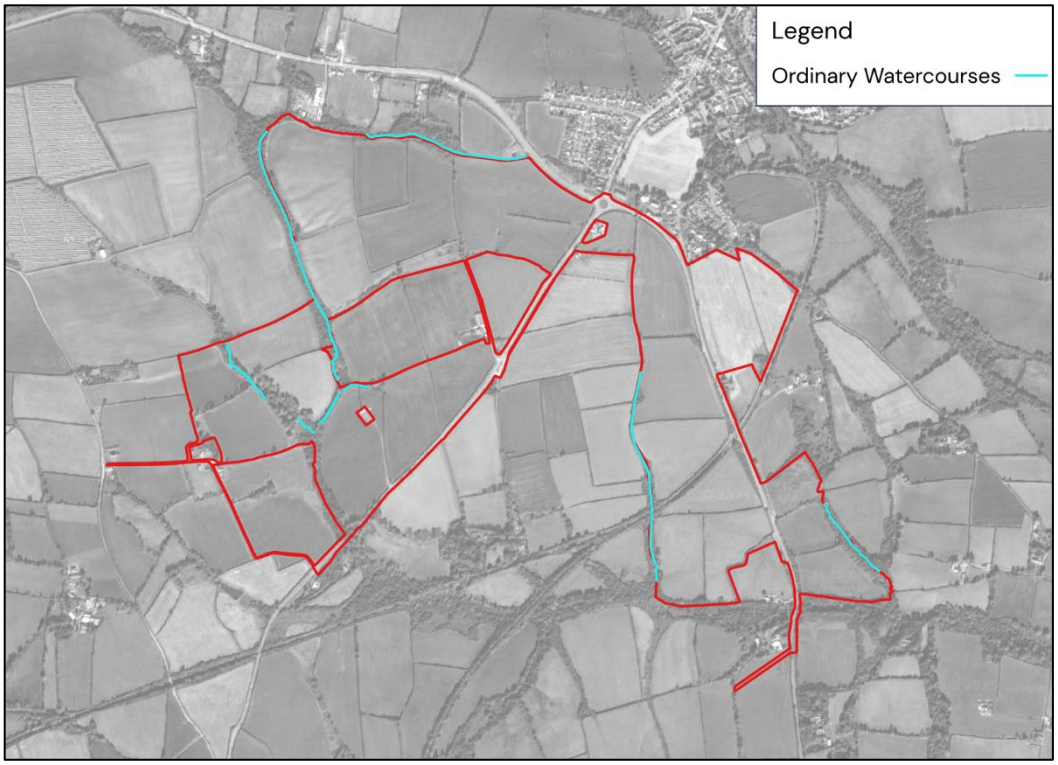
Baseline Conditions

Waterbodies

5.4.5. There are no Main Rivers[17] located within the Site according to DataMapWales[18] and the closest Main River, known as 'Merlins Brook' is located approximately 1.8km north of the Site.

5.4.6. There are several Ordinary Watercourses[19] along the boundaries of the Site and through western portions of the Site (refer to Figure 5.1 below).

5.4.7. **Figure 5.1 – Ordinary Watercourses**



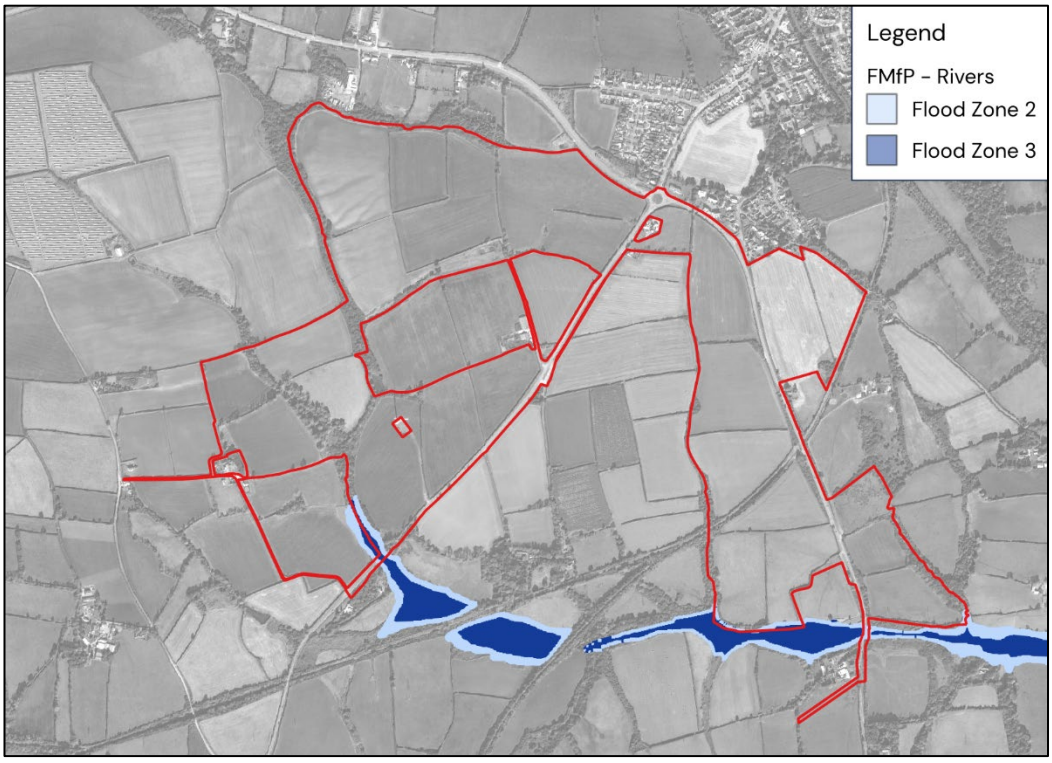
[17] Main rivers' are usually larger streams and rivers, but some of them are small watercourses of significance. They include certain structures that control or regulate the flow of water in, into or out of the channel.
[18] https://datamap.gov.wales/maps
[19] Ordinary Watercourses include all other water channels not classified as Main Rivers. This broad category encompasses smaller streams, brooks, ditches, drains, culverts, and dykes.

5.4.8. The Site is not located within an Internal Drainage District (IDD).

Flood Risk

5.4.9. The Flood Map for Planning Rivers Dataset produced by Natural Resource Wales (NRW) shows that the majority of the Site is located in Flood Zone 1. There are some small areas along the southern boundaries of the Site which are located within Flood Zone 2 and 3 (refer to Figure 5.2). There is no proposed infrastructure within areas of Flood Zone 2 and 3.

Figure 5.2 – Flood Map for Planning - Rivers



5.4.10. The Flood Map for Planning Sea dataset (NRW) shows that the entire Site is located in Flood Zone 1 and therefore there is no tidal flood risk on Site.

5.4.11. The Flood Map for Planning Surface Water and Small Watercourses dataset (NRW) shows that the majority of the Site is in Flood Zone 1. There are some Flood Zone 2 and 3 flow paths located within the Site, however these are mainly associated with existing watercourses on Site (refer to Figure 5.3). The layout will be designed to ensure no greater vulnerability infrastructure is located within areas at risk of Flooding from Surface Water and Small Watercourses.

5.4.12. There are some areas of proposed access tracks which are located within Flood Zone 2 for risk of Flooding from Surface Water and Small Watercourses, these are only internal access tracks and not direct access tracks from offsite and therefore the hazard is considered Low. There is one proposed access track which will be used to access a section of the development via a watercourse crossing over an Ordinary Watercourse within the western extent of the site. This is classified as Flood Zone 2 and 3 for risk of flooding from Surface

Water and Small Watercourses. This watercourse crossing will be designed to ensure it is above predicted flood depths at detailed design stage.

Figure 5.3 – Flood Map for Planning – Surface Water and Small Watercourses

5.4.13. According to the NRW Flood Map for Planning Interactive map, there are no recorded flood extents on Site. In addition, the Site is not at risk of Reservoir Flooding.

Geology

5.4.14. Geological data from the British Geological Survey (BGS) shows the majority of the Site is underlain by the "Rosemarket Formation – sandstone, argillaceous rocks and conglomerate" bedrock geology. The southern extent of the Site is underlain by the "Milford Haven Subgroup – argillaceous rocks and sandstone" bedrock geology.

5.4.15. The majority of the Site is note recorded to be underlain by any superficial deposits. An area along an ordinary watercourse in the western and southern extent of the Site is underlain by "Alluvium – clay, silt, sand and gravel" superficial deposits.

5.4.16. Soilscapes mapping shows that the Site comprises of "freely draining slightly acid loamy soils".

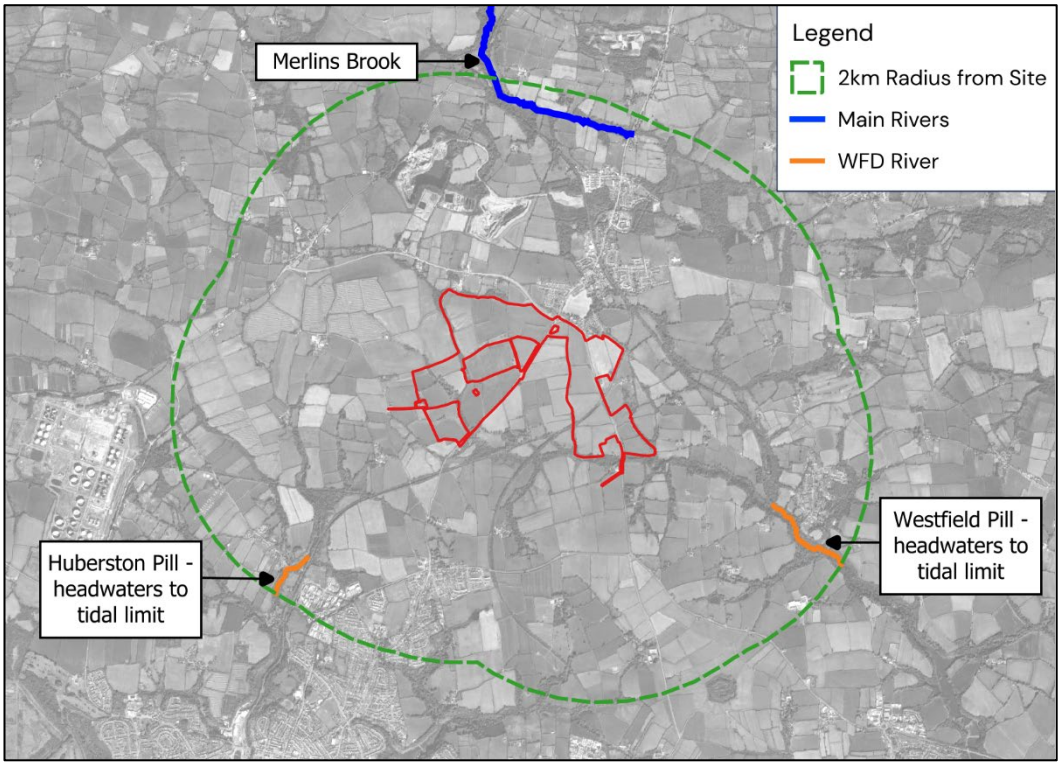
Water Quality

5.4.17. The Site is located within the WFD catchment area of the WFD River Waterbody 'Westfield Pill – headwaters to tidal limit' which is located within the 'Cleddau and Pembrokeshire Coastal Rivers Catchment' which has an overall water status of 'Moderate'.

Proposed Study Area

5.4.18. This assessment has considered the baseline conditions at the Site and surrounding area (up to 2km from the site) and is shown in Figure 5.4 below.

Figure 5.4 – Proposed Study Area



5.4.19. The Site currently comprises of fields predominantly for arable use, bound by a mixture of woodland, hedgerows, roads and a railway line and therefore the current drainage at Site relies on natural ground infiltration and overland flows.

5.4.20. The site is not located within the catchment areas associated with Merlins Brook or Huberston Pill but is located within the catchment area flowing into the Westfield Pill WFD river. Sustainable Drainage Systems (SuDS) will be incorporated into the design of the Proposed Development to ensure that surface water runoff is controlled, and that appropriate water quality treatment is applied to any runoff leaving the Site. Therefore, the above receptors located within the 2km radius of the site, will not be subject to any significant effects as a result of the proposed development.

Discussion for Scoping Out

5.4.21. As the Site is currently used for arable use, there will be an increase in impermeable surface areas as a result of the Proposed Development. However, the inclusion of SuDS within the design will enable surface water runoff to be discharged at existing greenfield rates (either via an attenuation-based strategy or an infiltration-based strategy, depending on the conclusions of the SAB Pre-App Consultation).

5.4.22. During the construction and decommissioning phase, the control of surface water runoff will be covered within a Construction Environmental Management Plan (CEMP) and Decommissioning Environmental Management Plan (DEMP), which will specify mitigation

measures to ensure that the construction and decommissioning works associated with the Proposed Development will not increase, or cause contamination of surface water runoff within the Site or elsewhere. In addition, it is not considered that surface water flow paths will be affected during the construction, operational and decommissioning stage due to no proposed changes in site levels.

5.4.23. For the Proposed Development's operational phase, a surface water drainage strategy will be prepared and submitted with the planning application. This will ensure that surface water runoff is discharged appropriately and is compliant with target discharge rates. The SuDS Approval Body (SAB) will be consulted in due course on the drainage strategy design. Therefore, considering the above, the Proposed Development will not increase surface water runoff, alter surface water flow paths or effect water quality during the construction works and once complete and operational or during the decommissioning stage.

5.4.24. An Ordinary Watercourse easement will be confirmed during the SAB Pre-App Consultation. This will ensure appropriate easements are incorporated into the site design.

5.4.25. In accordance with TAN 15, a Flood Consequence Assessment (FCA) is required for any development proposal located fully or partly in Surface Water and Small Watercourses - Flood Zones 2 and 3. As detailed above, whilst the majority of the Site is located in Flood Zone 1 (low risk), areas are located within Flood Zone 2 and 3. Therefore, it is considered necessary to undertake a FCA for the planning application to assess the risk flooding at the Site from fluvial, tidal, surface water, reservoir flooding and sewer flooding and ensure the Site will be safe from flooding for its operational lifetime with the added effects of climate change. The layout will take a 'sequential approach' whereby any more vulnerable development will be situated in areas with least flood risk and avoiding any area of surface water flooding including both flow paths and ponding. In addition, the height of the solar panels will be designed as such that they are elevated adequately above the ground and do not impede surface water flow routes. These measures will be detailed in the FCA.

5.4.26. There is one proposed watercourse crossing within the western part of the site which will be used to access two of the proposed solar fields. The Ordinary Watercourse is not a designated WFD waterbody, and the watercourse crossing will be designed to maintain the current flow and capacity of the watercourse and also will not result in any loss of floodplain. The watercourse crossing design will be available at detailed design stage.

Consultation

5.4.27. An EIA screening direction was received from Planning and Environment Decisions Wales (PEDW) on 3 October 2025 and details a consultation response from NRW on 24 September 2025 which states "*due to the scale and nature of the small section of the proposed development that falls within the identified flood outline, and based on the information provided, we can rule out a significant effect regarding flood risk. However, we support that a Flood Consequence Assessment will be submitted in support of any forthcoming planning application*".

5.4.28. Additional consultations have been undertaken at the time of writing this scoping report with NRW and Pembrokeshire LLFA/SAB. The NRW consultation and NRW Discretionary Advice inquiry requested guidance on any flood risk and drainage requirements that should be considered for a solar farm development. The NRW responded in November 2025 and stated that "*as such a small area of the site is within flood zones relating to fluvial or tidal flooding, I don't think we could add much value to a pre-application at this stage*".

5.4.29. The SAB consultation requested guidance relating to surface water flood risk and drainage requirements for solar farm developments in Pembrokeshire. A response was received from the SAB in October 2025 which provided guidance on drainage strategy guidance, greenfield runoff methodologies, infiltration testing requirements and the advice to undertake a Pre-App once the initial draft drainage strategy has been prepared.

Cumulative Effects

5.4.30. In accordance with national and local planning policies, other developments within the catchment will be expected to adhere to the same measures to ensure that other developments do not increase flood risk elsewhere or result in adverse effect on water quality.

5.4.31. On account of the policy requirements, it is envisaged that the Proposed Development will cause no detriment to downstream receptors, therefore it is considered unlikely that any cumulative effects will arise within the catchment, and therefore cumulative effects can be scoped out.

Conclusion

5.4.32. It is considered that the impact of the Proposed Development in relation to Hydrology and Flood Risk will not be significant in EIA terms for the construction, operational and decommissioning phases. As the planning application will be supported by an FCA, operational surface water drainage strategy, a CEMP and DEMP, it is considered that a Hydrology and Flood Risk ES chapter can be '**scoped out**' of the EIA as any significant effects are unlikely.

5.5. Transport and Access

5.5.1. It is considered that the requirement for a transport and access chapter can be scoped out.

5.5.2. The main transport and access impact of the development will be during the construction period when heavy goods vehicles (HGVs) will be required to access the site and use the surrounding road network to remove and import materials and equipment.

5.5.3. A Construction Traffic Management Plan (CTMP) will be submitted in support of the planning application. This will set out the proposed access and transport strategy, and consideration of measures and improvements required to mitigate any residual impacts to ensure they are not severe. The CTMP will include the following:

- A description of the development, including the local highway and public right of way network.
- A summary of local highway safety records.
- A description of the proposed site access arrangements during the construction and operational phases, including swept path assessments for the largest vehicles associated with each phase.
- The proposed construction traffic routing, which at this stage is anticipated to be restricted to major road including the A477 and A4076, including confirmation of any height, weight and width restrictions.

- Confirmation of the forecast vehicle movements associated with the proposals during the construction phase and the size and frequency of vehicles for deliveries and construction workers.

- The traffic management and mitigation measures proposed including details of the construction compounds, hours of deliveries, signage, wheel washing and road sweeping, a pre- and post-construction highway condition survey.

5.5.4. Vehicle movements can be controlled through a routing agreement with restrictions imposed over timings, as appropriate. There could be a temporary impact on local highway network which could affect people who live and work in the area. However, given the temporary nature of the construction period and these impacts, the location of the development, which is served from the A4076 and A477, and through the implementation of controls and mitigation methods that will be set out within a Construction Traffic Management Plan and Construction Method Statement, significant environmental effects are not considered likely.

5.5.5. Significant effects in traffic and transport are based upon the Institute of Sustainability and Environmental Professionals (ISEP; formally known as Institute of Environmental Management; IEMA) 'Environmental Assessment of Traffic and Movement'.

5.5.6. The IEMA guidelines sets out two rules to be considered when assessing the impact of development traffic on a highway link as follows:

- Rule 1: include highway links where traffic flows are predicted to increase by more than 30% (or where the number of HGVs is predicted to increase by more than 30%); and

- Rule 2: include any other specifically sensitive areas where traffic flows (or HGV component) are predicted to increase by more than 10%.

5.5.7. The 30% threshold is based upon research and experience and the IEMA guidelines suggest that less than a 30% increase results in imperceptible changes in the environmental effects of traffic, apart from in sensitive locations.

5.5.8. The A4076 and A477 within the vicinity of the site are not considered to be sensitive links as there are limited receptors that would be affected by the Proposed Development.

5.5.9. An initial assessment has been carried out based on traffic data available from the Department for Transport (DfT) on the A4076, from which the site is accessed, and the A447 to the south east of the site. Annual Average Daily Traffic (AADT) flows on each of the route is as follows:

- A4067: 7,818 total vehicles; 215 HGVs (2.8%).

- A447: 13,835 total; 512 HGVs (3.7%).

5.5.10. The Proposed Development will have a capacity of up to 65MWac and there will be a construction period of approximately nine months.

5.5.11. For the PV panels and associated infrastructure, it is anticipated that around 20 deliveries will be required for every MW produced, split equally between the modules and mounting structures. The site is proposed to generate around 65MW and as such this will equate to a total of 1,300 deliveries (2,600 two-way trips) by 16.5 metre long articulated vehicles.

5.5.12. In addition to the solar elements, there is proposed to be a substation and associated inverters and transformers. There will also be deliveries associated with access tracks, fencing, foundations etc. These components could be associated with a further 250 deliveries (500 two-way movements).

5.5.13. Assuming a nine month construction period (total) as a worst case and a six day working week (216 days total), this equates to on average around 7 HGVs, or around 14 two-way vehicle deliveries, per day by the largest vehicles.

5.5.14. It is estimated at this stage that up to 50 construction workers could be on site at any one time and that they would arrive primarily by minibus equating to four vehicles (eight two-way movements) per day.

5.5.15. The 'with development' AADT flows on each of the routes (assuming all construction traffic uses both routes as a worst case) is as follows:

- A4067: 7,840 total vehicles (0.3% increase), 229 HGVs (6.5% increase).
- A447: 13,857 total vehicles (0.2% increase), 527 HGVs (2.9% increase).

5.5.16. The initial assessment suggests that none of the links will have over a 10% increase in total vehicle flow or HGV flows during the construction phase. When considering the sensitivity of the links, the effect can be classified as negligible.

5.5.17. This initial assessment indicates that the development is unlikely to give rise to significant effects and transport and access can be scoped out.

5.5.18. Once operational, it is anticipated that there could be up to one vehicle trip to the site per week, associated with the maintenance of the development. Therefore, it is considered that operational effects related to vehicle movements will not be significant in EIA terms.

5.5.19. The decommissioning phase would be similar to the construction phase.

5.6. Air Quality

5.6.1. The Site does not lie within an Air Quality Management Area (AQMA) and is not adjacent or within close proximity to any other AQMA.

5.6.2. There would be emissions associated with vehicles during the construction of the Proposed Development, however, the anticipated traffic generation during construction is limited when compared to other development projects such as residential. Therefore, it is considered unlikely that the proposals will have a significant effect on air quality during construction or decommissioning. Once operational the only vehicle movements to / from the Site would be from the occasional maintenance vehicle, which would visit the Site approximately once a week. Such a low level of traffic to the Site would not give rise to significant effects on air quality.

5.6.3. More widely, the electricity the Proposed Development will produce will potentially displace primary fossil fuel derived electricity that relies on thermal combustion and the consequent release of Green House Gases (GHGs) and other pollutants into the atmosphere. Consequently, the proposal is considered to have a beneficial effect on air quality. The

Proposed Development will have no direct adverse environmental effect on air quality and therefore will have no significant environmental effect in EIA terms and is scoped out.

5.6.4. Whilst there will be some dust generated during construction, this can be reduced through the implementation of a Dust Monitoring and Management Plan (DMMP) that can be appropriately secured by planning condition.

5.7. Noise and Vibration

5.7.1. It is considered that noise from the Proposed Development is likely to arise during the construction stage however this would be managed with standard procedures (controlled by a CEMP), and due to the nature and scale of the development any effect is unlikely to be significant. The Proposed Development is not, inherently, a noise generating activity during operation., however, any impacts of noise are likely to be sufficiently mitigated through localised fencing and simple mitigation measures including landscaping. A Noise and Vibration Assessment will accompany the planning application and will consider the impact of noise and vibration during the construction and operational phases of the Development on existing noise sensitive receptors, this is not expected to be significant and is therefore scoped out of the EIA.

5.8. Climate

5.8.1. It is acknowledged that construction (and decommissioning) of the Proposed Development will result in the release of carbon as well as other emissions associated with the use of HGV vehicles and other plant / machinery, but that is common with any form of energy production. Considering the temporary nature of the development and the low level of physical construction work required, it is considered that these emissions are unlikely to be complex or significant on EIA terms.

5.8.2. There is a climate crisis and Pembrokeshire County Council formally declared a climate emergency on 9th May 2019 committing to becoming a net-zero carbon local authority by 2030. In July 2019 the Council approved and began implementing an action plan titled "Net Zero Carbon Action Plan". There is a rapidly diminishing period of time for countries to constrain global temperature increases below 1.5 degree, and therefore the rapid roll out of renewable energy development is crucial to attempting to halt climate change, and potentially reverse it, safeguarding populations, species and habitats globally. In this context, the contribution to reducing climate change is significant beneficial.

5.9. Risk of Major Accident and Disaster

5.9.1. The Site is not known to be susceptible to land instability or extreme and / or adverse climatic conditions, including flood risk. The Proposed Development would adhere to highway safety standards. There would be no unusual or complex processes employed during operation of the Site.

5.9.2. Solar photovoltaic technology is a relatively benign form of electricity generation with very low risk of accident or disaster and will not have a significant environmental effect in this regard. The solar farm will be enclosed by appropriately designed security fencing and monitored by CCTV, which will lower the risk of unauthorised access and accidents.

5.9.3. Considering the nature and location of the Proposed Development, it is not considered to be vulnerable to or give rise to significant impacts in relation to the Risk of Accidents and Major Disasters and this is scoped out of the EIA.

5.10. Material Assets

5.10.1. Construction (and decommissioning) will require the use of natural resources as is standard within the construction phase of development i.e. power supply / water / primary aggregates / concrete etc. This is not considered to be an unusual or complex operation with the construction period approximately 9 months and accordingly no significant effects are anticipated.

5.10.2. Due to the nature of the development, no natural resources will be required for the operation of the facility once constructed. Therefore, no long-term impacts are anticipated. Accordingly, no significant effects are anticipated and scoped out of the EIA for any further consideration.

5.11. Waste

5.11.1. There would be very little waste associated with the construction, operation and decommissioning of the Proposed Development. Waste would be disposed of in line with LPA requirements and managed in accordance with all applicable legislation and in line with best practice.

5.11.2. No significant effects are anticipated as a result of the Proposed Development's production of waste and therefore scoped out of the EIA.

5.12. Conclusion

5.12.1. As explained above, it is not considered that the Proposed Development will result in likely significant effects on the following disciplines: Human Health, Ground Conditions and Land, Soil, Water Environment, Transport and Access, Air Quality, Noise, Climate, Material Assets, Waste and Risk of Major Accidents and Disaster. It is therefore proposed these matters are scoped out of the ES

6. Topics to be 'Scoped In'

6.1. Chapter 5 - Landscape and Visual

Introduction

6.1.1. This section sets out the proposed scope and assessment methodology for the Landscape and Visual chapter of the ES for the Proposed Development. The parameters of the Proposed Development are described in Section 2.2 of this Scoping Report.

6.1.2. The Landscape and Visual chapter of the ES will seek to determine the landscape and visual effects brought about by the Proposed Development upon the identified receptors and whether such effects are significant or not. It will also consider mitigation strategy and landscaping in order to avoid, limit, or offset the harm.

6.1.3. The current draft *Landscape Character Assessment Final Report for Consultation May 2022* and LADMAP are considered to be the most relevant landscape characterisation studies.

6.1.4. Any subsequent assessment will be written with reference to the *Guidelines for Landscape and Visual Impact Assessment* (3rd Edition, 2013) (hereafter referred to as *GLVIA3*).

6.1.5. The *GLVIA3* does not provide a prescriptive method for the assessment but identifies the general principles and good practice approaches. The assessment will enable the likely significant landscape and visual effects to be determined and a landscape design and mitigation strategy to be put forward as part of the overall development proposals.

Relevant Legislation, Policy and Guidance

<u>National Planning Policy</u>

- Planning Policy Wales Edition 12 (2024) Chapter 6 'Distinctive and Natural Places' and select paragraphs throughout.
- Future Wales – The National Plan 2040:
    - Policy 17 'Renewable and Low Carbon Energy and Associated Infrastructure'
    - Policy 18 'Renewable and Low Carbon Energy Developments of National Significance'.

<u>Local Planning Policy</u>

- Pembrokeshire Local Plan
    - Policy SP 1 'Sustainable Development'.
    - Policy SP 16 'The Countryside'.
    - Policy GN 1 'General Development Policy'.

- Policy GN4 'Resource Efficiency and Renewable and Low-carbon Energy Proposals'.
- Policy GN31 'Protection and Enhancement of Biodiversity'.

- Pembrokeshire Supplementary Planning Guidance – Renewable Energy (2016).

Guidance

- Pembrokeshire Renewable Energy Assessment (2017).
- LADMAP.
- draft *Landscape Character Assessment Final Report for Consultation May 2022*.
- Additional guidance documents are listed in Landscape Appendix F.

Baseline Conditions

Site Description and Context

6.1.6. Section 2.1 provides description of the Site and its context, and this information is not repeated here.

6.1.7. The following paragraphs provide a short narrative from an LVIA point of view and aim to highlight key information and features relevant to this Scoping Report and any subsequent LVIA.

6.1.8. The Site comprises a number of parcels of arable and pastoral field enclosures. Public highways form in parts its boundaries and split the Site into discrete developable areas.

6.1.9. Topographically, the Site forms part of the undulating landform and largely slopes from the north / north east around Johnston at c. 75 m AOD descending into a narrow and wooded valley near Great Harmeston and Hayston Bridge / Lower Hayston reaching c. 30 m – 40 m along its southern edge. The eastern part of the Site slopes east descending to c. 60 m AOD along its eastern edge.

6.1.10. The field enclosures within the Site are best described as medium scale delineated by hedgerows, which appear to be well maintained. It is expected that an Arboricultural Impact Assessment will be prepared for the ES submission.

6.1.11. There are occasional gaps and low trimmed section of hedgerows. Woodland is prevalent in narrow incise valleys that mark the Site's western part and its southern edge. This woodland effectively forms a continuous line of vegetation extending from the north western edge of the Site, across its western part and then runs along its southern edge, and then continuing south east past Rosemarket towards the valley of Westfield Pill. This provides cues for mitigation planting and the appropriateness of such planting, from an LVIA and technical point of view, this would be explored though further LVIA work.

6.1.12. There are no PRoWs within the Site except for Public Footpath PP81/1, which lies adjacent to the southern-eastern parcel of the Site and comes inside its boundary for a very small section along its route.

6.1.13. Due to its relative elevation and change in levels the Site has a variable sense of enclosure. This indicates that reciprocal views from the south west, south, and east would be potentially gained, in addition to views from the adjacent roads the A4076, A477, Bulford Road Diversion, and other minor roads in the locale. The landscape, however, does not contain any high sensitivity receptors apart from PP8/1 and other PRoWs in the wider area, some of which are relatively distant with field boundary hedgerows interrupting the views – for example PRoWs south of Neyland Road. Similar, views from Neyland Road and Steynton to the south are considerably restricted, albeit the northern most part of the Site comes in and out in glimpsed views along the road. With regards Milford Road and the A477 the roadside hedgerows successfully screen the Site land with only localised glimpses. Such views can be successfully mitigated against. Bulford Road Diversion sits relatively high in the landscape and views overlook the sloping landform, and the site, with views towards the distant landscape around Milford Haven. Close range views of the infrastructure are expected to be gained from certain sections of this road, but with sensitively designed planting any adverse effects can be either reduced or mitigated against.

6.1.14. In terms of high sensitivity receptors, Public Footpath PP84/6 to the north west of the Site is considered to be the most relevant receptor from a design perspective. The receptors overlook large parts of the Site with woodlands in the valleys and tree belts interrupting the expanse of undulating arable fields. This provides reference for mitigation planting and it is envisaged that extensive tree planting could helping integrate the scheme into the receiving landscape and helping to diminish any adverse effects.

6.1.15. With reference to PRoWs: PP51/21, PP81/2, PP81/1, and PP81/2 near the south eastern edge of the Site, these cross a local narrow wooded valley and views are substantially controlled by the intervening vegetation. It is not expected that these views would be necessarily significantly affected or that the adverse effects could not be mitigated against.

6.1.16. With regards the Site's eastern parcel the closest PRoWs are located some distance away and the views investigated in situ do not relevel any high degree of inter-visibility.

6.1.17. Pembrokeshire Coast National Park is located approximately 4 km east and west of the Site at its nearest points. The Park encompasses a diverse coastal landscape, including dramatic cliffs, sandy beaches, and the Milford Haven waterway. The theoretical visibility of the Proposed Development (bare earth) extends towards Robeston Cross, on the outskirts of the oil refinery but does not breach the boundary of the National Park within the preliminary study area. The eastern areas of the National Park are more distant with theoretical visibility largely terminating on the higher ground around Rosemarket, and not breaching this part of the National Park either.

6.1.18. Views from within the Site, looking west and east do not appear to include the land within the National Park, and this will be investigated further. Views looking west do include the nearby operational solar farm and its immediately surrounding fields, some 2 – 3 fields away from the edge of the Site, but the rising topography around Tierson curtails views and the land then falls away from the Site with areas of 'visual shadow' illustrated by the ZTV plans.

6.1.19. Looking north, the built form in Lower Bulford and Sunnyhill along Bulford Road Diversion come in and out of the view along with some of the dwellings in the south western part of Johnston. The background is formed of undulating agricultural landscape and views terminate on this higher ground – southern slopes of Bolton Hill around the quarry and edge of the settlement.

6.1.20. Internally the undulating character of the Site helps create pockets of discreet developable areas, which are characterised by reduced to limited inter-visibility with the wider countryside.

6.1.21. Looking south, particularly from the northern part of the Site, views extend towards the recent residential developments along Neyland Road. Large scale wind turbines and oil refinery infrastructure, and indeed the landscape beyond, are also visible, but these features are distant and partially screened, indicating that their associated landscape is unlikely to exhibit any visual relationship with the Site.

6.1.22. Views east, looking from the eastern parcels of the Site are characterised by undulating and well treed landscape. Whilst a number of residential properties are identifiable, there are opportunities within the Site's eastern parcel to introduce hedgerow trees to strengthen the sense of enclosure and limit such views.

Baseline Survey Information

6.1.23. The Proposed Development is not located within any national statutory protected landscape designations. It does not lie within any regional or local non-statutory landscape designations, either. The Pembrokeshire Coast National Park is located approximately 4 km east and west of the Site at its nearest points therefore the core study area is not located within this statutory designation.

6.1.24. There are no adopted Supplementary Planning Guidance (SPGs) that would relate to the assessment of solar farms or landscape sensitivity.

6.1.25. The host National Landscape Character Area is No.48 'Aberdaugleddau / Milford Haven'.

6.1.26. The published draft *Landscape Character Assessment Final Report for Consultation May 2022*[20] appears to be the relevant landscape characterisation study applicable to the administrative area of the Council. It is understood that it supersedes the earlier draft report titled *Landscape Character Assessment Consultation Draft July 2019.*[21]

6.1.27. According to the published draft *Landscape Character Assessment Final Report for Consultation May 2022* the Site falls entirely within the Landscape Character Area (LCA) 9 'Johnston Lowlands'.

6.1.28. The LCA is located in central Pembrokeshire south of Haverfordwest, north of Milford Haven and west of the Western Cleddau and Daugleddau where it extends to the boundary of the Pembrokeshire Coast National Park. The 'Summary description' section of the draft *Landscape Character Assessment Final Report for Consultation May 2022* describes the host LCA 9 'Johnston Lowlands' as follows:

"This LCA is a rolling plateau landscape of gentle hills and wooded valleys. Farmland is dominated by high quality pastoral agriculture with hedgebanks and some arable, rough grassland and woodland blocks. The area is interspersed with scattered village settlements and farmsteads some of which have a strong historic character such as

[20] https://www.pembrokeshire.gov.uk/adopted-local-development-plan/ldp-
[21] Ibidem.

Rosemarket or Llangwm linked by quiet rural lanes. Busy A roads run north south, the A4076 and A477, between Haverfordwest to the north and Milford Haven and Pembroke Dock to the south. Johnston is the largest settlement and hosts both commercial and industrial/business uses. The area to the east is more tranquil and rural in character closer to the Western Cleddau, Daugleddau and the National Park. Views south to the Haven are dominated by refineries and wind turbines and pylons in places and solar farms lie to the south west."

6.1.29. The Landmap Aspect Landscape Context feature summaries Johnston Lowlands as rolling farmland and small valleys.

6.1.30. LANDMAP provides a comprehensive assessment of the Welsh landscape by assessing five layers which comprise the overall landscape. The LANDMAP aspect areas considered relevant to the Site and those that are adjacent are identified in Appendix G.

6.1.31. The assessment will consider all of the above published landscape character assessments.

Implications of Climate Change

6.1.32. The published draft *Landscape Character Assessment Final Report for Consultation May 2022* provides general advice with regards the potential changes to the landscape character at paragraphs 4.4 and 4.5. Out of these the most informative, in the context of the Proposed Development, are quoted below:

- ***"Increase quality and extent of hedgerows and Pembrokeshire hedgebanks including fallow margins/headlands.***
- ***Conservation and increase of semi-natural habitat patches and corridors including Green Infrastructure links, watercourses, riparian corridors, woodland, hedgerows, rough grazing, common, and patches of wetland and heathland.***

6.1.33. The draft *Landscape Character Assessment Final Report for Consultation May 2022* then goes on to identify a number of management guidelines referring to landscape character, conservation and enhancement of structural planting such as hedgerows, woodlands, Green Infrastructure etc but none of them provide any directly advice with regards climate change.

6.1.34. The description of the host LCA 9 'Johnston Lowlands' does not provide any advice with regards climate change and its potential implications on the character of the local area either.

6.1.35. Notwithstanding the above it is informative to note that the Proposed Development would bring about a net gain in the hedgerow and woodland resource within the Site thus, would respond positively to the management guidelines referenced above.

6.1.36. It is envisaged that through the creation of new and enhancement to the existing field boundary vegetation habitat connectivity would be strengthened. The increase in semi-natural habitats and increased connectivity allow adaptation to climate change and is one way of creating a resilient environment supporting pollinators required to maintain productive arable land.

6.1.37. The ground beneath the solar modules would be sown with a suitable grass mix to suit the ground condition and local climate. It is envisaged that the grassland mix would be able to sustain any prolonged period of wetness or other changes in the local climate and would

continue to characterise the land within the Site and local landscape. It is also envisaged that grassland species of local provenance, already present in the local area, may have the ability to naturally colonise the Site, should the shift in the weather pattern and climate be so severe to halt or impede the growth of the proposed grassland.

6.1.38. In addition, the proposed hedgerow and woodland planting would act as carbon sinks, assisting in sequestering more carbon than the structural vegetation currently present within the land associated with the Site.

6.1.39. The change from arable to permanent pastures, within the operational phase of the Proposed Development would also assist in regulating soil erosion by limiting the potential for the soil to be compacted through machinery and reducing chemical run-off. Grazing could be introduced across the Site, allowing land to rest.

6.1.40. A rise in temperatures may have an effect on the growth rates of vegetation. Slight increase in temperature would typically stimulate growth but prolonged periods of drought are likely to stump the vegetation. It is not possible, however, to predict to any degree of accuracy the future scenario as there are many variables that may affect the future baseline: water availability, temperature, resilience, or vulnerability to pathogens as their habitat suitability shifts or expands. In other words, the future growth of the existing and proposed vegetation is difficult to predict, but it is envisaged that it will continue to provide screening.

6.1.41. Whilst the proposed grassland mix, hedgerow and woodland planting may be sensitive to the increased frequency of extreme weather events, the selected species would be native and of local provenance / or a suitable substitution. These are considered to be better suited to the local soil and climate and are likely to adapt and be more resilient to the climate change. Any non-native species may be regarded as incongruous to the local landscape character, with the risk of becoming invasive due to the unknown aspects and effects of climate change.

Proposed Scope of Assessment

6.1.42. The assessment will consider the effect on the landscape resource (both direct effects and effects on how the landscape character is perceived) and the effect on visual amenity (views) in construction, operation, and decommissioning. Cumulative effects, arising from the effect of the Proposed Development in conjunction with other solar farms will also be considered, where applicable, and as expressed in the 'DNS Pre-application Advice CAS-04538-H9C9V8 –Great Harmeston Solar Farm', dated 05/11/2025 and received from PEDW.

6.1.43. Pegasus' Environmental Impact Assessment Screening Report (dated 19/08/2025) identified a number of cumulative schemes. Following PEDW's feedback, Pegasus has carried out additional cumulative search identifying a number of operational and proposed energy (wind, solar and BESS) schemes within the 3 km radii and beyond. These are listed in table 3.4 with their location and extent depicted in Pegasus' Cumulative Sites Plan (see Appendix D):

Methodology

6.1.44. This assessment of the likely significant effects of the Proposed Development will take into account of all of the attributes of the local landscape. The identified and shortlisted landscape character and visual receptors will be verified against the SZTV plan, updated to reflect the submission layout, in order to guide the extent of the study area. The assessment will be informed by a review of published landscape characterisation studies such as the draft *Landscape Character Assessment Final Report for Consultation May 2022*, or any other

updated reports available at the time of writing, and field surveys (June 2025 and any subsequent site visits)

6.1.45. In accordance with best practice, the assessment will consider the following potential effects:

- Construction Phase – landscape elements within the Site; effects on landscape character of the study area; and effects on visual receptors associated with the study area.
- Operational Phase – landscape elements within the Site; effects on landscape character of the study area; effects on visual receptors associated with the study area.
- Decommissioning Phase – effects on landscape character of the study area; effects on visual receptors associated with the study area. With regards the landscape elements within the Site it is difficult to predict future scenario and whether the implemented landscaping will be deemed suitable for removal. For this reason, this element of the assessment is proposed to be scoped out at this stage.

6.1.46. This assessment will be undertaken with regard to the current best practice, as outlined within the following publications:

- Guidelines for Landscape and Visual Impact Assessment (3rd Edition, 2013) - Landscape Institute / Institute of Environmental Management and Assessment (hereafter referred to as GLVIA3).
- GLVIA3 Statements of Clarification.
- Landscape Sensitivity Assessment Guidance for Wales (2023) – Natural Resources Wales.
- Technical Guidance Note (TGN) 06/19 Visual Representation of Development Proposals, 17 September 2019 by the Landscape Institute.
- Technical Guidance Note (TGN) 1/20 Reviewing Landscape and Visual Impact Assessments (LVIAs) and Landscape and Visual Appraisals (LVAs), 10th January 2020 by the Landscape Institute.
- Technical Guidance Note (TGN) 2/21 Assessing landscape value outside national designations, May 2021 by the Landscape Institute.
- Planning Policy Wales Edition 11 (PPW11), February 2021.
- LANDMAP Methodology, 2024 by Natural Resources Wales.
- LANDMAP Guidance Note 1: LANDMAP and Special Landscape Areas, 2017 by Natural Resources Wales.

6.1.47. In addition, the subsequent LVIA will be written with reference to Advice Note 7 , Advice Note 9 , and Advice Note 17 published by the Planning Inspectorate.

6.1.48. Landscape Appendix F outlines Pegasus' LVIA methodology, which is to be discussed and agreed with PEDW and the Council. The following paragraphs explain and highlight key elements of Pegasus' methodology.

6.1.49. Landscape and visual effects are assessed through professional judgements on the sensitivity of landscape elements, landscape character, visual receptors and representative viewpoints combined with the predicted magnitude of change arising from the Proposed Development.

6.1.50. The effects on landscape elements are limited to the area which would be occupied by the Proposed Development and include the direct physical change to the fabric of the landscape within the Site, such as the addition or removal of structural vegetation, effects of the footprint of the proposed built from and infrastructure. This is largely a quantitative analysis, i.e., whether the quantum of element proposed to be removed equals that of the proposed and any net gain.

6.1.51. In general terms, the presence or lack of landscape designations is relevant to the assessment as they provide an indication of recognised value and help to inform the identification of landscape and visual receptors or representative viewpoints.

6.1.52. Landscape character is defined as the ***"…distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse."*** Effects on landscape character arise either through the introduction of new elements that physically alter the existing pattern, or through the visibility of the Proposed Development that changes the way in which landscape character is perceived.

6.1.53. It is understood that the recently published draft *Landscape Character Assessment Final Report for Consultation May 2022* constitute the relevant landscape characterisation study for the local area and the basis for the subsequent landscape character assessment.

6.1.54. The assessment of the effects on views considers the indirect effects of the Proposed Development on the appreciation of the local landscape as experienced by key visual receptors associated with settlements, transport routes and PRoWs.

6.1.55. Various factors in relation to the value and susceptibility of landscape elements, landscape character, visual receptors or representative viewpoints are described in Pegasus' LVIA Methodology (see Appendix F) and are cross referenced to determine the overall sensitivity as shown in below Table 6.1

Table 6.1 Overall sensitivity of landscape and visual receptors

		Value		
Susceptibility		**High**	**Medium**	**Low**
	High	High	High	Medium
	Medium	High	Medium	Medium

	Low	Medium	Medium	Low

6.1.56. Magnitude of change is defined in GLVIA3 as "***a term that combines judgements about the size and scale of the effect, the extent over which it occurs, whether it is reversible or irreversible and whether it is short or long term in duration.***" Various factors contribute to the magnitude of change on landscape elements, character, visual receptors, and representative viewpoints.

Magnitude of Change– General Comments

6.1.57. Magnitude of change is defined in GLVIA3 as ***"a term that combines judgements about the size and scale of the effect, the extent over which it occurs, whether it is reversible or irreversible and whether it is short or long term in duration."***

6.1.58. Various factors contribute to the magnitude of change on landscape elements, landscape character, visual receptors and representative viewpoints as set out in Landscape Appendix F.

Nature of Effects – General Comments

6.1.59. The Town and Country Planning (Environmental Impact Assessment) Wales Regulations 2017 (the 'EIA Regulations') requires that an application for a DNS scheme for EIA development must be accompanied by an environmental statement, and such environmental statement shall include description of the likely significant effects of the development on the receiving environment and description of any features of the development, or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment.

6.1.60. GLVIA3 includes an entry that states ***"effects can be described as positive or negative (or in some cases neutral) in their consequences for views and visual amenity."*** GLVIA3 does not, however, state how negative or positive effects should be assessed, and this therefore becomes a matter of subjective judgement rather than reasoned criteria. Due to inconsistencies with the assessment of negative or positive effects a precautionary approach is applied to this Scoping Report and will be applied in any subsequent LVIA that assumes all landscape and visual effects are considered to be negative or adverse unless otherwise stated.

6.1.61. The approach to this (and the interpretation of positive, negative, or neutral effects) in the context of GLVIA3 and is set out in detail in Landscape Appendix F.

Duration of Effects

6.1.62. The duration of the effects of the Proposed Development would vary. The construction phase of the Proposed Development would last up to 9 months from commencement with the construction activities expected to be limited to typical working hours, and likely to include Saturdays.

6.1.63. The operational phase of the Proposed Development would be up to 40 years. The Proposed Development would be continuously operational throughout its lifecycle except for planned maintenance. The Proposed Development is proposed to be decommissioned at the end of its operational life and the indicative decommissioning period is likely to commence in late 2060s.

6.1.64. During the operational stage, the built elements of the Proposed Development including the solar modules, onsite Substation, and ancillary features such as inverters / transformer stations would be visible in the long term. The Cable Route would be underground and would not be visible during the operational stage. For that reason, this particular component is excluded from the assessment of the operational phase of the Proposed Development.

6.1.65. Other activities and movement including construction traffic including mobile cranes and excavators, and compound areas, would only be visible in the construction and decommissioning stages and are considered to be short term temporary effects. It is predicted that no more than two or three mobile cranes would be present at any given time within the Site.

6.1.66. It is expected that the lighting associated with the construction and decommissioning phases would be limited where practical, subject to the timing of the activities and time of the year, and is considered to be short term effect. It is expected that there will be no permanent lighting proposed as part of the Proposed Development except for the localised emergency security lighting in proximity to the substation, and control buildings. Such lighting would be triggered by movement only or manually turned on, and so would not be active for all hours of darkness. CCTV to be installed along the security fencing associated with the onsite Substation and wider Site would utilise infrared technology.

Assessment of Significance

6.1.67. The purpose of an LVIA when produced in the context of an EIA is to identify any significant effects on landscape and visual amenity arising from the Proposed Development. The likely significance of effects is dependent on all of the factors considered in the sensitivity and the magnitude of change, upon the relevant landscape and visual receptors. These factors are assimilated to assess whether or not the Proposed Development will have a likely significant or not significant effect. The variables considered in the evaluation of the sensitivity and the magnitude of change are reviewed holistically to inform the professional judgement of significance.

6.1.68. The sensitivity of the landscape and visual receptor and the magnitude of change arising from the Proposed Development are cross referenced in Table 6.2 to determine the overall degree and significance of landscape and visual effects. This deviates from above Table 3.3 -General Significance of Effect Matrix.

Table 6.2 Significance of Effects Matrix - landscape and visual effects

		Sensitivity		
		High	**Medium**	**Low**
Magnitude	**High**	Major	Major	Moderate

	Medium	Major	Moderate	Minor
	Low	Moderate	Minor	Minor
	Negligible	Negligible	Negligible	Negligible

6.1.69. It is important to note that the matrix above is intended to act as a guide to the assessment rather than a formulaic approach. The level (relative significance) of the landscape and visual effects is determined by combining judgements regarding the sensitivity of the landscape or view, the magnitude of change, the duration of effect, and the reversibility of the effect. In LVIA, any judgement about what constitutes a significant effect is ostensibly a subjective opinion expressed as in this case by a competent and appropriately qualified professional assessor.

6.1.70. The level (relative significance) of effect is described as Major, Moderate, Minor, or Negligible. No Effect may also be recorded as appropriate where there are no effects.

6.1.71. In the LVIA, those effects described as Major may be regarded as significant in EIA terms as required by EIA Regulations It should be noted that whilst an individual effect may be significant, it does not necessarily follow that the Proposed Development would be unacceptable in the planning balance.

6.1.72. It is understood that certain landscape assessors, may consider 'moderate' effects to be also significant or material to the decision-making process. Pegasus' LVIA methodology (Landscape Appendix F) is clear on this matter and recognises that major adverse effects are a high bar and relate to the change in landscape character or view that would cause a variation in the landscape character, or its value, change in the sense of place, or degrade or diminish the integrity of a range of characteristic features and elements, or cause a major deterioration in the view.

6.1.73. In determining the level of residual effects, all mitigation measures are taken into account. The assessment will consider residual effects at Year 15, on the basis that the proposed planting has been successfully established and the vegetation reached the desired height.

Cumulative effects

6.1.74. Cumulative effects arise where the study areas for two or more solar farms or other infrastructure, considered relevant to the assessment, overlap so that the cumulative schemes are experienced at proximity where they may have a greater incremental effect. This means that the addition of the Proposed Development to a situation where other solar developments, or other infrastructure, are apparent may result in a greater effect than where the Proposed Development is seen by itself. The cumulative assessment includes existing identified schemes, those that are consented, and those for which planning applications have been submitted. The list of relevant cumulative schemes has been listed in Table 3.4.

6.1.75. The location of the identified and agreed cumulative schemes and their geographical relationship to the Proposed Development is illustrated on Pegasus' Cumulative Sites Plan in Appendix D and these schemes will be considered in the subsequent LVIA and ES.

6.1.76. The cumulative assessment covers the potential cumulative effects on landscape character receptors and views. Cumulative effects on the landscape elements will be generally avoided, given that the extent of the Site is not expected to overlap with any of the identified cumulative schemes.

6.1.77. As with the assessment of effects of the Proposed Development, the significance of cumulative effects is determined through a combination of the sensitivity of the landscape receptor or view and the magnitude of change upon it. The sensitivity of landscape receptors and views is the same in the cumulative assessment as in the assessment of the Proposed Development itself. However, the definition of a significant cumulative effect is different from a significant effect in the assessment of the Proposed Development itself, and this means that the magnitude of change is also assessed in a different way.

6.1.78. Further details are provided in Landscape Appendix F.

Study Area

6.1.79. As part of the preliminary works 3 km radii study area, based on the Site's boundary, has been considered. It was judged that beyond this distance, even with good visibility, the Site and Proposed Development would not be easily discernible in the wider landscape due to a combination of intervening vegetation, topography and distance.

6.1.80. The preliminary SZTV plan used to inform the June 2025 site visit indicated that the Proposed Development would be theoretically visible across the local area:

- partially extending onto the southern slopes of Bolton Hill (c. 100 m AOD) but excluding Tiers Cross and terminating on the southern edge of Johnston;
- largely terminating at the minor road leading south east from Johnston to Rosemarket but with isolated patches of theoretical visibly further north east and east: across the Rosemarket Gold Course (c. 60 m AOD), localised higher ground around the junction of Langford Road and Targate Road near Upper Bastleford (c. 90 m AOD), and around Dirty Corner off Troopers Inn road (c. 70 m AOD);
- largely excluding Rosemarket but with limited patches of theoretical visibility on its northern and eastern edge (c. 60 m – 50 m AOD) with localised areas of theoretical visibility further away towards Sardis to the east (c. 60 m - 85 m AOD) and south east around Westfield Hill (c. 35 m – 50 m AOD) and extending towards Burton (c. 35 m – 50 m AOD) beyond the preliminary 3 km radii;
- extending south but largely terminating along the road between Rosemarket (c. 40 m AOD), Sentry Cross (c. 70 m AOD), and skirting the northern edge of Steynton (c. 70 m AOD) with a localised area covering the higher ground near and around Scoveston Fort (between c. 60 m – 80 m AOD);
- small and localised areas north of Lliddeston (c. 40 m – 60 m AOD) to the south west on the periphery of the 3 km radii study area;

- incidental very small areas at Robeston Cross (c. 65 m OD) and at the operational solar farm at Lower Thornton (Land to the South East of Court Road, Liddeston) (c. 60 m AOD) to the east;

- and to the east and south east largely terminating on the nearby localised higher ground (sloping from c. 80 m to 50 m AOD), which coincides with a minor road leading from Tierston and operational solar farm (Rose Cottage Farm; Woodson Farm; Tierson Farm, Tiers Cross) towards Steynton to the south.

6.1.81. Based on the preliminary SZTV it transpired that the Proposed Development would potentially be visible from up to 0.7 km to the north at Bolton Hill, largely one to two fields way from its eastern edge some 0.5 km away, potentially localised areas on the edge of Rosemarket and towards the junction of Langford Road and Targate Road near Upper Bastle for up to c. 1.5 km away, up to c. 1 km to the south, and up top c. 0.5 km to the west.

6.1.82. It is important to note that the SZTV is a binary modelling which identifies areas from where the Proposed Development would be theoretically visible. It does not necessarily follow that the entirety of the Proposed Development would be visible, and does not identify the extent of that visibility or which parts of the Proposed Development would be visible. Such modelling also does not take into account any screening features below 3 m high.

6.1.83. In summary, the above identified areas are taken as the 'core' study area appropriate for further analysis in any subsequent assessment. It does not follow, however, that potentially significant effects would be experienced across the whole of the core area.

Surveys

6.1.84. A preliminary two—day site visit was carried out in June 2025. It is envisaged that through this Scoping Report further viewpoints and visual receptors may be identified, to inform the assessment, and these will be captured during subsequent site visits, as appropriate.

Modelling

6.1.85. Computer modelling is used to assist in the assessment process and to illustrate the effects of the Proposed Development through the production of SZTV plans. The SZTV plans illustrate the theoretical extent of where the proposed solar modules and onsite Substation may be visible from, assuming 100% atmospheric visibility. As part of the ES submission the subsequent LVIA will be based on the most up to date SZTV plan, updated if necessary, and will include the screening provided by various vegetation and built form, based on the following assumptions:

- Indicative woodland and building heights are modelled at 15m and 8m respectively.

- National Tree data: vegetation height based on the survey data.

- The viewer height is set at 1.7m.

- Calculations include earth curvature and light refraction.

6.1.86. The current SZTV plan has been generated using a Digital Terrain Model of OS Terrain 5 combined with OS Open Map Local data for woodland and buildings, and National Tree data to create a Digital Surface Model (DSM).

6.1.87. Weather conditions and visibility are considered important aspects of the site visits for the photography. Where possible, visits will be planned around clear sunny days with good visibility. Viewpoint locations, where possible, will be visited according to the time of day and the orientation of the sun to avoid front lit scenes. Photographs facing into the sun will be avoided where possible to prevent the silhouette effect. Adjustments to lighting will be made in the rendering software, when preparing photomontages, to allow the Proposed Development to appear realistic in the view under the particular lighting and atmospheric conditions present at that time.

6.1.88. A number of guidance documents have been published that deal with site photography and photomontage techniques in general, with the Landscape Institute's Technical Guidance Note 06/19 Visual Representation of Development Proposals (2019), being the most recent one. Specific guidance in relation to wind farms has been available from the Scottish Natural Heritage since the early 2000s, but there is a lack of similar guidance for solar energy developments. In the absence of such guidance Pegasus has developed its own guidance with regard to the published documents.

6.1.89. The photograph locations were GPS recorded. These single photographs were then stitched together using PTGui to create a panoramic image of 75 degrees in planar projection.

6.1.90. The details of the development were modelled in 3d Studio Max from elevation and site layout plans provided by the Applicant.

6.1.91. The stitched photograph was then used as a backdrop within 3d Studio Max at full resolution. Using the known photograph location and then picking out features on the photograph these where cross-referenced with the same points taken from a number of sources including aerial imagery, Mastermap base mapping and survey points to accurately create a camera with 3d Studio Max and Vray to match the camera height, location and image field of view and resolution, a process known as camera matching. These 'survey' points are taken across the image both foreground and distant in order to allow for increased accuracy. Where necessary additional features were created as 3d models within 3d Studio Max to allow for better alignment.

6.1.92. Once the alignment was correct the completed 3d model was then rendered onto the photography to complete a seamless image.

6.1.93. For the images produced as photomontages these were taken into Photoshop in order to apply the masking. Masking is where the foreground objects and features or features which may 'mask' the development within the original photography are redrawn in front of the rendered image in order to simulate how the development will look within the existing landscape.

6.1.94. Once all the masking has been applied the image is then placed into the template within InDesign and the final pdf output is produced.

6.1.95. The precise location of each photograph is recorded using a hand-held GPS device and bearings from this location to prominent vertical features within the view (such as transmission masts) are also recorded using Google Earth software.

6.1.96. Whilst every effort has been made to ensure the accuracy of the photomontages, it must be appreciated that no photomontage could ever claim to be 100% accurate as there are a number of technical limitations in the model relating to the accuracy of the information

available from Ordnance Survey and from the GPS. For a detailed discussion regarding the limitations of photomontages, please refer to Visual Representation of Wind farms – Good Practice Guidance (SNH commissioned report FO3 AA 308/2).

6.1.97. The photographs and photomontages used in any subsequent assessment are for illustrative purposes only and, whilst useful tools in the assessment, are not considered to be completely representative of what will be apparent to the human eye. The assessments will be carried out from observations in the field rather than from photographs.

Vegetation Growth Rates

6.1.98. The residual effects, assessed in the subsequent LVIA will be based on the assumption that the proposed mitigation planting has been implemented in accordance with the proposed landscaping plan, current best practice, and has been subject to active and appropriate management regime, and that the vegetation has established successfully and developed into strong positive landscape features.

6.1.99. The precise growth rate is difficult to establish as it depends on the species, soil type, nutrients and water availability, ongoing management, and competition for other planting, and indeed the effects of climate change. For the purpose of the subsequent LVIA the growth of the proposed hedgerow and tree / woodland vegetation is assumed to be approximately 0.5 m per annum.

Assessment of likely significant effects

6.1.100. There would be several landscape and visual receptors that potentially would be affected by the Proposed Development on the Site. Those identified to date are listed below.

- Landscape features including:
    - Land Use and Ground Cover.
    - Hedgerows and Trees.
    - Landform.
    - Water Features.
    - PRoWs.
- Landscape Character referring to:
    - Site-specific landscape character, i.e., character of the Site.
    - Key characteristics of the identified host landscape areas, as per the published landscape character assessment(s).
    - LANDMAP, on both a site wide and broader contextual basis.
- Visual:

- Users of PRoWs and Open Access Land / other publicly accessible locations in the Site's context.
- Users of public highways in the Site's context.
- Local communities / settlements in the Site's context.

Effects During Construction

6.1.101. The assessment of likely significant effects during the Construction phase would consider the landscape elements within the Site and indirect effects upon the change to the landscape character and its perception, and visual amenity.

Effects During Operation

6.1.102. The assessment of likely significant effects during the Operational phase would consider the effects upon the change to the landscape character and its perception and visual amenity.

Effects During Decommissioning

6.1.103. The assessment of likely significant effects during the Decommissioning phase would consider the landscape elements within the Site and indirect effects upon the change to the landscape character and its perception, and visual amenity.

Consultation

6.1.104. It is envisaged that through this Scoping Report the Council will confirm the list of identified landscape character receptors – refer to paragraph 6.1.27 and Appendix G, and the identified cumulative schemes.

6.1.105. It is envisaged that a separate meeting will be held with the Council's Landscape Officer / or their external landscape consultant to discuss the scope of work and assessment approach, particularly for the assessment of visual receptors.

Scoping Criteria

Issues to be scoped out

6.1.106. Whilst the ES LV Chapter will consider residential visual receptors where appropriate, for example from public highways close to residential dwellings, it will not include a standalone Residential Visual Amenity Study.

Preliminary Discussions of Potential Mitigation and Enhancement Measures

6.1.107. Having assessed the magnitude of impacts against the identified receptors, the LVIA will consider whether any mitigation measures are necessary.

6.1.108. Where possible, mitigation measures will be embedded into the design to reduce the landscape and visual effects to an acceptable level. However, where this is not sufficient, further mitigation will be specified to reduce, remove, or compensate for any significant adverse effects identified.

6.1.109. The likely residual effects, taking account of embedded and additional mitigation, will be identified in the ES LVIA Chapter.

Mitigation by Design

6.1.110. The LVIA work will identify significantly affected receptors and would aim to inform the design of the Proposed Development in order to avoid, reduce or offset the level of harm through design changes or reduce the residual effects through embedded mitigation planting.

Additional Mitigation

6.1.111. It is envisaged that the proposed mitigation measures will be the 'embedded mitigation measure'. Should the LVIA assessment identified any additional change or harm, through additional assessment or as a result of other disciplines, additional mitigation will be proposed.

Enhancement

6.1.112. Opportunities to implement landscape character enhancements will be considered during the assessment work, and where possible could be incorporated into the design of the Proposed Development.

Questions

- Pegasus' Landscape Team would be grateful for the Council to respond to the below queries.
- Does PEDW and the Council intent to rely on the National Landscape Character Areas classification?
- Does PEDW and the Council intent to rely on the draft *Landscape Character Assessment Final Report for Consultation May* or the earlier draft report titled *Landscape Character Assessment Consultation Draft July 2019*, or both?
- Does PEDW and the Council consider the identified host Landscape Character Area and LANDMAP Aspect Areas (Appendix G) to be the only relevant landscape character receptors?
- Does PEDW and the Council consider Appendix F (Pegasus' LVIA methodology) to be appropriate and proportionate to the Proposed Development?
- Does PEDW and the Council consider the list of identified cumulative developments to be complete and appropriate for the subsequent LVIA?

6.2. Chapter 6 – Cultural Heritage and Archaeology

Introduction

6.2.1. This section details the proposed approach to the EIA for cultural heritage and archaeology. The 'cultural heritage and archaeology' EIA topic equates to the 'historic environment' in national and local policy terms. The assessment will consider the potential effects of the Proposed Development on cultural heritage receptors (hereafter 'historic assets' in line with policy terminology), both during construction and operation.

Relevant Legislation, Policy and Guidance

6.2.2. The *Historic Environment (Wales) Act (HEWA) 2023* forms the legislative framework for the management and protection of the historic environment. This Act refers to back to the UK Public General Acts, Town and Country Planning Act 1990, Section 314A of which provides statutory protection for Listed Buildings and their settings and Conservation Areas in Wales[22].

6.2.3. National policy for this topic is set out within Chapter 6 of Planning Policy Wales, Edition 12 (PPW12) which has the following objectives for the historic environment:

- Protect the Outstanding Universal Value of the World Heritage Sites;
- Conserve archaeological remains, both for their own sake and for their role in education, leisure and the economy;
- Safeguard the character of historic buildings and manage change so that their special architectural and historic interest is preserved;
- Preserve or enhance the character or appearance of Conservation Areas, while at the same time helping them remain vibrant and prosperous;
- Preserve the special interest of sites on the register of historic parks and gardens; and
- Protect areas on the register of historic landscapes in Wales.

6.2.4. These objectives cover both designated and non- designated assets. They are supported by asset-type specific polices in PPW12 and Technical Advice Note 24: The Historic Environment (TAN24).

6.2.5. The following topic guidance is relevant to the Proposed Development:

- Chartered Institute for Archaeologists (CIfA) (2020) Standard and guidance for historic environment desk-based assessment;
- IEMA, Institute of Historic Building Conservation (IHBC) and CIfA (2021) Principles of Cultural Heritage Impact Assessment in the UK (PCHIA);

[22] Welsh Government, *Historic Environment (Wales) Act 2023*.

- Cadw (2011) Conservation Principles for the sustainable management of the historic environment in Wales;
- Cadw (2017) Setting of Historic Assets in Wales;
- Cadw, Countryside Council for Wales[23] and Welsh Assembly Government (2007) Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process (2nd edition) (aka ASIDOHL2).

Preliminary Assessment of Baseline Conditions

6.2.6. The following sources were used to understand the baseline conditions for this topic:

- Cadw data, comprising:
  - Listed Buildings;
  - Scheduled Monuments;
  - Conservation Areas;
  - Historic Parks and Gardens;
  - World Heritage Sites; and
  - Registered Historic Landscapes.
- Heneb Historic Environment Record (HER) data;
- Published information on registered historic landscapes available on the Cadw and Heneb websites;
- Recent digital aerial photography (available via Google Earth);
- Site visit – undertaken 20/06/25.

6.2.7. A Study Area of land lying within 1 km of the Site was used for data gathering (see Appendix H for designated and non-designated historic assets .

6.2.8. There are no designated historic assets wholly within the Site. A very small sliver of a Registered Historic Landscape (RHL), Milford Haven Waterway Landscape of Outstanding Historic Interest ('LOHI', RHL ref. HLW (D) 3), lies within the Site adjacent to Hayston Bridge. The boundaries of RHLs were originally drawn at quite large-scale so it is possible, as the boundary of this LOHI does not exactly follow boundaries shown on Ordnance Survey

[23] The Countryside Council for Wales no longer exists and the majority of its former functions form part of the remit of Natural Resources Wales (NRW). NRW do not retain a remit to comment on registered historic landscapes within historic environment assessment. This responsibility lies with Cadw, as historic environment advisor to the Welsh Government.

mapping and otherwise lies wholly south of the Site, that the LOHI was not intended to include the land which constitutes the Site.

6.2.9. The following designated historic assets are in the Study Area:

- One Scheduled Monument, Burnt Mound 170m S of Jubilee Cottages (SM ref. PE476)[24], a later prehistoric mound which abuts the northern Site boundary.
- 10 Listed Buildings within a 1km radius of the site, as follows:
    - Church of St Peter at Johnston (Grade II*, LB ref. 11996), a medieval parish church c.410m north of the Site.
    - Upper Harmeston (Grade II, LB ref. 82698), a mid-19th century cottage adjacent to the site at the junction of the A477 and A4076;
    - Hayston Hall – three Grade II listed buildings:
        - Hayston Hall (LB ref. 83215), an early 19th century gentry house 210m south of the Site;
        - Lofted Outbuilding at Hayston Hall (LB ref. 83216), 230m south of the Site; and
        - Courtyard of Outbuildings at Hayston Hall (LB ref. 83217), 260m south of the Site;
    - Great Harmeston – two Grade II listed buildings:
        - Great Harmeston (LB ref. 13052), a gentry house of 16th century origin c.350m east of the western half of the Site;
        - Long Agricultural Range to W of Great Harmeston House, including Cartsheds and Food Processing Store (LB ref. 13053), 19th century outbuidlings for Great Harmeston lying c.300m east of the western half of the Site;
    - Hayston Bridge (Grade II, LB refs. 82524 & 83218), a late 18th century bridge adjacent to the Site which formerly carried the road from Johnston to Waterston over a stream;
    - Milepost near Redstock Bridge, lies adjacent to the site boundary at Redstock (Grade II, LB ref. 82696).

6.2.10. One HER entry (Heneb ref. 33149) is within the Site. This is for a linear earthwork which the HER states has been used recently as a farm track but may have its origins in a prehistoric defensive boundary feature. It is likely that this asset does not lie within the Site as the detailed HER description states it abuts a power station. There is no power station in or near

[24] Also recorded on the HER as Heneb ref. 3348.

the Site so it is assumed that the entry's grid reference is incorrect, leading to it being plotted within the site.

6.2.11. The Study Area has evidence for later prehistoric activity. The scheduled monument is of probable Bronze Age date and consists of a linear mound of fire-cracked stones[25] next to the stream which runs along the northern Site boundary. Burnt mounds are thought to have been formed by dumping of stones that had been used to heat water from an adjacent watercourse, both domestic and ritual activity has been suggested as the reason for their creation. A further eight burnt mounds are recorded in the Study Area[26], all lie along the stream adjacent to the north of the Site and its tributary springs. These include two c.100m north of the Site (Heneb refs. 3347, 3351) and two which were found c. 730m northeast of the Site during groundworks for the Johnston to Tiers Cross Bulford Road Improvement Scheme in 2014 (Heneb refs. 130499, 130500).

6.2.12. There are few records of activity between prehistory and the post-medieval period in the Study Area. A late 3rd century Roman coin was found during building works at Johnston (Heneb ref. 11836). Although the HER data shows this as at the northwestern edge of the Site, its exact location is not stated in the HER entry and its plotted location reflects the high-level grid reference[27] recorded against the find. This location does not have any recent buildings so it is unlikely that it came from within the Site and is more likely it came from within the built up area of Johnston. It does, however indicate some level of activity in the Study Area during the Roman period. An HER entry for the medieval settlement of Johnston is also recorded at this location. The location of the HER point for this entry is also based upon a high-level grid reference[27] and settlement is unlikely to have extended to into the Site. The core of this settlement is likely to have been around the parish church, St Peter's (LB ref. 11996; Heneb ref. 3352), c. 430m north of the Site.

6.2.13. The majority of HER entries within the 1km study area are of post-medieval date and are records of buildings and features recorded on the First and Second Edition Ordnance Survey maps (1871 and 1908 respectively). The majority of these are farmhouses, cottages and other dwellings dating to between the 16th and 19th centuries. They include the farmsteads and estates with listed buildings discussed above at Great Harmeston and Hayston Hall as well as the listed cottage Upper Harmeston. Farmsteads and cottages adjacent to the Site at Deemshill, Redstock and Hayston Mountain are also recorded[28]. An HER entry for an 'unspecified dwelling' documented in 1864 is also shown in the north of the Site (Heneb ref. 19859). No such dwelling is shown on the Tithe[29] or early Ordnance Survey editions This also has a high-level grid refence[27] so is unlikely to have existed in the site. Elements of a watermill are also recorded on the stream adjacent to the Site at Hayson bridge[30]. Further industrial features are recorded in the Study Area: the Sunny Hill Mineral Water Works, adjacent to the northwestern tip of the site (Heneb ref. 29538) and a quarry c. 120m eastern of the Site

[25] https://cadwpublic-api.azurewebsites.net/reports/sam/FullReport?lang=en&id=1438.
[26] Heneb refs. 3345, 3346, 3351, 3349, 3350, 3347, 106731, 130499 & 130500.
[27] The GIS point reflects that a 12 figure grid reference, SM 93000 10000, is recorded in the HER entry to reflect the general area in which the find/. The GIS point plots at the origin, southwestern corner, of the 1km grid square identified by the 12 figure grid reference.
[28] Heneb refs. 119670, 22371 & 62714.

[29] IR 29/54/123 Tithe apportionment for Stainton.
[30] Heneb refs. 62716, 62718, 103310.

(Heneb ref. 62715). The HER also records that both the A4076 and the A477 have their origins in post-medieval toll roads (Heneb refs. 108714, 109056).

Scope and Methodology of Assessment (including significance criteria)

6.2.14. The assessment will be undertaken in line with the guidance listed under 6.2.5 Legislation and Guidance above.

6.2.15. A 1 km Study Area is proposed for assessment. This Study Area will allow contextual understanding of asset which may experience direct physical effects and identification of assets which may be susceptible to effects related to setting change.

6.2.16. The following sources will be used:

- Cadw data, comprising:
    - Listed Buildings;
    - Scheduled Monuments;
    - Conservation Areas;
    - Historic Parks and Gardens;
    - World Heritage Sites; and
    - Registered Historic Landscapes.
- Heneb Historic Environment Record (HER) data;
- Published information on registered historic landscapes available on the Cadw and Heneb websites;
- Zones of Theoretical Visibility (ZTVs);
- LiDAR data;
- Historic mapping;
- Recent digital aerial photography (available via Google Earth);
- Results of geophysical survey of the Site undertaken in October – November 2025.
- Visualisations (e.g. wirelines, photomontages, and a computerised 3D model) of the Proposed Development.
- Findings of other topics where relevant (e.g. LVIA, noise and vibration).

6.2.17. A walkover survey of the Scoping boundary will be undertaken. This will review the condition and nature of any known assets or HER entries. The walkover will also aim to identify any hitherto unrecorded assets. All assets noted during the walkover will be subject to a basic record (e.g. photography) which will be used to inform the Historic Environment Desk Based

Assessment (HEDBA). Assets identified as susceptible to effects related to setting change will also be subject to field visits to understand their setting. Selected images from the walkover and setting surveys will be used to illustrate the HEDBA.

6.2.18. Historic assets will be considered in terms of their level of 'historic significance' in line with Cadw Conservation Principles. To avoid confusion with use of the 'significance' in EIA practice to refer to the level of effect a receptor would experience as a result of a development, historic significance will be referred to as the 'value' of the asset. Value will be ascribed using the following criteria:

- High: historic assets of national significance – designated historic assets and non-designated assets of demonstrably equivalent significance.
- Medium: historic assets of regional significance - identified with reference to regional priorities, such as outlined in 'A Research Framework for the Archaeology of Wales'.
- Low: historic assets of local significance.

6.2.19. Effects will be assessed in terms of how the Proposed Development will, either physically or through change in setting, affect the significance of the historic asset. This will be explained in terms of how the change would affect the historic values detailed in Cadw's Conservation Principles. In explaining effects, a description of the level of negative or positive change a historic asset will experience as a result of the Development, supported by an appropriate narrative linking this to how the asset will have its value changed.

6.2.20. There is no industry-wide accepted methodology for assessment of cumulative effects to cultural heritage receptors in EIA. Assessment of cumulative effects will use the agreed list of cumulative schemes for the Proposed Development to identify whether any further effects (i.e. those not caused solely by the Development itself) will arise (see Cumulative Sites Plan in Appendix D). This assessment will be undertaken and articulated in the same terms as the assessment of the effect of the Proposed Development in its own right.

6.2.21. All narrative statements on the nature of effects will close with a clear statement as to whether the effect is a significant effect in EIA terms. For assets with specific legislative tests, e.g. Listed Buildings and Conservation Areas, the statement on the effect will also state whether or not the test is fulfilled.

Potential Effects (including identification of specific receptors)

6.2.22. The following potential effects have the potential to arise as a result of the Proposed Development and are scoped in:

- Direct physical effects to historic assets within the Project arising during the construction and decommissioning period; and
- Effects related to setting change for assets within the Study Area during the construction and decommissioning period.
- Effects related to setting change for assets within the Study Area during the operational period.

6.2.23. The following effects are proposed to be scoped out:

- Direct physical effects during operation and maintenance – ground disturbance is envisaged only during construction so there is no source of impact once the Proposed Development is operational.

- Direct physical effects to assets beyond the Proposed Development during operation and maintenance – there will be no physical disturbance to assets lying outside of the Proposed Development so there is no source of impact when it is operational.

- Direct physical effects to assets beyond the land required for construction during the construction period – disturbance of ground beyond the footprint Proposed Development does not form part of the application so there is no source of impact.

Preliminary Discussions of Potential Mitigation and Enhancement Measures

6.2.24. Due to the nature of the scheme, mitigation is likely to focus on addressing direct physical effects to historic assets, particularly archaeological remains. The approach to mitigation will be guided by industry common practice and appropriate procedures as laid out in relevant CIfA Standard and guidance documents. Opportunities for addressing effects related to setting change will be explored in conjunction with those designing landscape mitigation measures (e.g. LVIA and ecology topic specialists).

Questions

- Do consultees agree that a 1 km Study Area is appropriate for the assessment?

- Does Cadw agree that an ASIDOHL2 is not required for the Proposed Development.

- Do consultees agree that all guidance relevant to assessment of effects to historic assets has been captured in (what is currently) Para. 6..2.5.

- Do consultees agree that the approach to assessment of effects, including those effects scoped in and out and the cumulative assessment, is appropriate?

- Do consultees agree that the approach to surveys is appropriate?

6.3. Chapter 7 – Ecology & Biodiversity

Introduction

6.3.1. This section of the Scoping Report sets out the likely significant effects on Ecology produced by the Proposed Development which will be reported in the Environmental Statement (ES). It is proposed that the ecological matters relating to the Site are scoped into the EIA.

Relevant Legislation, Policy and Guidance

6.3.2. Key planning policy relevant to biodiversity and nature conservation which has informed the assessment process includes the following:

National Planning Policy

6.3.3. The Habitats Directive: Adopted by the European Commission (EC) in 1992, Council Directive 92/43/EEC concerning the conservation of natural habitats and wild flora and fauna was transposed into UK legislation through the Conservation Regulations 1994. This has been superseded by the Conservation of Habitats and Species Regulations 2017. Habitats listed under Annex I to the Directive and species listed under Annex II (including otter and some species of bat) receive special legal protection. This is partly implemented through the creation of a network of protected sites (known through Europe as Natura 2000 network of Site of Community Importance) which, in the UK, is made up of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) which are designated under the Birds Directive (Directive 79/409/EEC). Under Regulation 48(1) of the Habitats Directive, all developments with the potential to affect a European Site must undergo an assessment, known as an Appropriate Assessment, to determine the potential to cause harm to the features for which the SAC or SPA was designated.

6.3.4. Chapter 6 (Distinctive and Natural Places) of Planning Policy Wales details a number of outcomes which planning applications should achieve as detailed below:

- the role which landscapes, the historic environment, habitats and biodiversity, the characteristics of coastal, rural or urban environments play in contributing to Distinctive and Natural places are identified, understood, valued, protected, maintained and enhanced;
- further fragmentation and isolation of habitats and species is avoided, wherever possible, and wildlife corridors and stepping stones forming wider ecological networks are protected, maintained and enhanced;
- sites designated for their landscape or biodiversity or geodiversity importance are fully considered and their special characteristics and features protected and enhanced, whilst the series of sites should be recognised as being at the heart of improving the resilience of ecosystems;
- development proposals are directly shaped by the principle of retaining and enhancing existing habitats and species. This is the most cost effective and robust option for biodiversity, taking into account the benefits of a preventative approach;
- opportunities in all areas to improve the resilience of ecosystems are taken by addressing problems such as, building on floodplains, diffuse pollution, soil

compaction and sealing, ensuring the protection of peat resources and improving approaches to coastal flood defence in urban areas and coastal margins;

- opportunities to improve health and well-being are taken, in particular, to reduce average levels of airborne pollution, protect appropriate soundscapes, create areas of tranquillity, secure sustainable drainage systems, ensure water sensitive design, address soil carbon management and secure access to informal spaces for recreation through green infrastructure provision so as to improve capacity for adaptability to the challenges of climate change, such as flood risk and increased temperatures;

- opportunities to develop green infrastructure are taken, where this would improve the resilience of ecosystems; and

- support development which contributes positively to an area and addresses environmental risks which constrain potential and impact adversely on communities and the natural and built environment by using PDL or existing buildings and taking opportunities to 'clean up' land and address dereliction, where this is informed by the historic and natural environment.

6.3.5. Under the Biodiversity and Resilience of Ecosystems Duty (Section 6 Duty), planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. The Nature Recovery Action Plan supports this legislative requirement to reverse the decline in biodiversity, address the underlying causes of biodiversity loss by putting nature at the heart of decision making and increasing the resilience of ecosystems by taking specific action focused around the 6 objectives for habitats and species.

6.3.6. Recognising that development needs to take place and some biodiversity may be impacted, the planning system should ensure that overall there is a net benefit for biodiversity and ecosystem resilience, resulting in enhanced wellbeing.

6.3.7. Development proposals must consider the need to:

- support the maintenance and enhancement of biodiversity and the resilience of ecosystems;

- ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats, including the most recent targets set out in the 2022 UN Global Biodiversity Framework;

- ensure statutory and non-statutory designated sites and habitats are properly protected and managed and their role at the heart of resilient ecological networks is safeguarded;

- safeguard protected species and species of principal importance and existing biodiversity assets from direct, indirect or cumulative negative impacts that affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water, air and soil, including peat; and

- secure the maintenance and enhancement of ecosystem resilience and resilient ecological networks by improving diversity, extent, condition, and connectivity.

6.3.8. Where negative effects on biodiversity and ecosystem resilience cannot be avoided, minimised or mitigated/restored, and as a last resort compensated for, it will be necessary to refuse planning permission.

6.3.9. Enhancement must be secured by delivering a biodiversity benefit primarily on Site or immediately adjacent to the site, over and above that required to mitigate or compensate for any negative impact.

6.3.10. Further legislation and policy documents relevant to the ecology and nature conservation at a national level applicable to this development are:

- The Wildlife and Countryside Act (WCA) 1981 (as amended);
- The Countryside and Rights of Way (CRoW) Act 2000;
- The Hedgerows Regulations 1997;
- The Protection of Badgers Act 1992;
- Wild Mammals (Protection) Act 1996
- The Environment (Wales) Act 2016
- Future Wales: The National Plan 2040 – Policies 17 and 18
- Planning Policy Wales Edition 12 (February 2024);
- Technical Advice Note 5: Nature and Conservation and Planning (September 2009)
- BS 42020:2013. Biodiversity – Code of practice for planning and development

Local Planning Policy

6.3.11. Policy GN.37 within Pembrokeshire County Council's local development plan relevant to ecology and nature conservation specifies that "all development should demonstrate a positive approach to maintaining and, wherever possible, enhancing biodiversity. Development that would disturb or otherwise harm protected species or their habitats, or the integrity of other habitats, sites or features of importance to wildlife and individual species, will only be permitted in exceptional circumstances where the effects are minimised or mitigated through careful design, work scheduling or other appropriate measures."

6.3.12. Pembrokeshire Local Action Plan (LBAP)[31] lists the following priority habitats and species which are, or may be relevant to the site:

Habitats

[31] Pembrokeshire Biodiversity Partnership (2011). *Pembrokeshire Local Biodiversity Action Plan*. Pembrokeshire County Council, Haverfordwest

- Grassland
- Lowland farmland
- Freshwater
- Woodlands

Species

- Bats (group plan)
- Farmland birds (group plan)
- Reptiles and Amphibians (group plan)
- Invasive non-native species (group plan)
- Otter
- Brown hairstreak
- Southern damselfly
- Kestrel
- Dormouse

Preliminary Assessment of Baseline Conditions

6.3.13. The ecological features have been identified through desk-based study and site surveys and recorded on the Baseline Habitats Features Plan (see Appendix I). The approach proposed in this Scoping Report has been informed by the findings of desk-based study including local records from West Wales Biodiversity Information Centre initial site survey work and published best practice guidance.

Baseline sources and surveys undertaken to date

6.3.14. The desk study has included data from the following sources:

- Multi-Agency Geographic Information for the Countryside (MAGIC) website[32];
- Woodland Trust Ancient Tree Inventory website[33];
- Information requested from West Wales Biodiversity Information Centre (LERC) (Data received on 4th November 2024)[34].
- Pembrokeshire County Council website[35];
- Joint Nature Conservation Committee (JNCC) website[36];

[32] Multi-Agency Geographic Information for the countryside (MAGIC) [Online] https://magic.defra.gov.uk/
[33] Woodland Trust Ancient Tree Inventory website; [Online] https://ati.woodlandtrust.org.uk/
[34] https://my.lerc.online/?src=lr
[35] https://www.pembrokeshire.gov.uk/biodiversity/pembrokeshire-nature-partnership-plans-and-guidance
[36] http://jncc.defra.gov.uk/ProtectedSites/

- Natural Resources Wales (NRW) designated sites website[37];
- Ordnance Survey mapping; and
- Google Maps, including aerial photography.

6.3.15. The study area was determined based on best practice guidance documents, including CIEEM Guidelines, and species-specific best practice guidance documents as appropriate.

6.3.16. A number of international statutory designated sites lie within 10 km of the Site, including several Special Areas of Conservation (SACs) and one Special Protection Area (SPA). These designations cover a range of coastal, marine, riverine and bat-related features.

6.3.17. Based on their qualifying interests and potential functional connectivity, Pembrokeshire Marine SAC, Scoveston Fort Site of Special Scientific Interest (SSSI) and Milford Haven Waterway SSSI, have been scoped into the assessment.

6.3.18. All other designated sites can be scoped out due to distance, lack of habitat connectivity.

6.3.19. The designated sites and proposed scoping outcomes are summarised below:

- Pembrokeshire Marine SAC (2.8–3.8 km S)
  Designated for marine habitats and species including otter. Natural Resources Wales (NRW) identified that potential impact pathways may exist and should be assessed.
  Scoped In.
- Cleddau Rivers SAC (6 km NE)
  Designated for riverine habitats and Annex II species (lamprey, bullhead, otter) but given distances impacts are not anticipated. **Scoped out** (otter addressed separately as a protected species).
- West Wales Marine SAC (7.8 km SW)
  Designated for harbour porpoise; however, given distance from the site and nature of development, impacts are considered highly unlikely.
  Scoped out.
- Limestone Coast of South West Wales SAC (8.2 km S)
  Designated for coastal habitats and greater horseshoe bat. Habitats will not be directly or indirectly affected and due to distance impacts on mobile interest features of the designation are considered unlikely.
  Scoped out.
- Pembrokeshire Bat Sites & Bosherton Lakes SAC (~10 km S)
  Supports greater and lesser horseshoe bats and otter. Distance and lack of commuting/roost impacts mean no pathway for effects.
  Scoped out.
- Castlemartin Coast SPA (10 km S)
  Designated for breeding chough. Breeding bird surveys did not record chough using

[37] https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-land-and-seas/find-protected-areas-of-land-and-sea/?lang=en

the Site so there is no functional link to the Site and therefore no impact pathways have been identified.
Scoped out.

- Scoveston Fort SSSI (2.3 km SE)
  Designated for greater horseshoe bat. Due to proximity and mobility of the species, indirect effects cannot be excluded pending completion of bat survey analysis.
  Scoped in.
- Milford Haven Waterway SSSI (~4 km S)
  Designated for its extensive estuarine and coastal habitats, including mudflats, saltmarsh, intertidal sediment communities, rich marine invertebrate assemblages, migratory fish, and important feeding/roosting habitat for waterfowl. Although the Site does not lie close to the waterway, potential hydrological connectivity via surrounding watercourses means indirect construction and/or phase effects (e.g., sediment run-off, pollution pathways) cannot be fully ruled out.
  Scoped in.

6.3.20. Owing to the distances involved and the nature of habitats for which other non-statutory sites have been designated, no direct or indirect impacts are anticipated, and therefore, these sites have been scoped out of further assessment.

6.3.21. Hedgerows, woodland, veteran trees and ponds are all listed as Habitats of Principal Importance (HoPI) under Section 7 of the Environment (Wales) Act 2016 and the NERC Act 2006.

6.3.22. On review of MAGIC, there is one area of priority deciduous woodland habitat within, three immediately adjacent to, and another approximately 280m northeast of the Site The broadleaved woodland habitat is listed as a Habitat of Principal Importance under the Priority Habitat Inventory and National Forrest Inventory (Forestry Commission 2020).

6.3.23. As described in Section 4, the following ecological surveys have been completed to date:

- Extended Phase 1 Habitat Survey and UKHab mapping (2024/ 2025 updates), providing a baseline assessment of habitat types and condition across the Site
- Badger Survey undertaken in October 2024 using standard methodologies.
- Non-breeding (wintering) bird surveys (2024/2025), undertaken by Logika Group following an adapted Winter Farmland Bird Survey methodology.
- Breeding bird surveys (2024), undertaken using standard territory-mapping methods.
- Great crested newt (GCN) eDNA surveys of accessible on-site ponds (2024), with additional ponds found dry and off-site ponds inaccessible for sampling.
- Bat activity surveys, including seasonal walked transects (2024) and multiple deployments of static detectors across 2024 and 2025, undertaken in line with BCT best practice.

Baseline descriptions and analysis to date

6.3.24. The following broad habitats identified within the EIA scoping boundary are as follows, and illustrated on the Habitat Features Plan:

- Arable fields

- Modified grassland
- Marshy grassland
- Neutral grassland
- Broadleaved woodland
- Ponds
- Watercourse
- Native species poor hedgerows with trees
- Native species rich hedgerows with trees

6.3.25. Hedgerows, certain types of woodland, arable field margins, rivers and ponds, are all listed on Section 7 as Habitats of Principal Importance for Wales.

Scope and Methodology of Assessment (including significance criteria)

6.3.26. The ES chapter will be prepared by competent experts with relevant and appropriate qualifications and experience. It will follow the methodologies set out in the Guidelines for Ecological Impact Assessment in the UK and Ireland (referred to as the 'CIEEM guidelines)[38]. This guidance will be used to evaluate existing conditions, and to assess the significance of likely effects on ecological features that may arise during construction and operation of the Development. This involves determining the relative importance of each ecological feature and undertaking an impact assessment with and without mitigation measures From this, any residual effects likely to occur can be identified along with an appreciation of their significance.

Assessment of Ecological Importance

6.3.27. When evaluating the baseline biodiversity importance of natural features found on the Site, the CIEEM guidelines indicate that the following characteristics are considered:

- Animal or plant species which are rare or uncommon, either internationally, nationally or more locally.
- Ecosystems which provide the habitats required by the above species.
- Species that are afforded legal protection.
- Endemic or locally distinct sub-populations of a species.
- Habitat diversity, connectivity and/ or other synergistic associations.
- Priority Species and Habitats under the Natural Environment and Rural Communities (NERC) Act, 2006.

[38] CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester

- Notably large populations or concentrations of animals considered uncommon or threatened in a wider context.
- Plant communities that are considered to be typical of valued natural/ semi-natural vegetation types.
- Species at the edge of their range.
- Species-rich assemblages of plants or animals.

6.3.28. The results of the initial desk study, site surveys and data gathered during detailed surveys will be used to evaluate the importance of ecological resources within the ZOI in accordance with the CIEEM Ecological Impact Assessment (EcIA) guidance .

6.3.29. The scale of importance of each ecological feature is assigned within a defined geographical context, namely international and European, national, regional, county, and local. Below these are features considered to be of negligible importance.

6.3.30. Consideration will also be given to legally protected or controlled species which are 'important features' in the context of this assessment, for which mitigation measures are required to ensure legal compliance, regardless of their geographic scale of importance. Thus, it is possible for a feature of negligible ecological importance to be legally protected and hence require mitigation.

6.3.31. Evaluation is based on various characteristics that can be used to identify ecological features likely to be important in terms of biodiversity. These include site designations (such as SSSIs), or for undesignated features, the size, conservation status (locally, nationally or internationally), and the quality of the ecological feature. In terms of the latter, quality can refer to habitats (for instance if they are particularly diverse, or a good example of a specific habitat type), other features (such as wildlife corridors or mosaics of habitats) or species populations or assemblages.

Impacts

6.3.32. The assessment should consider impacts including direct loss of habitats, fragmentation and isolation of habitats, disturbance or killing/injury of species, changes to key ecological features, and impacts to ecological receptors resulting from changes to the local hydrology or water quality.

6.3.33. The following factors are considered when describing ecological impacts:

- Positive or negative – an impact can improve or reduce the quality of the environment, evaluated against nature conservation objectives and policy;
- Extent – this is the area over which an effect occurs;
- Magnitude – the size or amount of an effect, determined on a quantitative basis where possible;
- Duration – the time for which an effect is expected to last prior to recovery or replacement of the resource of feature;

- Timing and frequency – some effects are only likely if they happen to coincide with a critical life-stage or seasons. Others may occur if the frequency of an activity is sufficiently high;

- Reversibility- an irreversible (permanent) effect is defined as one from which recovery is not possible within a reasonable timescale or for which there is no reasonable chance of action being taken to reverse it. A reversible (temporary) effect is one from which spontaneous recovery is possible or for which effective mitigation is both possible and enforceable; and

- Cumulative effects – where consideration is given to any other developments within the ZOI, together with the proposed development, may result in significant effects.

Magnitude

6.3.34. The magnitude of an environmental impact will be determined using the criteria provided in the Table 6.3 below.

Table 6.3 Considerations of magnitude

Magnitude	Environmental Impact
Substantial	An effect which will have a positive or negative impact on the integrity or conservation status of an ecological feature that is significant at a national level or above
High	An effect which will have a positive or negative impact on the integrity or conservation status of an ecological feature that is significant at a regional level
Moderate	An effect which will have a positive or negative impact on the integrity or conservation status of an ecological feature that is significant at a county or borough level
Minor	An effect which will have a positive or negative impact on the integrity or conservation status of an ecological feature that is significant at a local or site level
Negligible	An effect which will have an insignificant impact on an ecological feature
Neutral	No effect which will impact an ecological feature

Significant Effects

6.3.35. The significance of an effect is the product of the magnitude of the impact and the importance or sensitivity of the ecological feature affected. The CIEEM Guidelines provide a complex framework for the consideration of impacts to ecological features and the reader is

referred to the guidance document for full details. However, in summary, greater levels of significance are generally ascribed to large impacts on features of higher ecological importance, and lesser levels of significance are generally ascribed to small impacts on features of higher ecological importance, or larger impacts on features of lower ecological importance.

6.3.36. In accordance with professional guidance and terminology; a significant effect, in ecological terms, is defined as an effect (positive or negative) on the integrity of a designed site or ecosystem(s) and/or the conservation status of habitats or species within a given geographical area, including cumulative effects. Insignificant effects are those that would not result in such changes.

6.3.37. The importance of any features that would be significantly affected is then used to identify geographical scales at which the effect is significant. This value relates directly to the consequences, in terms of legislation, policy and/or development control at the appropriate level. So, a significant negative effect on a feature of importance at one level would be likely to trigger related planning policies and, if permitted, generate the need for development control mechanisms as described in those policies.

6.3.38. Significant effects on features of ecological importance should be mitigated (or compensated for) in accordance with the guidance derived from policies applicable at the scale relevant to the feature or resource.

6.3.39. Effects are unlikely to be significant where features of local importance or sensitivity are subject to small scale or short-term effects. However, where there are a number of small-scale effects that are not significant alone, it may be that cumulatively these may result in an overall significant effect.

6.3.40. The assessment of effects uses terminology described above. However, to provide consistency with the terminology throughout the ES potential and residual effects (positive and negative) are also described using the terms set out in the Table 6.4 below.

Table 6.4 Translation between traditional EIA and CIEEM terms of Significance

Scale of residual effect significance following CIEEM guidelines	**Equivalent of residual effect significance using the traditional EIA approach**
International/national (positive or negative) Major (adverse or beneficial)	Major (adverse or beneficial)
County/District (positive or negative) Moderate (adverse or beneficial)	Moderate (adverse or beneficial)
Local (positive or negative) Minor (adverse or beneficial)	Minor (adverse or beneficial)

Not significant/below Local significance (positive or negative)	Negligible (adverse or beneficial)

Potential Effects (including identification of specific receptors)

Designated Sites

6.3.41. There is potential for negative effects to the Pembrokeshire Marine SAC and Milford Haven Waterway SSSI silt deposition and run off, in the absence of mitigation. Appropriate mitigation will be detailed in primary mitigation in the Construction Environmental Management Plan (CEMP).

6.3.42. There are possible indirect impacts to greater horseshoe bats, a feature of Scovoston Fort SSSI in the absence of mitigation if they are utilising the Site for foraging and commuting. Seasonal bat activity surveys, including multiple rounds of static detector deployments, have been undertaken across the Site, and full analysis of the 2024–2025 dataset is currently ongoing to inform appropriate mitigation.

Habitats

6.3.43. The Proposed Development and any permanent construction-related effects will be focused primarily on areas of low ecological importance, such as the arable fields. There is also the potential for limited works to occur close to the stream corridor, which may result in localised disturbance to riparian vegetation and banks.

6.3.44. Hedgerow loss will be minimised and priority for retention will be given to hedgerows of most importance, where possible. The loss of habitats will be compensated for within green infrastructure focussing on grassland habitat types, ecologically designed attenuation and additional tree and hedgerow planting. Where works interface with the edges of the riparian corridor, there is the potential for temporary vegetation disturbance.

6.3.45. Individual trees will be retained and root zones protected, to ensure no impacts to these habitats. Trees and scrub located adjacent to the stream corridor may be subject to localised disturbance where works approach the watercourse margins.

6.3.46. Retained habitats will be protected from damage and disturbance through appropriate fencing, with the measures implemented to control construction impacts such as dust and run-off detailed in primary mitigation in the CEMP.

Protected Species

6.3.47. There is potential for displacement of protected and priority species as a result of direct loss of habitat, degradation and fragmentation of retained habitats, and disturbance as a result of construction activities (including vibration, noise, dust and lighting). This could have adverse effects upon the following receptors which have been scoped in.

Amphibians (including GCN)

6.3.48. Great Crested Newt (GCN) environmental DNA (eDNA) surveys of four ponds (Ponds 1, 2, 3 and 12) were undertaken in July 2024, with samples analysed by SureScreen Scientifics in accordance with the DEFRA WC1067 protocol [39],. All samples returned a **negative** result. The remaining on-site ponds were dry at the time of survey and could not be sampled, and access to off-site ponds within 250 m was not granted. No records of GCN were returned within 2 km of the Site, and on-site terrestrial habitats offer only limited suitability. Based on the negative survey results, absence of local records, and the limited quality of available habitat, GCN are assumed likely absent from the Site. GCN are considered absent, common amphibians may be present within field margins, ditches and areas of marshy grassland.

Breeding Birds

6.3.49. Breeding bird surveys undertaken in 2024 recorded largely a typical assemblage of common farmland bird species across the Site. A total of 13 confirmed skylark *Alauda arvensis* territories were mapped within the proposed Development boundary. Skylark are highly sensitive to vertical structures and typically avoid nesting in areas overlooked by tall infrastructure such as solar panels. As a result, the Proposed Development is predicted to lead to the loss of all 13 skylark nesting territories currently present within the Site.

6.3.50. Other breeding bird species recorded are primarily generalist and boundary associated species using hedgerows, treelines, woodland edges and field margins are not expected to be significantly affected, as these habitats will be retained and protected; however, there remains potential for localised disturbance to nesting and foraging birds where construction activity occurs close to these features. These species are anticipated to continue foraging and nesting within the retained boundary/suitable habitat habitats and enhanced grassland areas following construction.

6.3.51.

Birds (Non-breeding)

6.3.52. Wintering bird surveys (undertaken by Logika Group) recorded a narrow range of target species, typical of the habitats present and the region. In total, surveys recorded 3 species listed as Schedule 1 on the WCA, 7 species listed on Section 7 of The Environment (Wales) Act, and 4 BoCC Red-listed species.

6.3.53. Target and notable species included golden plover, lapwing, snipe, fieldfare, redwing, starling, herring gull, yellowhammer. Lapwing were only recorded in one field on one occasion and are likely to move from field to field throughout the winter meaning that they are unlikely to be significantly impacted by the loss of one field.

6.3.54. Construction works have the potential to cause temporary disturbance to wintering birds using arable fields and field margins within the Site. These species are anticipated to continue foraging within the retained boundary habitats and enhanced grassland areas following construction.

[39] Biggs J, Ewald N, Valentini A, Gaboriaud C, Griffiths RA, Foster J, Wilkinson J, Arnett A, Williams P and Dunn F (2014). *Analytical and methodological development for improved surveillance of the Great Crested Newt. Appendix 5. Technical advice note for field and laboratory sampling of great crested newt (*Triturus cristatus*) environmental DNA*. Freshwater Habitats Trust, Oxford.

Badger

6.3.55. Desk study data also returned several records of badger *Meles meles* within the local area, and suitable foraging habitats such as field margins, hedgerows and grassland are present on-site. A sett was identified adjacent to the Site boundary during surveys, although no setts were recorded within the Proposed Development Area. Given the proximity of the sett and the presence of suitable foraging habitat, badgers will use the Site for commuting and foraging purposes and there is potential for impacts during construction; and therefore, badgers are scoped into the assessment.

Bats

6.3.56. Trees with potential to support roosting bats are generally not anticipated to be directly or indirectly impacted based on the current layout of the Proposed Development; however, works required within or immediately adjacent to the riparian corridor may result in the need to remove or prune mature trees within this area, which could support roosting bats. The Proposed Development is not anticipated to directly impact upon foraging bats as foraging and commuting habitats (boundary features, waterbodies, woodland and the riparian corridor) will largely be retained, although temporary disturbance during construction remains possible.

Barn Owl

6.3.57. Barn Owl nest boxes, with pellets from a little owl were found to be present in the two trees on site. Three Hobbies (2 parents and 1 juvenile Hobby) were seen flying above the site during the Phase 1 habitat survey, and will likely be roosting in crows nests in wooded areas nearby. Hobbies and Barn owls are not anticipated to be impacted by the Proposed Development as their potential resting places in wooded habitats will be retained, no permanent lighting will be used, with suitable buffers around resting places will be implemented.

Dormouse

6.3.58. Suitable dormouse habitat is present in the form of native hedgerows and scattered woodland edges along field boundaries; however, these features will be largely retained, buffered and protected throughout the Proposed Development. There is potential for works to interact with small sections of hedgerow or riparian vegetation where access or cabling may be required.. Given the limited scale of hedgerow removal, the dominance of species-poor blackthorn/hawthorn hedgerows, and the absence of records from the desk study, the likelihood of dormouse presence is low. Nevertheless, because works could extend into or immediately adjacent to suitable connective vegetation, there remains potential for localised disturbance, and dormouse is therefore scoped into the assessment on a precautionary basis.

Otter and Water vole

6.3.59. Desk study data identified otter records approximately 300 m from the Site. A stream is present along the western boundary, but no otter field signs (such as spraints, footprints or couches) were recorded during survey work, and no suitable resting or breeding opportunities were identified. The watercourse on Site does offer some suitability for water vole.

6.3.60. The development design indicates that the cable route could require a crossing of the riparian corridor along the western boundary of the Site. The presence of a watercourse and nearby desk-study records (for otter) mean that potential effects cannot be fully ruled out if works occur within, or immediately adjacent to, the stream margins. On this basis, otter will be scoped into the assessment.

Reptiles

6.3.61. Although small areas of field margins, hedgerows and scrub offer limited suitability for widespread reptile species, the majority of suitable habitat will be retained, and given the dominance of arable and improved grassland across the Site, the reptile population is expected to be limited to a small number of individuals; therefore there is potential for some limited disturbance during construction.

Invasive non-native Species

6.3.62. Two stands of Japanese knotweed *Fallopia japonica* were recorded within a hedgerow on the southern part of the Site, with some stems encroaching into the adjacent field. Japanese knotweed is listed under Schedule 9 of the Wildlife and Countryside Act 1981, and it is an offence to cause its spread in the wild.

Cumulative Effects

6.3.63. A review of other renewable energy schemes in the surrounding area shows a number of operational wind and solar developments within about 3 km of the Site. Many of these have been scoped out of the cumulative assessment because they are already built and operating with their own mitigation and management in place, meaning they are not expected to contribute to any further combined ecological effects.

6.3.64. Developments that have been refused, withdrawn, dismissed at appeal or have expired permissions have also been scoped out, as they are not going ahead and therefore cannot contribute to cumulative impacts. The same applies to the various sites that are only at the Screening Opinion stage, as there is no confirmed proposal or design to assess at this point.

6.3.65. Only White House Farm Solar Farm (CAS_03107_C5X9W1), around 1.8 km from the Site, is close enough and large enough to potentially overlap with ecological receptors, so this is the only scheme that has been scoped in for cumulative assessment. The other pending applications have been scoped out: two are very small, with no realistic pathway for combined effects, and Alleston Solar Farm is over 10 km away, so it sits well outside the ecological zone where cumulative interactions would be expected.

Decommissioning Effects

6.3.66. The potential for likely significant effects is predominantly related to change in land use following decommissioning. If habitat is to be reverted to farming or other use there is potential for likely significant effect from the loss of the proposed habitat of other neutral grassland within the Site**.** There is also potential for significant effects of damage or disturbance to nearby designated sites during the decommissioning of the Site from pollution, dust and silt deposition and run off in the absence of mitigation.

Preliminary Discussions of Potential Mitigation and Enhancement Measures

Designated Sites

6.3.67. Preliminary mitigation measures for the Proposed Development will focus on avoiding or minimising adverse effects on ecological receptors and enhancing biodiversity across the Site. During construction, particular attention will be given to protecting Scoveston Fort SSSI, located approximately 2.3 km from the Site and designated for its population of greater horseshoe bat. In addition, Milford Haven Waterway SSSI (located approximately 4 km south) and the Pembrokeshire Marine SAC will also require consideration, due to potential hydrological connectivity and the risk of indirect effects.

6.3.68. Although no direct effects are anticipated due to distance and the nature of proposed works, construction activities will incorporate robust pollution-prevention controls to avoid run-off, siltation or contamination entering watercourses, alongside dust suppression, careful management of fuels and chemicals, and measures to prevent unnecessary disturbance. Construction traffic will be managed to avoid sensitive hydrological features. These measures are expected to ensure that any potential effects on the SSSI are avoided.

6.3.69. In terms of potential impacts on the interest features of the designation, this cannot be determined prior to full analysis of the bat data to determine whether the site is being used by greater horseshoe bats and whether any additional mitigation may be required.

Habitats

6.3.70. Priority habitats within the Site will also be protected and enhanced as far as possible with development focused on those areas of lowest ecological importance. All hedgerows will be retained except for small, essential breaks required for access or cabling, and buffers will be applied during construction to avoid root damage, dust deposition and habitat degradation. Opportunities will be taken to strengthen hedgerow connectivity through native gapping-up and the establishment of sympathetic cutting regimes. Woodland edges and treelines will be retained and protected in accordance with BS5837 guidance; however, sections of the associated riparian corridor may require intrusive works (e.g., cable installation or ground disturbance). Where works within the riparian corridor are unavoidable, only the minimum working area will be opened, and strict protection and reinstatement measures will be applied. There remains potential to enhance structural diversity through understorey management in unaffected areas. All ponds will be retained and buffered, with potential improvements such as marginal planting and desilting (where ecologically The stream along the western boundary may be crossed or subject to limited works where required for cable installation, and will otherwise be protected through the application of surface water controls, working area minimisation and reinstatement following completion of works. Where riparian vegetation is temporarily disturbed, reinstatement and habitat enhancement measures will be implemented. Protective fencing, dust suppression and surface water management measures will be implemented to prevent run-off, siltation and habitat degradation, with controls on vehicle movements and material storage secured via the CEMP. Habitat losses will also be compensated through green infrastructure measures, including species rich neutral grassland creation, ecologically designed attenuation features and additional native tree and hedgerow planting.

Amphibians

6.3.71. Common amphibians may be present within boundary habitats such as grassland margins, hedgerows and woodland edges. Although several ponds occur within 250 m of the Site, eDNA surveys came back negative for on-site ponds present during the survey season. .

Given the absence of GCN records within 2 km and the limited suitability of on-site terrestrial habitat, GCN has been scoped out of the assessment.

6.3.72. However, habitat suitable for common amphibians will be retained and protected under the emerging design, and significant effects on these species are not anticipated. Precautionary working methods including directional vegetation clearance and checks of refuges immediately prior to works will be implemented during site preparation to safeguard any amphibians that may be present.

Birds

6.3.73. Breeding bird surveys identified 13 confirmed skylark territories within fields that will be developed, and the Proposed Development is therefore expected to result in the loss of these territories.

6.3.74. A full Skylark Mitigation Strategy will be produced and appended to the Environmental Statement. Given the abundant, optimal skylark habitat surrounding the Site, mitigation will focus on the provision of enhanced foraging habitat on Site both under and around the panels to be managed appropriately for skylark (high species diversity, permanent and non-cultivated) to minimise the potential for significant effects.

6.3.75. Other breeding bird species associated with hedgerows, treelines, ponds and the riparian habitat are not expected to be significantly affected, as these habitats will be retained, buffered and protected whenever possible. Where limited works within the riparian corridor are necessary (e.g., for cable installation), only small areas of habitat may be temporarily disturbed, but these are not anticipated to result in significant effects given the extent of suitable habitat retained across the Site. Wintering birds may be subject to temporary disturbance during construction, but retention of boundary habitats and creation of species-rich grassland is expected to maintain or improve foraging resources during operation. Boundary features including hedgerows, woodland edges and field margins will be retained, which will continue to provide suitable habitat for non-breeding birds. No significant effects are anticipated with standard construction good practice in place.

Bats

6.3.76. All key bat foraging and commuting features, including hedgerows, treelines and woodland edges, will be retained and protected. No permanent lighting is proposed, and construction lighting will be directional, low level and time limited to avoid disturbance. Enhanced species-rich grassland and strengthened hedgerow networks will further improve bat foraging opportunities. Consideration will be given to lighting design to ensure no increase in light levels along hedgerows and woodland edges used by commuting bats. Construction noise and lighting will be managed through the CEMP to avoid disturbance. Enhanced species-rich grassland and strengthened hedgerow networks will further improve bat foraging opportunities. Where works affect mature trees within the riparian corridor or elsewhere, a Ground Level Roost Assessment (GLRA) will be undertaken in advance of works to confirm the presence or absence of roost features and to inform any required mitigation.

Badger

6.3.77. A badger sett is present just south of the Site boundary, no other badger setts were identified within the red line boundary or 30m of the Proposed Development. A 30m exclusion zone around the badger sett will be implemented, where no mechanised works are undertaken

within 30m of the badger sett, no significant impacts are anticipated upon badgers. A pre-construction badger check will be required and sensitive working measures will be outlined within the CEMP to minimise impacts during construction. Once operational it is anticipated that badgers will still be able to use the Site. .

Dormouse

6.3.78. Suitable dormouse habitat is present within the Site, associated with hedgerows, woodland edges and the riparian corridor along the western boundary. Although much of this habitat will be retained, the requirement for works within and immediately adjacent to the riparian corridor introduces the potential for localised habitat disturbance. Given the presence of connective woody vegetation, the potential for indirect fragmentation effects, and the lack of comprehensive field evidence confirming likely absence, dormouse cannot be confidently scoped out. This receptor is therefore scoped into the assessment. Any small-scale hedgerow or riparian vegetation removal will be limited to essential works only and undertaken under precautionary methods of working, with reinstatement following installation..

Otter and Water vole

6.3.79. If works are required within or immediately adjacent to the stream corridor, including any potential cable route crossing that may affect soft banks or riparian vegetation, targeted otter and water vole surveys will be undertaken in advance of construction to confirm presence/likely absence and inform any necessary mitigation.

Reptiles

6.3.80. Reptiles are also unlikely to be significantly affected, as suitable habitat is limited and largely retained to the field boundaries which are mostly retained; where necessary, vegetation will be cleared sensitively to encourage displacement.

6.3.81. The Proposed Development is not anticipated to impact upon reptiles, provided that suitable reptile habitats including natural grassland along field edges, woodland margins and hedgerows are retained throughout the construction and operational phases.

Japanese Knotweed

6.3.82. Two stands of Japanese knotweed were recorded within a hedgerow, and these will be subject to a minimum 7 m exclusion buffer with all construction activities kept clear. These areas will require a minimum 7 m buffer during all construction activities, with no ground disturbance, storage of materials or vehicle movements within this zone. A site-specific INNS Management Plan will ensure that no accidental spread occurs during construction, operation or decommissioning. A site-specific Invasive Non-native Species (INNS) Management Plan will be required to ensure no accidental spread occurs during construction, operation or decommissioning.

Biodiversity *General*

6.3.83. During operation, long-term biodiversity gains will be delivered through the implementation of a Landscape and Ecological Management Plan (LEMP). This will include the establishment and management of species rich grassland, enhancement of hedgerow and woodland edges, and improvements to ponds and riparian habitats. The absence of operational lighting will

help maintain dark corridors for bats and other nocturnal species. Net Benefit for Biodiversity will be secured by the conversion of arable land to long-term grassland ensuring ecological value increases beyond the baseline and supports wider landscape connectivity.

Questions

- Do consultees agree with the survey methodologies carried out?
- Do consultees agree with the mitigation strategies proposed?
- Do consultees agree with the proposed skylark mitigation strategy outlined?

6.4. Chapter 8 - Glint and Glare

Introduction

6.4.1. This section of the Scoping Report considers any potential for significant Glint and Glare effects created by the Proposed Development during its construction, operation, management and decommissioning phases and the methodologies which would be proposed, with particular focus on residential amenity, road safety, railway operations and infrastructure, and aviation safety.

6.4.2. A technical assessment and supporting chapter of the Environmental Statement of potential glint and glare effects will accompany the application, with any significant effects being mitigated through design (layout changes or screening) prior to the planning application being submitted.

Relevant Legislation, Policy and Guidance

6.4.3. There are no specific government guidelines setting out a particular methodological approach to delivering a glint and glare assessment.

6.4.4. For aviation activity specifically, guidelines for solar developments exist in the UK produced by the Civil Aviation Authority (CAA) and in the USA produced by the Federal Aviation Administration (FAA). The guidance outlined by both aviation-governing bodies are high-level, and neither prescribes a formal methodology.

6.4.5. The CAA Interim Guidance recommends:

"8. It is recommended that, as part of a planning application, the SPV developer provide safety assurance documentation (including risk assessment) regarding the full potential impact of the SPV installation on aviation interests."

The Air Navigation Order (ANO), also published by the CAA, outlines safeguarding concerns for aviation activity in the UK. The specific articles of the ANO state:

"224.—(1) A person must not exhibit in the United Kingdom any light which—

(a) by reason of its glare is liable to endanger aircraft taking off from or landing at an aerodrome; or

(b) by reason of its liability to be mistaken for an aeronautical ground light is liable to endanger aircraft.

…

240. A person must not recklessly or negligently act in a manner likely to endanger an aircraft, or any person in an aircraft."

6.4.6. The FAA guidance 'Technical Guidance for Evaluating Selected Solar Technologies on Airports' is considered the most comprehensive guidelines available for the assessment of solar developments near aerodromes. Therefore, it is referred to as industry best practice pertaining to glint and glare, including for developments in the UK. The guidance states:

"FAA has subsequently concluded that in most cases, the glint and glare from solar energy systems to pilots on final approach is similar to glint and glare pilots routinely experience from water bodies, glass-façade buildings, parking lots, and similar features."

6.4.7. The glint and glare assessment has been carried out in accordance with the principles contained within the following appropriate policy and legislation, considered further below:

- The Overarching National Policy Statement for Energy (EN-1).
- National Policy Statement for Renewable Energy Infrastructure (EN-3);
- National Planning Policy Framework;
- Guidance for Renewable and Low Carbon Energy;
- Policy paper for UK Solar PV Strategy; and
- The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

6.4.8. The National Policy Statement for Renewable Energy Infrastructure (EN-3) states in Sections 2.10.158 and 2.10.159:

"Solar PV panels are designed to absorb, not reflect, irradiation. However, the Secretary of State should assess the potential impact of glint and glare on nearby homes, motorists, public rights of way, and aviation infrastructure (including aircraft departure and arrival flight paths)".

"Whilst there is some evidence that glint and glare from solar farms can be experienced by pilots and air traffic controllers in certain conditions, there is no evidence that glint and glare from solar farms results in significant impairment on aircraft safety. Therefore, unless a significant impairment can be demonstrated, the Secretary of State is unlikely to give any more than limited weight to claims of aviation interference because of glint and glare from solar farms".

6.4.9. The NPPF was published by the Ministry of Housing, Communities and Local Government (formerly the Department for Communities and Local Government) in March 2012 and was updated in February 2025. The NPPF sets out the Government's planning policies and how these should be applied to England and Wales, and can be considered by the Secretary of State in the determination of NSIP applications.

6.4.10. Chapter 14 of the NPPF 'Meeting the challenge of climate change, flooding and coastal change' sets out at Paragraph 157 that:

"The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure."

6.4.11. Paragraph 163 continues to state that, when determining planning applications for renewable and low carbon development, local planning authorities should:

"a) not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions;

b) approve the application if its impacts are (or can be made) acceptable …"

6.4.12. The guidance for Renewable and Low Carbon Energy states:

"What are the particular planning considerations that relate to large scale ground-mounted solar photovoltaic Farms?

The deployment of large-scale solar farms can have a negative impact on the rural environment, particularly in undulating landscapes. However, the visual impact of a well-planned and well-screened solar farm can be properly addressed within the landscape if planned sensitively.

Particular factors a local planning authority will need to consider include:

- ***the proposal's visual impact, the effect on landscape of glint and glare (see guidance on landscape assessment) and on neighbouring uses and aircraft safety;***

- ***the extent to which there may be additional impacts if solar arrays follow the daily movement of the sun;***

6.4.13. The approach to assessing the impact of glint and glare from large scale solar farms is likely to be the same as assessing the impact of wind turbines. However, in the case of ground-mounted solar panels it should be noted that with effective screening and appropriate land topography the area of a zone of visual influence could be zero."

Preliminary Assessment of Baseline Conditions

<u>The site and context:</u>

6.4.14. The location of the Proposed Development is rural, surrounded by roads, dwellings, railway, and local airfields.

<u>Initial Surveys:</u>

6.4.15. No field work/site surveys were undertaken as part of the preparation for the glint and glare section of the Scoping Report.

Scope and Methodology of Assessment (including significance criteria)

6.4.16. The glint and glare assessment methodology has been derived from the information provided through consultation with stakeholders and by reviewing the available guidance and studies. The methodology for a glint and glare assessments is as follows:

- Identification of relevant receptors based on their type and range from the panel area.

- Technical modelling of the sun path throughout the year to calculate the times and duration of predicted glare for the proposed panel configuration.

- Evaluation of impact significance based on the criteria for the receptor type in accordance with Pager Power's guidance.
- Identification of areas that require mitigation, if any.
- Mitigation strategy if required.

6.4.17. There is no formal guidance with regard to the maximum distance at which glint and glare should be assessed. From a technical perspective, there is no maximum distance for potential reflections. However, the significance of a solar reflection decreases with distance. This is because the proportion of an observer's field of vision that is taken up by the reflecting area diminishes as the separation distance increases. In most instances. terrain and shielding by vegetation are also more likely to obstruct an observer's view at greater distances.

Assessment Process:

6.5. A 1km assessment area is considered when identifying ground-based receptors surrounding the Proposed Development. The following receptors have been identified:

- Railway lines (with signals).
- Residential dwellings.
- Milford Road.
- The A477
- Local roads.

6.6. Under the proposed methodology, technical modelling is not recommended for local roads, where traffic densities are likely to be relatively low. Any solar reflections from the Proposed Development that are experienced by a road user along a local road would be considered low impact in the worst case in accordance with the guidance and industry best practice.

6.7. Where a railway line is identified within 200m of the Proposed Development, then a technical assessment is undertaken for railway receptors within a 500m assessment area. This assessment area size is deemed appropriate when identifying railway receptors and infrastructure. A section of railway line has been identified within 500m of the Proposed Development, therefore railway will be considered as part of the assessment.

6.8. There is no formal buffer distance within which aviation effects must be modelled. However, in practice, concerns are most often raised for developments within 10km of a licensed aerodrome. Requests for modelling at ranges of 10-20km are far less common. Assessment of aviation effects for developments over 20km from a licensed aerodrome is a very unusual requirement. A 10km assessment area is considered when identifying aviation receptors. The following aerodromes have been identified:

- Rosemarket Airfield, approximately 2km east of the proposed development.

Assessment of Sensitivity:

6.9. The sensitivity of all identified environmental receptors, as well as the magnitude of impact on those receptors will be described as high, medium or low. This is set out in the context of Glint and Glare below.

Table 6.5: Sensitivity of the Identified Environmental Receptor

Sensitivity	Definition
High	A receptor that requires exceptional isolation or screening from glare of any kind
Medium	A receptor that may be affected by glare, but can experiences glare with limited adverse impacts
Low	A receptor that is largely unaffected by glare of any kind

Significance:

6.10. The significance of an environmental effect is determined by the interaction of magnitude and sensitivity. This impact significance matrix is set out below.

Table 6.6: Significance of effect upon the Identified Environmental Receptor

Sensitivity/Magnitude	High	Medium	Low
High	Major	Major/Moderate	Moderate/Minor
Medium	Major/Moderate	Moderate	Moderate/Minor
Low	Moderate	Moderate/Minor	Minor
Negligible	Moderate/Minor	Minor	Negligible
Neutral	Neutral	Neutral	Neutral

6.11. Overall, the level of effect would be considered 'Significant' if the resultant significance of effect is 'moderate' or higher.

Potential Effects (including identification of specific receptors)

Environmental Receptor – Aviation Receptors

6.12. Sensitivity: aviation receptors are of 'Medium' sensitivity because pilots experience glare from the man-made and natural environment during the course of a typical flight and have the capacity to encounter glare safely, such as from lakes, rooftops, and the sun itself.

6.13. Magnitude: The magnitude of effect upon aviation receptors is predominantly dependent upon the following factors:

- The predicted glare intensity.
- The direction that glare occurs from, relative to the receptor and their direction of travel.

6.14. A 'Negligible' magnitude would occur if no glare could be experienced at the receptor.

6.15. A 'Low' magnitude would occur if the receptor is predicted to experience glare of an intensity of 'low potential for temporary after-image', or if the glare originates outside of a pilot's primary field-of-view (defined as 50 degrees either side of the direction of travel).

6.16. A 'Medium' magnitude would occur if the receptor is predicted to experience glare of an intensity of 'potential for temporary after-image', which originates within a pilot's primary field-of-view.

6.17. A 'High' magnitude would occur if the receptor is predicted to experience glare of an intensity of 'potential for permanent eye damage', which originates within a pilot's primary field-of-view.

Environmental Receptor – Railway Receptors

6.18. Sensitivity and importance: railway receptors are of 'Medium' sensitivity because receptors experience glare from a man-made and natural environment all the time.

6.19. Magnitude of impact: The magnitude of effect upon a person is predominantly dependent on the following factor:

- The direction that glare originates from, relative to the receptor.

6.20. A 'Negligible' magnitude would occur if no glare could be experienced at the receptor.

6.21. A 'Low' magnitude would occur if the receptor could be subjected to glare which originates outside of a train driver's primary field-of-view (30 degrees either side of the direction of travel).

6.22. A 'Medium' magnitude would occur if the receptor could be subjected to glare which originates inside of a train driver's primary field-of-view (30 degrees either side of the direction of travel).

6.23. A 'High' magnitude would occur if the receptor could be subjected to glare which originates directly in front of a train driver.

Environmental Receptor – Road Receptors

6.24. Sensitivity: road receptors are of 'Medium' sensitivity because road users experience glare from a man-made and natural environment all the time.

6.25. Magnitude: The magnitude of effect upon a road user is predominantly dependent on the following factor:

- The direction that glare originates from, relative to the receptor and their direction of travel.

6.26. A 'Negligible' magnitude would occur if no glare is predicted to be experienced by the road user.

6.27. A 'Low' magnitude would occur if the receptor is predicted to experienced glare which originates outside of a road user's primary field-of-view (defined as 50 degrees either side of the direction of travel).

6.28. A 'Medium' magnitude would occur if the receptor is predicted to experience glare which originates inside of a road user's primary field-of-view.

6.29. A 'High' magnitude would occur if the receptor is predicted to experience glare which originates directly in front of a road user.

Environmental Receptor – Dwelling Receptors

6.30. Sensitivity: dwelling receptors are of 'Low' sensitivity because people experience glare from a man-made and natural environment all the time.

6.31. Magnitude: The magnitude of effect upon a person is predominantly dependent on the following factor:

- The duration a receptor may be subjected to the glare.

6.32. A 'Negligible' magnitude would occur if no glare is predicted to be experienced at the receptor.

6.33. A 'Low' magnitude would occur if the receptor is predicted to experience glare for less than three months per year and less than 60 minutes on any given day.

6.34. A 'Medium' magnitude would occur if the receptor is predicted to experience glare for more than three months per year or more than 60 minutes on any given day.

6.35. A 'High' magnitude would occur if the receptor is predicted to experience glare for more than three months per year and more than 60 minutes on any given day

Preliminary Discussions of Potential Mitigation and Enhancement Measures

6.36. The effect of the Proposed Development can only reliably be determined via detailed geometric modelling, which will be undertaken in accordance with the methodology and guidance as stated in previous sections.

6.37. Common mitigation strategies for ground-based receptors are:

- Site surveys to inform visibility (and landscaping plans) more accurately.
- Provision of screening (planting or opaque fence) at the Proposed Development boundary or elsewhere between the observer and reflecting panel areas.

- Changes to the site configuration. This may involve changes to the azimuth angle of the solar panels; and/or changes to the elevation (tilt) angle of the solar panels.

6.38. The most common mitigation solution for ground-based receptors is the provision of screening at the site perimeter, this can be either natural or manmade, such as vegetation planning or fencing. A screening solution that sufficiently obstructs visibility of the potentially reflecting panels will mitigate impacts.

6.39. The reflecting panels that should be obscured from view, based on the proposed configuration, will be defined within the impact assessment (if any).

6.40. Where screening solutions are not feasible changes to the site configuration can be investigated.

6.40.1. For aviation receptors, where mitigation is recommended/required, the most common solution is changes to the site configuration.

Questions

- Do consultees agree with the study parameters/receptors/methodology?

6.41. Chapter 9 – Socio Economics (including Population)

Introduction

6.41.1. This section of the Scoping Report sets out what will be provided within the Socio-Economics chapter of the Environmental Statement (ES) which will provide an assessment of the likely significant socio-economic effects generated by the Proposed Development. This will include the identification and assessment of likely effects during the construction phase, the operational phase, and the decommissioning phase, and including cumulative effects.

Relevant Legislation, Policy and Guidance

- The **Overarching National Policy Statement (NPS) for Energy (EN-1)**[40], latest revision dated November 2023, which came into force 17 January 2024, includes a section dedicated to '*Socio-Economic Impacts'* (Section 5.13). It notes that, where a project is likely to have socio-economic impacts at local or regional levels, an assessment of such impacts should be undertaken as part of the application.

- An update to the **National Policy Statement (NPS) for Renewable Energy (EN-3)** was published in September 2021 a further revision was published in March 2023 for consultation, with the latest revision having come into force on 17 January 2024. In this latest revision (November 2023)[41], consideration of solar and potential for associated socio-economic effects is referenced in respect of the potential for socio-economic benefits of the site infrastructure being retained after the operational life of solar photovoltaic generation.

- **Planning Policy Wales (PPW)**[42] sets out the land use planning policies of the Welsh Government. PPW states that Low Carbon electricity must become the main source of energy in Wales and that renewable energy will be used to provide both heating and transport in addition to power. It states that the future energy supply mix will depend on a range of established and emerging low carbon technologies.

- **Future Wales: The National Plan 2040**, published in February 2021, is Wales' national development framework and sets the direction for development in Wales to 2040. It has a strategy for addressing key national priorities through the planning system, including sustaining and developing a vibrant economy, achieving decarbonisation and climate-resilience, developing strong ecosystems and improving the health and well-being of communities.

- The **All Wales Plan 2021-2025**, which outlines how all of Wales will work together to achieve net zero. The Plan sets out pledges that Wales make to target seven areas where action is needed.

[40] Department for Energy Security & Net Zero, November 2023, Overarching National Policy Statement for Energy (EN-1).
[41] Department for Energy Security & Net Zero, November 2023; National Policy Statement for Renewable Energy Infrastructure (EN-3).
[42] Planning Policy Wales, February 2024; Welsh Government.

- The **Review of Wales' Renewable Energy Targets, Summary of Consultation Responses**, published in July 2024, provides a summary of the Welsh Government's consultation on its proposals for revised renewable energy targets for Wales.

- In March 2022, the Welsh Government published **Stronger, Fairer, Greener Wales: A Plan for Employability and Skills**. The aim of the Plan is to set out how the Welsh Government is committed to ensuring all individuals in Wales have a high quality education, access to jobs and to ensure Wales is a place where businesses can thrive

- Pembrokeshire is currently preparing a Local Plan, however as the draft is not yet available, the most relevant local policy is the **Pembrokeshire County Council Local Development Plan** (Adopted February 2013)[43]. Within the Plan there is the objective of mitigating and responding to climate change.

Preliminary Assessment of Baseline Conditions

6.41.2. The assessment will establish baseline socio-economic conditions within those areas likely to be affected by the Proposed Development. Study areas are defined based on an understanding of relevant local and wider economic geographies, and the extent to which socio-economic effects are likely to be contained within these established statistical geographies. It is proposed that the study area used is Pembrokeshire local authority, this being the area most affected from a socio-economic perspective by the Proposed Development.

6.41.3. Where available, data will be analysed for Pembrokeshire local authority, benchmarked against Wales and Great Britain..

6.41.4. Baseline socio-economic conditions will be established using the most up-to-date available secondary data, establishing the extent to which the following key indicators have changed over time. Baseline information will be sought from sources that include:

- Overarching National Policy Statement for Energy (EN-1).
- National Policy Statement for Renewable Energy (EN-3).
- Planning Policy Wales.
- Office for National Statistics (ONS) data.
- Welsh Index of Multiple Deprivation.
- Information obtained from the Applicant.

6.41.5. A summary of key baseline characteristics of the relevant geographies at this present time is as follows:

- **Population:** Between 2014 and 2024 the population of Pembrokeshire grew by 3%. This compares to a population growth of 3.7% in Wales for the same period. The fastest growing age group in Pembrokeshire in this time was those aged 65+ with an

[43] Pembrokeshire County Council Local Development Plan (Adopted February 2013).

increase of 16.8%. Between 2022 and 2042, the population of Pembrokeshire is projected to increase by 2.9%, compared to 4.2% for Wales.[44]

- **Employment:** Based on data from the Office for National Statistics, as of 2024, there were 50,000 jobs in Pembrokeshire. This was a decline of 2% (1,000) since 2015. In Wales, however, employment increased by 2% between 2015 and 2024, with 1,349,000 jobs in 2024. Of the 50,000 jobs in Pembrokeshire, 3,500 (7%) were in the construction sector.

- **Unemployment:** As of October 2025, the claimant count in Pembrokeshire was 3.3%, which has increased from 3.1% in October 2022. The latest rate was the same as the corresponding figures for Wales (3.3%).

- **Commuting data:** according to census data, as of 2021 there were 48,405 people that worked and lived in Pembrokeshire. Beyond this, 3,119 people lived outside of Pembrokeshire and worked in Pembrokeshire, whilst 4,354 people lived in Pembrokeshire and worked elsewhere.

- **Economic Output:** Between 2013 and 2023, gross value added (GVA) in Pembrokeshire grew by 52.3% (£1,021million) to reach £3 billion. This was above the growth in GVA that was seen in Wales (46.8%).

- **Deprivation:** Based on data from the 2019 Welsh Index of Multiple Deprivation, Pembrokeshire 008C (where the Proposed Development is located) has an overall rank of 1,059, putting it in the top 50% least deprived lower super output areas (LSOAs) in Wales (out of 1,909, rank 1 is most deprived and 1,909 is least). Pembrokeshire 008C has its' highest rank in housing with an overall rank of 1,488, putting it in the top 40% least deprived LSOAs. It has its lowest rank in access to services with a rank of 326, putting it in the top 20% most deprived LSOAs for this domain.

6.41.6. Other key indicators that will be included in the baseline analysis are:

- Business base.
- Qualifications and skills.
- Economic activity.
- Visitor Economy.
- Accommodation provision.

Scope and Methodology of Assessment (including significance criteria)

6.41.7. There is no overarching Government guidance that sets out the preferred methodology for assessing the likely socio-economic effects of development proposals. Accordingly, the approach adopted for the assessment will be based on professional experience and best

[44] Population Projections for Wales, StatsWales, Accessed 18/11/2025 here: Population projections by local authority and year

practice, and in consideration of the policy requirements/tests set out within the NPPF and the Local Plan.

6.41.8. The first step in the assessment will be to identify the sensitivity of the receptors. In socio-economic assessments, receptors are not sensitive to changing environmental conditions in the same way as many environmental receptors are. To address this, the assessment will draw on a combination of measurable indicators (jobs, population, etc.) and a consideration of the importance of the receptor in policy terms to gauge the receptor's sensitivity. The sensitivity criteria proposed to be used in the Socio-Economics ES chapter is presented in Table 6.7.

6.41.9. The magnitude of change upon each receptor will then be determined by considering the predicted deviation from baseline conditions, both before and, if required, after mitigation. The magnitude of effect criteria proposed to be used in the Socio-Economics ES chapter is presented in Table 6.8.

6.41.10. Wherever possible the magnitude of change will be quantified. Where this is not possible, for example, for the number of the social related considerations, consideration of magnitude of change will be on a qualitative basis and justified through baseline research, review of relevant policy, and consultation undertaken.

6.41.11. There are no industry standard significance criteria for the assessment of socio-economic effects. The assessment is quantitative where possible. In circumstance where this is not possible, the assessment is qualitative in nature based on professional judgement. The significance of effect is identified by combining the sensitivity of the receptor against the magnitude of impact using the matrix in Table 6.9.

Table 6.7: Criteria for Sensitivity of Receptor

Sensitivity	Evidence for Sensitivity Assessment
High	Evidence of direct and significant socio-economic challenges relating to receptor. Accorded a high priority in local, regional or national economic regeneration policy. Evidence of direct and significant socio-economic challenges including: • Areas with levels of unemployment well in excess of / below regional / national averages and high levels of relative deprivation (i.e. top 10%). • Areas with claimant count well in excess of / below regional / national averages. • Areas with economic activity rate well in excess of / below regional / national averages. • Areas with a significant oversupply / undersupply of visitor accommodation.

Sensitivity	Evidence for Sensitivity Assessment
Medium	Some evidence of socio-economic challenges linked to receptor, which may be indirect. Change relating to receptor has medium priority in local, regional and national economic and regeneration policy. Some evidence of socio-economic challenges, including: • Areas with levels of unemployment above / below regional / national averages and levels of relative deprivation (i.e. top 50%). • Areas with claimant count well above / below regional / national averages. • Areas with economic activity rate above / below regional / national averages. • Areas with a moderate oversupply / undersupply of visitor accommodation.
Low	Little evidence of socio-economic challenges relating to receptor. Receptor is accorded a low priority in local, regional and national economic and regeneration policy. Little evidence of socio-economic challenges, including: • Areas with levels of unemployment in line with regional / national averages and levels of relative deprivation (i.e. bottom 50%). • Areas with claimant count in line with regional / national averages. • Areas with economic activity rate in line with regional / national averages. • Areas with a sufficient supply of visitor accommodation.
Negligible	No socio-economic issues relating to receptor. Receptor is not considered a priority in local, regional and national economic development and regeneration policy. No socio-economic issues relating to a receptor, including: • Areas with levels of unemployment less than regional / national averages and low levels of relative deprivation (i.e. bottom 10%).

Sensitivity	Evidence for Sensitivity Assessment
	• Areas with claimant count higher than average regional / national averages. • Areas with economic activity rate higher than average regional / national averages. • Areas with a surplus supply of visitor accommodation.

Table 6.8: Criteria for Magnitude of Effect

Magnitude of Impact	Description / Criteria
High	Proposed Development would cause a large change to existing socio-economic conditions in terms of absolute and/or percentage change. • Greater than 5% increase / decrease on existing baseline levels of employment. • Greater than 5% increase / decrease in GVA from baseline. • Greater than 5% increase / decrease in business rates from baseline. • Greater demand required than available accommodation supply.
Medium	• Proposed Development would cause a moderate change to existing socio-economic conditions in terms of absolute and/or percentage change. • 1% - 5% increase / decrease on existing baseline levels of employment. • 1% - 5% increase / decrease in GVA from baseline. • 1% - 5% increase / decrease in business rates from baseline. • Increased demand in respect of accommodation but below available supply.
Low	• Proposed Development would cause a minor change to existing socio-economic conditions in terms of absolute and/or percentage change. • Limited increase / decrease on existing baseline levels of 0.1% - 0.99% increase / decrease on existing baseline levels of employment. • 0.1% - 0.99% increase / decrease in GVA from baseline. • 0.1% - 0.99% increase / decrease in business rates from baseline. • Limited increase in demand in respect of accommodation.

Magnitude of Impact	Description / Criteria
Negligible	No discernible change in baseline socio-economic conditions.

Table 6.9: Significance of Effect

Magnitude of Change	Sensitivity of Receptor				
		High	**Medium**	**Low**	**Negligible**
	High	Major	Major	Moderate	Negligible
	Medium	Major	Moderate	Minor to Moderate	Negligible
	Low	Moderate	Minor to Moderate	Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

Cumulative Effects

6.41.12. Cumulative schemes will be studied as part of this assessment. The schemes are shown in Appendix D of this Scoping Report and will align with other chapters. They will be assessed in the same manner as the Proposed Development in isolation.

Potential Effects (including identification of specific receptors)

6.41.13. During construction, it is anticipated that the Proposed Development will generate the following socio-economic effects:

- Employment – direct, indirect and induced jobs based in the local and wider impact areas.
- Economic output – measured in gross value added (GVA, generated by the employment supported during the construction phase).
- Accommodation – potential impacts on available accommodation as a result of construction workers required during the construction phase.

6.41.14. Once completed and fully operational, it is anticipated that the socio-economic effects associated with the Proposed Development will include the following:

- Employment – direct, indirect and induced jobs based in Pembrokeshire local authority.
- Economic Output – measured in gross value added (GVA, generated by the employment supported once operational).
- Business rates revenue – measured in terms of the business rates generated by the Proposed Development.

6.41.15. During decommissioning, it is anticipated that the Proposed Development will generate the following socio-economic effects:

- Employment – direct, indirect and induced jobs based in Pembrokeshire local authority.
- Economic output – measured in gross value added (GVA, generated by the employment supported during the decommissioning phase).
- Accommodation – potential impacts on available accommodation as a result of workers required during the decommissioning phase.

Preliminary Discussions of Potential Mitigation and Enhancement Measures

6.41.16. Requirements for mitigation and opportunities for enhancement measures will be identified and discussed with relevant consultees and the Applicant as soon as practicable.

Assumptions & Limitations

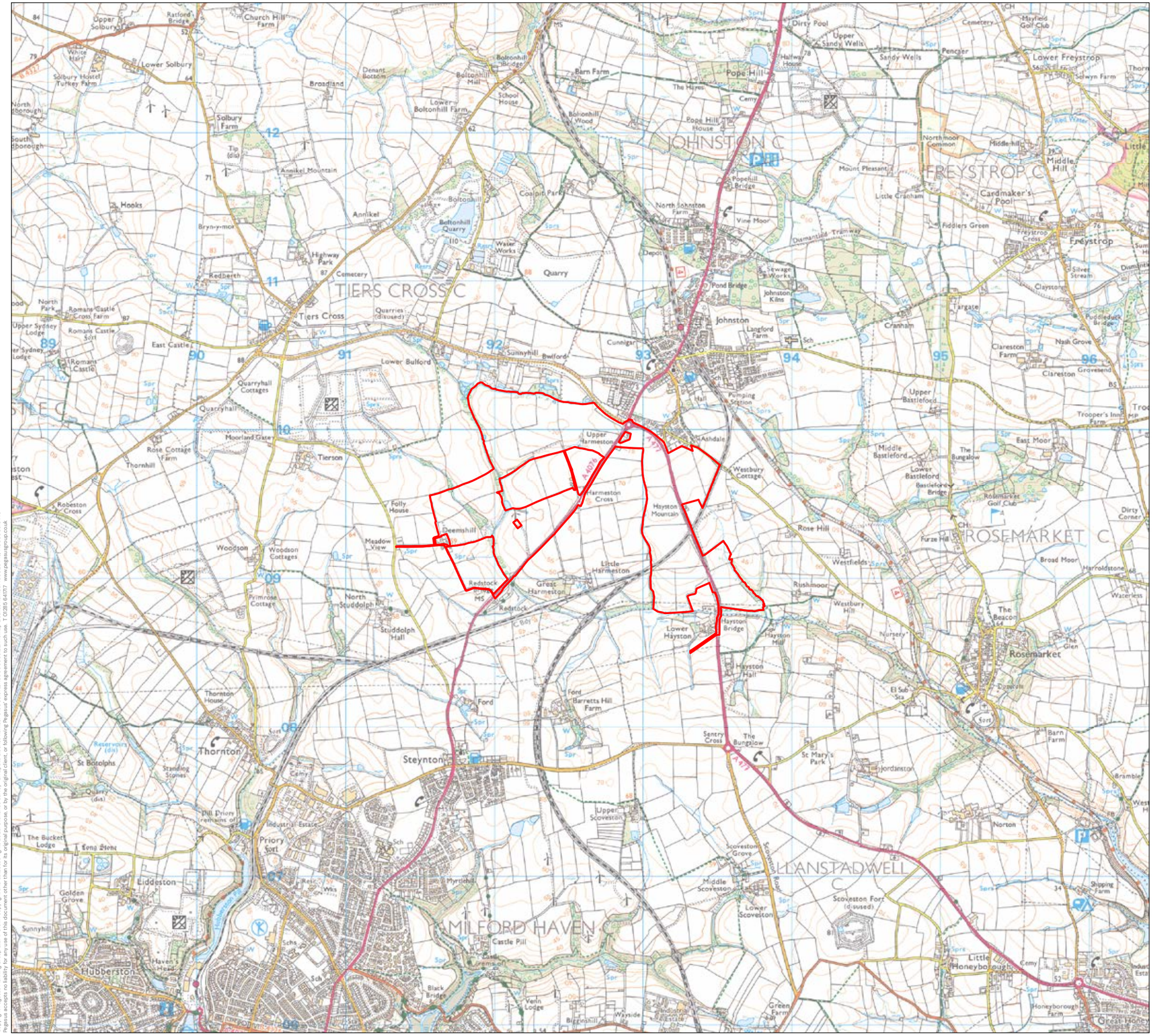
6.41.17. Baseline information is derived from the latest available statistics, however there is often a time-lag associated with the publication of this data. As such, the latest available data at the time of finalisation of assessment documentation will be presented.

6.41.18. The Applicant is intending to accommodate any construction or decommissioning workers who reside from outside of the local area in Serviced and/or Non-Services Accommodation as opposed to residential dwellings (rental or otherwise). As such, consideration of potential effects on housing supply, be it affordable or otherwise, is scoped out of the assessment.

Questions

- Do consultees agree with the study parameters/receptors/methodology?

Appendix A – Site Location Plan



KEY

🟥 Site Boundary

REV	DATE	DESCRIPTION
-	-	-

SITE LOCATION PLAN

GREAT HARMESTON

ARISE RENEWABLE ENERGY UK LTD

DATE	SCALE	DRAWN	APPROVED
08/08/2025	1:25,000@A3	NC	RCH

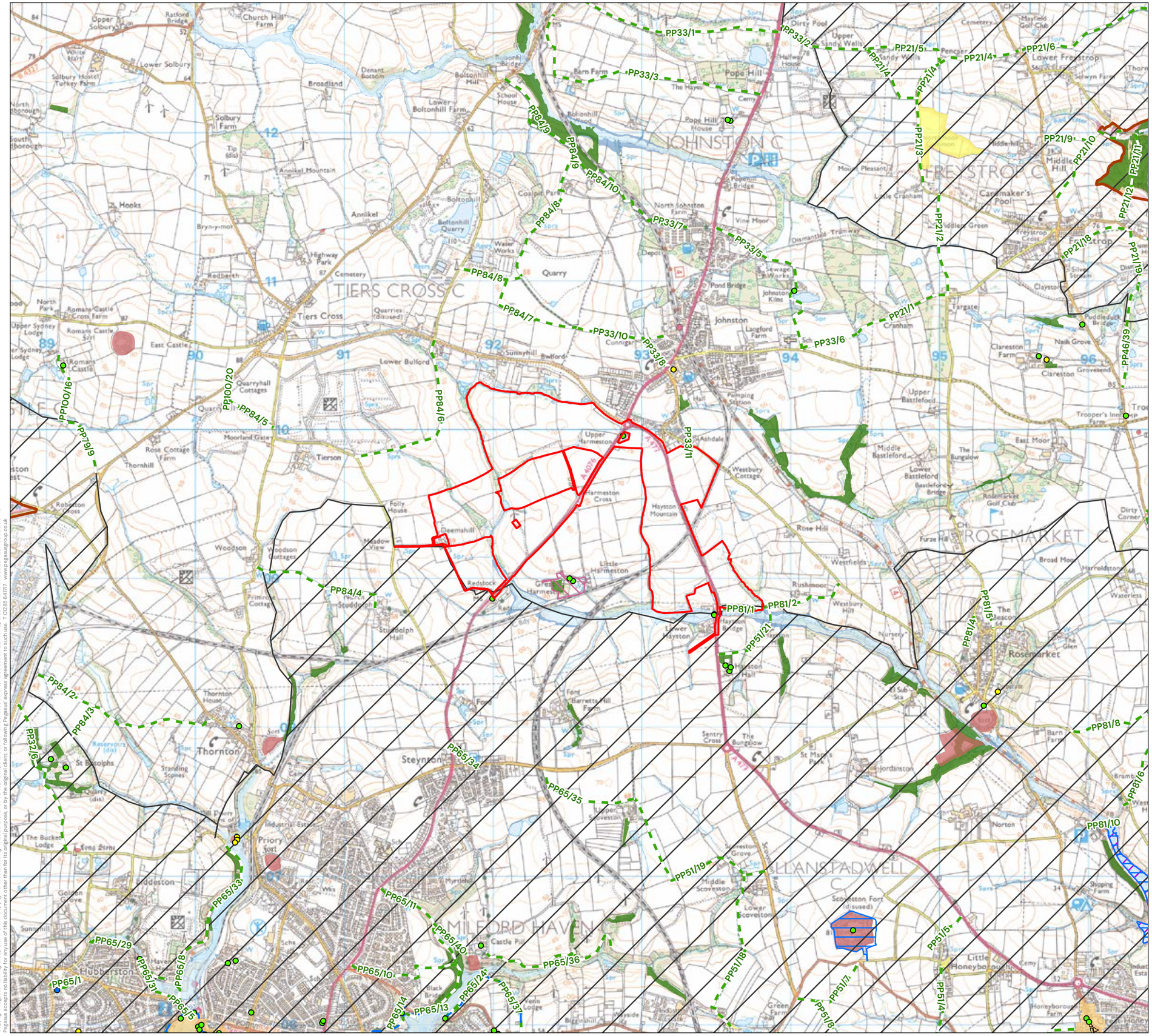
SHEET	REV	N
-	D	

0 0.5 KM

DRAWING NUMBER
P24-1037_EN_03

PEGASUS GROUP

Appendix B – Environmental Designations Plan



KEY

- Site Boundary
- Grade
  - I
  - II*
  - II
- Public Rights of Way
- Wales Coastal Path
- Statutory Access Land
- Registered Common Land
- National Parks
- Historic Landscape Area
- Registered Historic Parks and Gardens
- Conservation Areas
- Scheduled Ancient Monuments
- Sites of Special Scientific Interest
- Special Areas of Conservation
- Ancient Woodland
- Flood Zone 2
- Flood Zone 3

REV	DATE	DESCRIPTION
-	-	-

ENVIRONMENTAL DESIGNATIONS PLAN

GREAT HARMESTON

ARISE RENEWABLE ENERGY UK LTD

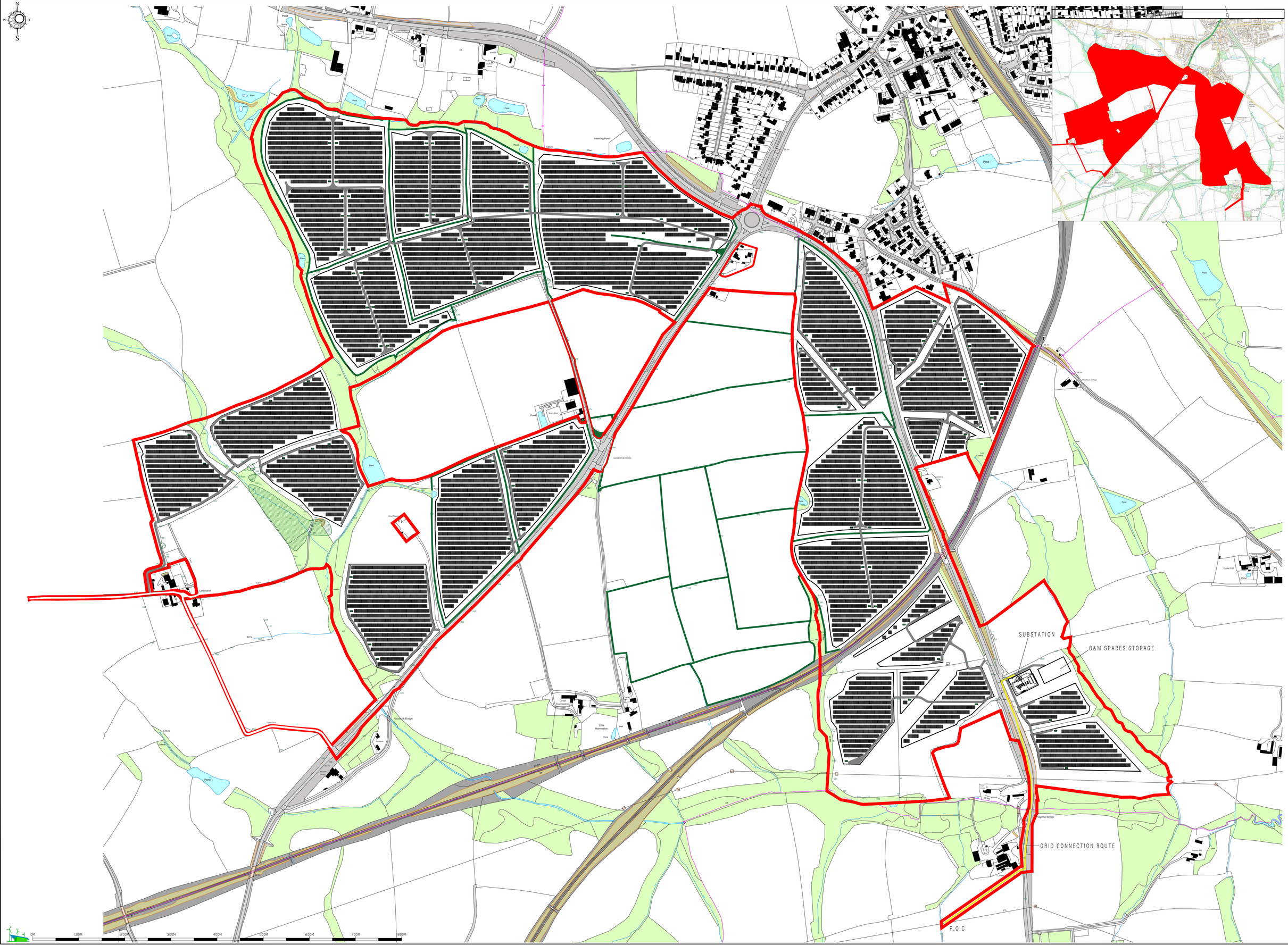
DATE	SCALE	DRAWN	APPROVED
08/08/2025	1:25,000@A3	NC	EHF

SHEET	REV	N	0	0.5KM
-	D			

DRAWING NUMBER
P24-1037_EN_04

PEGASUS GROUP

Appendix C – Indicative Site Layout Plan



LEGEND

🟥	DEVELOPMENT AREA
▬	CRUSHED STONE ACCESS ROAD
▦	630W SOLAR MODULES
―	PERIMETER SECURITY FENCING
🟩	INVERTER / TRANSFORMER

arise

MWp (DC) : 93.11MWp

RED LINE AREA He : 1280249.2883 M2

SITE : GREAT HARMESTON

TITLE : PROPOSED SITE PLAN

LOCATION :
LAND EAST & WEST OF
JUNCTION OF
MILFORD ROAD
A4076 A477,
JOHNSTON SA62 3HL

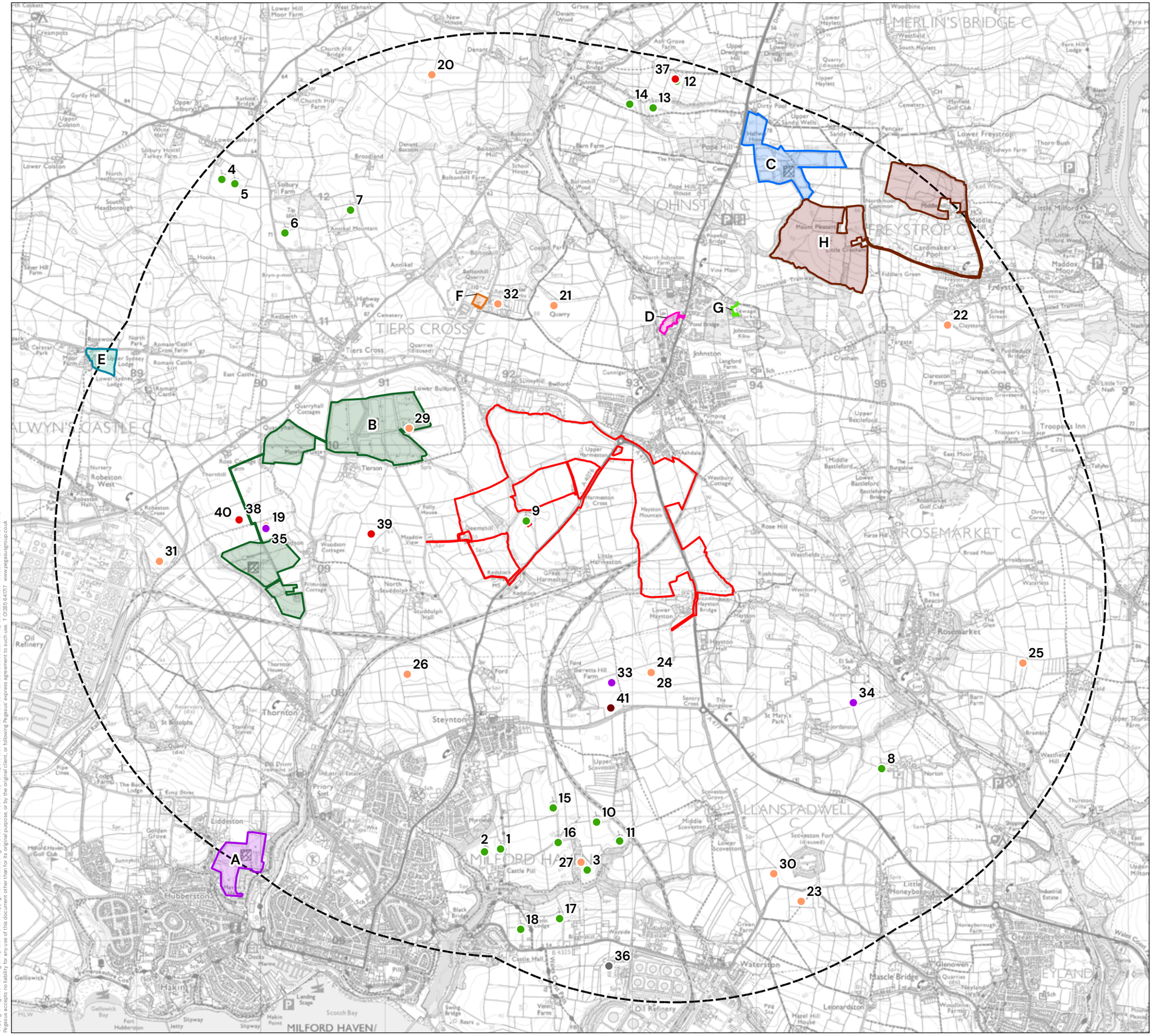
STATUS : PRE-PLANNING

SCALE : 1:2500@A1

DATE : JUL 25

DRAWING NUMBER : HSF-RHL-V1-00-CM-Y-**0001a**-S0-**P00**

Appendix D – Cumulative Sites Plan



KEY

- Site Boundary
- 3km Buffer

SOLAR & BESS

Operational

- A: 12/0614/PA - Land to the South East of Court Road, Liddeston (Solar)
- B: 13/0214/PA & 14/0670/PA - Rose Cottage Farm; Woodson Farm; Tierson Farm, Tiers Cross (Solar)
- C: 15/0443/PA - Land east of A4076 (T) at Pope Hill, Johnston (Solar)
- D: 23/0560/PA - Land to rear of The Larder, Vine Road (Holiday Lodges)
- E: 15/0451/PA - Firstone House, Walwyns Castle, Haverfordwest (Solar)

Pending Planning Permission

- F: 18/0386/PA - Bolton Hill WTW, Tiers Cross (Solar)
- G: 18/0367/PA - Johnston Sewage Treatment Works, Kiln Road (Solar)
- H: CAS_03107_C5X9W1 - White House Farm Solar Farm (Solar & BESS)
- I: CAS-03072-D7X6N7 - Alleston Solar Farm (Solar)

WIND

Status

- Operational
- Screening Opinion
- Appeal Dismissed
- Expired Approval
- Refused
- Withdrawn

1:50,000@A3 0 1KM

REV	DATE	DESCRIPTION
-	-	-

CUMULATIVE SITES PLAN

GREAT HARMESTON

ARISE RENEWABLE ENERGY UK LTD

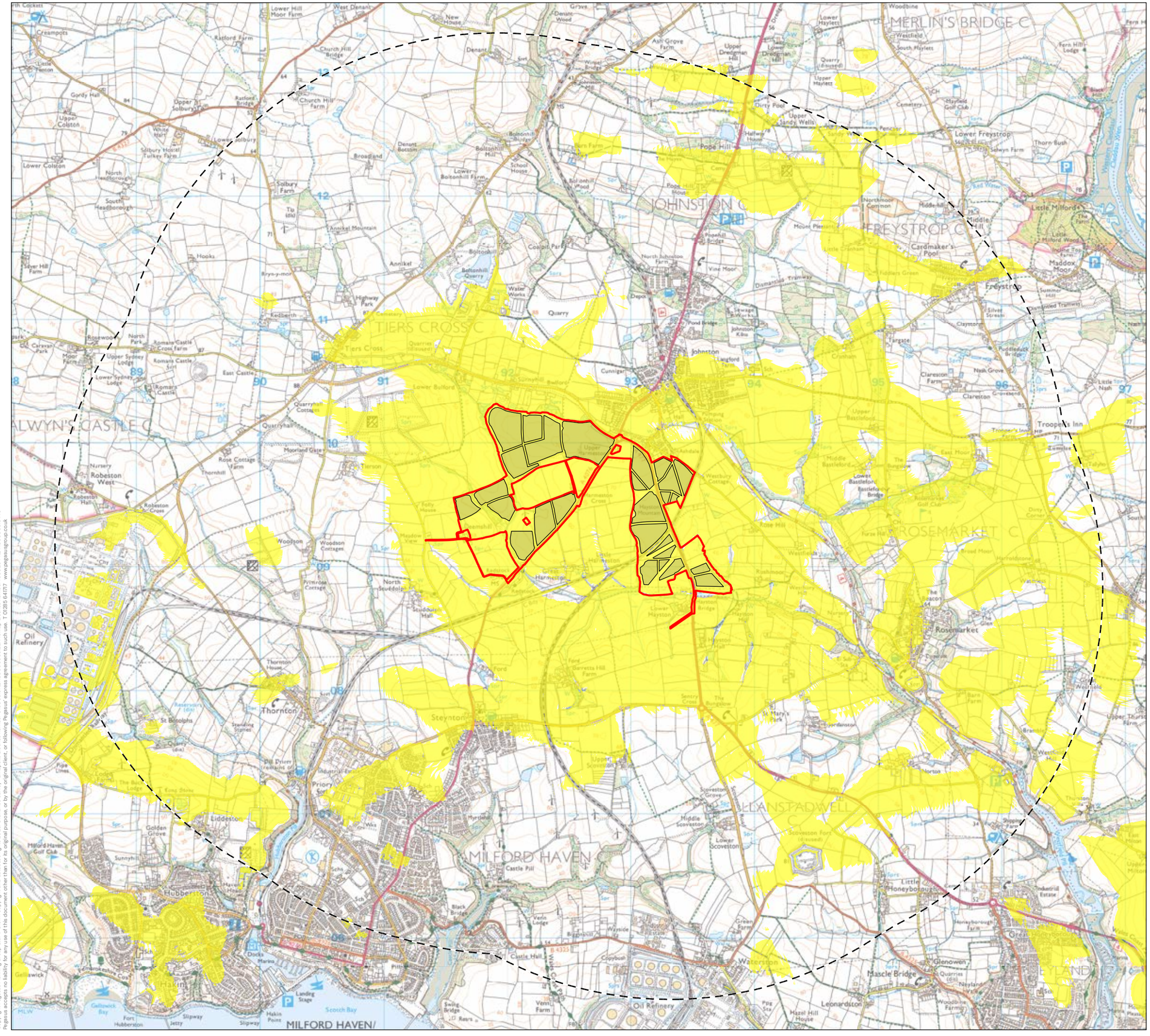
DATE	SCALE	DRAWN	APPROVED
04/12/2025	1:30,000@A3	EH	AR/RCH

SHEET	REV	N	0 1KM
-	B		

DRAWING NUMBER
P24-1037_EN_06

PEGASUS GROUP

Appendix E – Bare Earth & Screened ZTVs



KEY

- Site Boundary
- 3km Buffer
- Proposed Development
- Lidar Bare Earth Zone of Theoretical Visibility (3m)

Bare Earth ZTV Production Information -

- DTM data used in calculations is 1m resolution LiDAR (2020-2023)

- Viewer height set at 1.7m
  (in accordance with para 6.11 of GLVIA Third Edition)

- Calculations include earth curvature and light refraction

N.B. This Zone of Theoretical Visibility (ZTV) image illustrates the theoretical extent of where the development may be visible from, assuming 100% atmospheric visibility.

REV	DATE	DESCRIPTION
-	-	-

LIDAR BARE EARTH ZONE OF THEORETICAL VISIBILITY

GREAT HARMESTON

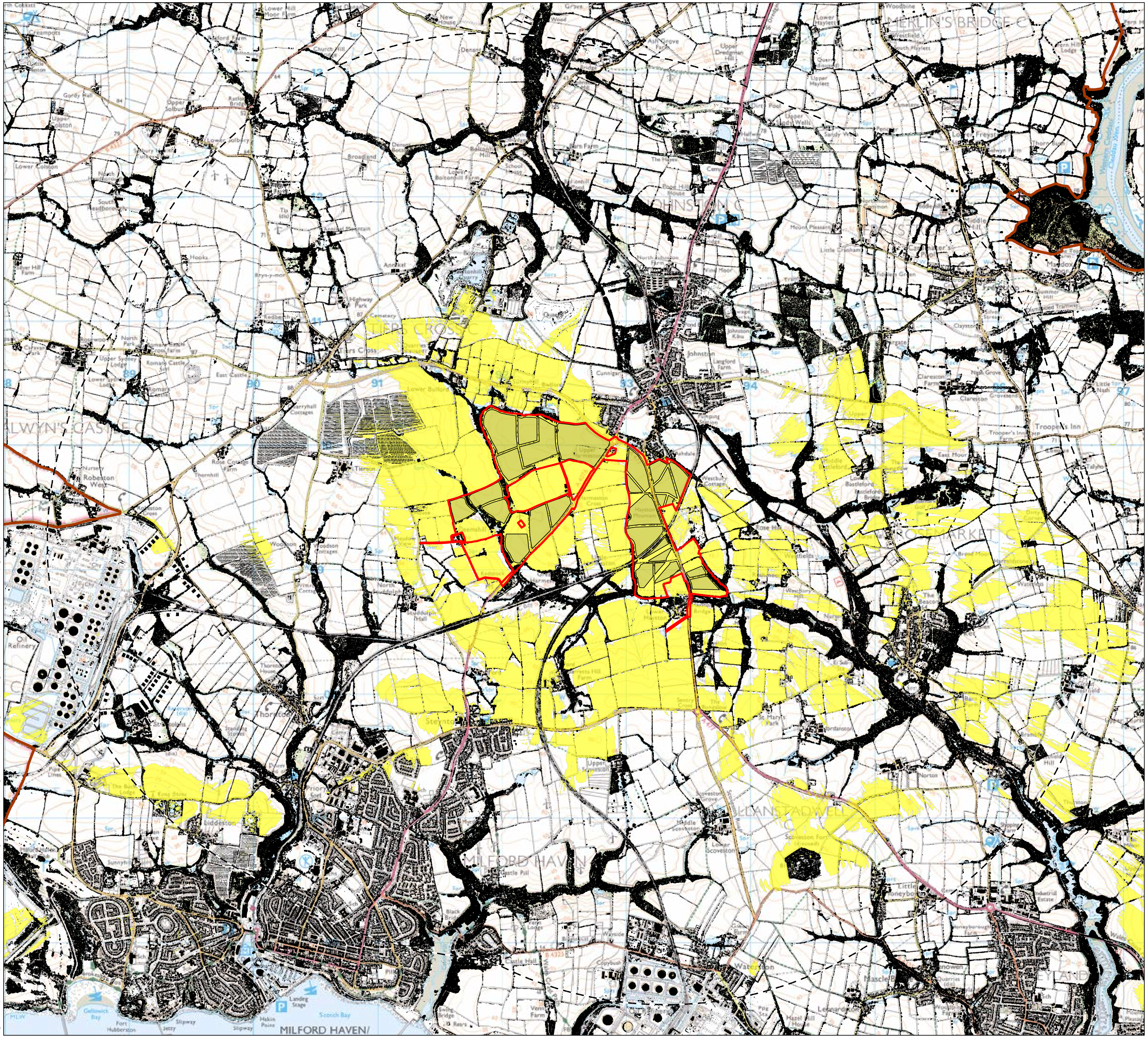
ARISE RENEWABLE ENERGY UK LTD

DATE	SCALE	DRAWN	APPROVED
14/08/2025	1:30,000@A3	NC	RCH

SHEET	REV	N	0	0.5 KM
-	C			

DRAWING NUMBER
P24-1037_EN_01

PEGASUS GROUP



KEY

- Site Boundary
- 3km Buffer
- Proposed Development
- National Parks
- Surface Features extracted from LiDAR > 1m
- Screened Zone of Theoretical Visibility - 3m Development Height

DataMap Wales Screened ZTV Production Information -

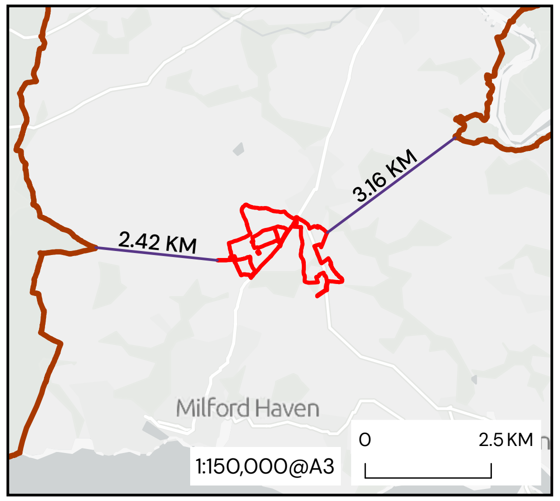
- DataMap Wales LiDAR data has been utilised; combining the Digital Terrain Model (DTM) and Digital Surface Model (DSM) to derive screening features.

This method of ZTV takes into account the varied heights of screening features as derived from historic LiDAR surveys, and is therefore representative of the time of survey for that area. Any changes in vegetation cover or building addition/removal will not be taken into account after this date.

- Viewer height set at 1.7m
(in accordance with para 6.11 of GLVIA Third edition)
- Calculations include earth curvature and light refraction

N.B. This Zone of Theoretical Visibility (ZTV) image illustrates the theoretical extent of where the development may be visible from, assuming 100% atmospheric visibility.

Date of LiDAR survey data: 2020-2023



REV	DATE	DESCRIPTION
-	-	-

LIDAR SCREENED ZONE OF THEORETICAL VISIBILITY

GREAT HARMESTON

ARISE RENEWABLE ENERGY UK LTD

DATE	SCALE	DRAWN	APPROVED
14/08/2025	1:30,000@A3	NC	RCH

SHEET	REV	N	
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DRAWING NUMBER
P24-1037_EN_02

PEGASUS GROUP

Appendix F – Landscape Methodology

LANDSCAPE AND VISUAL IMPACT ASSESSMENT METHODOLOGY

1. INTRODUCTION

1.1 This Landscape Appendix 1 LVIA Methodology outlines Pegasus' LVIA methodology that will be applied to any subsequent assessment of the Proposed Development.

1.2 Any subsequent LVIA will be undertaken with regards to best practice as outlined within the following publications:

- Guidelines for Landscape and Visual Impact Assessment (3rd Edition, 2013) - Landscape Institute / Institute of Environmental Management and Assessment (hereafter referred to as GLVIA3).
- GLVIA3 Statements of Clarification.
- Landscape Sensitivity Assessment Guidance for Wales (2023) – Natural Resources Wales.
- Technical Guidance Note (TGN) 06/19 Visual Representation of Development Proposals, 17 September 2019 by the Landscape Institute.
- Technical Guidance Note (TGN) 1/20 Reviewing Landscape and Visual Impact Assessments (LVIAs) and Landscape and Visual Appraisals (LVAs), 10th January 2020 by the Landscape Institute.
- Technical Guidance Note (TGN) 2/21 Assessing landscape value outside national designations, May 2021 by the Landscape Institute.
- Planning Policy Wales Edition 12 (2024) – Chapter 6 – Distinctive and Natural Places and select paragraphs throughout
- LANDMAP Methodology, 2024 by Natural Resources Wales.
- LANDMAP Guidance Note 1: LANDMAP and Special Landscape Areas, 2017 by Natural Resources Wales.

1.3 GLVIA3 states within paragraph 1.1 that ***"Landscape and Visual Impact Assessment (LVIA) is a tool used to identify and assess the significance of and the effects of change resulting from development on both the landscape as an environmental resource in its own right and on people's views and visual amenity."***[1]

1.4 GLVIA3 also states within paragraph 1.17 that when identifying landscape and visual effects there is a ***"need for an approach that is in proportion to the scale of the project that is being assessed and the nature of the likely effects. Judgement needs to be exercised at all stages in terms of the scale of investigation that is appropriate and proportional."***[2]

1.5 GLVIA3 recognises within paragraph 2.23 that ***"professional judgement is a very important part of LVIA. While there is some scope for quantitative measurement of some relatively***

[1] Para 1.1, Page 4, GLVIA, 3rd Edition
[2] Para 1.17, Page 9, GLVIA, 3rd Edition

objective matters much of the assessment must rely on qualitative judgements"[3] undertaken by a landscape consultant or a Chartered Member of the Landscape Institute (CMLI).

1.6 The effects on cultural heritage and ecology are not considered within this LVIA.

Study Area

1.7 The preliminary study area for the purpose of the Scoping Report, and preliminary LVIA work carried out in summer 2025, has been taken as 3 km radii from the perimeter of the Site. Following the preliminary site works carried out in June 2025, however, it has been determined that the assessment work ought to be more focused with the core study area defined as a radius of approximately 1.5 km from the Site, whilst acknowledging that it may be appropriate to consider more distant visual receptors located beyond this distance.

2. EFFECTS ASSESSED

2.1 Landscape and visual effects are assessed through professional judgements on the sensitivity of landscape elements, character and visual receptors combined with the predicted magnitude of change arising from the Proposed Development. The landscape and visual effects have been assessed in the following sections:

- Effects on landscape elements.
- Effects on landscape character.
- Effects on visual amenity.

2.2 Sensitivity is defined in GLVIA3 as ***"a term applied to specific receptors, combining judgments of susceptibility of the receptor to a specific type of change or development proposed and the value related to that receptor."***[4] Various factors in relation to the value and susceptibility of landscape elements, character, visual receptors, or representative viewpoints are considered below and cross referenced to determine the overall sensitivity as shown in Table 1:

Table 1, Overall sensitivity of landscape and visual receptors

		VALUE		
SUSCEPTIBILITY		**HIGH**	**MEDIUM**	**LOW**
	HIGH	High	High	Medium
	MEDIUM	High	Medium	Medium
	LOW	Medium	Medium	Low

[3] Para 2.23, Page 21, GLVIA, 3rd Edition
[4] Glossary, Page 158, GLVIA, 3rd Edition

2.3 Magnitude of change is defined in GLVIA3 *as* ***"a term that combines judgements about the size and scale of the effect, the extent over which it occurs, whether it is reversible or irreversible and whether it is short or long term in duration."***[5] Various factors contribute to the magnitude of change on landscape elements, character, visual receptors, and representative viewpoints.

2.4 The sensitivity of the landscape and visual receptor and the magnitude of change arising from the Proposed Development are cross referenced in Table 11 to determine the overall degree of landscape and visual effects.

3. EFFECTS ON LANDSCAPE ELEMENTS

3.1 The effects on landscape elements are typically limited to within the Site and include the direct physical change to the fabric of the land, such as the removal of woodland, hedgerows or grassland to allow for the Proposed Development.

Sensitivity of Landscape Elements

3.2 Sensitivity is determined by a combination of the value that is attached to a landscape element and the susceptibility of the landscape element to changes that would arise as a result of the Proposed Development – see pages 88-90 of GLVIA3. Both value and susceptibility are assessed on a scale of high, medium or low.

3.3 The criteria for assessing the value of landscape elements and landscape character are shown in Table 2:

Table 2, Criteria for assessing the value of landscape elements and landscape character	
HIGH	Designated landscape including but not limited to World Heritage Sites, National Parks, National Landscapes considered to be an important component of the country's character experienced by a high number of people. Landscape condition is very good and components are generally maintained to a high standard. The combination of seclusion, enclosure, land use, traffic and movement, light pollution and presence/absence of major infrastructure, elevated level of relative tranquillity renders the landscape to be of heightened value. Rare or distinctive landscape elements and features are key components that contribute to the landscape character of the area.
MEDIUM	Undesignated landscape, also including urban fringe and typical working rural countryside considered to be a typical component of the national or local landscape character. Landscape condition is good to fair and components are generally well maintained. The combination of seclusion, enclosure, land use, traffic and movement,

[5] Glossary, Page 158, GLVIA, 3rd Edition

	light pollution and presence/absence of major infrastructure, elevated level of relative tranquillity renders the landscape to be of medium value. Rare or distinctive landscape elements and features are notable components that contribute to the character of the area.
LOW	Undesignated landscape including urban fringe and rural countryside considered to be of unremarkable character with detracting elements or heightened influence of urbanising features / negative large scale infrastructure. Landscape condition may be poor and components poorly maintained or damaged. The combination of seclusion, enclosure, land use, traffic and movement, light pollution and presence/absence of major infrastructure, elevated level of relative tranquillity renders the landscape to be of low value. Rare or distinctive elements and features are not notable components that contribute to the landscape character of the area.

3.4 The criteria for assessing the susceptibility of landscape elements and landscape character are shown in Table 3:

Table 3, Criteria for assessing landscape susceptibility	
HIGH	Scale of enclosure – landscapes with a low capacity to accommodate the type of development being proposed owing to the interactions of topography, vegetation cover, built form, etc. Nature of land use – landscapes with no or little existing reference or context to the type of development being proposed. Nature of existing elements – landscapes with components that are not easily replaced or substituted (e.g. ancient woodland, mature trees, historic parkland, etc). Nature of existing features – landscapes where detracting features, major infrastructure or industry is not present or where present has a limited influence on landscape character.
MEDIUM	Scale of enclosure – landscapes with a medium capacity to accommodate the type of development being proposed owing to the interactions of topography, vegetation cover, built form, etc. Nature of land use – landscapes with some existing reference or context to the type of development being proposed. Nature of existing elements – landscapes with components that are easily replaced or substituted. Nature of existing features – landscapes where detracting features, major infrastructure or industry is present and has a noticeable influence on landscape character.

LOW	Scale of enclosure – landscapes with a high capacity to accommodate the type of development being proposed owing to the interactions of topography, vegetation cover, built form, etc. Nature of land use – landscapes with extensive existing reference or context to the type of development being proposed. Nature of existing features – landscapes where detracting features or major infrastructure is present and has a dominating influence on the landscape.

3.5 Various factors in relation to the value and susceptibility of landscape elements are assessed and cross referenced to determine the overall sensitivity as shown in Table 1.

3.6 Sensitivity is defined in GLVIA3 as ***"a term applied to specific receptors, combining judgments of susceptibility of the receptor to a specific type of change or development proposed and the value related to that receptor."***[6] The definitions for high, medium, low landscape sensitivity are shown in Table 4:

Table 4, Criteria for assessing landscape sensitivity	
HIGH	Landscape element or character area defined as being of high value combined with a high or medium susceptibility to change. Landscape element or character area defined as being of medium value combined with a high susceptibility to change.
MEDIUM	Landscape element or character area defined as being of high value combined with a low susceptibility to change. Landscape element or character area defined as being of medium value combined with a medium or low susceptibility to change. Landscape element or character area defined as being of low value combined with a high or medium susceptibility to change.
LOW	Landscape element or character area defined as being of low value combined with a low susceptibility to change.

Magnitude of Change on Landscape Elements

3.7 Professional judgement has been used to determine the magnitude of change on individual landscape elements within the Site as shown in Table 5:

[6] Glossary, Page 158, GLVIA, 3rd Edition

Table 5, Criteria for assessing magnitude of change for landscape elements	
HIGH	Total loss/gain of a landscape element.
MEDIUM	Partial loss/gain or alteration to part of a landscape element.
LOW	Minor loss/gain or alteration to part of a landscape element.
NEGLIGIBLE	No loss/gain or very limited alteration to part of a landscape element.

4. EFFECTS ON LANDSCAPE CHARACTER

4.1 Landscape character is defined as *the* ***"distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse."***[7]

4.2 The assessment of effects on landscape character considers how the introduction of new landscape elements physically alters the landform, landcover, landscape pattern and perceptual attributes of the Site or how visibility of the Proposed Development changes the way in which the landscape character is perceived.

Sensitivity of Landscape Character

4.3 Sensitivity is determined by a combination of the value that is attached to a landscape and the susceptibility of the landscape to changes that would arise as a result of the Proposed Development – see pages 88-90 of GLVIA3. Both value and susceptibility are assessed on a scale of high, medium or low.

4.4 The criteria for assessing the value of landscape character are shown in Table 2.

4.5 The criteria for assessing the susceptibility of landscape character are shown in Table 3.

4.6 The overall sensitivity is determined through cross referencing the value and susceptibility of landscape character as shown in Table 1.

Magnitude of Change on Landscape Character

4.7 Professional judgement has been used to determine the magnitude of change on landscape character as shown in Table 6:

[7] Glossary, Page 157, GLVIA, 3rd Edition

Table 6, Criteria for assessing magnitude of change on landscape character	
HIGH	Introduction of major new elements into the landscape or some major change to the scale, landform, landcover or pattern of the landscape.
MEDIUM	Introduction of some notable new elements into the landscape or some notable change to the scale, landform, landcover or pattern of the landscape.
LOW	Introduction of minor new elements into the landscape or some minor change to the scale, landform, landcover or pattern of the landscape.
NEGLIGIBLE	No notable or appreciable introduction of new elements into the landscape or change to the scale, landform, landcover or pattern of the landscape.

5. EFFECTS ON VISUAL AMENITY

5.1 Visual amenity is defined within GLVIA3 as the ***"overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating, visiting or travelling through an area."***[8]

5.2 The effects on visual amenity consider the changes in views arising from the Proposed Development in relation to visual receptors including settlements, residential properties, transport routes, recreational facilities and attractions; and representative viewpoints or specific locations within the study area as agreed with the Local Planning Authority.

Sensitivity of Visual Receptors

5.3 Sensitivity is determined by a combination of the value that is attached to a view and the susceptibility of the visual receptor to changes in that view that would arise as a result of the Proposed Development – see pages 113-114 of GLVIA3. Both value and susceptibility are assessed on a scale of high, medium or low.

5.4 The criteria for assessing the value of views are shown in Table 7:

Table 7, Criteria for assessing the value of views	
HIGH	Views with high scenic value within designated landscapes including but not limited to World Heritage Sites, National Parks, National Landscapes, etc. Likely to include key viewpoints on OS maps or reference within guidebooks, provision of facilities, presence of interpretation boards, etc.
MEDIUM	Views with moderate scenic value within undesignated landscape including typical working rural countryside.

[8] Page 158, Glossary, GLVIA3

LOW	Views with unremarkable scenic value within undesignated landscape with partly degraded visual quality and detractors.

5.5 The criteria for assessing the susceptibility of views are shown in Table 8:

Table 8, Criteria for assessing visual susceptibility	
HIGH	Includes occupiers of residential properties and people engaged in recreational activities in the countryside using Public Rights of Way (PRoWs).
MEDIUM	Includes people engaged in outdoor sporting activities and people travelling through the landscape on minor roads and trains.
LOW	Includes people at places of work e.g. industrial and commercial premises and people travelling through the landscape on major roads and motorways.

5.6 Sensitivity is defined in GLVIA3 as ***"a term applied to specific receptors, combining judgments of susceptibility of the receptor to a specific type of change or development proposed and the value related to that receptor."***[9] The definitions for high, medium, low visual sensitivity are shown in Table 9:

Table 9, Criteria for assessing visual sensitivity	
HIGH	Visual receptor defined as being of high value combined with a high or medium susceptibility to change. Visual receptor defined as being of medium value combined with a high susceptibility to change.
MEDIUM	Visual receptor defined as being of high value combined with a low susceptibility to change. Visual receptor defined as being of medium value combined with a medium or low susceptibility to change. Visual receptor defined as being of low value combined with a high or medium susceptibility to change.
LOW	Visual receptor defined as being of low value combined with a low susceptibility to change.

[9] Glossary, Page 158, GLVIA, 3rd Edition

Magnitude of Change on Visual Receptors

5.7 Professional judgement has been used to determine the magnitude of change on visual receptors as shown in Table 10:

Table 10, Criteria for assessing magnitude of change for visual receptors	
HIGH	Major change in the view that has a defining influence on the overall view with many visual receptors affected.
MEDIUM	Some change in the view that is clearly visible and forms an important but not defining element in the view.
LOW	Some change in the view that is appreciable with few visual receptors affected.
NEGLIGIBLE	No notable change in the view.

6. CUMULATIVE ASSESSMENT

Assessment of Cumulative Effects

6.1 Cumulative effects arise where the study areas for two or more solar farms or other infrastructure, considered relevant to the assessment, overlap so that the cumulative schemes are experienced at proximity where they may have a greater incremental effect. This means that the addition of the Proposed Development to a situation where other solar developments, or other relevant infrastructure, are apparent may result in a greater effect than where the Proposed Development is seen by itself. The cumulative assessment would typically include existing identified schemes, those that are consented, and those for which planning applications have been submitted.

6.2 The cumulative assessment covers the potential cumulative effects on landscape character receptors and views. Cumulative effects on the landscape elements may only arise when the extent of the Site overlaps with any of the identified cumulative schemes. For that reason, effects upon landscape features are often excluded from the cumulative assessment.

6.3 As with the assessment of effects of the Proposed Development, the significance of cumulative effects is determined through a combination of the sensitivity of the landscape receptor or view and the magnitude of change upon it. The sensitivity of landscape receptors and views is the same in the cumulative assessment as in the assessment of the Site itself. However, the definition of a significant cumulative effect is different from a significant effect in the assessment of the Proposed Development itself, and this means that the magnitude of change is also assessed in a different way.

Cumulative magnitude of change

6.4 The cumulative magnitude of change is an expression of the degree to which landscape character receptors and views will be changed by the addition of the proposed solar

development to the identified solar schemes and other infrastructure, that are already existing, consented or proposed. This is dependent on a number of variables:

- **The location of the Proposed Development in relation to other solar schemes and infrastructure**. If the Proposed Development is seen in a part of the view that is not affected by another development, this will generally increase the cumulative magnitude of change as it will extend the influence into an area that is currently unaffected. Conversely, if the Proposed Development is seen in the context of other developments, the cumulative magnitude of change may be lower as it is not extending development to hitherto undeveloped parts of the outlook. This is particularly true where the scale and layout of the Proposed Development is similar to that of the other sites, as where there is a high level of integration and cohesion with an existing site, the various solar schemes may appear as a single site.
- **The extent of the developed skyline**. If the Proposed Development will add notably to the developed skyline in a view, the cumulative magnitude of change will tend to be higher, as the nature of the skyline has a particular influence on both views and landscape receptors.
- **The number and scale of the developments seen simultaneously, successively, or sequentially**. Generally, the greater the number of visible developments, the higher the cumulative magnitude of change will be.
- **The distance of the Proposed Development from the viewpoint or receptor**. As in the assessment of the Site itself, the greater the distance, the lower the cumulative magnitude of change will tend to be.
- **The magnitude of change of the Proposed Development as assessed in the main assessment**. The lower this is assessed to be, the lower the cumulative magnitude of change is likely to be. Where the Proposed Development itself is assessed to have a negligible magnitude of change on a view or receptor there will not be a cumulative effect as the contribution of the Proposed Development will equate to the 'no change' situation.

6.5 In addition, cumulative landscape and visual effects can arise in four reasonably distinctive ways:

- **Simultaneously / in combination**, where two or more solar schemes / other infrastructure are seen together at the same time from the same viewpoint in the same field of view. The effects of an extension of an existing development or the positioning of a new development such that it would give rise to an extended or/and intensified impression of the development in the landscape as seen from fixed locations.
- **In succession** – where two or more developments are present in views from the same location but cannot be seen in the same field of view and the observer has to turn to see them.
- **In sequence** – where two or more developments are not seen from the same viewpoint, even if the observer turns around to extend their perception of the surrounding landscape. The receptor has to move to another location to see cumulative developments. The frequency of occurrence greatly depends on factors like distance to developments, distance to another viewpoint and speed of travel.
- **Perceived** – where the observer is unable or unwilling to gain a view of another development but is aware of its presence.

6.6 Definitions of cumulative magnitude of change are applied in order that the process of assessment is made clear. These are listed in Table 11 below.

Table 11, Cumulative magnitude of change	
MAGNITUDE OF CHANGE	DEFINITION
HIGH	The addition of the Proposed Development will make an immediately apparent contribution to the cumulative situation in a landscape receptor or view.
MEDIUM	The addition of the Proposed Development makes a notable contribution to the cumulative situation, and its cumulative addition is readily apparent.
LOW	The addition of the Proposed Development will make a minor contribution to the overall cumulative situation, and its cumulative addition is only slightly apparent.
NEGLIGIBLE	The addition of the Proposed Development will make a negligible contribution to the cumulative situation and its addition equates to a 'no change' situation.

Significance of cumulative effects

6.7 The objective of the cumulative assessment is to determine whether any effects that the Proposed Development will have on views and landscape character receptors when seen or perceived in conjunction with other existing and proposed sites will be significant or not significant. A significant cumulative effect will occur where the addition of the Proposed Development to other existing and proposed solar developments, and other identified infrastructure, will result in a landscape character or view that is defined by the presence of more than one solar scheme farm, exacerbates the adverse effects of other infrastructure identified for the purpose of the cumulative assessment, and is characterised primarily by solar schemes and / or other energy related infrastructure so that other patterns and components are no longer definitive. If the solar scheme itself is assessed to have a significant effect on a landscape character receptor or view, it does not necessarily follow that the cumulative effect will also be significant. If the joint effect of the two or more solar schemes / other infrastructure does not result in the perception of a solar farm-defined landscape, the cumulative effect will be not significant, even if the effect of the Proposed Development itself is significant.

7. SIGNIFICANCE OF LANDSCAPE AND VISUAL EFFECTS

7.1 The likely significance of effects is dependent on all of the factors considered in the sensitivity and the magnitude of change upon the relevant landscape and visual receptors. These factors are assimilated to assess whether or not the Proposed Development will have a likely significant or not significant effect. The variables considered in the evaluation of the sensitivity and the magnitude of change is reviewed holistically to inform the professional judgement of significance.

7.2 A likely **significant** effect will occur where the combination of the variables results in the Proposed Development having a definitive effect on the view. A **not significant** effect will occur where the appearance of the proposed development is not definitive, and the effect continues to be defined principally by its baseline condition.

7.3 Within Table 11 below, the major effects highlighted in grey are considered to be significant in terms of the Town and Country Planning (Environmental Impact Assessment) Wales Regulations 2017 (the 'EIA Regulations'). It should be noted that whilst an individual effect may be significant, it does not necessarily follow that the Proposed Development would be unacceptable in the planning balance. The cross referencing of the sensitivity and magnitude of change on the landscape and visual receptor determines the significance of effect as shown in Table 12:

Table 12, Significance of landscape and visual effects

		HIGH	**MEDIUM**	**LOW**
Magnitude of Change	**HIGH**	Major	Major	Moderate
	MEDIUM	Major	Moderate	Minor
	LOW	Moderate	Minor	Minor
	NEGLIGIBLE	Negligible	Negligible	Negligible

ognised that significant effects are a high bar and relate to the change in landscape character or view that would cause a variation in the landscape character, or its value, change in the sense of place, or degrade or diminish the integrity of a range of characteristic features and elements, or cause a major deterioration in the view. Significant effects are considered to be associated with landscapes or views that have been redefined or partly redefined, rather than simply changed.

7.4 The GLVIA3 recognises that: ***"There are no hard and fast rules about what makes a significant effect, and there cannot be a standard approach since circumstances vary with the location and landscape context and with the type of proposals. (…) major loss or irreversible effects, over and extensive area, o elements and/or aesthetic and perceptual aspects that are key to the character of nationally valued landscapes are likely to be of greatest significance…"***[10] Similar conclusions are drawn in the GLVIA3 in relation to the visual effects (paragraphs 6.42- 6-45, pages 115 – 116 of the GLVIA3).

8. TYPICAL DESCRIPTORS OF LANDSCAPE EFFECTS

8.1 The typical descriptors of the landscape effects are detailed within Table 13:

[10] Para 5.56, Page 92, GLVIA, 3rd Edition

Table 13, Typical Descriptors of Landscape Effects	
MAJOR BENEFICIAL	The landscape resource has a high sensitivity with the Proposed Development representing a high beneficial magnitude of change and / or the proposed changes would: - enhance the character (including value) of the landscape; - enhance the restoration of characteristic features and elements lost as a result of changes from inappropriate management or development; - enable a sense of place to be enhanced.
MODERATE BENEFICIAL	The landscape resource has a medium sensitivity with the Proposed Development representing a medium beneficial magnitude of change and / or the proposed changes would: - enhance the character (including value) of the landscape; - enable the restoration of characteristic features and elements partially lost or diminished as a result of changes from inappropriate management or development; - enable a sense of place to be restored.
MINOR BENEFICIAL	The landscape resource has a low sensitivity with the Proposed Development representing a low beneficial magnitude of change and/or the proposed changes would: - complement the character (including value) of the landscape; - maintain or enhance characteristic features or elements; - enable some sense of place to be restored.
NEGLIGIBLE	The proposed changes would (on balance) maintain the character (including value) of the landscape and would: - be in keeping with landscape character and blend in with characteristic features and elements; - Enable a sense of place to be maintained.
NO CHANGE / NEUTRAL	The proposed changes would not be visible and there would be no discernible change to landscape character.
MINOR ADVERSE	The landscape resource has a low sensitivity with the Proposed Development representing a low adverse magnitude of change and / or the proposed changes would: - not quite fit the character (including value) of the landscape; - be a variance with characteristic features and elements; - detract from sense of place.
MODERATE ADVERSE	The landscape resource has a medium sensitivity with the Proposed Development representing a medium adverse magnitude of change and/or the proposed changes would: - conflict with the character (including value) of the landscape;

	- have an adverse effect on characteristic features or elements; - diminish a sense of place.
MAJOR ADVERSE	The landscape resource has a high sensitivity with the Proposed Development representing a high adverse magnitude of change and/or the proposed changes would: - be at variance with the character (including value) of the landscape; - degrade or diminish the integrity of a range of characteristic features and elements or cause them to be lost; - change a sense of place.

9. TYPICAL DESCRIPTORS OF VISUAL EFFECTS

9.1 The typical descriptors of the visual effects are detailed within Table 14:

Table 14, Typical Descriptors of Visual Effects	
MAJOR BENEFICIAL	The visual receptor is of high sensitivity with the Proposed Development representing a high magnitude of change and/or the Proposed Development would result in a major improvement in the view.
MODERATE BENEFICIAL	The visual receptor is of medium sensitivity with the Proposed Development representing a medium magnitude of change and/or the Proposed Development would result in a clear improvement in the view.
MINOR BENEFICIAL	The visual receptor is of low sensitivity with the Proposed Development representing a low magnitude of change and/or the Proposed Development would result in a slight improvement in the view.
NEGLIGIBLE	The proposed changes would be in keeping with, and would maintain, the existing view or where (on balance) the proposed changes would maintain the quality of the view (which may include adverse effects which are offset by beneficial effects for the same receptor) or due to distance from the receptor, the proposed change would be barely perceptible to the naked eye.
NO CHANGE/ NEUTRAL	The proposed changes would not be visible and there would be no change to the view.
MINOR ADVERSE	The visual receptor is of low sensitivity with the Proposed Development representing a low magnitude of change and/or the Proposed Development would result in a slight deterioration in the

	view.
MODERATE ADVERSE	The visual receptor is of medium sensitivity with the Proposed Development representing a medium magnitude of change and/or the Proposed Development would result in a clear deterioration in the view.
MAJOR ADVERSE	The visual receptor is of high sensitivity with the Proposed Development representing a high magnitude of change and/or the Proposed Development would result in a major deterioration in the view.

10. NATURE OF EFFECTS

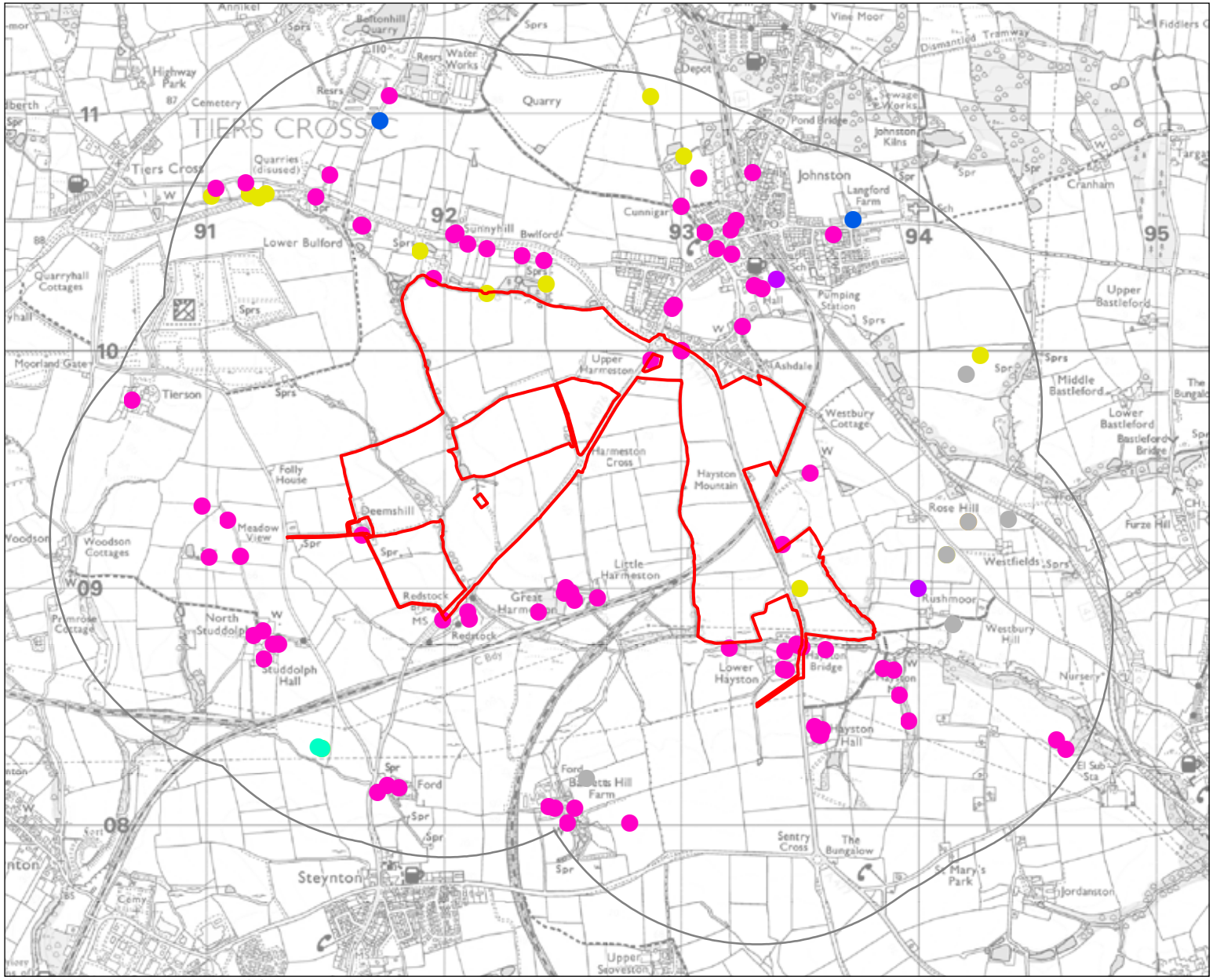
10.1 GLVIA3 includes an entry that states ***"effects can be described as positive or negative (or in some cases neutral) in their consequences for views and visual amenity."***[11] GLVIA3 does not, however, state how negative or positive effects should be assessed, and this therefore becomes a matter of professional judgement supported by site specific justification within the LVIA.

[11] Para 6.29, Page 113, GLVIA 3rd Edition

Appendix G – Landscape Aspect Areas

LANDMAP Aspect	Aspect Area Code	Overall Evaluation
LANDMAP Areas Covering the Site		
Visual and Sensory	PMBRKVSO68	Moderate
Landscape Habitats	PMBRKLH943	Low
Historic Landscape	PMRKHL46055	High
	PMBRKHL43899	High
Geological Landscape	PMBRKGL159	High
	PMBRKGL162	Moderate
	PMRKGL142	Moderate
Cultural Landscape Services	PMBRKCLS129	n/a
LANDMAP Areas Adjacent to the Site		
Landscape Habitats	PMBRKLH342	Moderate
Historic Landscape	PMBRKHL43896	High
	PMBRKHL56211	Moderate

Appendix H – Designated and Non Designated Historic Assets



KEY

- Site
- 1km

Non designated assets

period

- PREHISTORIC
- Prehistoric
- Mesolithic;Neolithic
- Neolithic
- Bronze Age
- Iron Age;POST MEDIEVAL
- Roman
- EARLY MEDIEVAL
- Early Medieval
- Medieval
- Medieval;POST MEDIEVAL
- POST MEDIEVAL
- MODERN
- NOT APPLICABLE
- Unknown

Non Designated Historic Assets

Great Harmeston Solar PV

Client: Arise Renewable Energy UK Ltd

DRWG No: P24-1037

Drawn by: EP

Date: 21/08/2025

Scale: 1:25,000 @ A4

Approved by: GS

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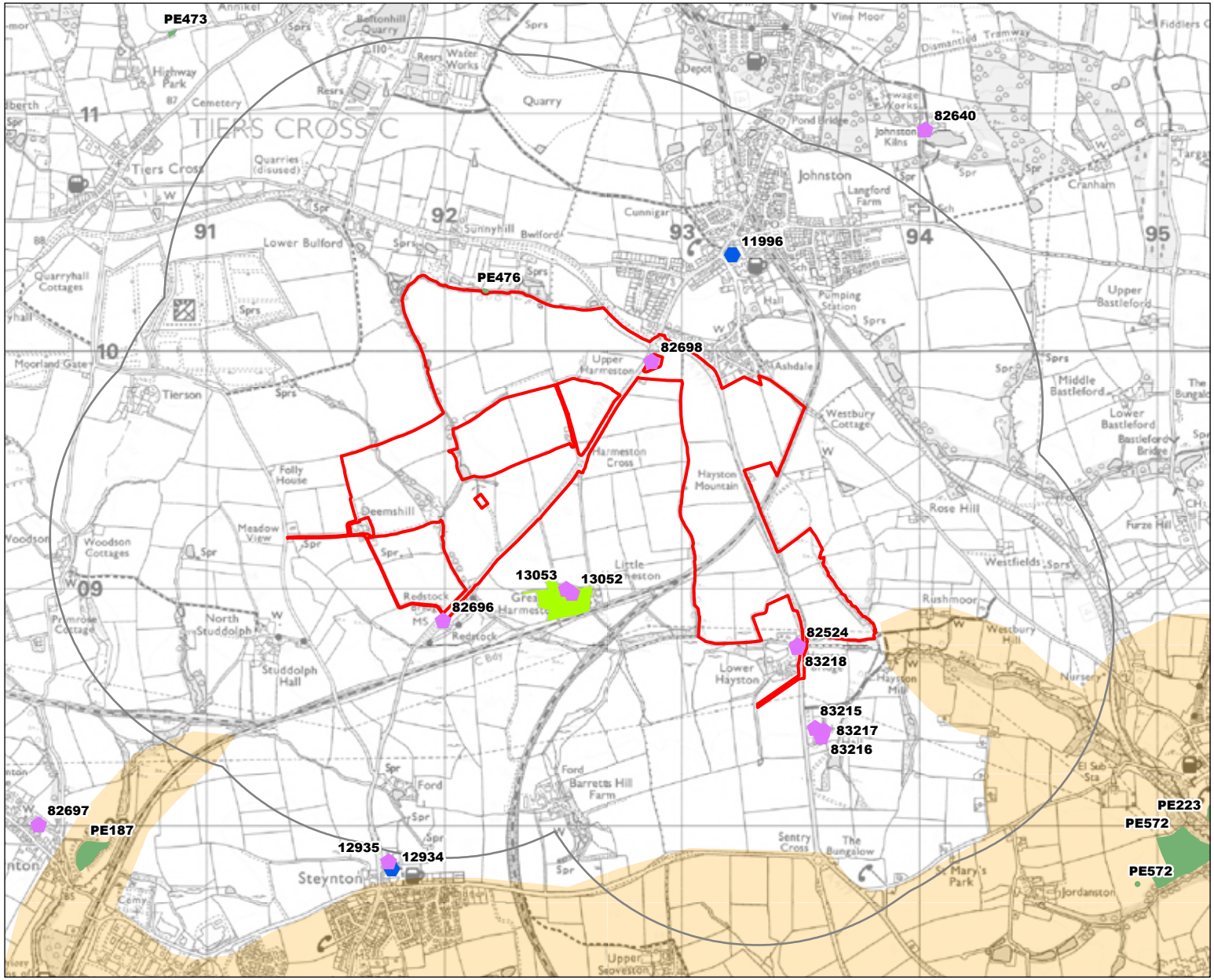

KEY

- Site
- 1km

Listed Buildings

Grade

- II*
- II

- Scheduled Monuments
- Registered Historic Parks and Gardens
- Registered Historic Landscape ("Milford Haven Waterway")

Contains Cadw data.

Designated Historic Assets

Great Harmeston Solar PV

Client: Arise Renewable Energy UK Ltd

DRWG No: P24-1037

Drawn by: EP

Date: 10/12/2025

Scale: 1:25,000 @ A4

Approved by: GS

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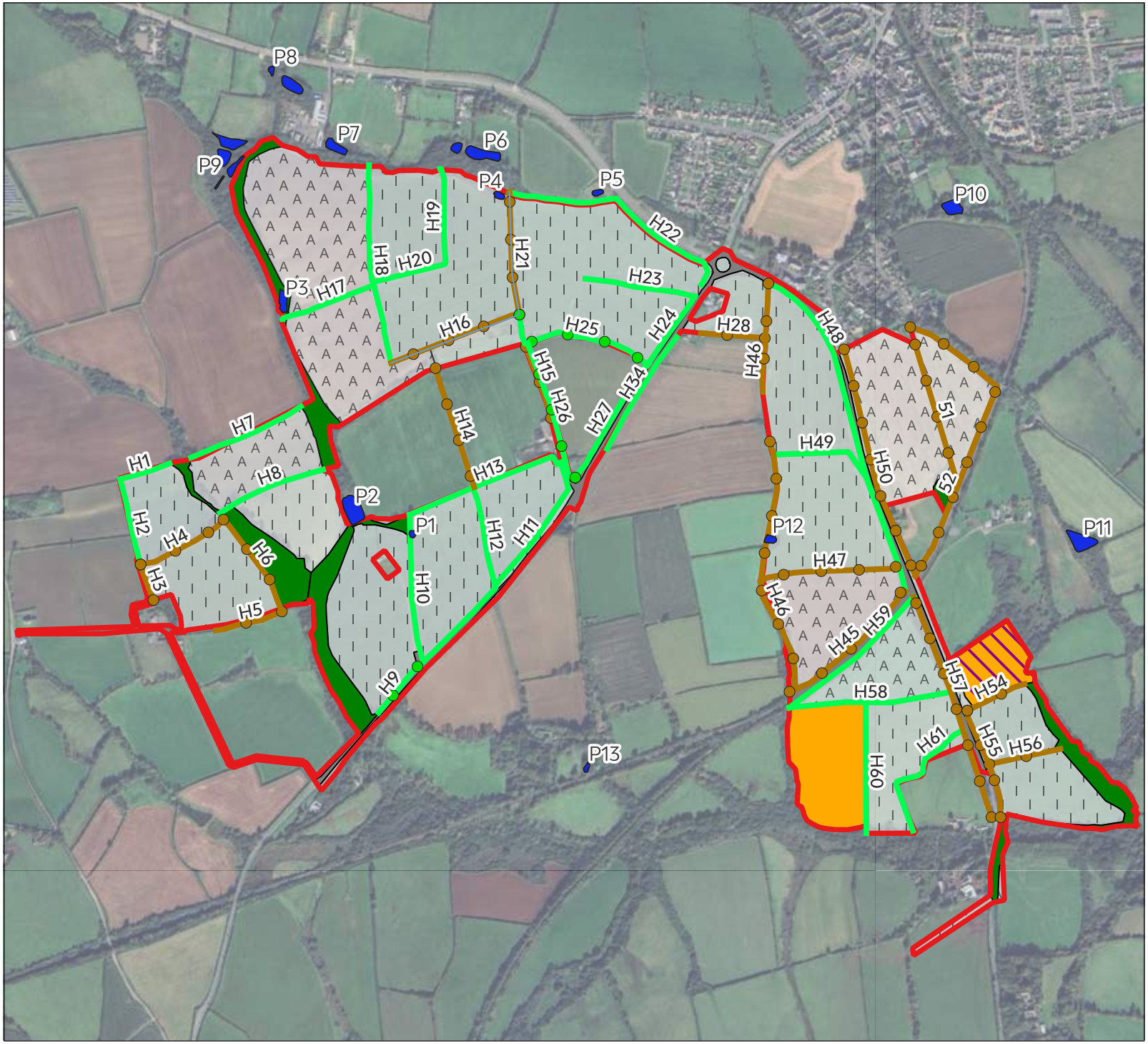
Appendix I – Baseline Habitats Features Plan



Legend

- Redline Boundary
- Ponds
- Species poor hedgerow with trees
- Species rich hedge with trees
- Species-poor
- J1.1 - Cultivated/disturbed land - arable
- Hardstanding
- G1 - Standing Water
- B5 - Marsh/marshy grassland
- B4 - Improved grassland
- B2.1 - Neutral grassland - unimproved
- A1.1.1 - Broadleaved woodland - semi-natural

0 250 500 m

Figure X.X Habitat Features Plan

PROJECT Great Harmeston Solar Farm, Pembrokeshire

CLIENT Arise Renewable Energy UK Ltd

DATE	SCALE	DRAWN	APPROVED
02/12/2025	As Shown (Approximate)		

SHEET REV

N

DRAWING NUMBER

PEGASUS GROUP

Town & Country Planning (Environmental Impact Assessment) Regulations 2017

Expertly Done.

DESIGN | ECONOMICS | ENVIRONMENT | HERITAGE | LAND & PROPERTY | PLANNING | TRANSPORT & INFRASTRUCTURE

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