Fferm Solar Larnog

Environmental Statement

Volume II, Chapter 2: Approach to the EIA

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Issue Sheet

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Volume II, Chapter 2: Approach to the EIA

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2. Approach to the EIA

2.1. Introduction

2.1.1. This chapter outlines the approach to the Environmental Impact Assessment (EIA), to identify, evaluate and mitigate the likely significant effects associated with the Proposed Development. It sets out the EIA process, the relevant regulations, guidance, terminology, methodology, and scoping process. EIA Scoping has been an ongoing process which is documented within this chapter alongside the evidence base associated with those topics and elements of topics scoped out of the assessment.

2.1.2. This ES has been produced in accordance with Regulation 17 and Schedule 4 of the EIA (Wales) Regulations 2017 (Information for Inclusion in Environmental Statements)[1] and the Welsh Office Circular 11/99[2].

2.1.3. Further details of topic-specific methodologies are provided in the relevant technical chapters (see **Chapters 6** to **11**).

2.2. The EIA Process

Overview

2.2.1. EIA is a process for identifying the likely significant environmental effects (positive and negative) of a project to inform the decision-making process when considering an application for planning permission.

2.2.2. The preparation of an Environmental Statement (ES) is one of the key stages in the EIA process, as it brings together information about any significant environmental effects, which the decision makers will use to determine whether the Proposed Development should be allowed to proceed.

2.2.3. This ES has been prepared to allow consultees an opportunity to comment on its contents, and for the Applicant to consider and respond to any comments received, as part of the statutory pre-application consultation (PAC) process (see **Section 2.4** for further details on consultation). Prior to the submission of the planning application, the ES will be updated as necessary following comments received during statutory consultation. Any amendments to the ES prior to submission will be identified within a PAC Report.

[1] The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 – Statutory Instrument 2017 No. 567 (W.136).
[2] Welsh Office, Circular 11/99 Environmental Impact Assessment (EIA).

2.2.4. The EIA process identifies the potential for effects to arise and identifies environmental measures (mitigation) to be incorporated into the design of the Proposed Development, or the method of construction and operation that may reduce or eliminate negative effects. Typically, numerous design iterations take place in response to environmental constraints identified during the EIA process (in effect, incorporating environmental mitigation measures to avoid, reduce or compensate for identified adverse effects). Further details of such measures identified for the Proposed Development are presented in **Chapter 4: Design Evolution and Alternatives**, and the corresponding environmental topic chapters.

Need for EIA

2.2.5. Under the EIA Regulations, the Proposed Development falls within the description of energy industry development in paragraph 2 of Schedule 2 of the EIA Regulations 2017 as an 'industrial installation for the production of electricity'. The Proposed Development exceeds the applicable threshold for this type of development because the area of development exceeds 0.5 hectares.

2.2.6. As noted in **Chapter 1: Introduction**, a request for an EIA Screening Opinion was submitted to the Vale of Glamorgan Council (hereafter 'the Council') on 16 December 2025. A response was received from the Council on 27 March 2026 (**Appendix 1A**). The Screening response concluded that the Proposed Development is EIA Development within the meaning of the EIA Regulations, due to the size of the development, the local context, and the potential for significant adverse landscape and visual impacts, and potential impacts to mineral resource of national importance, protected sites and species, and archaeological resource.

EIA Regulations

2.2.7. Schedule 4 of the EIA Regulations specifies that the ES should describe the factors likely to be significantly affected by the Proposed Development: population, human health, biodiversity (for example flora and fauna), land (for example land take), soil (e.g. 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.

2.2.8. Establishing which aspects of the environment and associated issues are relevant for a particular project can be captured in the EIA scoping process. The proposed scope of the assessment is provided to the determining authority by the Applicant, and the determining authority provides its opinion on the scope, taking account of feedback it obtains from key consultees.

2.2.9. The scoping exercise undertaken for the Proposed Development is described in **Section 2.3** and a copy of the EIA Scoping Report and EIA Scoping Opinion are set out in **Appendix 1B** and **1C**, respectively.

2.3. EIA Scoping

2.3.1. Regulation 17(4)(c) of the EIA Regulations requires that, where a Scoping Opinion (or Direction) has been adopted, an ES must "…*be based on the most recent scoping opinion or direction issued (so far as the proposed development remains materially the same as the proposed development which was the subject of that opinion or direction)".* This effectively allows the determining authority to control the scope of the assessment. As such, it is important to set out as much information as possible about the development and the proposed work scope when preparing a Scoping Report with the objective of achieving a Scoping Opinion or Direction that ideally does not require amendment.

2.3.2. Scoping involves identifying the following:

- The people and environmental resources (collectively known as 'receptors') that could be significantly affected by the Proposed Development; and
- The assessment work and methodologies required to identify and assess potentially significant effects.

2.3.3. As set out in **Chapter 1: Introduction**, an EIA Scoping Report was submitted to the Vale of Glamorgan Council on 23 June 2026 together with a formal request for an EIA Scoping Opinion in accordance with Regulation 14 of the EIA Regulations (please refer to **Appendix 1B**). A formal Scoping Opinion was subsequently received from the Council on 7 October 2026 (**Appendix 1C**).

Topics Scoped into the EIA Process

2.3.4. Taking into account the feedback received as part of the EIA Scoping Opinion provided by the Council (**Appendix 1C**), in addition to the nature, size and location of the Proposed Development, the following environmental topics have been scoped into the EIA process and are reported in the technical chapters of this ES:

- Landscape and Visual Assessment (**Chapter 6** of this ES);
- Biodiversity (**Chapter 7** of this ES);
- Noise (**Chapter 8** of this ES);
- Historic Environment (**Chapter 9** of this ES);
- Cumulative Effects (Considered in **Chapters 6** to **9** of this ES); and
- Intra-project cumulative effects (**Chapter 10** of this ES); and
- Other Environmental Effects (**Chapter 11** of the ES), which considers Climate Change (greenhouse gases and climate resilience), Glint and Glare, Hydrology, and Hydrogeology and Geology.

2.3.5. The ES also includes consideration of the alternatives, in accordance with the EIA Regulations, which states that an ES should include "*A description of the reasonable alternatives (for example in terms of project 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*." This is considered within **Chapter 4: Design Evolution and Alternatives** of this ES.

2.3.6. Other environmental topics that do not require standalone chapters in the ES but still require consideration as part of the EIA process are detailed in **Table 2.1**.

Table 2.1: Environmental topics not requiring standalone chapters in the ES

Topic	Where Addressed in the ES
Climate (Greenhouse Gases)	Climate Change (Greenhouse Gases) was scoped out of requiring a standalone ES chapter; however, it has been considered through the EIA process and assessed within the Carbon Balance Assessment (**Appendix 11A**). This approach was agreed by the Vale of Glamorgan Council through the EIA Scoping Opinion (see **Appendix 1C**). The findings of the technical assessment have been used to inform a proportionate assessment of likely significant effects and the summary and conclusions presented within **Chapter 11: Other Environmental Effects** of the ES.
Climate Resilience	Climate resilience refers to the vulnerability of the Proposed Development to the potential effects of future climate change. In accordance with the EIA Scoping Opinion (see **Appendix 1C**), these climate resilience measures are incorporated within the Carbon Balance Report (see **Appendix 11A**). A summary of the climate resilience considerations, which are embedded into the design of the Proposed Development, a high-level assessment of the vulnerability of the Proposed Development to future climate change and conclusions, are detailed within **Chapter 11: Other Environmental Effects** of the ES.
Glint and Glare	In accordance with the EIA Scoping Opinion (see **Appendix 1C**), glint and glare was requested to be scoped into the EIA process. Consequently, the Glint and Glare Technical Report has been prepared and considered as part of the EIA process and can be found within **Appendix 11B**. The findings of the technical assessment have been used to inform a proportionate assessment of likely significant effects, and the summary and conclusions are presented within **Chapter 11: Other Environmental Effects** of the ES.

Topic	Where Addressed in the ES
Hydrology, Hydrogeology and Geology	Hydrology and Flood Risk In accordance with the EIA Scoping Opinion (see **Appendix 1C**), hydrology and flood risk have been considered as part of the EIA process through the Flood Consequence Assessment (FCA) and Outline Drainage Strategy (**Appendix 11E**). The assessment demonstrates that the Proposed Development can be accommodated without increasing flood risk on or off site and incorporates embedded mitigation, including Sustainable Drainage Systems (SuDS), permeable access tracks and drainage design measures. The assessment presented in **Chapter 11: Other Environmental Effects** is informed by the findings of the FCA and Outline Drainage Strategy and takes account of the mitigation measures embedded within the design and the commitments set out within the Outline CEMP (**Appendix 5A**). Hydrogeology and Geology In accordance with the EIA Scoping Opinion (see **Appendix 1C**), hydrogeology and geology have been considered as part of the EIA process through a Preliminary Risk Assessment (PRA) (**Appendix 11C**), Mineral Resource Assessment (MRA) (**Appendix 11D**), Flood Consequence Assessment and Outline Drainage Strategy (**Appendix 11E**). These assessments consider ground conditions, contamination, mineral safeguarding and potential effects on groundwater resources. The assessment presented in **Chapter 11: Other Environmental Effects** is informed by the findings of these technical reports and takes account of mitigation measures embedded within the design together with the construction-phase controls and pollution prevention measures secured through the Outline CEMP (**Appendix 5A**).
Population and Human Health	Human Health has been scoped out as a standalone chapter and is addressed within the individual technical chapters, where relevant. The EIA wider determinants of health are considered below, in line with ISEP guidance[3]: • Health and Safety (H&S): H&S risks associated with the construction are addressed as part of the outline CEMP (**Appendix 5A**). • Social: traffic management measures and management of recreational routes are detailed in the outline CTMP (**Appendix 5B**) and outline CEMP (**Appendix 5A**). • Economic: effects associated with employment and skills development opportunities are not anticipated to be significant across all phases and thus, have been scoped out of the EIA (see socio-economics section within **Table 2.2** below). • Bio-physical environment: – Climate change: considered through the Carbon Balance Assessment (**Appendix 11A**) and **Chapter 11: Other Environmental Effects**. No significant effects are anticipated.

[3] Pyper, R., Lamming, M. and Beard, C., (2022). Guide to effective scoping of human health in Environmental Impact Assessment. Available at: https://www.researchgate.net/publication/376488593_IEMA_Guide_Effective_Scoping_of_Human_Health_in_Environmental_Impact_Assessment (Accessed: September 2026).

Topic	Where Addressed in the ES
	– Air quality: no significant effects are anticipated (see air quality section in **Table 2.2** below). – Water quality and availability: considered through the Flood Consequence Assessment and Outline Drainage Strategy (**Appendix 11E**) and **Chapter 11: Other Environmental Effects**. No significant effects are anticipated. – Land quality: consideration of potential effects on visual amenity and landscape character, including views from recreational users (PRoWs) and residential properties are considered as part of **Chapter 6: Landscape and Visual**. – Land contamination: In accordance with the EIA Scoping Opinion (**Appendix 1C**), land contamination was identified as a matter requiring further consideration and was therefore scoped into the EIA process. The PRA (**Appendix 11C**) concludes the risks posed to human health receptors from the potential contamination sources is low. The findings of the PRA have been used to inform a proportionate assessment of likely significant effects, with a summary of the assessment findings and the overall conclusions presented within **Chapter 11: Other Environmental Effects** of the ES. – Noise and vibration: considered as part of **Chapter 8: Noise and Vibration**. – Radiation: no significant effects are anticipated (see heat and radiation section in **Table 2.2**). • Built environment: No significant effects on the built environment are anticipated during construction, operation or decommissioning of the Proposed Development. This includes effects on community facilities, utilities and other infrastructure. Overall, in line with the principles of preparing a proportionate EIA, a standalone human health chapter has not been prepared. Potential effects on human health have instead been considered through the relevant technical assessments, supporting technical reports and ES chapters.

Topics Scoped out of the EIA Process

2.3.7. As part of scoping, several topics or elements have been scoped out of the EIA process on the basis that significant effects are not likely to arise due to the Proposed Development. Therefore, these topics are not reported in this ES.

2.3.8. **Table 2.2** summarises this aspect of the process and the justification for scoping out these topics/elements.

Table 2.2: Topics Scoped out and their Justification

Topic/Element Scoped Out	Justification
Agriculture and Land Use	The Site does not contain any Best and Most Versatile (BMV) agricultural land, and any effects on soils during construction would be temporary, reversible and appropriately managed through soil handling measures. An Outline Soil Management Plan (oSMP) has been prepared and is included in **Appendix 5C**. The oSMP sets out the principles and procedures for the handling, storage, movement and reinstatement of soils during construction in accordance with best practice. Any permanent loss of agricultural land during operation will be limited to the Project Substation Compound and access tracks. The remaining areas of the Site will be available for livestock management. Temporary disruption to public rights of way (PRoW) during construction would be managed and mitigated through temporary closures and/or diversions during short periods. All PRoW will remain open during the operational phase. All areas of woodland within the Site have been avoided as part of the Proposed Development. Based on the characteristics of the Site, the absence of BMV land, the limited permanent loss of agricultural land and the continued agricultural use, the Proposed Development will not give rise to significant effects in respect of agricultural and land use. This topic has been scoped out of the EIA. This approach was agreed by the Vale of Glamorgan Council through the EIA Scoping Opinion (see **Appendix 1C**).
Air Quality	The Site is located approximately 3.5km from the nearest Air Quality Management Area (AQMA), located in Cardiff City Centre (AQMA ID: 1034). During construction, emissions to air would be limited to those associated with construction traffic, construction plant, and the movement of the workforce to and from the Site. There is potential for localised and short-term dust generation, particularly during the formation or modification of access tracks and earthworks. However, these effects would be temporary and confined to the construction period. Any potential impacts on air quality during construction are anticipated to be negligible to minor and would be appropriately managed through the Construction Environmental Management Plan (CEMP) and Construction Traffic Management Plan (CTMP). These plans include best practice measures to minimise dust generation and vehicle emissions. With these controls in place, it is unlikely that construction activities would result in any significant effects on air quality. Please refer to **Appendix 5A** for an outline CEMP and **Appendix 5B** for an outline CTMP. During operation, the Proposed Development would not give rise to any meaningful emissions to air. Unlike other electricity generating technologies, solar PV infrastructure does not produce operational air emissions, with activities limited to occasional maintenance visits by technicians. As such, no significant operational effects on air quality are anticipated.

Topic/Element Scoped Out	Justification
	Similar to the construction phase, any potential effects on localised air quality associated with decommissioning works would be minor, short term and temporary. Air quality has therefore been scoped out of the EIA process. This approach was agreed by the Vale of Glamorgan Council through the EIA Scoping Opinion (see **Appendix 1C**).
Heat and Radiation	Due to the scale and nature of the Proposed Development, it is not anticipated that there will be any significant sources of heat or radiation during construction, operation, or decommissioning. This approach was agreed by the Vale of Glamorgan Council through the EIA Scoping Opinion (see **Appendix 1C**).
Major Accidents and Disasters	The nature of the Proposed Development is not considered to give rise to Major Accidents or Disasters, following the implementation of relevant design considerations and mitigation measures. A standalone chapter for Major Accidents and Disasters has been scoped out of the EIA. This approach was agreed by the Vale of Glamorgan Council through the EIA Scoping Opinion (see **Appendix 1C**). However, the potential for major accidents and disasters arising from the construction, operation and maintenance, and decommissioning phases of the Proposed Development has been considered in **Chapter 5: Project Description**. Furthermore, an outline Battery Safety Management Plan (BSMP) has been prepared as part of the Proposed Development, please refer to **Appendix 5D**.
Material Assets and Waste	There are no sensitive material assets within the Site that would be affected by the Proposed Development, with heritage assets considered separately within **Chapter 9: Historic Environment**. Any waste generated during construction would be managed through an approved CEMP, incorporating a Site Waste Management Plan (SWMP) to minimise waste generation and ensure the appropriate storage, reuse, recycling and disposal of materials. An outline CEMP has been prepared (**Appendix 5A**) in support of the planning application, which includes measures to ensure that construction materials would be locally sourced where practicable and from recycled or secondary sources where feasible, with all materials stored within designated areas to minimise the risk of pollution to air, ground or water. All relevant environmental legislation would be complied with, and any waste requiring off-site disposal would be handled by suitably licensed contractors. With these measures in place, the construction phase is not anticipated to give rise to significant effects. During operation, waste generation would be limited to routine maintenance activities and the replacement of components where necessary. Given the limited scale and infrequency of such activities, no significant effects on material assets or waste are anticipated during the operational phase of the Proposed Development.

Topic/Element Scoped Out	Justification
	The Scoping Opinion states that the generation of waste should be more fully explored in a preliminary decommissioning assessment (see **Appendix 1C**). Decommissioning of the Proposed Development would not occur until the end of its anticipated 40-year operational lifetime. Consequently, it is difficult at this stage to reliably predict the quantities of waste that may arise, the available recycling technologies, and the methodologies that would exist at the time of decommissioning. Nevertheless, **Chapter 5: Project Description** provides indicative details of the anticipated decommissioning methodologies and the types of waste likely to be generated through the removal of the Proposed Development infrastructure. These details have informed the consideration of decommissioning effects within **Chapters 6 to 11**, where appropriate. In addition, an Outline Decommissioning Plan will be provided as part of the final ES. This will include outline measures for the management of wastes arising from decommissioning, maximising opportunities for the reuse and recycling of materials where practicable and ensuring that any waste requiring disposal is managed in accordance with the relevant legislation, policy requirements and best practice applicable at the time of decommissioning. Material assets and waste have been scoped out of the EIA on the basis that potential impacts would be temporary and effectively managed through standard controls, waste generation would be minimised and appropriately managed through the CEMP and SWMP, no sensitive material assets would be affected, and the Proposed Development is temporary and reversible in nature. This approach was agreed by the Vale of Glamorgan Council through the EIA Scoping Opinion (see **Appendix 1C**).
Socioeconomics	Although the Proposed Development would generate temporary employment, skills development opportunities and expenditure on local goods and services during the construction and decommissioning phases, these benefits would be short term and limited to the duration of these activities. Any increased demand on local services and infrastructure would be minor, while effects on tourism are not anticipated to be significant due to the temporary and localised nature of construction activities and the implementation of mitigation measures through the CEMP, including maintaining safe access to PRoW and minimising disturbance. During operation, the Proposed Development would be largely unmanned and require only limited maintenance, resulting in negligible long-term employment opportunities. Whilst some employment would be created, it is unlikely to be significant given the nature and scale of the Proposed Development. On that basis socio-economic effects are scoped out from the EIA. This approach was agreed by the Vale of Glamorgan Council through the EIA Scoping Opinion (see **Appendix 1C**).

Topic/Element Scoped Out	Justification
Arboriculture	As part of the early design iteration process, Tree Preservation Orders (TPOs) were identified within and adjacent to the Site and considered as part of the site selection and layout. An arboricultural survey was subsequently undertaken to identify individual trees, groups of trees and other arboricultural features of interest, and an Arboricultural Impact Assessment (AIA) was prepared (see **Appendix 7H**). The Proposed Development has been designed to avoid woodland, trees and hedgerows through the application of a 10m buffer to field boundaries, thereby avoiding identified habitats and tree features, where reasonably practicable. There would be some limited vegetation removal related to the widening of site access points; however, these are considered within **Chapter 7: Biodiversity**. Any potential construction effects on trees would be managed through the implementation of a CEMP, including measures to retain vegetation and protect root protection zones, with mitigation informed by the findings of the AIA. Measures are included within the Outline CEMP (**Appendix 5A**). Consequently, no significant effects on arboricultural features are anticipated and arboriculture has been scoped out of the EIA.
Traffic and Transport	The scope of the transport assessment was agreed with the Council's Highway Team through a Transport Scoping meeting on 16 April 2026 and subsequent Transport Scoping Document (this forms an Annex to **Appendix 11F**). While the construction phase would generate additional traffic for a temporary period of approximately 6 to 9 months, traffic flows are not expected to exceed the ISEP (formerly IEMA)[4] thresholds (30% change in baseline flows within the study area) that would trigger significant effects, and no highway links within the study area are considered highly sensitive. An outline CTMP has been prepared as part of this ES (**Appendix 5B**), which includes measures to manage construction vehicle movements and access arrangements. The CTMP would be developed and agreed prior to construction. Once operational, the Proposed Development's effect on the local road network will be minimal. Access will be required from time to time for routine maintenance, and less frequently for major maintenance and upgrades. Therefore, it is not anticipated that the changes in traffic on the existing network will change by more than 30% for all vehicle movements, these being defining thresholds for environmental effects on the local transport network. A Transport Statement (**Appendix 11F**) has been prepared, which assesses site accessibility, highway safety, traffic generation and potential effects on PRoW and the local highway network.

[4] Institute of Environmental Management and Assessment (IEMA) Guidelines: Environmental Assessment of Traffic and Movement, IEMA, 2023.

Topic/Element Scoped Out	Justification
	The Scoping Opinion noted that it would be useful for an Outline Decommissioning Traffic Management Plan (DTMP) to accompany the application. However, an Outline DTMP has not been prepared at this stage given that decommissioning would not occur until the end of the 40-year lifetime. An Outline Decommissioning Plan will be provided as part of the final ES. This will set out the overarching decommissioning principles and include a commitment for a DTMP to be prepared prior to the commencement of decommissioning works. The detailed Decommissioning Plan and associated DTMP will be secured via planning condition and developed in consultation with the LPA and Highways Authority and in line with the latest available guidance, legislation and the latest technologies available at the time of the Proposed Development's decommissioning.

2.3.9. Further detail on the sub-topic issues scoped out of the EIA process for those environmental topics considered in **paragraph 2.3.4** is provided in **Chapters 6** to **10** of this ES.

2.4. Consultation

2.4.1. Consultation is an essential element of the EIA process. The Applicant has undertaken consultation and engaged with a range of statutory and non-statutory consultees, local communities, organisations and individuals to refine the Proposed Development, the EIA and assist in the development of any required mitigation. Specific information on any feedback received is presented in the individual environmental topic chapters (**Chapters 6** to **9**).

2.4.2. A website was set up at the start of the project to provide information about the proposals and feedback mechanisms to enable local communities and stakeholders to provide feedback on the emerging proposals.

2.4.3. Informal community consultation was held from 3 December 2025 to 23 January 2026, which included the sharing of information about early-stage plans and surveys. The consultation also included community drop-in events.

2.4.4. A Pre-Application Consultation Report will form part of the planning application and will summarise how pre-application consultation was undertaken and set out how feedback was considered.

Technical Consultation

2.4.5. As part of the EIA process, technical consultation with a range of statutory and non-statutory consultees has been ongoing. Details of the technical consultation undertaken for each topic area is provided in the respective technical chapters (see **Chapters 6** to **9**).

Statutory Consultation

2.4.6. This ES informs the statutory pre-application consultation (PAC) process. This will provide local communities, statutory consultees and stakeholders the opportunity to review and understand the proposals, likely significant effects, and any proposed mitigation measures. The statutory PAC period will include in-person public consultation events on the 13 and 14 November 2026, enabling stakeholders to provide feedback on the proposals and findings of the EIA.

2.4.7. Following the statutory PAC period, all feedback will be reviewed and considered by the Applicant. Where appropriate, the feedback will be used to inform further design refinement and the preparation of the ES to support the planning application.

2.5. Approach to Mitigation, Enhancement and Monitoring

Defining Mitigation

2.5.1. Schedule 4, Part 1, Paragraph 7 of the EIA Regulations states that an ES should include:

"*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*."

2.5.2. For each environmental topic, the EIA process has systematically identified impacts and effects, taking into consideration environmental measures that the Proposed Development will adopt. These environmental measures include avoidance, best practice and design commitments, which are classified into primary or tertiary measures in accordance with ISEP's *Implementing the Mitigation Hierarchy from Concept to Construction*[5] definitions.

[5] ISEP. (2024). ISEP Guidance: Implementing the Mitigation Hierarchy from Concept to Construction [online]. Available at: https://www.isepglobal.org/resources/blogs/2024/08/iema-guidance-implementing-the-mitigation-hierarchy-from-concept-to-construction?trk=public_post_comment-text (Accessed: September 2026).

2.5.3. A key benefit of the EIA process is the opportunity it gives to integrate environmental considerations into the iterative design of a project. Embedded environmental (mitigation) measures are those measures which are inherent to the Proposed Development and are integral to and should be included in consideration of the application. Embedded measures include those assumed to be in place during construction, operation, and decommissioning. Embedded measures include those considered as industry standard or best practice. The following types of mitigation measures are considered within this EIA:

- Embedded mitigation:
  - Primary: modifications to the location, design or operation of the Proposed Development made during the pre-application phase that are an inherent part of the Proposed Development, and do not require additional action to be taken.
  - Tertiary: Actions that would occur with or without input from the EIA feeding into the development process. These include actions that will be undertaken to meet other existing legislative requirements or actions that are considered standard practice used to manage commonly occurring environmental effects. These are referred to as 'good practice measures' and are also embedded within the design of the Proposed Development. Examples include construction management measures implemented to minimise the risk of nuisance or pollution effects, set out in an outline CEMP and associated plans such as an Outline Drainage Strategy, with the final versions secured via a suitably worded planning condition.
- Further (secondary) mitigation: Measures identified through the EIA process to avoid, reduce or offset likely environmental effects beyond those accounted for through the design of the Proposed Development and other embedded measures. Where such measures are required to achieve the assessed outcome, they will be clearly identified and secured through appropriate mechanisms.

Embedded Mitigation

2.5.4. Embedded measures that form part of the Proposed Development will be described in each of the technical chapters, as well as the project description (**Chapter 5**), and will be considered within the assessment in identifying significant environmental effects. The initial determination of impact magnitude and significance of effects, therefore, assumes implementation of these measures. This ensures that the measures that the Applicant is committed to are taken into account in the assessment of effects.

Further (Secondary) Mitigation

2.5.5. Where significant environmental effects cannot be avoided through embedded mitigation, there is a requirement to consider the implementation of further mitigation measures to avoid or minimise the level of residual effect. Any commitments to further mitigation measures will be reported within the relevant technical chapters. Where required (i.e. if significant effects are identified), the assessment of residual effects, with further mitigation in place, is presented after the initial assessment within each topic chapter within this ES.

Enhancement

2.5.6. Enhancement measures are those measures implemented as part of the Proposed Development that are 'over and above' mitigation and are not considered when determining the significant of environmental effects.

2.5.7. Opportunities for environmental enhancement measures (for creation of a traditional orchard, species-rich wildflower grasslands, etc.) have been considered throughout the design evolution of the Proposed Development and are reported in the individual environmental factor chapters where relevant.

Monitoring

2.5.8. Monitoring may be required, where appropriate, to assess the effectiveness of mitigation measures, validate the conclusions of the EIA, and identify whether any remedial actions are required during the phases of the Proposed Development. Any monitoring requirements identified through the EIA process are described within the relevant technical chapters, where required (see **Chapters 6** to **9**).

2.6. Overview of the Assessment Methodology

Introduction

2.6.1. All the topic assessments presented in this ES have been undertaken based on a common understanding of the nature of the Proposed Development, as described in **Chapter 5: Project Description**.

2.6.2. For each technical chapter (**Chapter 6** to **11**), the assessment of likely significant effects has been undertaken by competent experts with relevant specialist skills (see Table 1.1 of **Chapter 1: Introduction**), drawing on their experience of working on other development projects, good practice in EIA and on relevant published information in line with Regulation 17(4)(a). For some topics, use has been made of modelling or other methodologies, as appropriate.

2.6.3. Each technical chapter includes the following information:

- **Introduction**: Provides a brief introduction, the purpose of the ES chapter, and identifies any supporting documentation (i.e. technical appendices).
- **Legislative Framework, Policy and Guidance**: Provides a summary of the relevant legislative requirements, planning policy, and technical guidance that have informed the assessment.
- **Consultation and Engagement**: Describes the consultation and engagement undertaken and explains how consultation has been considered within the assessment.
- **Study Area**: Defines the study area adopted for the assessment.
- **Scope of the Assessment**: Identifies the matters considered within the assessment, including any sub-topics scoped in or scoped out.
- **Baseline Data Collection**: Provides information on any desk studies, surveys and data sources used to establish the baseline environment.
- **Baseline Conditions**: Provides a description of the existing and future environmental conditions within the study area.
- **Assessment Methodology and Significance Criteria**: Describes the methodology and significance criteria used to undertake the assessment.[6]
- **Embedded Mitigation**: Describes the mitigation measures adopted as part of the Proposed Development.
- **Assessment of Effects**: Provides an assessment of the likely significant effects, considering the embedded mitigation measures.
- **Identification of Additional Mitigation Measures and Residual Effects** (if required): To avoid, reduce and, if possible, remedy adverse effects (in addition to those measures that form part of the Proposed Development).
- **Cumulative Effects**: Provides an assessment of cumulative effects between the Proposed Development and cumulative applications.
- **Summary**: Provides a summary of the environmental effects.
- **Further Work to be Undertaken** (if required): Identifies any additional surveys, investigations, monitoring or assessment work required to inform the final assessment.

[6] If the assessment methodology or criteria deviates from the overarching methodology (as set out within this ES chapter), this is detailed within the respective technical chapter.

General EIA Methodology

2.6.4. Following confirmation of the scope of the EIA, individual environmental topics are subject to survey, investigation and assessment, and individual topic chapters are prepared for the ES. The assessment methodologies are based on recognised good practice and guidelines specific to each topic area, details of which are provided in the appropriate chapter.

2.6.5. In general terms, the technical studies undertaken for each topic area and chapter include:

- Collection and collation of existing baseline information about the receiving environment and original surveys to fill any gaps in knowledge or to update any historic information, together with identification of any relevant trends in, or evolution of, the baseline;
- Consultation with experts and relevant consultees to define the scope of the assessment and Study area and subsequent consultation in response to emerging Study findings;
- Consideration of the potential effects of the Proposed Development on the baseline, followed by identification of design changes to seek to avoid or reduce any predicted adverse effects;
- Engagement with other technical topic specialists and engineers / designers in a design iteration process seeking to optimise the Proposed Development for the differing environmental effects and to identify any appropriate environmental (mitigation) measures;
- Assessment of the final Proposed Development design and evaluation of significant effects, together with an evaluation of any residual significant effects that remain after mitigation measures have been implemented; and
- Compilation of the ES chapters (and supporting figures/technical appendices).

2.6.6. Many of the changes as a result of the Proposed Development are relevant to more than one environmental topic area and the resulting effects in one topic area may affect receptors considered under another topic (for example change to water quality may affect aquatic biodiversity receptors). Careful attention has therefore been paid to interrelationships to avoid overlap or duplication between topic chapters. For example, the assessment of effects on cultural heritage features has been aided by the assessment in the landscape and visual chapter.

Spatial and Temporal Scope

Spatial Scope

2.6.7. The location and geographic extent of the Proposed Development is detailed in **Figure 1.1** of the ES. The study area for each environmental topic has been defined to encompass the geographic extent over which environmental effects may occur (the Zone of Influence). The study area has been established through a combination of desk-based review, consultation with relevant statutory and non-statutory consultees, and field survey work where required.

2.6.8. Details of the relevant Zone of Influences and study areas are detailed in each environmental topic chapter (see **Chapters 6** to **9**).

Temporal Scope

2.6.9. The temporal scope of the assessment relates to the duration and timing of potential impacts and effects on identified receptors. Effects may arise during construction, operation and decommissioning and may be temporary, permanent, short term or long term in nature. The temporal scope considered within the EIA for the Proposed Development is summarised in **Table 2.3.**

Table 2.3: Temporal scope for the EIA

Development Phase	Temporal Scope
Construction	Commencement: 2028 **End**: 2029 **Duration**: 6-9 months for construction, 3 months for commissioning
Operation and Maintenance	Commencement: 2029 **End**: 2069 **Duration**: 40 years
Decommissioning	Commencement: 2069 **End**: 2070 **Duration**: 6-9 months

Limitations and Assumptions

2.6.10. Schedule 4(6) of the EIA Regulations states that an ES should include:

> *"...details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved…"*

2.6.11. Where there are limitations or assumptions used within the EIA, these are clearly identified in this ES. Limitations and assumptions specific to certain topics have been identified, where applicable, in the relevant **Chapters** (**6** to **11**).

2.7. Establishment of Baseline Conditions

Existing Baseline

2.7.1. In order to assess the effects of construction, operation and decommissioning, it is necessary to determine the existing baseline environment. The baseline environment comprises the existing environmental characteristics and conditions based upon desk-top studies and field surveys undertaken and information available at the time of the assessment.

Future Baseline

2.7.2. The 'future baseline' is the description of the likely evolution of the baseline scenario without the implementation of the Proposed Development, as far as natural changes from the baseline scenario can be assessed based on available environmental information and scientific knowledge.

2.7.3. In the absence of the Proposed Development, it is anticipated that the existing agricultural land use at the Site would continue. Accordingly, the future baseline is generally expected to remain comparable to the current baseline. Nevertheless, consideration has been given to foreseeable changes that may influence environmental conditions over the temporal period (as defined in **Table 2.3**), including the likely effects of climate change.

2.7.4. The description of the future baseline conditions will be presented within **Chapters 6** to **9**.

2.8. Overview of the Approach to Significance Evaluation Methodology

Introduction

2.8.1. One of the requirements of an ES is to set out the conclusions that have been reached about the likely significant environmental effects that it is predicted would result from a Proposed Development. Reaching a conclusion about which effects, if any, are likely to be significant is the culmination of an iterative process that involves the following stages:

- Identifying those effects that are potentially likely to be significant (see **Section 2.3** on scoping);
- Assessing the effects of the Proposed Development against the baseline (current or future, as appropriate); and
- Concluding whether these resultant effects are likely to be significant.

2.8.2. **Chapters 6** to **9** describe the approaches that have been used in relation to the stages outlined in the bullet points above for each of the environmental topics that are considered in this ES.

Impacts and Effects

2.8.3. The Proposed Development has the potential to result in a range of impacts and effects on the physical, biological and human environment. For the purposes of this ES, the terms 'impact' and 'effect' are used consistently across all technical assessments, and are defined below:

- An **impact** is the change arising from an action associated with the Proposed Development.
- An **effect** is the consequence of an impact on a receptor. The significance of an effect is determined by considering the magnitude of the impact and the sensitivity or importance of the affected receptor (see below).

Types of Effects

2.8.4. Paragraph 5 of Schedule 4 of the EIA Regulations states that "*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*." Where appropriate, this ES considers all these types of effects where they are relevant to different environmental topic chapters.

- **Direct effects**: Direct effects are those that result directly from a Proposed Development. For example, where a machine disturbs an area of habitat, the associated physical activity would result in a change to that habitat.
- **Indirect and secondary effects**: Indirect and secondary effects are those that result from consequential change caused by the development. As such they would normally occur on a different receptor, later in time or at locations farther away than direct effects. An example would be where an area of habitat disturbed by machinery results in loss of vegetation and soil compaction which increases silted run-off rates into nearby watercourses, smothering gravel beds downstream used by spawning salmon.
- **Transboundary effects**: Transboundary effects are those that would affect the environment in another state within the European Economic Area (EEA). No such effects are anticipated as a result of the Proposed Development.

- **Temporal effects**: typically defined as being permanent or temporary, as follows:
  - Permanent - these are effects that will remain even when the Proposed Development is complete (following the operational lifetime and decommissioning of the Proposed Development), although these effects may be caused by environmental changes that are permanent or temporary. For example, an excavator that is temporarily driven over an area of valuable habitat could cause so much damage that the effect on this vegetation would be permanent; and
  - Temporary – these are effects that are related to environmental changes associated with a particular activity and that will cease when that activity finishes. For example, an increase in noise levels during construction may affect nearby residential receptors, but any effects would cease on completion of this phase of a proposed development. Where effects are temporary, they may be defined as short-, medium- and long-term, the duration of which may depend on the receptor in question and would therefore be defined in technical chapters as appropriate.
- **Positive / negative effects**: Most predicted effects will be obviously positive or negative and will be described as such (or alternatively 'beneficial' or 'adverse').

Significance Evaluation

Sensitivity / Value / Importance of Receptors

2.8.5. The receptors considered within the ES are identified within technical **Chapters 6** to **11**. The sensitivity (or value / importance) of these receptors is also defined within technical chapters and have been determined where available and appropriate by quantifiable data, the consideration of existing designations, and professional judgement. The categories used (high, medium, low, and negligible), unless otherwise stated, are shown in **Table 2.4**.

2.8.6. Where topic specific methodology deviates from this approach, for example because of following topic specific guidance, this is set out in the methodology section of the relevant Chapter.

Magnitude of Change

2.8.7. The magnitude of change for each identified effect is predicted as a deviation from the established baseline conditions, due to the Proposed Development. The magnitude of these impacts is also defined within technical **Chapters 6** to **9** and has been determined where available and appropriate by quantifiable data, topic-specific assessment criteria, relevant legislation, policy and published guidance, together with professional

judgement. The scale used (negligible, small, medium, large), unless otherwise stated, is shown in **Table 2.4**.

2.8.8. The magnitude of impact identified is based on the peak potential magnitude of impact, i.e. the greatest likely magnitude of impact that may be experienced by a receptor (existing or proposed).

Determination of Significance

2.8.9. The method for assessing significance of effect varies between environmental factors but in principle will be based on the environmental sensitivity (or value / importance) of a receptor and the magnitude of change from the baseline conditions (see **Table 2.4** below).

Table 2.4: Matrix for Determining Significance of Effect

		Sensitivity (or Value / Importance)			
		High	Medium	Low	Negligible
Magnitude of Change	Large	Major	Moderate - Major	Minor - Moderate	Negligible
	Medium	Moderate - Major	Moderate	Minor	Negligible
	Small	Minor - Moderate	Minor	Negligible - Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

2.8.10. Effects assessed as **Major** are considered significant for the purposes of the EIA. **Moderate** effects may also be considered significant, depending on the environmental topic and the application of professional judgement. Where a range of effect levels is identified (e.g. Moderate-Major, Minor-Moderate or Negligible-Minor), the final level of effect reported is determined through the application of professional judgement, taking account of the specific characteristics of the receptor, the nature of the impact and the guidance relevant to the environmental topic being assessed.

2.8.11. The terms for significance of effect as identified within **Table 2.4** have been defined below, applying to both beneficial and adverse effects:

- **Major effect**: Only adverse effects are normally assigned this level of effect. They represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites or features of international, national or regional importance that are likely to suffer a most damaging impact and loss of resource integrity. However, a major change in a site or feature of local importance may also enter this category.
- **Moderate effect**: These beneficial or adverse effects may be important but are not likely to be key decision-making factors. The cumulative effects of such factors may

influence decision making if they lead to an increase in the overall adverse effect on a resource or receptor.

- **Minor effect**: These beneficial or adverse effects may be raised as local factors. They are unlikely to be critical in the decision-making process but are important in enhancing the subsequent design of the project.
- **Negligible effect**: No effects of those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

2.8.12. Summary effect tables that summarise the likely significant environmental effects associated with each of the environmental topics are provided at the end of each technical chapter. These tables will outline sensitive receptors, mitigation measures and residual effects. A distinction will be made between direct and indirect; short, medium, and long-term; permanent and temporary; and positive and negative effects.

2.9. Cumulative Assessment

2.9.1. The EIA process includes consideration as to whether any of the individual effects of the Proposed Development would combine to create a cumulative effect greater than the sum of the individual effects. There are two types of cumulative effects to be considered:

- **Inter-project cumulative effects**: The cumulative effects of several development schemes which may, on an individual basis be insignificant but, cumulatively with the Scheme, have a new or different likely significant effect; and
- **Intra-project cumulative effects**: The combined effect of individual impacts from the Scheme, for example noise or pollutants on a single receptor.

Inter-project Cumulative Effects

2.9.2. The approach to the assessment of inter-project cumulative effects considers the deviation from the baseline conditions at common sensitive receptors because of changes brought about by the Proposed Development in combination with one or more other committed developments. The assessment of the inter-project cumulative effects has been based upon the residual effects that have been identified in technical **Chapters 6** to **9** (and **Chapter 11**) as well as available environmental information for the list of 'other existing development and /or approved developments'.

2.9.3. The approach to the assessment of inter-project cumulative effects has broadly followed the four-stage criteria as set out within Planning Inspectorate CEA Guidance Note[7], which is set out in **Table 2.5**.

[7] Planning Inspectorate (2026), NSIPs: Advice on Cumulative Effects Assessment. Available at: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-cumulative-effects-assessment (Accessed: October 2026).

Table 2.5: Summary of Planning Inspectorate CEA Guidance Note process

Stage	Title	Description
1	Establish the ZoI and identify the long list of 'other development'	Each environmental topic assessment included in the ES will have a ZoI within which the potential for cumulative effects will be considered. These are established through desk studies and modelling. A desk Study of local planning applications, DNS/SIP applications, development plans and frameworks and other available sources are completed within this ZoI to form a long list of 'other developments'. The ZoI is measured from the Site Boundary for the Proposed Development.
2	Identify a short list of 'other development' for CEA	Professional judgement from technical specialists will refine the long list of 'other developments' to identify those that could give rise to a significant effect cumulatively with the Proposed Development.
3	Information gathering	Information will be gathered on the 'other developments' in the shortlist to inform the assessment.
4	Assessment	Each of the environmental aspects will complete an assessment of the relevant 'other developments' in the shortlist within their ZoI.

Stage 1 – Establish the Zone of Influence (ZOI) and Long List of 'Other Developments'

2.9.4. Given the scope and scale of the Proposed Development and associated works, this stage activities focus on establishing the likely ZOI associated with each of the environmental topics being assessed with the EIA.

2.9.5. Identifying other developments that should be considered in the CEA involves first acknowledging that the availability of information necessary to conduct this will partly depend on the prevailing status of the relevant other developments. Developing this concept further, other developments can be grouped into tiers, which reflect the likely degree of certainty attached to each development, with Tier 1 being the most certain and Tier 3 the least certain, as illustrated in **Table 2.6**.

Table 2.6: Scoping of other developments to be considered in the CEA

Hierarchy of Cumulative Developments	Certainty of Other Developments	
Tier 1	Under construction*.	Decreasing level of detail likely to be available
	Permitted application(s), whether under the Town and Country Planning Act 1990, DNS/SIP or other regimes, but not yet implemented.	
	Submitted application(s), whether under the Town and Country Planning Act 1990, DNS/SIP or other regimes, but not yet determined (including refused applications subject to appeal procedures which aren't yet determined).	
Tier 2	Projects on the Welsh Government's register of DNS/SIP, and/or received by a relevant local planning authority, and where a scoping report has been submitted	
Tier 3	Identified in the relevant Development Plan (and emerging Development Plans - with appropriate weight being given as they move closer to adoption) recognising that much information on any relevant proposals will be limited.	
	Identified in other plans and programmes (as appropriate) which set the framework for future development consents/approvals, where such development is reasonably likely to come forward.	

* Where other projects (i.e., new permanent development such as new housing estates etc) are expected to be completed before construction of the Proposed Development, and the effects of those projects are fully determined, effects arising from these are considered as part of the baseline and therefore as part of the assessment of both the construction and operational phases.

2.9.6. In the context of the Proposed Development, and in accordance with the EIA Regulations, sufficiently detailed information required to undertake a CEA is available only for Tier 1 and Tier 2 developments as described in **Table 2.6**.

2.9.7. To inform the inter-project cumulative assessment, 'other developments' have been identified for consideration by utilising the search criteria presented in **Table 2.7**.

Table 2.7: CEA Search Criteria

Development / Plan		Search Criteria		
		Residential Housing Unit (no.)	Residential Housing Area (hectare)	Non-Residential (hectare)
Nationally Significant Projects		All Scoped In		
'Major Applications' to the local planning authority[8]	Large Scale	200+	4+	2+
	Small Scale	10-199	0.5-4	1-2
Other Applications to LPA		Professional Judgement		

2.9.8. Corresponding to Stage 1 in **Table 2.5**, the following sources have been interrogated to identify 'other developments' within the ZoI identified by the technical topics (up to a maximum of 10km from the Site red line boundary for biodiversity):

- Register of applications for DNS / SIP[9];
- Vale of Glamorgan Council Planning Portal; and
- Cardiff Council Planning Portal.

Stage 2 – Establishing a Short List of 'Other Developments'

2.9.9. The 'long list' of other developments was reduced to a 'short list' by considering those with the potential to give rise to significant cumulative effects with the Proposed Development. This was on the basis that the developments omitted from the short list:

- Do not constitute 'major' development as defined in the Town and Country Planning (Development Management Procedure) (Wales) Order 2012 (as amended) (see **Table 2.7**);
- Are understood to have already undergone construction or will be complete and operational before construction of the Proposed Development and therefore form part of the current baseline or will form part of the future baseline conditions and have been considered on that basis;
- Are unlikely to have commenced prior to the completion of the Proposed Development and/or insufficient information is available to complete an assessment at this time. Therefore, any cumulative effects assessment would need to be completed by the developer/applicant for that particular proposal; or

[8] Town and Country Planning (Development Management Procedure) (Wales) Order 2012 (as amended). Available at: https://www.legislation.gov.uk/wsi/2012/801 (Accessed: September 2026).
[9] Developments of National Significance (DNS) Applications. Available online at: https://planningcasework.service.gov.wales/ (Accessed: September 2026).

- Are of sufficient distance from the Proposed Development, or of a size and nature that significant cumulative effects are considered unlikely to occur.

2.9.10. Major developments which have been taken forward in relation to inter-project cumulative effects that have been assessed in the ES are summarised in **Table 2.8** and shown on **Figure 2.1**. These are considered within the individual technical chapters, as appropriate.

Stage 3 – Information Gathering

2.9.11. This stage involves collating and reviewing the available information relating to the 'other developments' on the short list in order to inform the Stage 4 assessment. This includes location, design information, programme for construction, operation and decommissioning (if relevant) and likely potential environmental effects.

Stage 4 – Assessment of Inter-project Cumulative Effects

2.9.12. The inter-project cumulative effects are assessed within each technical chapter (see **Chapters 6** to **9**). Where practicable, the methodology used to assess inter-project cumulative effects follows that used to assess the effects of the Proposed Development alone.

Table 2.8: Short list of cumulative applications scoped into the CEA

Development Name / Reference	Brief Description	Planning Status	Distance from the Site (km)
Parc Dyffryn Solar Park DNS/3267575	The construction of a solar photovoltaic electricity generating station, battery storage facility and associated ancillary development, with an installed capacity of approximately 65 MW.	Consented	8.2
LDES - Barry Power Station 2025/00807/FUL	Construction and operation of a 50MW long duration energy storage facility with associated equipment, access, drainage, infrastructure and engineering works.	Consented	2.3
Sully to Cosmeston Active Travel Route 2025/00493/RG3	Works for a shared pedestrian and cycle route (Active Travel Route), earthworks, landscaping and associated works from Sully to Cosmeston.	Consented	Adjacent to the Site.
Land at Upper Cosmeston Farm, Lavernock Road, Penarth 2020/01170/OUT	Outline application for residential development, a primary school, community space and public open space with all matters reserved other than access.	Consented	0.28

Development Name / Reference	Brief Description	Planning Status	Distance from the Site (km)
Leckwith Quay 2020/01218/HYB	Hybrid planning application for residential development for up to 228 dwellings, associated highway and bridge improvement / realignment works.	Consented	6.4
Land at Swanbridge Road, Sully - Phase 2 2025/00509/RES	Residential development of up to 190 units with associated access and associated works	Consented	0.62
Parc Worlton Solar Farm DNS CAS-02112-T2N0G8	Proposed Solar Farm with an installed generation capacity of 42MW and associated ancillary infrastructure, including a 132 kV substation	Consented	6.6
Larnog Solar Farm – Grid Connection	The Project Substation would be connected to the selected NGED substation via underground electrical cabling. The grid connection cable route is anticipated to be predominantly located within the public highway corridor. Indicative grid connection and routing options for each option are shown on **Figure 5.6: Indicative Grid Connection**.	Unknown	Adjacent to the Site.

Inter-related Cumulative Effects

2.9.13. Inter-relationships between topics may lead to a greater environmental effect in combination with each other than they otherwise would when considered in isolation. For example, several effects on one receptor or receptor group could theoretically interact or combine to produce a combined significant overall effect.

2.9.14. There is no established EIA methodology for assessing and quantifying effect interactions that lead to combined effects on sensitive receptors, however the European Commission (EC) has produced guidelines for assessing effect interactions "*which are not intended to be formal or prescriptive but are designed to assist EIA practitioners in developing an approach which is appropriate to a project…*"[10].

2.9.15. The approach to the assessment of effect interactions has been developed based on these guidelines will use the defined residual effects of the Proposed Development to

[10] European Commission (EC) (1999) Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions [Online] Available at: http://ec.europa.eu/environment/archives/eia/eia-studies-and-reports/pdf/guidel.pdf [Accessed August 2026].

determine the potential for effect interactions that lead to combined effects. The approach is described in **Chapter 10: Intra-project cumulative effects**.

2.9.16. **Chapter 10: Intra-project Cumulative Effects** considers these interactions and is based upon the residual effects that have been identified in **Chapters 6** to **11**. Only adverse or beneficial residual effects classified as minor, moderate, or major will be considered in relation to potential effect interactions. Residual effects, which are classified as negligible will be excluded from the assessment of the effect interactions as, by virtue of their definition, they are considered to be imperceptible effects to an environmental / socio-economic resource or receptor.