Glöyn Byw | Butterfly Solar Farm

Land to the North of the B5426, Wrexham

ES Chapter 2.0 – EIA Methodology

Prepared for

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2.0 ENVIRONMENTAL IMPACT ASSESSMENT METHODOLOGY

2.1 Introduction

2.1.1 This Chapter sets out the legislative requirement for the application to be supported by an ES; the scoping process undertaken; the broad approach to the assessment that has been undertaken in relation to the topics that have been identified as having the potential to result in significant environmental effects; and finally, how the ES complies with the requirements of the EIA Regulations.

2.2 Need for Environmental Impact Assessment

2.2.1 The requirement for EIA was prescribed by European law under Council Directive 85/337/EEC ('the EIA Directive'). This Directive has been amended four times, with the latest amendment, the Environmental Impact Assessment (EIA) Directive (2014/52/EU) entering into force on 15 May 2014.

2.2.2 Planning is a devolved matter, therefore each country of the United Kingdom is required to implement any updates to the EIA Directive into domestic legislation. In Wales, the Directive has been enacted most recently into law by the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 [SI 2017 No. 571] – referred to hereafter as 'the EIA Regulations 2017'. These regulations came into force on the 16 May 2017.

2.2.3 The EIA Regulations prescribe the types of development for which EIA is mandatory (Schedule 1 development) and others that may require an assessment if they have the potential to give rise to significant environmental impacts (Schedule 2 development). The Proposed Development is for the construction and operation of an approximate 146 ha solar farm, which is covered by Schedule 2, Part 3(a) of the EIA Regulations:

a) "3 Energy Industry

b) Industrial installations for the production of electricity, steam and hot water (unless included in Schedule 1).

c) The area of the development exceeds 0.5 hectare."

2.2.4 Whilst the Proposed Development qualified as a Schedule 2 development in respect of the EIA Directive, no formal screening was undertaken as it was assumed, given the location and scale of the Proposed Development, potential significant effects were likely. This was confirmed through an initial pre-application consultation with Wrexham County Borough Council, the advice from which directed the developer towards a formal EIA process.

2.3 Overview of EIA Scoping Process

EIA Scoping Direction

2.3.1 Regulation 15 of the EIA Regulations stipulates that (in the context of DNS applications) prospective applicants may request a Scoping Direction from the Welsh Ministers. This is a written confirmation as to the information that, in the opinion of the Welsh Ministers, ought to be provided within the ES. However, requesting such n Direction is not a mandatory requirement.

2.3.2 A Scoping Report was submitted to PDEW on 3 February 2025 under Regulation 15 of the EIA Regulations. A copy of the Scoping Report is included in **Appendix 2.1.**

2.3.3 In response to the Scoping Report, PEDW issued a Scoping Direction on 3 April 2025, which outlined where there was agreement with the applicant's Scoping Report and where certain other aspects were required to be included within the EIA process. The Scoping Direction also included the comments of statutory consultation bodies as defined by Regulation 2(1) of the EIA Regulations. The Scoping Direction is included in **Appendix 2.2**.

2.3.4 With respect to the views of statutory consultation bodies, Regulation 17(4)(c) of the EIA Regulations states that:

"(c) where a scoping opinion or direction has been issued in accordance with regulation 14 or 15, 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);"

2.3.5 **Appendix 2.3** includes a schedule of all the comments made by PEDW, with details of how these comments have been addressed within the EIA or reported in the ES.

With respect to ID2 of **Appendix 2.3**, the PEDW Scoping Direction had highlighted NRW's concerns regarding the potential air quality impacts from the Proposed Development affecting sites designated for nature conservation purposes, and advises the Applicant to liaise with directly with NRW to agree if air quality can be scoped out of the EIA. An Air Quality Technical Note was subsequently produced (**Appendix 2.4**), which has led to NRW confirming in writing that it is happy for air quality to be scoped out of the ES (**Appendix 2.5**).

2.4 Contents of the Environmental Statement

2.4.1 The information required to be included within an ES is set out in Schedule 4 of the EIA Regulations**.** **Table 2.1** below indicates where information relevant to the requirements of Schedule 4 can be found in the ES.

Table 2.1 – Review of Schedule 4 Requirements

Sch 4. Para.	Requirement	Where Addressed in ES
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.	(a) Chapter 1.0 (b) Chapter 4.0 (c) Chapter 4.0 (d) Chapter 4.0 in relation to the description of the Proposed Development, and Chapters 5.0 - 8.0 in relation to individual topic areas
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.	Chapter 4.0
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	Chapters 5.0 - 8.0 as this relates to individual topic areas

Sch 4. Para.	Requirement	Where Addressed in ES
	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.	Chapters 5.0 - 8.0 as this relates to individual topic areas
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 or Member State level which are relevant to the project, including in particular those established under Council Directive 92/43/EEC(1) and Directive 2009/147/EC(2).	Chapter 4.0 in relation to the description of the Proposed Development, and Chapters 5.0 - 8.0 in relation to individual topic areas
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.	The overall EIA methodology and approach to assessment is described in Chapter 2.0. The specific technical methodologies used to identify and assess effects are fully described (or

Sch 4. Para.	Requirement	Where Addressed in ES
		referenced) within Chapters 5.0 - 8.0 as they relate to individual topic areas.
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.	The approach to mitigation (including implementation of the mitigation hierarchy) is provided at Section 2.5 of this ES chapter. Mitigation measures, as they apply to individual environmental topic areas, are described in Chapters 5.0 - 8.0 as they relate to each topic.
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 European Union legislation such as 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 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.	Chapter 4.0, section 4.2
9	A non-technical summary of the information provided under paragraphs 1 to 8.	A separate Non-Technical Summary is provided as Volume 1 of the ES
10	A reference list detailing the sources used for the descriptions and assessments included in the environmental statement.	References are provided as footnotes and/or reference document lists within, or at the end of each ES chapter, as appropriate

2.5 EIA Methodology

2.5.1 The approach to EIA is not standardised, but there are established and recognised approaches set out by professional institutions about methods to be used for the assessment of environmental effects. Where appropriate, the environmental effects of the Proposed Development have been assessed using definitive standards, relevant legislation, and guidance applicable to each of the technical areas covered within this ES.

2.5.2 In order to provide a clear and robust assessment each of the technical chapters presented within the ES follows the structure set out in the subsequent paragraphs.

Introduction

2.5.3 A brief summary of the approach to the topic is provided outlining any key issues relevant to the subject area being assessed.

Methodology

2.5.4 This section provides details of the assessment method followed, and provides the following information:

- A description of any relevant legislation, policy or guidance that has been considered in the assessment.
- The findings from any consultations undertaken to date.
- the approach taken to gathering of any desk-based or field data. Where specific surveys have been undertaken an outline of the survey methodology is provided.
- The approach to the impact assessment is defined. This includes how the particular topic has defined impact magnitude, receptor sensitivity and how these relate to the overall level effect / significance.
- Any limitations or assumptions made in the assessment.

Baseline

2.5.5 This section of the chapter provides a description of the baseline conditions at the Site and its environs, relevant to the topic being assessed. The baseline conditions have been established through consultation, collation and analysis of existing data sets and reports, and in some cases site specific field data. The baseline identifies any sensitive receptors that will need to be evaluated in the assessment.

2.5.6 Where relevant and appropriate the likely future state of the environment is set out by predicting future change in the baseline conditions in the absence of the Proposed Development, in line with current guidance. The future baseline is then taken into account when assessing the likely effects of the project over its operational lifetime.

Assessment of Effects

2.5.7 This section of the chapter describes the likely significant environmental effects of the Proposed Development on the baseline condition at the Site and its environs, relevant to the assessment topic. As indicated above, the assessment considers potential future changes in the baseline environment where relevant. The assessment includes a description of the nature, extent and significance of these effects. The assessment considers the embedded mitigation measures that have been specifically incorporated into the Proposed Development to reduce environmental effects of the project.

2.5.8 The Applicant is applying for a temporary, yet generational development, for 40 years, therefore the assessment of effects will consider the construction, operational and decommissioning phases of the Proposed Development.

2.5.9 The EIA Regulations do not provide definitive methods for the assessment of significance and a variety of methods are employed within EIA methodologies. The method used to assess the effects is specific to each discipline. Where available and appropriate, the assessments follow impact assessment criteria and methodology set out by relevant professional institutions. Where such guidance is not available, or prescriptive methods are not set out by the relevant professional body, then assessment criteria have been developed by the technical specialists to enable a clear and structured assessment to be undertaken.

2.5.10 The level of the effect is, in general, derived by considering the magnitude of the impact and the sensitivity of the receptor to a change resulting from the Proposed Development.

2.5.11 Depending on the discipline there are several factors that need to be considered when establishing the type and magnitude of an effect, including:

- Whether the effect is adverse or beneficial.
- Whether it is temporary or permanent.
- Extent or spatial scale of the effect.
- Duration of the effect.
- Whether the effect is reversible.

- Probability / likelihood of the effect.

2.5.12 Similarly, the sensitivity of a receptor is the function of several elements dependent on the discipline and effect being assessed, these could include:

- Designation and legal status.
- Quality.
- Rarity.
- Importance.
- Ability to adapt to change.

2.5.13 Having established the magnitude of the effect and the sensitivity of the receptor, the significance of the effect is then defined. For some disciplines, a matrix is used to classify the level of effect by correlating magnitude and sensitivity, as shown in Table 2.2.

Table 2.2 Example Significance of Effect Matrix

		Magnitude of Impact Severity			
		High	Medium	Low	Negligible
Receptor Sensitivity	High	Major	Moderate	Minor to Moderate	Negligible or Minor
	Medium	Moderate	Minor to Moderate	Minor	Negligible
	Low	Minor to Moderate	Minor	Negligible or Minor	Negligible
	2013	Negligible or Minor	Negligible	Negligible	Negligible
	Negligible	Major	Moderate	Minor to Moderate	Negligible or Minor

2.5.14 Where a matrix is not used, the magnitude of change and the sensitivity of the receptor is used to make a reasoned professional judgement to establish the level of the effect and whether it is significant or not.

2.5.15 Where the findings of an assessment are set out as different levels of effect (e.g., major, moderate, minor, etc.) the assessment clearly sets out where an effect is significant. This may vary between disciplines and the threshold is defined within each chapter. This approach is used to assist the decision maker, consultees and other interested parties in establishing the most important environmental effects of the Proposed Development.

2.5.16 There is no statutory definition of what level of effect is to be regarded as significant and there is often not a single, definitive, correct answer as to whether an effect is significant or not. Generally, in EIA terms, a significance of effect of 'Moderate' or above would be deemed significant.

2.5.17 A significant effect does not necessarily mean that such an effect is unacceptable to decision-makers nor necessarily results in a breach of planning policy. This is a matter to be weighed in the planning balance alongside other material considerations[1] . What is important is that the likely significant environmental effects of any proposal are transparently assessed and described in sufficient detail to enable the determining authority to make a balanced and well-informed judgement as part of the decision-making process.

2.5.18 In all instances, the assessments contained within this ES set out the basis of the judgements made so that the readers of the ES can see the weight attached to the different factors and can understand the rationale of the assessment. In this sense the ES clearly explains how the significance of effects has been derived.

Mitigation

2.5.19 It is a requirement of the EIA Regulations to describe the measures envisaged to avoid, prevent, reduce and where possible offset any significant effects on the environment. Mitigation measures can be used to reduce or avoid any adverse effect, whether that effect is deemed to be 'significant' or not.

Mitigation Hierarchy

2.5.20 Mitigation can be achieved in several ways. The Institute of Environmental Management (IEMA) Impact Assessment Guidelines document 'Implementing the Mitigation Hierarchy from Concept to Construction (2024)' describes the concept and implementation of the 'mitigation hierarchy' as follows (illustrated at **Image 2.1**):

[1] *A material consideration is a matter that should be taken into account in deciding a planning application or on an appeal against a planning decision https://www.planningportal.co.uk/services/help/faq/planning/about-the-planning-system/what-are-material-considerations Accessed 7 October 2022.*

"A systematic approach used to minimise adverse effects of a project or scheme on the environment and people. It is a series of steps or principles to guide decision-making and prioritise activity. The hierarchy comprises four stages, with the most desirable first: avoid, prevent, reduce and, finally, offset. The hierarchy indicates that avoidance is the priority and offsetting should only be relied on as a last resort. For definitions of these terms within the hierarchy."

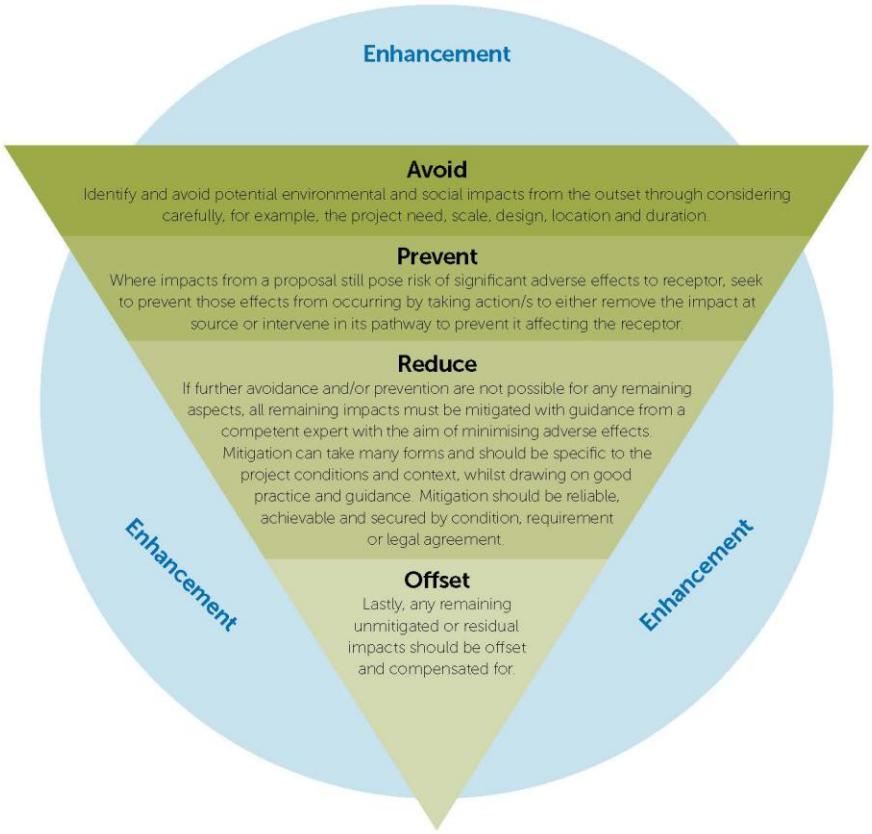

Image 2.1 – The Mitigation Hierarchy

Classified Mitigation

2.5.21 The IEMA Impact Assessment Guidelines document 'Implementing the Mitigation Hierarchy from Concept to Construction (2024)' states that: *"classifying mitigation measures into one of three key types helps to achieve a more proportionate ES, as it allows for some mitigation measures to be taken-as-read in assessing effects (i.e. these mitigations are embedded intrinsically into the project design as set out in the*

project description." Within the Guidance, there are three distinct forms of mitigation as follows:

- Primary (inherent)
  - An inherent part of the project design and should be described in the design evolution narrative and included in the project description.
- Secondary (foreseeable)
  - Requires further activity to achieve the anticipated outcome – typically, these will be described in the ES chapters but often secured through planning conditions, requirements, and/or management plans.
- Tertiary (inexorable)
  - Required regardless of any EIA assessment as it is imposed, for example, because of legislative requirements and/or standard sectoral practices.

Enhancement

2.5.22 Enhancement can be considered as environmental gains that are not required as a form of mitigation. The IEMA Impact Assessment Guidelines document states with respect to enhancement that: *"outside of specific requirements for biodiversity net gain……there is no regulatory driver for securing overall environmental gain through development. However, the EIA process is likely to gather information that could allow a developer to build effective and valuable environmental benefits into the design of their project. Such benefits can help enable development and provide reasons for communities and wider stakeholders to support the developer's aspirations for the site."*

Initial Development Design and Impact Avoidance/Reduction Measures

2.5.23 Each ES topic chapter contains a section entitled 'Initial Development Design and Impact Avoidance/Reduction Measures' which describes mitigation measures identified at the commencement of the EIA assessment process to avoid, prevent, reduce, or offset likely adverse effects from the Proposed Development.

2.5.24 Mitigation from all three mitigation classifications is identified as 'Initial Development Design and Impact Avoidance/Reduction Measures'; an example of each (specific to the Proposed Development) is provided below:

- **Primary** – careful siting of the proposed structures as far as reasonably practicable from the nearest residential receptors to minimise amenity effects.
- **Secondary** – provision of a Construction Environmental Management Plan (CEMP) with detailed management plans for task and/or environmental receiver specific to be produced by the Principal Contractor (PC) post-consent. It should be noted that the requirement for a CEMP was identified at the EIA scoping stage (prior to the commencement of the EIA assessment process). As such, an Outline CEMP document has been produced for this DNS application, which will be subject to planning condition, adopted by the PC and expanded to include a series of detailed management plans. The Outline CEMP is therefore classified as primary mitigation, with the detailed CEMP (which will be a 'live' document) also classified as secondary mitigation.
- **Tertiary** – compliance with the relevant aspects of Guidance for Pollution Prevention documents, and BS5228: 2009+A1 'Code of Practice for Noise and Vibration Control on Construction and Open Sites. It should be noted that tertiary mitigation typically (but not exclusively) apply to the construction phase; as such tertiary mitigation for this project is also detailed in the Outline CEMP, which means that such tertiary mitigation is also secondary mitigation.

2.5.25 Where relevant, primary mitigation is described in **ES Chapter 4.0 (The Proposed Development)** where it is an inherent part of the Proposed Development design. Mitigation measures identified as 'Initial Development Design and Impact Avoidance/Reduction Measures' have been considered when coming to a judgement of the likely significance of the effects of the Proposed Development.

Further Mitigation and Monitoring

2.5.26 Each ES topic chapter contains a section entitled 'Further Mitigation and Monitoring' which describes further mitigation measures identified after the completion of the initial EIA assessment process to avoid, prevent, reduce, or offset likely adverse effects from the Proposed Development. Such mitigation measures can be classified as primary or secondary (they are not tertiary as such measures will be implemented regardless of the outcome of the EIA assessment process).

2.5.27 Mitigation measures identified as 'Further Mitigation and Monitoring' include an explanation as to how their implementation would mitigate/reduce the identified effects of the Proposed Development.

2.5.28 The residual effects (after the implementation of 'Further Mitigation and Monitoring') are described in in each topic chapter. The likely significant residual effects are also summarised in **ES Chapter 9.0 (Summary of Environmental Effects).**

Enhancement

2.5.29 Each ES topic chapter contains a section entitled 'Enhancement Measures' which, where relevant, describes enhancement measures deemed to be proportionate and relevant to the Proposed Development which would provide notable benefits.

2.6 Cumulative Effects

2.6.1 Schedule 4, Paragraph 5(e) of the EIA Regulations requires that the ES include:

'A description of the likely significant effects of the development on the environment resulting from…

… (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'.

2.6.2 The EIA Regulations do not define cumulative effects. However, a commonly accepted description is:

'Impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project' (European Commission, 1999).

Types of Cumulative Effect

2.6.3 Two major types of cumulative effect are generally recognised, '*Intra-project' and* '*Inter-project'* effects.

Intra-project Effects

2.6.4 Intra-Project cumulative effects (or the in-combination effects) between environmental disciplines are inherently considered in each environmental topic ES chapter. For example, topic areas such as biodiversity and noise and vibration cannot be considered in isolation since changes affecting one topic area also have the potential for implications for other topic areas. Additionally, effects upon the setting of heritage assets may derive from change in view (i.e. a visual effect) or change in noise levels (i.e. a noise effect). The ES identifies potential interactions between environmental topic areas where relevant (under the sub-heading 'Inter-Relationship of Potential Effects').

Inter-project Effects

2.6.5 Inter-project effects are those that occur because of the likely effects of the Proposed Development interacting with the likely effects of other development in the vicinity. For example, construction and/or operation traffic effects of the Proposed Development combined with the construction and/or operation traffic effects of another major development using the same access routes may result in cumulative effects on the surrounding highway network.

2.6.6 For the purpose of this ES, inter-project effects are hereafter referred to as 'cumulative effects' and are considered in each of the environmental topic ES chapters (under the heading 'Cumulative Effects'). The method provided below describes how other projects have been identified for the consideration of cumulative effects.

Methodology for cumulative assessments

2.6.7 There is no defined methodology in the UK as to how cumulative effects should be assessed. In determining the approach to be adopted to this element of the assessment, reference is made to the following guidance:

- Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions (European Commission 1999).
- Cumulative Effects Assessment Practitioners Guide (Canadian Environmental Assessment Agency 1999).

- Guidelines for Environmental Impact Assessment (Institute of Environmental Management and Assessment 2006).
- The State of Environmental Impact Assessment Practice in the UK (Institute of Environmental Management and Assessment 2011).
- DNS Guidance Appendix 3 (Environmental Impact Assessment).

Identification of Cumulative Developments

2.6.8 Paragraph 5(e) of Schedule 4 of the EIA Regulations requires a:

"description of the likely significant effects of the development on the environment resulting from …. the culmination of effects with other existing and/or approved projects."

2.6.9 In this regard the regulations are specific about the projects that should be considered to result in cumulative effects i.e., existing and/or approved projects. However, it is proposed to also include projects that are currently awaiting determination within the cumulative assessment as there is a possibility that these projects could be approved whilst the application for the Proposed Development is being determined. Accordingly, the assessment of cumulative impacts will encompass the effects of the Proposed Development in combination with relevant:

- existing development, under construction.
- approved development, awaiting implementation.
- schemes awaiting determination within the planning process.

2.6.10 The presence of operational schemes (and for some disciplines, schemes that are under construction, but not yet operational) is an established influence upon the environment, that will be considered when determining the baseline for the non-cumulative 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.

2.6.11 As such, the additional schemes that would form part of the assessment of cumulative effects will be major projects that have either been granted planning

consent but have not yet been constructed and major projects for which a planning application is awaiting determination. Major projects are developments that are one or more of the following[2]:

"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."

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

2.6.13 Each topic will have a different spatial zone where potential cumulative significant effects could occur. A preliminary search area of 2.5 km from the Site has been used to identify schemes that have the potential to result in cumulative effects.

2.6.14 As the WCBC planning website does not contain a 'map search' function to identify planning applications, engagement with the WCBC Planning Department during the pre-application process, and the use of third-party planning resources, helped identify and agree a list of other projects within the WCBC administrative area that qualified as cumulative developments. Additionally, a search was undertaken on the PEDW casework website to identify any other Developments of National Significance that may interact with the Proposed development either during construction or

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

operation. Finally, Local Development Plan Allocations were reviewed to identify the scale and delivery timeframes of any plan-led development to identify where these could coincide with the delivery of the proposed development.

2.6.15 The list of identified cumulative development is set out in **Table 2.3** below and presented on **Figure 2.1**. The consideration of the potential for cumulative effects is considered in each of the environmental topic ES chapters (under the heading 'Cumulative Effects').

Table 2.3 – Cumulative Developments

Name of Development	Description of Development
Plas Power Estate Solar Farm – Plas Power Estate, Ruthin Road, Wrexham LL11 3BS. Planning ref: DNS/3253253 (PEDW)	Proposed ground mounted photo voltaic solar farm, including battery energy storage system, together with associated equipment, infrastructure and ancillary works.
Glasshouse Development – Land at Sesswick Way Planning ref: P/2020/0363 (Wrexham Borough Council)	Proposed glasshouse with packing facility and offices, energy centre, recovery plant and reservoirs.
Little Llwyn Onn Soar Farm - Land Adjacent to Little Llwyn Onn Cefn Road Abenbury Wrexham LL13 0NY Planning ref: P/2022/0541 (Wrexham Borough Council)	Erection of solar farm and battery storage facility.

2.7 Potential Indirect Upstream / Downstream Effects (Finch Judgment)

2.7.1 On 20 June 2024, the Supreme Court handed down a majority judgement on R v Surrey County Council and others (on the application of Finch on behalf of the Weald Action Group), hereafter referred to as the Finch judgment. As described below, this has material implications for EIA and, specifically, the need to clearly consider likely significant environmental impacts of a development arising from potential indirect upstream and / or downstream effects.

2.7.2 In order to evaluate whether the Proposed Development could give rise to indirect upstream / downstream effects, it is considered important to understand the main findings of the Finch judgment.

2.7.3 The case related, specifically, to an application to Surrey County Council for planning permission to expand existing oil production from a well site at Horse Hill near Horley in Surrey. The proposed project relates to the extraction of oil from six wells over a period of 20 years. The application was mandatorily supported by an Environmental Impact Assessment (EIA).

2.7.4 The developer argued that, as regards the impact of the project on climate, the scope of the EIA should be confined to the direct releases of greenhouse gases from within the well site boundary, during the lifetime of the project; and that the EIA need not include an assessment of the greenhouse gas emissions that would occur when the

oil extracted from the wells was, ultimately, burnt elsewhere as fuel. The Council accepted this position and granted planning permission.

2.7.5 The claimant (Ms Finch) applied for judicial review of the Council's decision. She argued that the decision was unlawful because the EIA was required to, but did not, include an assessment of the combustion emissions. The claim was rejected by the High Court and, subsequently, the Court of Appeal upheld the judge's decision.

2.7.6 The claimant then appealed to the Supreme Court, who allowed the appeal by a three-to-two majority and held that the Council's decision was unlawful because the emissions that would occur when the oil produced is burnt as fuel are within the scope of the EIA required by law.

2.7.7 In short, in order to comply with Regulation 4(2) and Schedule 4 of the EIA Regulations, specifically, in relation to the provision of a description of the likely significant direct and 'indirect' effects, the EIA process should have considered the 'downstream' effects of the oil extraction. Specific to such assessment in this case was that, if the project goes ahead, it is not merely likely but inevitable that the oil produced from the well site will be refined and, as an end product, eventually undergo combustion, and that that combustion will produce greenhouse gas emissions. There was consensus that those emissions would have a significant impact upon climate and that the amount of these emissions could be estimated using an established methodology.

2.7.8 It is acknowledged that the judgment is applicable outside of the sphere of fossil fuel extraction development. However, there are in essence three questions to determine whether an EIA is required to assess indirect upstream and / or downstream effects. If all of the questions give rise to a positive response (i.e. yes) then the EIA for the project must assess the upstream and / or downstream effects. If the answer to any of the questions is negative (i.e. no), then no such assessment is required.

The questions are:

i) Would the development give rise to inevitable indirect upstream or downstream effects i.e. would there be inevitable causation?
ii) Is it possible to undertake evidence-based meaningful assessment of the effects?

iii) Will an assessment reasonably conclude likely significant effect(s)?

2.7.9 With regard to the Proposed Development, and the first question, Welcome Break's position is as follows:

- There is a recognised need for renewable energy to facilitate the pathways to meet predicted future energy demand, as described in the **Planning Statement**.
- The Proposed Development would be a contributing factor to these pathways, therefore it is considered a required component of future UK electricity demand, which would otherwise be provided by other renewable energy developments.
- The Proposed Development would utilise products and services already available within the market sector, meaning there would be no tangible impact on International manufacturing processes.
- There are no end-user emissions resulting from the use of electricity produced by the Proposed Development.

2.7.10 Given the above points, it has been concluded that no further consideration needs to be given to upstream / downstream effects, as part of the EIA process.

2.8 Transboundary Effects

2.8.1 An initial transboundary screening exercise for the Proposed Development under Regulation 56 of the EIA Regulations has been undertaken. The Proposed Development is not likely to have a significant effect either alone or cumulatively on the environment in any European Economic Area (EEA) state.

2.8.2 The nearest EEA states are the Republic of Ireland at over 200km west and France at over 400km south-east of the Proposed Development Site. Taking into account the potential pollution impact pathways through air, land and water, and the effects predicted to arise from the Proposed Development, the likelihood of significant effects on the environment of another EEA state is considered negligible. Therefore, significant transboundary effects associated with the Proposed Development are not anticipated.

Appendix 2.1 – Glöyn Byw / Butterfly Solar Farm Scoping Report

Appendix 2.2 – PEDW Scoping Direction

Appendix 2.3 – Scoping Direction Response Schedule

Appendix 2.4 – Air Quality Technical Note

Appendix 2.5 – NRW Response to Air Quality Technical Note