

# Preliminary Environmental Information Report

## Chapter 18: Cumulative Effects and Interactions

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Future Energy Llanwern Limited

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# 18.0 Cumulative Effects and Interactions

## 18.1 Introduction

18.1.1 This Chapter includes the preliminary assessment for cumulative effects as a result of the Proposed Development. Schedule 4 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 EIA Regulations (EIA Regulations 2017) (Ref 18-1) requires the consideration of the potential impact of inter-relationships and cumulative effects of 'existing and/or approved development' with the Proposed Development.

18.1.2 The assessment presented in this Chapter considers the following types of effects:

- Effect interactions which have the potential to arise where several different effects resulting from the Proposed Development have the potential to affect a single receptor The assessment draws on the assessment of impacts provided in **Chapters 6 to 17** of this Preliminary Environmental Information Report (PEIR).
- Cumulative effects relate to the potential for two or more developments (which are reasonably foreseeable and/ or consented), within proximity to the Proposed Development which would result in effects on the same receptor. Individual topic assessments have been undertaken within each technical chapter of this PEIR.

18.1.3 The methodology underpinning the process used to identify other developments which have the potential to cause cumulative effects is set out in **Chapter 5: EIA Methodology** along with the screening criteria presented in **Appendix 5A**.

18.1.4 This Chapter is supported by **Appendix 18A** and **Figure 18-1**

## 18.2 Legislative Context

18.2.1 The EIA Regulations 2017 (Ref 18-1) directly reference the requirement for an assessment of the effect interactions between types of effect, Schedule 4 Part 1 confirms an EIA should contain a description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development, resulting from:

- The existence of the development;
- The use of natural resources;
- The emission of pollutants, the creation of nuisances and the elimination of waste; and
- The description by the applicant of the forecasting methods used to assess the effects on the environment.

18.2.2 Schedule 4 paragraph 4 requires a description of the factors likely to be significantly affected by the Development, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the interrelationship between the above factors.

18.2.3 Schedule 4(5) sets out the requirements for:

*“a description of the likely significant effects of the development on the environment resulting from, inter alia ... 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”.*

18.2.4 The Overarching National Policy Statement (NPS) (Ref 18-2) for Energy EN-1 sets out at paragraph 4.4.5 the following requirement

*“The impacts of more than one development may affect people simultaneously, so the applicant should consider the cumulative impact on health in the ES where appropriate”.*

## **18.3 Assumption and Limitations**

18.3.1 As detailed in **Chapter 5: EIA Methodology** and **Appendix 5A**, the list of cumulative developments considered within the EIA will be reviewed and updated prior to the submission of the ES, to ensure that any changes to status of the developments presented in this PEIR is updated or new developments that were unknown at the time the PEIR submission.

18.3.2 The Cumulative Effects Assessment (CEA) based on the Study Areas presented by each technical assessment, this will be reviewed and confirmed within the ES.

18.3.3 The cumulative assessment has been assessed on a topic by topic basis in line with Planning Inspectorate Advice Note 17 (Ref 18-3). A similar approach will be adopted for the ES.

## 18.4 Stakeholder Engagement

18.4.1 An EIA Scoping Report (**Appendix 1C**) for the Proposed Development and a request for an Environmental Impact Assessment (EIA) Scoping Opinion from the Planning Inspectorate was submitted in December 2024. **Table 18-1** presents a summary of comments provided by the Planning Inspectorate and consultees (**Appendix 1D**) as part of the scoping process and the Applicant's response, highlighting where relevant how these comments have been addressed within this Chapter.

Table 18-1 Consultation Matters Raised and Responses for Effects Interactions and Cumulative Effects

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
Planning Inspectorate	The ES should include information on the location of the developments included in the CEA and the distance from the proposed development. This should be supported by a figure depicting the locations and extent of cumulative developments in relation to the proposed development.	The location of the developments included in the CEA has been depicted on <b>Figure 18-1</b> . The developments depicted will be continually monitored as detailed in <b>paragraph 18.5.1</b> . An updated and final version will be presented at the ES.	See <b>Figure 18-1</b> .
Planning Inspectorate	The ES should assess the potential for cumulative effects that may occur as a result of proposed mitigation for a specific environmental aspect or matter e.g. landscape and visual mitigation planting on buried archaeological assets	The ES will present the potential cumulative effects that may occur as a result of the proposed mitigation for specific technical topics	The ES will present the potential cumulative effects that may occur as a result of the proposed mitigation within each technical topic chapter.
Planning Inspectorate	Insufficient information has been provided regarding the nature and location of cumulative schemes beyond the 5km study area, therefore the Inspectorate is unable to scope out this matter out at this stage.	The CEA has been determined through identification of Study Areas defined by each technical topic, taking into consideration the areas and receptors likely to be affected by relating to the Proposed Development.	See <b>Chapter 5: Environmental Impact Assessment Methodology</b> and <b>paragraph 5.2.5 of Appendix 5A</b> which presents the screening criteria underpinning the CEA.
Planning Inspectorate	If off-site disposal of waste is required, an assessment of likely significant effects including cumulative effects should be included within the ES. The ES should provide a waste management plan and describe any measures implemented to minimise waste and demonstrate how the waste hierarchy will be applied.	The ES will present an assessment of likely significant effects including cumulative effects should there be a requirement for off-site disposal of Waste required for the Proposed Development.	The ES will present, within <b>Chapter 18</b> , an assessment of likely significant effects including cumulative effects should there be a requirement for off-site disposal of Waste required for the Proposed Development.

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
<b>Planning Inspectorate</b>	<p>The Project Description chapter of the ES should clearly set out the likely number and type of vehicles required for construction, operation and decommissioning.</p> <p>The Inspectorate agrees that an assessment of vehicle and plant emissions can be scoped out of the ES subject to confirmation in the ES that the proposed vehicle numbers alone or cumulatively with other proposals on relevant links will not exceed Environmental Protection UK (EPUK) and Institute of Air Quality Management (IAQM) thresholds.</p>	<p>The likely number and type of vehicles required for the construction, operational and decommissioning phases of the Proposed Development have been set out within the PEIR. An outline Construction Environmental Management Plan (oCEMP) and Decommissioning Environmental Management Plan (oDEMP) have been prepared to support the PEIR (<b>Appendix 2A</b> and <b>Appendix 2B</b>) which sets out the EPUK and IAQM guidance.</p>	<p>See <b>Section 15.8 of Chapter 15: Transport and Access</b></p>
<b>CADW</b>	<p>ASIDOHL assessment will also need to consider the cumulative impact of this proposed solar farm along with those that have already been constructed, consented or proposed in the Gwent Levels registered historic landscape and the individual historic landscape character areas (HCLA). CADW should be consulted in regard to the HCLAs that will need to be included in the ASIDOHL. Annex A lists the relevant Listed Buildings and Scheduled Monuments.</p>	<p>The ASIDOHL will be presented at ES stage and will include consultation with CADW to ensure the appropriate HCLAs are included in the ASIDOHL.</p>	<p>The ASIDOHL presented at ES will consider the cumulative impact of the Proposed Development along with those that have already been constructed, consented or proposed in the Gwent Levels registered historic landscape and the individual HCLAs.</p>
<b>Goldcliff Community Council</b>	<p>Noted cumulative impact of solar developments on the SSSI have been included within scope but doesn't encompass the impact the cumulative impact of similar recently completed scheme which have</p>	<p>Impacts to reen systems have been considered within the PEIR.</p>	<p>See <b>Chapter 10: Water Environment.</b></p>

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
	<p>already seen the impact of solar development on a substantial part of the SSSI.</p> <p>Explained that the drainage system on the SSSI is integrated such that changes to absorption and drying rates on land effect the system as a whole. Added that the Solar Panels will interfere with the drainage system. Suggested that the scope should include the impacts on the overall reens system in terms of flood risk, not just on reens failing in the area covered by the proposal as it is already under pressure from changes to the flow of drainage from building developments around Newport.</p>		
<b>Magor with Undy Town Council</b>	<p>The Town Council is concerned with the cumulative impact of proposals.</p> <p>Cumulative impact of the failure to protect green infrastructure on the levels in favour of further developments inconsistent with the principles of nature conservation and the declaration of a climate and nature emergency in Wales.</p>	<p>The CEA has been determined through identification of Study Areas defined by each technical topic, taking into consideration the areas and receptors likely to be affected by relating to the Proposed Development.</p>	<p>The screening criteria underpinning the CEA is set out in <b>Chapter 5: EIA Methodology</b> and <b>paragraphs 5.2.5 of Appendix 5A.</b></p> <p>See <b>Appendix 8J Outline Landscape and Ecological Management Plan</b> for details on proposed ecological enhancements relevant to green infrastructure.</p>
<b>Natural Resources Wales</b>	<p>Suggest that, as identified in section 4.14, the cumulative impacts of any current/future projects should be taken into consideration when assessing wider impacts on designated features.</p>	<p>Cumulative effects are to be fully addressed at the ES Stage.</p>	<p>See <b>Section 8.12 of Chapter 8: Ecology.</b></p>

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
<b>Natural Resources Wales</b>	Evaluation of the impacts of the Proposed Development should include: direct and indirect; secondary; cumulative; short medium and long term; permanent and temporary; beneficial and adverse; and construction (including impacts of construction site access) operation and decommissioning phase impacts on the nature conservation resource, landscape and public access.	The methodology used to inform the CEA has included direct and indirect; secondary; cumulative; short, medium and long term; permanent and temporary; beneficial and adverse; across all phases of the Proposed Development.	See <b>Chapter 5: Environmental Impact Assessment Methodology</b> and <b>Appendix 5A</b> which presents the screening criteria underpinning the CEA.
<b>National Highways</b>	The effects of the proposed development should be assessed cumulatively with other developments and we would expect the applicant to agree an appropriate list of schemes, including committed development in the area, with the Local Planning Authority.	The cumulative developments presented at ES will be agreed with Newport City Council and Monmouthshire County Council.	The shortlist presented at ES will be agreed with Newport City Council and Monmouthshire County Council.
<b>Monmouthshire County Council</b>	Noted that cumulative effects beyond 5km should be scoped in and include an assessment relative to Twmbarlwm and Mynydd Henllys ridge.	The CEA has been determined through identification of Study Areas defined by each technical topic, taking into consideration the areas and receptors likely to be affected by relating to the Proposed Development.	See <b>Chapter 5: Environmental Impact Assessment Methodology</b> and <b>paragraph 5.2.5 of Appendix 5A</b> which presents the screening criteria underpinning the CEA.

## 18.5 Assessment Methodology

- 18.5.1 The assessment of effect interactions is based on the methodology described in **Chapter 5: Environmental Impact Assessment Methodology** and **Appendix 5A** of this PEIR and considers the potential for direct or indirect effects arising from the Proposed Development to give rise to an effect on a single receptor. Currently, there are no specific, relevant guidelines on how the assessment of effect interactions should be undertaken, and so the assessment will be undertaken on a qualitative basis using the results of the individual assessments, informed by professional judgement.
- 18.5.2 A preliminary assessment relating to the potential for intra-project effects has been undertaken whereby each technical chapter (**Chapters 6 to 17**) has been reviewed to identify which receptors are affected to determine if there is the potential for intra-project effects.
- 18.5.3 The preliminary embedded design mitigation and additional mitigation presented is also presented in the respective technical chapters and summarised within the commitments register presented in **Appendix 19A**. It should be noted that this CEA assumes the preliminary embedded design mitigation and additional mitigation presented in **Appendix 19A** have been implemented before the consideration of effects meaning that solely residual effects are considered within this assessment.
- 18.5.4 This preliminary assessment will be further developed and each topic chapter within the ES will provide a summary of impact interactions, setting out how the particular topic area has considered and assessed secondary effects arising as a result of impacts from other technical chapters.
- 18.5.5 It should be noted that only receptors that are expected to incur more than one potential effect have been included in the assessment (e.g. noise and transport). Receptors predicted to be affected by only a single effect (e.g. only noise) are excluded because there is considered to be no potential for effect interactions to take place.

## Effect Interactions

- 18.5.6 The assessment of effect interactions is based on the methodology described in **Chapter 5: EIA Methodology** of this PEIR and considers the potential for several direct or indirect effects arising from the Proposed Development to give rise to an effect on a single receptor.
- 18.5.7 A detailed matrix of receptors identified across the PEIR has been summarised in **Appendix 18A**. **Appendix 18A** sets out the residual effects on the individual receptors identified in the technical chapters underpinning this PEIR and identifies the potential effect interactions arising from the individual impacts.
- 18.5.8 It should be noted that potential effect interactions were solely identified in **Appendix 18A** for the following technical chapters:
- **Chapter 11: Landscape and Visual Impact Assessment;** and
  - **Chapter 14: Socio-economics, Tourism and Recreation.**
- 18.5.9 As such the potential effect interactions identified have been summarised into **Table 18-2** to **Table 18-4** across all phases of the Proposed Development.
- 18.5.10 Due to the nature of the Proposed Development within this locality, the effect interactions focus on two key areas:
- Recreational Receptors; and
  - Residential Receptors.

Table 18-2 Potential effect interactions during construction

Receptor	Description of potential effect interactions	Preliminary Residual significance of effect determined through EIA Landscape and Visual Impact Assessment	Socio-economics, Tourism and Recreation	Effect interactions	Additional mitigation required (if any)
<b>Wales Coast Path</b>	<ul style="list-style-type: none"> <li>Visual Effects</li> <li>Impacts upon Recreation Receptors</li> </ul>	Moderate Adverse ( <b>Significant</b> )	Major ( <b>Significant</b> )	<b>Significant</b>	No additional mitigation is proposed. Design and mitigation measures to reduce visual effects will be considered as the design of the Proposed Development progresses, with the assessment presented in the ES.
<b>NCN Route 4</b>	<ul style="list-style-type: none"> <li>Visual Effects</li> <li>Impacts upon recreation and tourism</li> </ul>	Moderate Adverse ( <b>Significant</b> )	Adverse – Major ( <b>Significant</b> )	<b>Significant</b>	No additional mitigation is proposed. Design and mitigation measures to reduce visual effects will be considered as the design of the Scheme progresses, with the assessment presented in the ES.
<b>Redwick Circular Route (promoted walk)</b>	<ul style="list-style-type: none"> <li>Visual Effects</li> <li>Impacts upon recreation and tourism</li> </ul>	Moderate Adverse ( <b>Significant</b> )	Moderate ( <b>Probably Significant</b> )	<b>Significant</b>	No additional mitigation is proposed. Design and mitigation measures to reduce visual effects will be considered as the design of the Proposed Development progresses, with the assessment presented in the ES.
<b>Local PRow network ((372/56/1,</b>	<ul style="list-style-type: none"> <li>Visual Effects</li> </ul>	Moderate Adverse ( <b>Significant</b> )	Adverse - Moderate ( <b>Probably</b> )	<b>Significant</b>	No additional mitigation is proposed. Design and mitigation

Receptor	Description of potential effect interactions	Preliminary Residual significance of effect determined through EIA Landscape and Visual Impact Assessment	Socio-economics, Tourism and Recreation	Effect interactions	Additional mitigation required (if any)
372/54/3, 372/58/3,5,1,7 , 392/15A/1, 372/59/1, 372/59A/1)	<ul style="list-style-type: none"> <li>Impacts upon recreation and tourism</li> </ul>		<b>Significant)</b> / Minor (Not significant)		measures to reduce visual effects will be considered as the design of the Proposed Development progresses, with the assessment presented in the ES.

Table 18-3 Potential effect interactions during operation

Receptor	Description of potential effect interactions	Preliminary Residual significance of effect determined through EIA		Effect interactions	Additional mitigation required (if any)
		Landscape and Visual Impact Assessment	Socio-economics, Tourism and Recreation		
<b>Wales Coast Path</b>	<ul style="list-style-type: none"> <li>Visual Effects (Year 1 and 15 of Operation).</li> <li>Impacts upon Tourism and Recreation</li> </ul>	Moderate Adverse ( <b>significant</b> ) following 15 years the effect will be reduced but remain Moderate Adverse ( <b>Significant</b> )	Major Adverse ( <b>Significant</b> )	<b>Significant</b>	Detailed planting strategy to include reinforcement of existing hedgerows, gapping up and management of existing hedgerows to grow out and improve screening along the southern boundary of the Proposed Development. Additional landscape features within the ecological buffer along the southern boundary of the Proposed Development are being reviewed.
<b>Redwick Circular Route</b>	<ul style="list-style-type: none"> <li>Visual Effects (Year 1 of Operation)</li> <li>Impacts upon Tourism and Recreation</li> </ul>	Major Adverse ( <b>significant</b> )	Moderate Adverse ( <b>Probably significant</b> )	<b>Significant</b>	Implementing management of hedgerows to improve screening. Supplementary planting of replacement hedges and gapping up.
<b>Local PRow network ((372/56/1, 372/54/3, 372/58/3,5,1,7, 392/15A/1, 372/59/1, 372/59A/1)</b>	<ul style="list-style-type: none"> <li>Visual Effects upon Recreational Routes and Destinations (rest of Operation).</li> <li>Impacts upon Tourism and Recreation</li> </ul>	Major Adverse ( <b>Significant</b> ),	Moderate Adverse ( <b>Probably Significant</b> ) / Minor Adverse (Not significant)	<b>Significant</b>	Implementing management of hedgerows to improve screening. Supplementary planting of replacement hedges and gapping up.

Table 18-4 Potential effect interactions during decommissioning

Receptor	Description of potential effect interactions	Preliminary Residual significance of effect determined through EIA		Effect interactions	Additional mitigation required (if any)
		Landscape and Visual Impact Assessment	Socio-economics, Tourism and Recreation		
<b>NCN Route 4 (within Study Area)</b>	<ul style="list-style-type: none"> <li>Visual Effects.</li> <li>Impacts upon Recreation</li> </ul>	Moderate Adverse ( <b>Significant</b> )	Major Adverse ( <b>Significant</b> )	<b>Significant</b>	Manage hedgerows to retain screening
<b>Redwick Circular Route (promoted walk)</b>	<ul style="list-style-type: none"> <li>Visual Effects.</li> <li>Impacts upon Recreation</li> </ul>	Moderate Adverse ( <b>Significant</b> )	Moderate Adverse ( <b>Probably significant</b> )	<b>Significant</b>	Manage hedgerows to retain screening
<b>Local PRow network ((372/56/1, 372/54/3, 372/58/3,5,1,7, 392/15A/1, 372/59/1, 372/59A/1)</b>	<ul style="list-style-type: none"> <li>Visual Effects.</li> <li>Impacts upon Recreation.</li> </ul>	Moderate Adverse ( <b>Significant</b> )	Moderate Adverse ( <b>Probably Significant</b> ) / Minor (Not significant)	<b>Significant</b>	Manage hedgerows to retain screening
<b>Wales Coast Path (within Study Area)</b>	<ul style="list-style-type: none"> <li>Visual Effects.</li> <li>Impacts upon Recreation.</li> </ul>	Moderate Adverse ( <b>Significant</b> )	Major Adverse ( <b>Significant</b> )	<b>Significant</b>	Manage hedgerows to retain screening

## Cumulative Effects

- 18.5.11 The methodology underpinning the process used to identify other developments which have the potential to cause cumulative effects is set out in **Chapter 5: Environmental Impact Assessment Methodology** along with the screening criteria presented in **Appendix 5A**. A preliminary shortlist of other developments has been prepared to support this PEIR is presented in **Appendix 5B**. The final shortlist will be presented within the ES.
- 18.5.12 Where the Proposed Development has a Negligible effect, there is not considered to be the potential for any cumulative effects. Therefore, the preliminary cumulative effects assessment has focused only on Minor, Moderate and Major impacts identified within the PEIR. **Table 18-5** presents a summary of the preliminary cumulative effects that have been assessed and identified within each of the technical chapters of this PEIR (**Chapters 6 to 17**).

Table 18-5 Summary of the cumulative effects identified within each of the technical Chapters 6 to 17 of this PEIR

Description of Identifier / receptor	Sensitivity of receptor	Anticipated Impact	Significance of impact/effect	Mitigation	Residual Effect and Reinstatement of Significance
<b>Chapter 6: Greenhouse Gasses</b>					
No cumulative effects were identified throughout the assessment.					
<b>Chapter 7: Cultural Heritage and Archaeology</b>					
<b>Bishton Castle (MM128), Pencoed Castle (MM201; MM274; PGW(Gt)3(NPT); Cadw 17076; Cadw 2904; Cadw 3089; Cadw 3090; Cadw 3091), and Wilcrick Hill Camp (MM127)</b>	High	Cumulative impacts on setting from Craig y Perthi Solar Farm	Minor Adverse	N/A	Minor Adverse
<b>Relict Seawall alongside Collister Pill Reen (MM226) and Redwick Conservation Area</b>	High	Cumulative impacts on setting from Magor Net Zero project	Minor Adverse	N/A	Minor Adverse
<b>Chapter 8: Ecology</b>					
Cumulative Effects will be fully assessed at the ES stage.					
<b>Chapter 9: Ornithology</b>					
Cumulative Effects will be fully assessed at the ES stage.					
<b>Chapter 10: Water Environment</b>					
No cumulative effects were identified throughout the assessment.					
<b>Chapter 11: LVIA</b>					
LCA A2: Caldicot Level (incl Caldicot Level SLA)	Medium	Change to Landscape Character as a result of cumulative effects with	Major/Moderate Adverse ( <b>Significant</b> )	N/A	Major/Moderate Adverse ( <b>Significant</b> )

Description of Identifier / receptor	Sensitivity of receptor	Anticipated Impact	Significance of impact/effect	Mitigation	Residual Effect and Reinstatement of Significance
		Rush Wall Solar Park Ltd and Magor Net Zero			
LCA B1 Severn Estuary (inc. MCA: 29 Severn Estuary (Wales) and Caldicot Level SLA)	High	<ul style="list-style-type: none"> <li>Change to Landscape Character as a result of cumulative effects with Rush Wall Solar Park Ltd</li> </ul>	Moderate Adverse ( <b>Significant</b> ).	N/A	Moderate Adverse ( <b>Significant</b> ).
<b>Chapter 12: Glint and Glare</b>					
No cumulative effects were identified throughout the assessment.					
<b>Chapter 13: Noise and Vibration</b>					
Multiple	High	Noise and vibration effects from Renewable Energy & Green Hydrogen Production Facility	It is considered there could be the potential for Significant cumulative effects during the construction and operation of the development. The information currently available is insufficient to undertake an assessment of cumulative effects. An assessment of potentially significant cumulative effects will be provided in the ES,	N/A	The information currently available is insufficient to undertake an assessment of cumulative effects. An assessment of potentially significant cumulative effects will be provided in the ES, subject to availability of appropriate information.

Description of Identifier / receptor	Sensitivity of receptor	Anticipated Impact	Significance of impact/effect	Mitigation	Residual Effect and Reinstatement of Significance
<p><b>Multiple (but particularly dwellings in the same area: receptors near R15 – Summerleaze Farm and R16 – Yew Tree cottage)</b></p>	High	<p>Noise and vibration effects from land near the village of Redwick, south east of Newport, Wales on the Caldicot Levels</p>	<p>subject to availability of appropriate information.</p> <p>It is considered there is Negligible potential for Significant cumulative effects during the construction, operation and decommissioning of the development. This is on the basis that predicted noise levels during the construction and operation of the development at all receptor locations assessed are significantly below the respective thresholds of significance. Therefore, noise from the construction and operation of the development does not have the potential to contribute to a cumulative level that</p>	N/A	<p>It is considered there is Negligible potential for Significant cumulative effects during the construction and operation of the development. This is on the basis that predicted noise levels during the construction and operation of the development at all receptor locations assessed are significantly below the respective thresholds of significance. Therefore, noise from the construction and operation of the development does not have the potential to contribute to a cumulative level that could give rise to significant cumulative effects.</p>

Description of Identifier / receptor	Sensitivity of receptor	Anticipated Impact	Significance of impact/effect	Mitigation	Residual Effect and Reinstatement of Significance
			could give rise to significant cumulative effects.		
<b>Chapter 14: Socio-Economics, Tourism and Recreation</b>					
<b>All Relevant Receptors</b>	Low to High	Cumulative effects with Rush Wall and Craig Y Perthi Solar Developments on socio-economics, tourism and recreation.	This will be further assessed at the ES stage as there is, at the time of writing, not enough information to conduct a thorough assessment.	N/A	This will be further assessed at the ES stage.
<b>Chapter 15: Transport and Access</b>					
Multiple	N/A to Low	M4; A4810; Broad Street Common; North Row; Green Street; Pill Street; Whitewall; Barecroft Common, Meadows Road; Queensway Meadows Road; Nash Road; and A48 in-combination with the following: <ul style="list-style-type: none"> <li>• DNS/3220457 - Rush Wall Solar Park Ltd</li> <li>• CAS-01960-J2H3X5 - Magor Solar Farm</li> <li>• 06/0471</li> <li>• 22/00634</li> <li>• 22/0349 (92/0875)</li> <li>• 24/0467 (Outline 06/0845)</li> </ul>	Moderate Adverse	N/A	To be assessed at ES Stage

Description of Identifier / receptor	Sensitivity of receptor	Anticipated Impact	Significance of impact/effect	Mitigation	Residual Effect and Reinstatement of Significance
		<ul style="list-style-type: none"> <li>• 24/0537</li> <li>• DM/2021/00358 &amp; DM/2021/00357</li> </ul> <p>In relation to fear and intimidation, driver delay, severance, pedestrian delay and accident and road safety.</p>			
<b>Chapter 16: Ground Conditions</b>					
<b>Soil</b>	High	Cumulative effects with Rush Wall Solar Park (DNS/3220457). The potential for significant effects on soils is associated with the permanent loss of naturally occurring in situ soil resources for hard development	Potential for significant cumulative effects	Review of other developments on agricultural land within the ZoI for soil resources confirms that these include mitigation measures to limit impacts on soils, such as separate storage of excavated topsoil and subsoil for reuse in reinstatement.	No Significant cumulative effects identified.

Description of Identifier / receptor	Sensitivity of receptor	Anticipated Impact	Significance of impact/effect	Mitigation	Residual Effect and Reinstatement of Significance
<b>Chapter 17: Other Environmental Topics</b>					
No cumulative effects were identified throughout the assessment.					

## 18.6 Summary

- 18.6.1 Potential effect interactions arising as a result of the Proposed Development includes consideration of the individual effects identified in the technical chapters of this PEIR (**Chapter 6 to 17**) combining on a single receptor.
- 18.6.2 Intra-project effects identified through this PEIR focus on the interaction of the Proposed Development with visual receptors, which have been assessed within both **Chapter 11: Landscape and Visual Impact Assessment** and **Chapter 14: Socio-economics, Tourism and Recreation**. While this results in significant effect interactions on these receptors, both assessments assess the same impact on the receptor, visual effects. Therefore, due to the interconnected nature of the assessments of these chapters, it is assumed that where there is a conclusion of significance within **Chapter 11: Landscape and Visual Impact Assessment**, that there would also be a significant effect concluded within **Chapter 14: Socio-economics, Tourism and Recreation**.
- 18.6.3 As detailed above in **Table 18-5**, upon consideration of the information available for the PEIR, it has been concluded there is potential for significant effect interactions as a result of the Proposed Development. Further mitigation measures will be identified through the iterative design process and the final conclusions on effect interactions will be set out in the ES.
- 18.6.4 The CEA presented in **Table 18-5** identifies the potential cumulative effects of the Proposed Development in-combination with other proposed and consented developments within the Study Areas defined by technical chapters (**Chapter 6 to 17**). The assessment has identified the potential for significant cumulative effects to occur. This assessment will be updated and finalised within the ES, to confirm the final cumulative assessment with the inclusion of all relevant mitigation measures.

## 18.7 References

Ref 18-1 UK Government (2017) The Town and Country Planning (Environmental Impact Assessment) Regulations 2017. Available at: <https://www.legislation.gov.uk/uksi/2017/571/contents/made> [Accessed: November 2025].

Ref 18-2 Department for Energy Security & Net Zero (2025) Overarching National Policy Statement for Energy (EN-1). Presented to Parliament pursuant to Section 9(8) of the Planning Act 2008. London: The Stationery Office. Available at: <https://assets.publishing.service.gov.uk/media/6915ba42bc34c86ce4e6e726/overarching-national-policy-statement-for-energy-en-1-web-accessible.pdf> [Accessed: November 2025].

Ref 18-3 Planning Inspectorate (2024) Nationally Significant Infrastructure Projects: Advice on cumulative effects assessment [online]. Bristol: The Planning Inspectorate. Available at: <https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-cumulative-effects-assessment> [Accessed: November 2025].