



THE DROVES
SOLAR FARM

The Droves Solar Farm

Preliminary Environmental Information Report

Volume III, Chapter 2: EIA Process and Methodology

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Appendix 2.4

Cumulative Schemes



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1 Cumulative Schemes

1.1 Introduction

1.1.1 This appendix of the Preliminary Environmental Information Report ('PEIR') presents the work undertaken to date concerning the potential cumulative effects as a result of the Scheme during the Construction, Operational and Decommissioning Phases. Cumulative effects refer to potential impacts arising from two or more committed developments which are reasonably anticipated and/or consented, but not part of the baseline environment. These developments, if in proximity to the Scheme, may lead to cumulative effects on the same receptor.

1.1.2 Whilst there is no widely accepted methodology for assessing cumulative effects, the Cumulative Effects Assessment (CEA) will be undertaken in accordance with PINS Advice on Cumulative Effects Assessment (September 2024) and will consider two types of cumulative effects:

- In-combination effects (or intra-project combined effects) - the inter-relationship and combination between different individual environmental residual (post-additional mitigation) effects, for example, noise, dust and visual, on one particular receptor. These are presented in **Volume I, Chapter 16: In-Combination Effects**; and
- Cumulative effects - multiple existing and/or approved developments generating additive effects which together have an increased effect on the same receptors. Each environmental topic chapter within the ES will consider and assess the cumulative effects arising as a result of other existing or proposed development

1.1.3 **Volume I, Chapter 2: EIA Process and Methodology** outlines the methodology used to identify and assess other developments that have the potential to cause cumulative effects with the Scheme. Topic chapters within the PEIR will provide high-level conclusions known at this stage regarding the likelihood of cumulative effects where possible. The cumulative assessment will be updated and detailed in the ES once environmental effects following detailed assessments and cumulative developments have been further confirmed.

Consultation on Cumulative Effects

1.1.4 The Scheme was subject to EIA Scoping Report (**Volume III, Appendix 2.1**) with a Scoping Opinion issued on 18th December 2024 (**Volume III, Appendix 2.2**). In the preparation of the Scoping Report consultation was undertaken with key stakeholders where possible. The Planning Inspectorate consulted on the Scoping Report with the prescribed consultation bodies. Those responses were included with the Scoping Opinion issued by the Planning Inspectorate. Any key matters raised in those responses will be covered in the individual technical chapters where relevant and set out in **Volume III, Appendix 2.3**.

1.1.5 A summary of PINS consultation responses to the Scoping Report relevant to cumulative effects are set out in Table 1.1.



Table 1.1 Summary of PINS consultation responses on cumulative effects

Consultee and Date	Comment	Outcome and next steps
<p>The Planning Inspectorate</p> <p>Scoping Opinion</p> <p>December 2024</p>	<p>Cumulative Effects Assessment:</p> <p>PINS require the ES to consider other developments as part of the cumulative effects assessment (CEA), listing and requiring other non-solar developments to be included in the CEA. The comment also sets the ES should explain why developments within the study area have been excluded from the CEA.</p> <p>PINS requests potential developments considered in the CEA should be consulted on with local planning authorities, the highways authority, and other relevant consultation bodies.</p> <p>The comment from PINS also notes the ES should include information on the locations of the developments included in the CEA and the distance from the Proposed Development supported by a figure depicting the locations and extent of the identified cumulative developments in relation to the Proposed Development.</p>	<p>Noted. The ES will set out other existing or proposed development in the long and short lists for the EIA, including non solar developments. The ES will include the methodology for the cumulative effects assessment and explain why developments have been excluded.</p> <p>A preliminary long and short list will be consulted on by the relevant stakeholders during the Statutory Consultation process.</p> <p>A figure depicting locations and extents will be included in the ES.</p>
<p>The Planning Inspectorate</p> <p>Scoping Opinion</p> <p>December 2024</p>	<p>Cumulative effects – assessment years:</p> <p>PINS require the ES to set out the assumed worst-case assessment years. Where there is potential for construction activities to occur across several sites simultaneously this should be considered to ensure a worst-case assessment is provided. Where different aspect assessments use different assessment years, the reasons for the selection of assessment years should be clearly explained in each case, with reference to relevant guidance.</p>	<p>The CEA for the ES will use the assumed worst-case assessment years scenario to complete the assessment of cumulative effects.</p>
<p>The Planning Inspectorate</p>	<p>PINS require the ES to fully justify the study area for cumulative sites with reference to relevant guidance and the likely extent of impacts. The ES should</p>	<p>Noted. The ES will include how the study area for cumulative effects</p>



Consultee and Date	Comment	Outcome and next steps
Scoping Opinion December 2024	provide a clear justification for the extent of each Zone of Influence (Zoi) and how it captures the effects from the Proposed Development.	assessment has been identified.

1.1.6 There has been consultation with Breckland Council and King's Lynn and West Norfolk Council to introduce the Scheme, provide updates and where possible focused sessions to discuss environmental matters as part of the Scheme design.

1.1.7 To date, there has not been any discussions with the Councils with regard to the development lists of 'other developments'. The Applicant will seek to utilise the Statutory Consultation process as an opportunity for Councils to review the lists and provide any feedback.

1.2 Legislation, Planning Policy and Guidance

1.2.1 The requirement for cumulative effects assessment (CEA) is set out in the Environmental Impact Assessment (EIA) Directive (EIA Directive 2014/52/EU, which amends EIA Directive 2011/92/EU), making explicit reference for an assessment of the effects interactions between types of effect, and states that the EIA should:

“A description of the likely significant effects of the development on the environment resulting from, inter alia: ... (e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources... The description of the likely significant effects on the factors specified in regulation 5(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”.

1.2.2 This is transposed directly into domestic law through the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

1.2.3 The consideration of cumulative effects is addressed under each topic heading within Section 5 of the NPS EN-1: Overarching National Policy Statement for Energy (November 2023). Paragraph 4.3.3 of NPS EN-1 (November 2023) explains that the EIA Regulations require an assessment of the likely significant effects of the proposed project on the environment.

1.2.4 The Planning Inspectorates (PINS) advice on Cumulative Effects (September 2024) sets out guidance on the approach to Cumulative Effects Assessment (CEA) to which the methodology for the CEA for ES is based on and has been adapted to fit the nature of the Scheme and the location in which it is based.

1.2.5 The CEA presented for PEIR is preliminary relying on environmental information reported by third-party developers for their schemes. The available information varies between schemes, and therefore there is a high degree of uncertainty in the cumulative effects reported. In addition, the review of the available information and assessments are at an early stage. Therefore, the effects presented in this section are preliminary and will be refined through further assessment work and reported in the ES.



1.3 Assessment Methodology

- 1.3.1 The methodology for assessment has been developed in line with the relevant policy and appropriate industry guidance for assessing potential cumulative effects from the Scheme. CEA, outlined further in **Volume I, Chapter 2: EIA Process and Methodology**.
- 1.3.2 The environmental information that underpins the CEA is taken from publicly available sources: submitted planning applications (planning portals), the Planning Inspectorate website and relevant planning policy documents.

Establishing the Study Area

- 1.3.3 A topic-based approach has been taken to identify the zone of influence (Zol) for cumulative schemes. The worst-case Zol for each environmental topic area is identified based on the extent of likely significant effects in line with industry specific guidance along with professional judgement and knowledge of the local area. Table 1.2 outlines the Zones of Influence (Zol) for potential cumulative effects with other developments, categorised by each environmental topic.
- 1.3.4 The largest Zol, in the case for this Scheme, 25km will represent the search area and has been used to compile the preliminary long list of schemes, which is presented in Table 1.3.

Table 1.2 Cumulative Effects Zone of Influence broken down by Environmental Topic

Topic	Zone of Influence
Landscape and Visual	The extent of the Study Area is defined by the potential visual envelope arising from the Scheme based upon the Zone of Theoretical Visibility (ZTV) mapping and fieldwork. On the basis of ZTV modelling in this case, a 3km Study Area from the Site Boundary is considered appropriate
Ecology and Biodiversity	The Study Area for scoping ecological receptors includes the Site itself, as well as an appropriate search radius from the Study Area to assess the presence of designated sites and their ecological sensitivity with regard to the receptor's Zone of Influence. Internationally designated sites within 25km National statutory designated sites within 5km Local non-statutory designated sites within 2km
Cultural Heritage and Archaeology	5km from the Solar PV Site for higher grade heritage assets (i.e. World Heritage Sites, Scheduled Monuments, Grade I and Grade II*)



Topic	Zone of Influence
	<p>2km from the Solar PV Site boundary for remaining designated heritage assets (i.e. Grade II Conservation Areas)</p> <p>1km from the Solar PV Site for non-designated heritage assets and Historic Environment Record entries</p>
Traffic and Transport	<p>The extent of the road network, including the Strategic Road Network (SRN), local roads, and any areas where improvements or changes may be required to accommodate construction traffic (the Highway Works), that will be utilised to facilitate traffic movements associated with the Construction, Operational, and Decommissioning Phases of the Scheme.</p> <p>Three potential access routes from the strategic road network (SRN).</p>
Noise and Vibration	1km of the Solar PV Site
Agriculture and Soils	Norfolk (NSIP only)
Water Resources	5km. The Zoi is based on the hydrological and hydrogeological connectivity of water bodies located downstream of the Scheme.
Climate Change	Global Climate (Lifecycle Greenhouse Gas Impact Assessment)
Human Health	England
Socio-economics	England
Air Quality	Impacts from fugitive dust impacts (up to approximately 250m) from the Site boundary
Glint and Glare	<p>1km from the Solar PV Site for residential dwellings and road users.</p> <p>5km and 10km for licenced and licenced aviation infrastructure</p>
Telecommunications, Utilities and Television Receptors	Adjacent to the Site boundary



Topic	Zone of Influence
Waste	Norfolk County
Electromagnetic Fields	Site boundary

Table 1.3 Preliminary long list of cumulative schemes – See table at end of document.

- 1.3.5 Although the Global Climate is the largest Zol, where effects are considered at this scale in the climate change assessment, it is inherently cumulative by drawing from projections of the future baseline and therefore it is not necessary to consider cumulative effects from specific cumulative schemes.
- 1.3.6 Further, where effects are considered in the traffic and transport assessment the future year assessment is inherently cumulative as it considers background strategic growth alongside cumulative schemes (with any forthcoming development on the network including High Grove Solar) and increases in traffic in the Study Area through growth factors obtained from the Department for Transport TEMPRO NTM Database (2023). The growth factor up to the period 2031 suggests a potential 5% increase in flows.
- 1.3.7 Due to the busy nature of the A1065 and scale of the increase in traffic associated with the growth factor above a circa 460 daily vehicles increase in flows along the A1605 in growth accounted for. At the time of writing, no information on the High Grove Solar construction programme or trip information it is considered likely that the typical daily vehicle trip generation would fall well within this along the A1065. This information will be revisited and updated for the ES submission.
- 1.3.8 The majority of the cumulative schemes identified within the long list comprise permanent, irreversible development of land (agricultural or otherwise). For cumulative sites which are allocated through local policy, or where planning consent has been granted, the resultant loss of any BMV land has been accepted in planning terms and therefore considered as part of the baseline environment. Therefore, allocated or approved cumulative schemes which are not NSIPs in Norfolk are not considered further in the cumulative effects assessment on BMV agricultural land.
- 1.3.9 As such, cumulative effects from the use of BMV land is restricted to NSIP solar developments only in Norfolk, as identified in the long list of cumulative schemes and have been included within the short list for further consideration at this stage, specifically High Grove Solar.
- 1.3.10 The cumulative effects assessment for socio-economics and human health considers the impact of Tier 1 and 2 cumulative schemes alongside the Scheme on the effects considered in the assessment. Where this assessment relies on other technical chapters, the Committed Developments are considered within the study areas of those chapters, ensuring consistency with the assessment of the Scheme's direct effects on socio-economics and human health.
- 1.3.11 As such, a 25km (in relation to **Volume I, Chapter 7: Ecology and Biodiversity**) is the largest Zol relevant to the search of development and is considered sufficient to capture any potential significant cumulative effects and forms the Search Area for cumulative schemes.



Impact Assessment Methodology

- 1.3.12 The assessment is based on the methodology outlined in **Volume I, Chapter 2: EIA Process and Methodology** which has been developed in accordance with Planning Inspectorate advice on cumulative effects assessment (September 2024). The assessment follows a four-stage approach:
- Stage 1 - Establishing the long list of ‘other existing development and/or approved development’
 - Stage 2 - Establishing a shortlist of ‘other existing development and/or approved development’
 - Stage 3 - Information gathering; and
 - Stage 4 – Assessment.
- 1.3.13 Identified schemes have been categorised into tiers, as detailed in **Volume I, Chapter 2: EIA Process and Methodology**, indicating a decreasing level of certainty (Tier 1 – most certain to Tier 3 – least certain) for the implementation of each development.

Assumptions and Limitations

- 1.3.14 The list of developments considered from PEIR will be updated before the ES is finalised to account for any changes in the status of developments or to account for the inclusion of any new developments that have emerged.
- 1.3.15 The ZoI is based on the worst-case Study Area of the individual specialist topics. This will be reviewed and confirmed in the ES.
- 1.3.16 It is noted, High Grove Solar Farm DCO (which at the time of writing is at the pre-application stage) is proposed to the south of the Scheme. It is further noted, part of the High Grove Solar Farm Scheme, specifically an area of the cable corridor, is understood within the Site boundary of the Scheme. The Applicant is actively engaging with the developer of High Grove Solar Farm. It is intended that ongoing collaboration and information sharing between the two projects will ensure that assessments are cognisant of each other and minimise likely significant effects arising in-combination and cumulatively as far as reasonably practicable.
- 1.3.17 The cumulative effects assessment presented in this chapter is preliminary relying on environmental information reported by third-party developers for their schemes. The available information varies between schemes, and therefore there is a high degree of uncertainty in the cumulative effects reported. In addition, the review of the available information and assessments are at an early stage. Therefore, the effects presented in this section are preliminary and will be refined through further assessment work and reported in the ES.

Mitigation Measures

- 1.3.18 The approach to mitigation measures has been outlined within **Volume I, Chapter 2: EIA Process and Methodology**.
- 1.3.19 A summary of all mitigation measures and how they will be secured, either inherently through the Scheme design, or through control documents, or requirements within the DCO, are set out in the **Commitments Register (Volume III, Appendix 2.4)**, which will be kept under review as the Scheme progresses.



1.4 Cumulative Effects Assessment

Stage 1 - Establishing the long list of 'other existing development and/or approved development'

- 1.4.1 Stage 1 focuses on identifying relevant developments and land allocations within the area of search that could generate significant cumulative effects. A preliminary long list of developments has been prepared of which the Applicant will seek to utilise the Statutory Consultation as an opportunity for Councils to review the preliminary list and provide any feedback. The final list, along with the inclusionary criteria, will be presented in the ES.
- 1.4.2 The preliminary long list at this stage is derived from the Study Area for **Volume I, Chapter 8: Ecology and Biodiversity** of 25km, as outlined in Table 1.2, and the likely maximum range of any potential significant effects.
- 1.4.3 These developments have been screened to assess their potential interaction with the Scheme focusing on their ability to generate likely significant cumulative effects. The preliminary long list was developed with consideration to the following criteria:
- Within Zone of Influence (25km)
 - Meets thresholds for EIA Development
 - Developments currently not yet complete and operational (reasonable effort has been made to determine this from publicly available online sources)
 - Local and regional authority applications with extant permission (cases since 31/01/2020)
 - Development listed on the National Infrastructure Planning online map
 - Strategic developments identified in the relevant Development Plan (and emerging Development Plans); and
 - Development identified in other plans and programmes which set the framework for future development consents/approvals, where such development is reasonably likely to come forward.
- 1.4.4 The preliminary long list, at end of this appendix, of developments excludes small scale planning applications (full, outline or scoping opinion request applications only listed) as these are considered development of insufficient scale or type to result in cumulative effects with the Scheme. Within this appendix the preliminary long list presents the identified existing and/or approved developments within the 25km Zol and sets out the threshold criteria applied to identify the short list for each environmental topic.
- 1.4.5 The preliminary long list will be further refined through consultation with the relevant local planning authorities to ensure that all developments with the potential to cause significant cumulative effects, when considered alongside the proposed Scheme.



Stage 2 - Establishing a shortlist of 'other existing development and/or approved development'

- 1.4.6 A shortlist list, of developments will be prepared and discussed through consultation with Breckland and King's Lynn and West Norfolk Council and any other local planning authorities the Applicant deems relevant for consultation.
- 1.4.7 The rationale for including or excluding developments from the long list will be documented in a matrix, utilising Matrix 1 of Annex 1 of the Planning Inspectorate's Advice Note 17 as an example. This matrix will be included in the ES.
- 1.4.8 The criteria will ensure that only other existing and/or approved development which is likely to result in significant cumulative effects is taken forward to the assessment stage. The shortlist of existing and/or approved development will be consulted upon with statutory and non-statutory consultees during the EIA process.
- 1.4.9 The preliminary shortlist will be used by environmental topics to inform their cumulative assessments for DCO Application.
- 1.4.10 The final shortlist, along with the criteria for inclusion and full justification, will be finalised and any developments that are unlikely to result in significant cumulative impacts will be excluded, and the shortlist for assessment presented in the ES to ensure a thorough CEA is undertaken.
- 1.4.11 The threshold criteria to be used will consider the following factors:
- Temporal Scope
 - Scale and Nature of the Development; and
 - Other factors such as, nature and capacity of the receiving environment, source-pathway-receptor approach, and professional judgment.

Stage 3 – Information Gathering

- 1.4.12 Environmental information will be gathered for short listed existing and/or approved development, where available, utilising Matrix 2 of Annex 2 of the Planning Inspectorate's Advice Note 17 and including details of:
- Proposed design and location information
 - Proposed programme of construction, operation and decommissioning; and
 - Environmental assessments that set out baseline data and effects arising from the other existing and, or approved development
- 1.4.13 A preliminary review of information has been completed for PEIR, the Applicant will compile further information to inform the assessment for ES.



Stage 4 - Assessment

- 1.4.14 At this stage the preliminary short list has where practicable been used to undertake a preliminary assessment by topics utilising the other developments outlined within **Volume II, Appendix 2.4.**
- 1.4.15 Once stages 1 to 3 have been completed a detailed assessment will be carried out by topics to support the DCO Application and outlined within the ES following the agreement of the short list with the relevant local authority Councils. The final cumulative assessment will be presented in the ES.

Preliminary Assessment of Likely Effects

Next steps

- 1.4.16 Following Statutory Consultation, the long and short list (Stages 1 and 2) will be refined. Should any new other developments be proposed, these will added to the long list and reviewed using the above set out criteria whether to progress to stages 2,3 and 4. Any additional projects added to the short list with the final cumulative assessment reported in the ES.



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