Cumulative Effects Assessment

Advice note seventeen: Cumulative effects assessment relevant to nationally significant infrastructure projects

Status of this Advice Note
This Advice Note has no statutory status and forms part of the suite of advice provided by the Planning Inspectorate.

This Advice Note supersedes all previous versions. It will be kept under review and updated when necessary.

This Advice Note makes reference to other Advice Notes, these can be found at: http://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/

Summary of this Advice Note
The requirement for cumulative effects assessment (CEA) is set out in the Environmental Impact Assessment (EIA) Directive\(^1\). With respect to Nationally Significant Infrastructure Projects (NSIPs) under the Planning Act 2008 (as amended) ("the PA2008"), the requirements of the Directive are implemented through the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 ("the EIA Regulations")\(^2\).

A range of public sector and industry-led guidance is available on CEA but at present there is no single, agreed industry standard method. Consequently, the approach taken to CEA varies between applications. This Advice Note sets out a staged process that applicants may wish to adopt in CEA for NSIPs. It complements the advice provided in the Planning Inspectorate's Advice Note 9: Rochdale Envelope\(^3\).

This Advice Note seeks to provide:
- a brief description of the legal context and obligations placed on an applicant, with respect to cumulative effects under national planning policy and the EIA Regulations\(^4\);
- an overview of the CEA process that applicants may wish to adopt for NSIPs; and
- advice regarding a staged approach and the use of consistent template formats for documenting the CEA within an applicant’s Environmental Statement (ES).

Contents
1. Legal Context and Obligations Placed on an Applicant (Page 2)
2. Overview of the CEA Process for NSIPs (Page 3)
3. Staged Approach and Formats for CEA (Page 4)
4. Data Protection (Page 10)

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1. EIA Directive 2014/52/EU which amends EIA Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment
2. The EIA Regulations include transitional provisions for Proposed Developments that have commenced an EIA process under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009
4. The Planning Inspectorate's Advice Note 10 deals with habitats regulations assessment
This Advice Note should be read in conjunction with the EIA Directive, the EIA Regulations, the PA2008, relevant Government Planning Policy, guidance from Consultation Bodies, European Commission guidance, relevant institute guidelines and emerging industry guidance. To assist, some documents are referenced in the footnotes but it will be for applicants to ensure that all relevant policy, legislation and guidance has been applied.

1. Legal Context and Obligations Placed on an Applicant

EU Directive, Regulatory and Planning Policy Framework

1.1 The EIA Regulations implement the EU Directive “on the assessment of the effects of certain public and private projects on the environment” (usually referred to as the EIA Directive) for the PA2008 regime.

1.2 Schedule 3 paragraph 1(b) of the EIA Regulations, which refers to the selection criteria for screening Schedule 2 development, states that ‘the characteristics of development must be considered with particular regard to… …(b) the cumulation with other existing development and/or approved development’. Schedule 3 paragraph 3(g), which relates to the ‘Types and characteristics of the potential impact’ also requires ‘(g) the cumulation of the impact with the impact of other existing and/or approved development’ to be taken into account. The EIA Regulations expand the definition set out in Annex III of the Directive, which simply refers to ‘the cumulation with other projects’.

1.3 In relation to the information for inclusion in an ES, Schedule 4 paragraph 5 of the EIA Regulations requires ‘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 text goes on to state that ‘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.’

1.4 The need to consider cumulative effects in planning and decision making is set out in planning policy, in particular the National Policy Statements (NPSs). For example, the Overarching NPS for Energy (EN-1) paragraph 4.2.5 states that “When considering cumulative effects, the ES should provide information on how the effects of the applicant’s proposal would combine and interact with the effects of other development (including projects for which consent has been sought or granted, as well as those already in existence)”.

1.5 NPS EN-1 paragraph 4.2.6 goes on to state that the Secretary of State should consider how the “accumulation of, and interrelationship between effects might affect the environment, economy or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place.”

5. For example: The relevant National Policy Statements (England and Wales); National Planning Policy Framework (NPPF) (England); Planning Policy Wales (Wales)


10. For the purposes of this advice note, ‘other existing development and/or approved development’ is taken to include existing developments and existing plans and projects that are ‘reasonably foreseeable’
1.6 The NPSs\(^4\) variously state that applicants should, amongst other matters, consider mitigation for cumulative effects in consultation with other developers; assess cumulative effects on health; give due consideration to other NSIPs within their region; consider positive and negative effects; and consider environmental limits (e.g. the potential for water quality effects to arise due to incremental changes in water quality).

2. Overview of the CEA Process for NSIPs

2.1 The scale and nature of NSIPs will typically dictate a broad spatial and temporal zone of influence (ZOI). The scale and complexity of an NSIP may result in a complex CEA process that takes into account a dynamic baseline environment that goes beyond a static assessment of the current situation. There may be considerable variation in the approach to the identification and assessment of ‘other existing development and/or approved development’ as part of the CEA process.

2.2 This Advice Note presents a four-stage approach to CEA that applicants may wish to adopt. The stages are illustrated in the figure below and outlined in more detail in Section 3 of this Advice Note. Stages 1 – 2 should ideally be undertaken early in the pre-application phase and ideally before requesting a Scoping Opinion. Applicants should make use of the EIA scoping process to provide information on the CEA and ensure that it is appropriately focussed and proportionate. Additional focussed assessment may be required during examination for newly identified ‘other existing development and/or approved development’ with potential to give rise to significant effects. This may be requested by the Examining Authority.

2.3 The Inspectorate has produced templates which can be used by applicants to document the staged CEA process and to aid consistency in the approach. The Templates are provided at Appendix 1 and Appendix 2 of this Advice Note. The templates ensure that information on the outcomes from each stage of the process are clearly presented in a standardised format and provide benefit to those involved in the application and examination. Applicants are encouraged to use them in order to ensure a robust assessment of the effects and to facilitate meaningful consultation during the pre-application stage and beyond. The aim is to assist the Secretary of State in making the decision by presenting the CEA process in a transparent and easy to understand format.

2.4 The Inspectorate’s proposed CEA process is staged and sequential, however, the assessment should be iterative and may need to be repeated a number of times during the preparation of a Development Consent Order (DCO) application and on occasion during the examination.

The Staged approach to the CEA process

2.5 The recommended process focuses on cumulative effects with ‘other existing development and/or approved development’. This should not be confused with the assessment of interrelationships between aspects for the proposed NSIP (e.g. between ecology and hydrology). These will typically have been assessed as part of the specialist aspect chapters. Stages 1 and 2 are presented sequentially in this advice note but it may be practicable to combine these stages and undertake them simultaneously.
3. Staged Approach and Formats for CEA

3.1 Stage 1: Establishing the long list of ‘other existing development and/or approved development’

3.1.1 ‘Other existing development and/or approved development’ likely to result in significant cumulative effects should be identified and assessed by the applicant in the CEA. In order to establish the relevant ‘other existing development and/or approved development’ the applicant should determine the Zone of Influence (ZOI) for each environmental aspect considered within the ES. The ZOI for each aspect should be documented within the ES. For clarity a table format is recommended (see Table 1 below).

3.1.2 The Inspectorate also recommends that the ZOI for each aspect is mapped, using GIS software. The ZOI (once generated) will enable a transparent and justifiable area of search within which ‘other existing development and/or approved development’ may be located. The applicant may wish to present this information (in plans or figures) as an appendix to the ES.

Table 1: Example ZOI summary table entry

<table>
<thead>
<tr>
<th>Environmental aspect</th>
<th>Zone of Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Quality</td>
<td>e.g. Construction dust and vehicle emissions – ZOI defined by relevant institute guidelines.</td>
</tr>
<tr>
<td></td>
<td>e.g. Operational plant emissions – ZOI identified by air quality modelling.</td>
</tr>
<tr>
<td>Heritage</td>
<td>e.g. Physical effects on buried archaeology – ZOI defined by relevant institute guidelines.</td>
</tr>
</tbody>
</table>

3.1.3 The ZOI for each aspect should support a desk study exercise to identify the long list of other existing development and/or approved development in the form of planning applications, relevant development plans and any other available and relevant sources (e.g. consultation response information particularly from a relevant planning authority). Matrix 1 at Appendix 1 may be used to capture this information.

3.1.4 ‘Other existing development and/or approved development’ types that should be established for the CEA are listed in Table 2 below. The Planning Inspectorate acknowledges that the availability of information necessary to conduct the CEA will depend on the current status of the ‘other existing development and/or approved development’. The applicant should clearly state any assumptions or limitations in relation to the ‘other existing development and/or approved development’ data collected. It is recommended that a level of certainty, reflecting the availability of detail and information necessary for the assessment, is assigned to each development and recorded.

3.1.5 Table 2 provides criteria that may be used to indicate the certainty that can be applied to each ‘other existing development and/or approved development’. The criteria are assigned in tiers which descend from Tier 1 (most certain) to Tier 3 (least certain) and reflect a diminishing degree of certainty which can be assigned to each development. It is recommended that applicants record the assigned tier using the template provided at Appendices 1 and 2. This information will clearly illustrate the level of certainty the applicant has applied to the information available.
Table 2 – Assigning certainty to ‘other existing development and/or approved development’

<table>
<thead>
<tr>
<th>Tier 1</th>
<th>Tier 2</th>
<th>Tier 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>• under construction*;</td>
<td>• projects on the Planning Inspectorate’s Programme of Projects where a scoping report has been submitted.</td>
<td>• projects on the Planning Inspectorate’s Programme of Projects where a scoping report has not been submitted.</td>
</tr>
<tr>
<td>• permitted application(s), whether under the PA2008 or other regimes, but not yet implemented;</td>
<td>• identified in the relevant Development Plan (and emerging Development Plans - with appropriate weight being given as they move closer to adoption) recognising that there will be limited information available on the relevant proposals;</td>
<td>• identified in other plans and programmes (as appropriate) which set the framework for future development consents/approvals, where such development is reasonably likely to come forward.</td>
</tr>
<tr>
<td>• submitted application(s) whether under the PA2008 or other regimes but not yet determined</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Decreasing level of detail likely to be available

* Where other projects are expected to be completed before construction of the proposed NSIP and the effects of those projects are fully determined, effects arising from them should be considered as part of the baseline and may be considered as part of both the construction and operational assessment. The ES should clearly distinguish between projects forming part of the dynamic baseline and those in the CEA.

Development related to the NSIP (including permitted development)

A proposed NSIP may comprise multiple, geographically dispersed development sites (e.g. a development site supported by offsite highways improvements and freight consolidation centres), including development for which consent is sought under a different planning regime (e.g. an application under the Town and Country Planning Act). In these circumstances, the applicant should consider the potential for cumulative effects to arise due to the interactions between different components of their NSIP, as well as with ‘other existing development and/or approved development’.

Where the proposed NSIP comprises elements of work classed as permitted development, the applicant should ensure that these are included within the CEA, if they are not already considered within the individual aspect based assessments.
3.2 Stage 2: Establishing a shortlist of ‘other existing development and/or approved development’

3.2.1 Following Stage 1, applicants should apply threshold criteria to the long list, in order to establish a shortlist of other existing development and/or approved development and to ensure that the CEA is proportionate. The criteria should be used to guide a decision as whether to include or exclude ‘other existing development and/or approved development’ that falls within the proposed NSIP’s ZOI from further assessment.

3.2.2 Ideally, the criteria used to determine whether to include or exclude other existing development and/or approved development should be presented at an early stage, such as within the applicant’s scoping report. This will enable the Planning Inspectorate to provide its opinion on the criteria.

3.2.3 The criteria should be structured to support a proportionate assessment. It should ensure that only other existing and/or approved development which is likely to result in a significant cumulative effect is taken forward to the assessment stage. Care should be taken in this regard, it is important not to exclude consideration of effects deemed individually not significant from the CEA, since the cumulative effect of a number of non-significant effects could in itself be significant.

3.2.4 The criteria used to determine whether to include or exclude ‘other existing development and/or approved development’ from further assessment should be clearly presented. It should be prepared having regard to relevant policy or guidance documents and in consultation with the appropriate statutory consultation bodies (particularly the local planning authority). The criteria should address the following:

- **Temporal scope:** The applicant may wish to consider the relative construction, operation and decommissioning programmes of the ‘other existing development and/or approved development’ identified in the ZOI together with the NSIP programme, to establish whether there is overlap and any potential for interaction.

- **Scale and nature of development:** The applicant may wish to consider whether the scale and nature of the ‘other existing development and/or approved development’ identified in the ZOI are likely to interact with the proposed NSIP. Statutory definitions of major development and EIA screening thresholds may be of assistance when considering issues of scale.

- **Other factors:** The applicant should consider whether there are any other factors, such as the nature and/or capacity of the receiving environment that would make a significant cumulative effect with ‘other existing development and/or approved development’ more or less likely and may consider utilising a source-pathway-receptor approach to inform the assessment.

- **Documentation:** The CEA shortlisting process may be documented using Matrix 1 (Appendix 1). The reasons for excluding any development from further consideration should be clearly recorded. This will provide decision makers, consultation bodies and members of the public with a clear record of ‘other existing development and/or approved development’ considered and the applicant’s decision making process with respect to the need for further assessment.

3.2.5 Professional judgement may also be used to supplement the threshold criteria and in order to avoid excluding ‘other existing development and/or approved development’ that is:

- Below the threshold criteria limits but has characteristics likely to give rise to a significant effect; or
- Below the threshold criteria limits but could give rise to a cumulative effect by virtue of its proximity to the proposed NSIP.

3.2.6 Similarly, professional judgement could be applied to support excluding ‘other existing development and/or approved development’ that exceeds the thresholds but may not give rise to discernible effects. All of the ‘other
existing development and/or approved development’ considered should be documented and the reasons for inclusion or exclusion should be clearly stated.

3.2.7 Where the applicant has identified ‘other existing development and/or approved development’ with the potential to give rise to a significant cumulative effect, the applicant should proceed to Stage 3 – Information Gathering. The applicant should consult on the ‘shortlist of other existing development and/or approved development’ for assessment with the relevant consultation bodies including the local planning authorities.

Consultation Applicants are strongly advised to take advantage of pre-application consultation with the consultation bodies including the relevant local planning authority(ies) and other relevant organisations, to ensure that the shortlist of ‘other existing development and/or approved development’ identified for CEA is comprehensive and accurate. Applicants should ideally use completed matrices to identify and discuss issues with the consultation bodies and other relevant organisations. Ultimately this approach should also assist with identifying a robust suite of mitigation measures submitted with the application for development consent that might otherwise remain unresolved and require exploration during the examination. This process may need to be repeated during the pre-application stage and should be based on the most up to date list of developments available. The CEA should include a summary of any such consultations undertaken and evidence of any agreements reached.

3.3 Stage 3: Information Gathering

3.3.1 Stage 3 of the CEA process requires the applicant to gather information on each of the ‘other existing development and/or approved development’ shortlisted at Stage 2. As part of the Stage 3 process the applicant is expected to compile detailed information, to inform the Stage 4 assessment. The information captured should include but not be limited to:

- 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 development and/or approved development’.

3.3.2 The relevant data is likely to be available from a variety of sources including the website of the relevant local planning authority(ies), the Planning Inspectorate’s website and potentially through direct liaison with other stakeholders including other local authorities, statutory bodies and relevant applicants/developers. Key details from the information gathered should be captured and presented in an accessible format, for example in line with Matrix 2 (Appendix 2).

3.4 Stage 4: Assessment

3.4.1 The applicant should assess the cumulative effects of the proposed NSIP with the ‘other existing development and/or approved development’ identified in Stages 1-3 of the process outlined above. As highlighted above, there may be some overlap and iteration between the various stages of the CEA.

3.4.2 The assessment should be undertaken to an appropriate level of detail, commensurate with the information available at the time of assessment. Information on some proposals may be limited and such gaps should be acknowledged within the assessment. The assessment will move from a more qualitative to a more quantitative
assessments as the availability and/or certainty of information increases. Any uncertainty in the assessments should be clearly documented.

3.4.3 An assessment should be provided for all Tier 1 and Tier 2 ‘other existing development and/or approved development’, where possible. For ‘other existing development and/or approved development’ falling into Tier 3, the applicant should aim to undertake an assessment where possible, although this may be qualitative and at a very high level. The assessment should be carried out with reasonable effort and should be clearly documented in the ES for example using the format presented in Matrix 2 (Appendix 2).

3.4.4 Certain assessments, such as transport and associated operational assessments of vehicular emissions (including air and noise) may inherently be cumulative assessments. This is because they may incorporate modelled traffic data growth for future traffic flows. Where these assessments are comprehensive and include a worst case within the defined assessment parameters, no additional cumulative assessment of these aspects is required. Any such assumptions should be clearly stated in the technical aspect chapter and CEA chapter. However, the assessment should be kept under review in the event that any new ‘other existing development and/or approved development’ is identified that has potential to exceed the previous worst case assumptions based on growth data (e.g. not previously included in modelled forecasts). This may trigger the need to update previous modelling work.

3.4.5 In preparing the assessment, it should not be forgotten that a key purpose of the ES is to enable the examination necessary to inform decisions (the Secretary of State must examine the environmental information in reaching a reasoned conclusion on the significant effects of the proposed development)\(^1\). Whilst applicants should make a genuine attempt to assess the effects arising from multiple, individually non-significant effects, the CEA should be proportionate and should not be any longer than is necessary to identify and assess any likely significant cumulative effects.

3.4.6 Where significant cumulative effects between the proposed NSIP and ‘other existing development and/or approved development’ are only likely to arise in relation to one environmental aspect area, the assessment should focus on that issue only. The assessment should be proportionate to the effect being assessed and some effects will need only very brief information to indicate that they have been considered. A precautionary but pragmatic approach, based around the best available evidence, should be used where baseline data or data about the environmental effects of ‘other existing development and/or approved development’ are incomplete, although applicants should be able to demonstrate that they have attempted to source this data where relevant.

### The co-ordinated approach

Where an Applicant is required to submit a Habitats Regulations Assessment (HRA) alongside an ES. The Applicant should ensure that information is not duplicated between assessments. The use of shared datasets is recommended.

### 3.4.7 Significance Criteria:

The significance criteria used to assess cumulative effects should consider the capacity of the receiving environment and receptors to accommodate changes that are likely to occur. The terminology used to determine significance should be explicit and support a clear presentation and understanding of the outcome of the CEA.

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\(^1\) Separate consideration may be required of the accumulation or inter-relationship of these effects on an individual set of receptors e.g. as part of a socio-economic assessment.

\(^2\) Regulation 21(1) of the Infrastructure Planning (EIA) Regulations 2017
3.4.8 Where bespoke criteria are developed for determining significance of cumulative effects, consideration needs to be given to the following:

- the duration of effect, i.e. will it be temporary or permanent;
- the extent of effect, e.g. the geographical area of an effect;
- the type of effect, e.g. whether additive (loss of 2 pieces of woodland of 1ha, resulting in 2ha cumulative woodland loss) or synergistic (two discharges combine to have an effect on a species not affected by discharges in isolation);
- the frequency of the effect;
- the ‘value’ and resilience of the receptor affected; and
- the likely success of mitigation.

3.4.9 Assessment Cut-off Date: It is understood that applicants are required to stop assessment work at a particular point in time in order to be able to finalise and submit an application. The applicant should state any assessment cut-off date. However, where new ‘other existing development and/or approved development’ comes forward following the stated assessment cut-off date, the Examining Authority may request additional information during the examination in relation to effects arising from such development. The applicant should be aware of the potential need to conduct additional assessments to reduce delays and questions during examination.

3.4.10 Mitigation and monitoring: The Applicant should describe the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant cumulative effects and, where appropriate, any proposed monitoring arrangements. The means of securing delivery of these measures should be explained. This should be documented within Matrix 2 (Appendix 2). All mitigation relied upon in the assessment should be described and presented in the ES. Where mitigation and/or monitoring is proposed to be secured and delivered through a requirement in the draft DCO, e.g. within a Construction Environmental Management Plan (CEMP), rather than embedded in the design of the NSIP, the draft requirement should be clearly referenced in the mitigation column of the applicant’s Matrix 2 and/or as part of an applicant’s overarching schedule of mitigation.

3.4.11 As a minimum, applicants are expected to include the mitigation necessary to address impacts associated with their proposed NSIP. However, apportionment of effect and mitigation between the proposed NSIP and ‘other existing development and/or approved development’ included in the CEA may be acceptable in certain cases, subject to robust justification and agreement with the relevant consultation bodies and/or other applicant(s).

3.4.12 Where possible, applicants should consider opportunities to develop holistic mitigation strategies in collaboration with other relevant bodies identified in the CEA, for example, NPS EN-3 paragraph 2.6.120 which advocates the use of shared cable corridors to minimise ‘the cumulative effects of multiple cable routes …crossing the subtidal zone’. The relevant method by which to secure such mitigation should be agreed by the applicant in consultation with their legal advisors and other relevant bodies.
4. Data Protection

4.1. If an application is accepted to progress to examination by the Secretary of State, it will be published on the National Infrastructure Planning website (https://infrastructure.planninginspectorate.gov.uk/)

4.2. Applicants must ensure that the information provided with their application complies with data protection legislation and that any confidential or personal information of private individuals is treated appropriately – this may include redaction or obtaining consent from the individuals concerned regarding the processing of their personal information.

Terms and abbreviations used in this Advice Note

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Applicant</td>
<td>The party applying for development consent. Responsible for carrying out the necessary preparatory work in support of the application to enable the competent authority to carry out its duties</td>
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<tr>
<td>CEA</td>
<td>Cumulative Effects Assessment</td>
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<tr>
<td>CEMP</td>
<td>Construction Environmental Management Plan</td>
</tr>
<tr>
<td>DCO</td>
<td>Development Consent Order</td>
</tr>
<tr>
<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<tr>
<td>ES</td>
<td>Environmental Statement</td>
</tr>
<tr>
<td>ExA</td>
<td>Examining Authority</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographical Information Systems</td>
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<tr>
<td>HRA</td>
<td>Habitats Regulations Assessment</td>
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<tr>
<td>NPPF</td>
<td>National Planning Policy Framework</td>
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<tr>
<td>NPS</td>
<td>National Policy Statement(s)</td>
</tr>
<tr>
<td>NSIP</td>
<td>Nationally Significant Infrastructure Project(s)</td>
</tr>
<tr>
<td>ZOI</td>
<td>Zone of Influence</td>
</tr>
</tbody>
</table>

Further information

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