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 a suite of advice provided by the Planning Inspectorate.

This is a new Advice Note. 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 Article 4(3) and Article 5(1) of the Environmental Impact Assessment (EIA) Directive. 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 2009 (as amended) (“the EIA Regulations”).

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 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 guidance provided in the Planning Inspectorate’s Advice Note 9: Rochdale Envelope.

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;
- 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).

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1. EIA directive (85/337/EEC) as amended by the Council Directives 97/11/EC, 2003/35/EC and 2009/31/EC and codified by 2011/92/EU. The EIA Directive has recently been amended. The UK has until May 2017 to transpose the new directive into UK legislation. The amended directive does not change the requirement to address cumulative effects.
3. 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 Statutory Consultees, 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 14 of the EIA Regulations, which refers to the selection criteria for screening Schedule 2 development, states that ‘the characteristics of the development must be considered having regard, in particular, to… …(b) the cumulation with other development.

1.3 In relation to the information for inclusion in an ES, Schedule 4 Part 1 of the EIA Regulations lists ‘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 or temporary, positive and negative effects of the development resulting from:

(a) the existence of the development;

(b) the use of natural resources;

(c) the emission of pollutants, the creation of nuisances and the elimination of waste,’ (paragraph 20) and ‘a description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment’ (paragraph 21).

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 (NPS). 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.”

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


6. Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions, European Commission 1999


9. For the purposes of this advice note, ‘other development’ is taken to include plans and projects
1.6 The NPSs’ 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) for an NSIP, resulting in an often complex CEA process. There may be considerable variation in the approach to the identification and assessment of ‘other development’ as part of the CEA process.

2.2 This Advice Note sets out a four stage approach to CEA that applicants may wish to adopt. The stages are illustrated in Table 1 and outlined in more detail in Section 3 below. Stages 1 – 2 should ideally be undertaken early in the pre-application phase. Additional focussed assessment may be required during examination for newly identified ‘other development’ with potential to give rise to significant effects. This may be requested by the Examining Authority.

2.3 Template formats for documenting the staged CEA process in a consistent fashion are provided at Appendix 1: Matrix 1 - Identification of ‘other development’ for CEA; and Appendix 2: Matrix 2 - Assessment matrix. These template matrices provide a means of clearly presenting the outcomes from each stage of the process in a standardised tabular form for the benefit of all those involved in the application and examination. They can be used by applicants to ensure a robust assessment of effects and can be used to facilitate meaningful consultation during the pre-application stage and beyond. The aim is to make the CEA process transparent and easy to understand, in order to assist the Secretary of State in making the decision.

2.4 Although the process illustrated is in sequential stages, the applicant should be aware that the process is both iterative and on-going and may need to be repeated a number of times during the preparation of a Development Consent Order (DCO) application and during the examination phase.
<table>
<thead>
<tr>
<th>CEA stage</th>
<th>Activity</th>
<th>Responsible parties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stage 1: Establish the NSIP’s ZOI and identify long list of ‘other development’</strong></td>
<td><strong>Key activity:</strong> Identifying a long list of ‘other development’ to support Stages 2-3. Applicant undertakes desk study to establish ZOI of scheme for environmental topics proposed to be scoped into the EIA. The ZOI analysis for the project is documented e.g. in a table describing the ZOI for each topic. Ideally this is supported by Geographical Information Systems (GIS) mapping. The applicant undertakes a desk study of planning applications, development plan documents, relevant development frameworks and any other available sources to identify ‘other development’ within the ZOI. Key information is documented in Matrix 1. This should include the level of certainty or tier assigned to the ‘other development’. The applicant consults with relevant planning authority(ies) and statutory consultees regarding the list of ‘other development’. Stage 1 should ideally be completed prior to the formal submission of a request for a Scoping Opinion to the Secretary of State.</td>
<td>Applicant, Statutory consultees, Planning Inspectorate</td>
</tr>
<tr>
<td><strong>Stage 2: Identify shortlist of ‘other development’ for CEA</strong></td>
<td><strong>Key activity:</strong> Develop a shortlist of ‘other development’ for CEA by applying inclusion/exclusion criteria to the Stage 1 list of ‘other development’. Applicant considers inclusion/exclusion threshold criteria as set out in section 3.2 of this advice note to assess whether ‘other development’ has any potential to give rise to significant cumulative effects by virtue of overlaps in temporal scope; due to the scale and nature of the ‘other development’/receiving environment; or any other relevant factors. A shortlist of ‘other development’ for CEA is identified. Matrix 1 is updated. Documented information may be high level at this stage, outlining key issues to take forward to Stages 3-4. Proposed inclusion/exclusion criteria should ideally be finalised prior to the formal submission of a request for a Scoping Opinion to the Secretary of State. The applicant consults with relevant planning authority(ies) and statutory consultees regarding the shortlisted ‘other development’.</td>
<td>Applicant, Statutory consultees, Planning Inspectorate</td>
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<tr>
<td><strong>Stage 3: Information Gathering</strong></td>
<td><strong>Key activity:</strong> Applicant gathers available information regarding the shortlisted ‘other development’ to inform the CEA. Information should be documented and may be used to update Matrix 2.</td>
<td>Applicant</td>
</tr>
<tr>
<td><strong>Stage 4: Assessment</strong></td>
<td><strong>Key activity:</strong> CEA of shortlisted ‘other development’. Applicant reviews each of the ‘other development’in turn to assess whether cumulative effects may arise and documents this using Matrix 2. Mitigation measures should be identified in relation to adverse cumulative effects. Matrix 2 should clearly signpost to the relevant means of securing mitigation e.g. to the DCO Requirements and associated mitigation plans. It may be appropriate to consider the apportionment of effect between the proposed NSIP and the ‘other development’ e.g. is the contribution to the effect demonstrably related to one development or is there an equal contribution from either development. This will require professional judgement and should not be used as a means to shift the burden of mitigation. The applicant may wish to consult with applicants/developers of ‘other development’ to identify means to jointly address the mitigation of significant adverse cumulative effects and the means to ensure delivery.</td>
<td>Applicant</td>
</tr>
</tbody>
</table>
2.5 The recommended process focuses on cumulative effects with ‘other development’. This should not be confused with the assessment of interrelationships between topics for the proposed NSIP (e.g. between ecology and hydrology). These will have been assessed as part of the specialist topic chapters.

3. Staged Approach and Formats for CEA

3.1 Stage 1: Establish the NSIP’s ZOI and Long List of ‘Other Development’

3.1.1 ‘Other development’ with potential to give rise to cumulative effects should be identified by the applicant with reference to the proposed NSIP ZOI. The applicant should determine the likely spatial ZOI for each environmental topic area within the ES. As a minimum, the ZOI for each topic should be documented. For clarity a table format is recommended (see Table 2 below).

3.1.2 Ideally, the ZOI for each topic should also be mapped, using GIS software in order to generate a transparent and auditable area of search for ‘other development’. The applicant may wish to include these maps as appendices to the ES.

<table>
<thead>
<tr>
<th>Environmental topic</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 Having established and documented the NSIP’s ZOI for each topic in the ES, the applicant should obtain available information on ‘other development’ by reference to planning applications, relevant development plans and any other available sources including stakeholder consultations, in particular with the relevant local planning authority(s). Matrix 1 (Appendix 1) may be used to capture this information.

3.1.4 ‘Other development’ types that should be considered in the CEA are listed in Table 3 below. It is acknowledged that the availability of information necessary to conduct the CEA will depend on the current status of the ‘other development’. The applicant should clearly state any assumptions or limitations in relation to the ‘other development’ data collected and it is recommended that the level of certainty assigned to each development is recorded.

3.1.5 An example of assigning certainty is set out in Table 3. The ‘other development’ is grouped into tiers, reflecting the likely degree of certainty attached to each development, with Tier 1 being the most certain. ‘Other development’ falling into Tier 3 is least certain and most likely to have limited publicly available information to inform assessments. It is recommended that applicants record the assigned tier in the template matrices at Appendix 1 and 2, to illustrate the level of certainty applicable to the information available for the ‘other development’.
Table 3: ‘Other Development’ for inclusion in CEA

<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></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 much information on any relevant proposals will be limited;</td>
</tr>
<tr>
<td>• submitted application(s) whether under the PA2008 or other regimes but not yet determined;</td>
<td></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>
</tbody>
</table>

* 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 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. a town and country planning application). 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 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 considered within the individual topic based assessments.
3.2 Stage 2: Identify Shortlist of ‘Other Development’ for CEA

3.2.1 In order to ensure that the CEA is proportionate, it may be appropriate for applicants to apply threshold criteria to assist in deciding whether to include or exclude ‘other development’ that falls within the proposed NSIP’s ZOI from further assessment.

3.2.2 Ideally, the detail of any inclusion or exclusion criteria proposed to be adopted should be explained at an early stage, such as within the applicant’s scoping request, as this would enable the Secretary of State to comment on the criteria. The applicant should provide transparent justification for the decision to exclude any ‘other development’ from further assessment.

3.2.3 Applicants should not use exclusion criteria to exclude effects deemed individually not significant from the CEA, since by definition the cumulative effect of a number of non-significant effects could in itself be significant.

3.2.4 Where the applicant is considering applying threshold criteria, it is recommended that the applicant has regard to any relevant policy or guidance documents and, in consultation with the appropriate statutory consultees (particularly the local planning authority) considers the following:

- The temporal scope of ‘other development’;
- The scale and nature of ‘other development’; and
- Any other relevant factors.

3.2.5 Professional judgement may help in the application of threshold criteria in order to avoid excluding ‘other development’ that is:

- Close to the threshold limits but has characteristics likely to give rise to a significant effect; or
- 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 ‘other development’ that exceeds the thresholds but may not give rise to discernible effects. All of the ‘other development’ considered should be documented and the reasons for inclusion or exclusion should be clearly stated.

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

3.2.8 Scale and nature of development: The applicant may wish to consider whether the scale and nature of the developments identified in the ZOI are likely to interact with the proposed NSIP and to result in a cumulative effect. Statutory definitions of major development and EIA screening thresholds may be of assistance when considering issues of scale.

3.2.9 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 development’ more or less likely and may consider a source-pathway-receptor approach to inform the assessment.

3.2.10 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, consultees and members of the public with a clear record of ‘other development’ considered and the applicant’s decision making process with respect to the need for further assessment.
3.2.11 Where the applicant has identified ‘other 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 developments for assessment with the relevant planning authorities, statutory consultees and any other relevant parties.

Consultation Applicants are strongly advised to take advantage of pre-application consultation with the relevant local planning authority(ies), statutory consultees and any other relevant organisations, to ensure that the list of ‘other development’ identified for CEA is comprehensive and accurate. Applicants should ideally use completed matrices to identify and discuss issues with consultees, including the relevant statutory consultees. 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 possible. 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 The applicant is expected to compile detailed information on the ‘other development’ shortlisted, 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 development’.

3.3.2 The relevant data is likely to be sourced from the website of 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, for example within Matrix 2 (Appendix 2) for inclusion in the ES.

3.4 Stage 4: Assessment

3.4.1 The applicant should assess the cumulative effects of the proposed NSIP with the ‘other 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, moving from a more quantitative to a more qualitative assessment as the availability and/or certainty of information decreases. The uncertainty in such assessments should be clearly documented.

3.4.3 An assessment should be provided for all Tier 1 and Tier 2 ‘other development’; where possible. For ‘other development’ falling into Tier 3, the applicant should seek to provide assessment where possible, although this may be at a very high level. The assessment may be documented in Matrix 2 Appendix 2.

3.4.4 Certain assessments, such as transport and associated operational assessments for vehicular emissions (including air and noise) may inherently be cumulative assessments. This is because they may incorporate modelled traffic data growthed for future traffic flows. Where these assessments are comprehensive and worst case within the defined assessment parameters, no additional cumulative assessment of these topics is required. Any such assumptions should
be clearly stated in the specialist topic chapter and CEA chapter. However, the assessment should be kept under review in the event that any new ‘other development’ is identified that has potential to exceed the previous worst case assumptions based on growthed 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 EIA is to inform the examination and decision making process (its findings must be ‘taken into consideration’\(^\text{11}\)). Whilst applicants should make a genuine attempt to assess the effects arising from multiple, individually non-significant effects, the CEA should be proportionate and not be any longer than is necessary to identify and assess any likely significant cumulative effects that are material to the decision making process, rather than cataloguing every conceivable effect that might occur.

3.4.6 Where significant cumulative effects between the proposed NSIP and ‘other development’ are only likely to arise in relation to one environmental topic area, the assessment should focus on that issue only. Effects which have little or no significance for the proposed NSIP will need only very brief treatment to indicate that their possible relevance has 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 development’ are incomplete, although applicants should be able to demonstrate that they have attempted to source this data where relevant.

3.4.7 **Significance Criteria:** The significance criteria used to assess likely cumulative effects should consider the capacity of environmental resources and receptors to accommodate changes that are likely to occur. The terminology used to determine significance should be explicit and ensure a clear understanding of the outcome of the CEA.

3.4.8 Where specific 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 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 further assessments to reduce delays and questions during examination.

3.4.10 **Mitigation:** The applicant should describe the measures proposed to mitigate significant adverse cumulative effects. This should be documented within Matrix 2 (Appendix 2). Where mitigation is proposed to be secured and delivered through a requirement in the draft DCO, or within a Construction Environmental Management Plan (CEMP),

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10. 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.

11. Regulation 3(2) of the Infrastructure Planning (EIA) Regulations 2009 (as amended)
rather than embedded in the design of the NSIP, the draft requirement should be clearly identified 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 development’ included in the CEA may be acceptable in certain cases, subject to robust justification and agreement with the relevant statutory consultee and/or other applicant(s).

3.4.12 Where possible, applicants should consider opportunities to develop holistic mitigation strategies in collaboration with other developers identified in the CEA, for example, NPS EN-3 paragraph 2.6.120 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.

Further information
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