

SECTION 5: GUIDANCE FOR ASSESSING CUMULATIVE LANDSCAPE AND VISUAL EFFECTS

- 5.1 Although this landscape sensitivity and capacity study has identified that parts of the National Park may be able to accommodate renewable energy, telecoms masts and tourism developments, care must be taken to prevent unacceptable (significant) cumulative landscape and visual effects arising either from multiple developments of the same type or multiple developments of different types.
- 5.2 This area of landscape and visual assessment is evolving and there is no prescribed approach since the issues depend on the specific characteristics of both the proposed developments and the location in which they are to be sited. It is not possible to provide generic Guidance on numbers or distances between proposed developments and each proposal should be considered on a case-by-case basis. This is normally achieved through a cumulative landscape and visual assessment as part of the environmental impact assessment (EIA) process. The requirement for consideration of cumulative landscape and visual effects is a matter for agreement at the scoping stage of the assessment through discussion with the relevant planning authority and consultation bodies.
- 5.3 The results of an assessment of the cumulative landscape and visual effects of any development should be reviewed against the landscape strategy and objective for the LCA/LCAs within which it lies, as well as those for neighbouring LCAs. This is important to determine whether or not the proposed development (in combination with/or addition to the various other developments) fits with the landscape strategy identified for the LCA or whether it would conflict with the strategy.

Definition of Cumulative Landscape and Visual Effects

- 5.4 The assessment of cumulative landscape and visual effects⁴⁴ deals with the effects of a proposed development interacting with the effects of other development(s) (associated with or separate to the proposed development). This is in recognition that the overall combined landscape and visual effects of a number of similar developments concentrated in one area may be greater than the sum of the effects from the same developments if considered individually.
- 5.5 GLVIA3⁴⁵ (para. 7.3) refers to the Scottish Natural Heritage (SNH) definition of cumulative effects as set out in their 2012 paper⁴⁶:
- **Cumulative effects** are ‘the additional changes caused by a proposed development in conjunction with other similar developments or as the combined effect of a set of developments, taken together’ (SNH, 2012: 4);
 - **Cumulative landscape effects** are effects that ‘can impact on either the physical fabric or character of the landscape, or any special values attached to it’ (SNH, 2012: 10); and
 - **Cumulative visual effects** are effects that can be caused by combined visibility, which ‘occurs where the observer is able to see two or more developments from one view-point’ and/or sequential effects which ‘occur when the observer has to move to another viewpoint to see different developments’ (SNH, 2012: 11). (GLVIA3 Paragraph 7.3)

Requirement to Assess Cumulative Landscape and Visual Effects

- 5.6 The assessment of cumulative effects is set within the framework of EIA⁴⁷. EIA is a methodical approach to undertaking an assessment of the likely significant impacts that a proposed project may have on the environment; thus enabling decision makers to take into account these impacts when considering applications.

⁴⁴ Alternatively referred to as cumulative landscape and visual impact assessment (CLVIA)

⁴⁵ Landscape Institute and Institute for Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, 3rd Edition, Routledge

⁴⁶ SNH (2012) Assessing the cumulative impact of onshore wind energy development, Inverness: Scottish Natural Heritage

⁴⁷ The Town and Country Planning (Environmental Impact Assessment) Regulations 2011, consolidate previous regulations and set out the current requirements for meeting European Directive 85/337/EEC.

- 5.7 EIA is always required for developments which fall within Schedule 1 of the Regulations⁴⁸; however, none of the developments considered in this study fall within this category.
- 5.8 EIA may be required for developments that are located in, or partly in a 'sensitive area' or fall within Schedule 2 of the Regulations and exceed the relevant thresholds. Schedule 2 developments includes, energy producing installations such as wind farms, and tourist development with the following thresholds:
- *The threshold for wind energy developments is more than 2 turbines, or where the hub height of any turbine or any other structure exceeds 15 metres (Regulation 2(1))*
 - *The threshold for tourist development in relation to **static caravan/chalet parks** (permanent camp sites and caravan sites) is where the area of the development exceeds 1 hectare, or where the area of development exceeds 0.5 hectare if it is a permanent caravan site with more than 200 pitches⁴⁹*
- 5.9 Where a development would exceed these thresholds the proposal needs to be screened by the planning authority to determine whether significant effects are likely and hence whether an EIA is required. Projects listed in Schedule 2 which are located in, or partly in, a sensitive area also need to be screened, even if they are below the thresholds or do not meet the criteria.
- 5.10 **Mobile mast development (telecommunications infrastructure)** is also not listed in Schedule 2 and therefore is outside the Regulations; however, such developments may require planning permission particularly within the National Park. The local planning authority would then decide what level of assessment is required.
- 5.11 If a proposed development requires an EIA, then Schedule 4, Part 1 of the EIA Regulations states that: '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.....'⁵⁰
- 5.12 Circular 02/99, which provides Guidance on the Regulations, states: 'in judging... the effects of a development...local planning authorities should always have regard to the possible cumulative effects with any existing or approved development' (paragraph 46).
- 5.15 Once it has been established that an EIA is required, a scoping opinion should be sought from the local planning authority to determine what topics should be considered within the EIA; this will determine whether or not a landscape and visual impact assessment (LVIA) and assessment of cumulative landscape and visual effects is required. Detailed assessments of cumulative landscape and visual effects are required when it is considered that the proposal could result in a significant cumulative effect which could influence the eventual planning decision.
- 5.16 It is important to note that GLVIA3 advocates that whilst cumulative landscape and visual effects assessment can relate to any form of development, to keep the task reasonable and proportional it is important to focus on likely significant effects; 'the emphasis on EIA is on likely significant effects rather than on comprehensively cataloguing of every conceivable effect that might occur'⁵¹.
- 5.17 Significance is not absolute and can only be defined in relation to each development and its location. GLVIA3 notes that there are no hard and fast rules but generally:
- *'The most significant cumulative landscape effects are likely to be those that would give rise to changes in the landscape character of the study area of such an extent as to have major effects on its key characteristics and even, in some cases, to transform it into a different landscape type.'* (para 7.28)
 - *'Higher levels of significance may arise from cumulative visual effects related to developments that are in close proximity to the main project and are clearly visible together in views'*
 - *Developments that are highly inter-visible with overlapping ZTVs - even though the individual developments may be at some distance from the main project and from individual viewpoints, and*

⁴⁸ EIA Regulations 2011 (see footnote 2)

⁴⁹ <http://planningGuidance.planningportal.gov.uk/blog/Guidance/environmental-impact-assessment/considering-and-determining-planning-applications-that-have-been-subject-to-an-environmental-impact-assessment/annex/>

⁵⁰ Assessing the Cumulative Impact of Onshore Wind Energy Developments', Scottish Natural Heritage, March 2012

⁵¹ GLVIA3 Paragraph 7.5

when viewed individually not particularly significant, the overall combined effect on a viewer at a particular viewpoint may be more significant.’ (para 7.38)

Published Guidance

5.18 There are three main sources of published Guidance for undertaking an assessment of cumulative landscape and visual effects:

- *Scottish Natural Heritage (March 2012) Assessing the Cumulative Impact of Onshore Wind Energy Developments*
- *Landscape Institute and the Institute for Environmental Management and Assessment (IEMA) (Third Edition 2013) Guidelines for Landscape and Visual Impact Assessment (GLVIA3)*
- *LANDMAP Guidance Note 3: Guidance for Wales, Using LANDMAP for Landscape and Visual Impact Assessment of Onshore Wind Turbines (May 2013)*

Applying the Guidance

5.19 The developments considered in this study can broadly be broken into two ‘forms’ of development, ‘vertical’ development and ‘horizontal’ development as follows:

Vertical Development	Horizontal Development
Wind Energy Development	
	Static Caravan/Chalet Park Development
Mobile Mast Development	

5.20 The indicative approach outlined below can be used as a starting point for assessing the cumulative landscape and visual effects of any of these developments and identifies any differences in approach between the assessment of ‘vertical’ and ‘horizontal’ developments.

5.21 The assessment of cumulative landscape and visual effects for ‘vertical’ developments should broadly follow the Guidance produced by SNH (*Assessing the Cumulative Impact of Onshore Wind Energy Developments*) and that set out within GLVIA3 and LANDMAP Guidance Note 3. There is no specific Guidance for assessing the cumulative landscape and visual effects of field-scale solar PV energy developments or static caravan/chalet parks therefore it is recommended that assessment of ‘horizontal’ development should follow the Guidance set out within GLVIA3.

5.22 The scope of a cumulative assessment (level of detail that is required) should be agreed with the local planning authority and will be dependent upon the sensitivity of the site, the nature of the proposal and other consented and operational developments and the potential for significant cumulative effects (bearing in mind that the assessment should remain appropriate and proportionate).

Study Area

5.23 The establishment of the study area may depend a number of factors, as follows:

- The overall size and scale of the proposed new development
- The size and location of other existing and proposed developments in the landscape
- The topography of the landscape in which it is proposed
- The sensitivity of the landscape and neighbouring or more distant landscapes

5.24 The initial task in defining a study area is to identify all major developments (operational, consented or in planning) which may interact with the proposed development, giving rise to potential significant cumulative landscape and visual effects.

- 5.25 To do this it is necessary to identify the distance within which significant effects would be likely to occur for each type of development. This is because the distance between the main proposed development and any other development to be included in the cumulative assessment affects the magnitude of the cumulative effects which may occur and therefore judgements about their significance.
- 5.26 This is explained further below by reference to zones of influence – areas where significant landscape and visual effects are most likely to occur.
- 5.27 The types of development to be considered should be agreed with the local planning authority at the outset of the study together with the zones of influence. As outlined in LANDMAP Guidance Note 3 (May 2013) it is not necessarily the case that cumulative assessments of wind energy developments should only consider other operational and consented wind energy developments, these assessments may also consider other vertical types of development such as overhead lines as well as horizontal developments such as field-scale solar PV where this is requested or agreed with the local planning authority.
- 5.28 *‘A CLVIA should describe and assess any additional and combined cumulative effects of a potential wind energy development (wind turbines and associated infrastructure) on the landscape when considered in conjunction with other existing or consented wind energy developments or those “in planning”, and potentially other non-energy developments.’ Section 8, LANDMAP Guidance Note 3 (May 2013)*
- 5.29 For ‘vertical’ developments study areas may initially extend over relatively large distances. Recommended distances of zones of theoretical visibility (ZTV) for different height wind turbines are outlined in Table 2 of SNH publication ‘Visual Representation of Windfarms, Good Practice Guidance’ (2006); these indicate that study areas could extend up to 35 km. This table could be used as a starting point for establishing study areas for the cumulative assessments of the ‘vertical’ developments; however, in order to keep the task proportionate it is recommended that they be scaled down to ‘zones of influence’ as and when more detailed analysis identifies areas where it is reasonable to consider that significant effects may occur.
- 5.30 For ‘horizontal’ developments it is reasonable to assume that the study area would be smaller in comparison because the landscape and visual effects of such development are unlikely to extend over such long distances. Study areas for these types of development may initially be up to 10 km but again the progression of more detailed analysis may scale down the extents to focus on ‘zones of influence’ in which significant effects are most likely to occur.

Cumulative Zone of Theoretical Visibility

- 5.31 A cumulative zone of theoretical visibility (CZTV) is often a useful tool, used to inform the assessment of cumulative visual effects. Where considered beneficial, a zone of theoretical visibility (ZTV) should be generated for the main development being proposed. This can then be compared on a plan to the ZTVs for the other developments being taken into consideration (often these ZTVs will have been produced as part of the EIA/planning application for the other developments – if this is not the case a decision needs to be made about how useful generating new ZTV for each of the other developments). The different ZTVs can then be combined to analyse where interactions between developments are likely to occur and presented as a CZTV or series of different CZTVs to help explain the various cumulative scenarios being assessed (see below). This tool can also be used to refine the overall study area.

Cumulative Scenarios

- 5.32 Where a number of different development proposals are involved, assessments of cumulative landscape and visual effects often consider a range of scenarios.
- 5.33 For each scenario the CLVIA should assess the effects of the proposed scheme in combination with the other developments and identify the contribution that the proposed scheme makes to the degree of cumulative effect. GLVIA3 states that *‘agreement should be reached about whether the cumulative effects assessment is to focus primarily on the additional effects of the main project under consideration, or on the combined effects of all the past, present and future proposals together with the new project.’* Paragraph 1.18, GVLIA
- 5.34 The scenarios and approach to their assessment should be agreed with the local planning authority.

Assessment of Cumulative Landscape Effects

- 5.35 The assessment of cumulative landscape effects is concerned with the totality of potential effects on the landscape, taking into consideration the overall combination of effects from the construction and operation of the proposed development together with the other similar developments as combined in the various cumulative scenarios. These effects may result from changes in the fabric, aesthetic aspects and overall character of the landscape in particular places, arising from the introduction of new elements or from the removal of or damage to existing ones.
- 5.36 The identification and assessment of the significance of cumulative landscape effects should follow the same approach as that taken in the LVIA. The emphasis of the assessment, however, should always be on the proposed development and how or whether it would add to (or combine with) the other developments being considered to create or increase the magnitude of a significant landscape effect.
- 5.37 In making judgements the assessment should consider:
- The susceptibility of the landscape to the types of development being considered.
 - The value attached to the landscape, reflecting its designation status and other valued components of the landscape.
 - The nature or magnitude of effects, both in terms of scale and geographical area.
- 5.38 The significance of identified cumulative landscape effects should then be assessed through the application of professional judgement, based on a combination of the above factors and whether the change is likely to be temporary or permanent, long or short term.
- 5.39 Significance is not absolute and can only be defined in relation to each development and its location. GLVIA3 notes that there are no hard and fast rules but generally:
- *‘Major loss or irreversible negative effects over an extensive area, on elements and/or aesthetic and perceptual aspects that are key to the character of nationally valued landscapes are likely to be of the greatest significance.*
 - *Reversible negative effects of short duration, over a restricted area, on elements and/or aesthetic and perceptual aspects that contribute to but are not key characteristics of the character of landscapes of community value are likely to be of least significance and may, depending on the circumstances, be judged as not significant.*
 - *Where assessment of significance place landscape effects between these extremes, judgements must be made about whether or not they are significant, with full explanations of why these conclusions have been reached.’ (para.5.56)*

540 GLVIA3 also notes that:

- 5.41 *‘the most significant cumulative landscape effects are likely to be those that would give rise to changes in the landscape character of the study area of such an extent as to have major effects on its key characteristics and even, in some cases, to transform it into a different landscape type. This may be the case where the project itself tips the balance through its additional effects. The emphasis must always remain on the main project being assessed and how or whether it adds to or combines with the others being considered to create a significant cumulative effect.’ para. 7.27*
- 5.42 It is recommended that the assessment initially considers potential effects upon designated landscapes (paying particular attention to the individual special qualities of those areas), followed by an assessment of cumulative effects upon the different LCAs likely to be affected.

Assessment of Cumulative Visual Effects

- 5.43 The assessment of cumulative visual effects is concerned with the identification and assessment of the additional effects on peoples’ views arising from the proposed development when seen together with the other projects as set out in the various cumulative scenarios. These effects would result from changes in the character and content of the views experienced due to the introduction of new elements or removal of or damage to existing ones.

- 5.44 The identification and assessment of the significance of cumulative visual effects follows the same approach as that taken in the LVIA. The emphasis of the assessment, however, should always be on the proposed development and how or whether it would add to, or combine with, the other developments being considered to create or increase the magnitude of a significant visual effect.
- 5.45 The cumulative visual assessment should be backed up by cumulative wireframes set beneath photographs and/or photomontages prepared from key viewpoints to illustrate the magnitude of cumulative visual effects (these can also be useful to illustrate the nature and degree of cumulative change to the landscape).
- 5.46 A number of representative and/or worst-case viewpoints should be selected and agreed with the local planning authority to illustrate the potential cumulative visual effects arising from the main development being assessed, in combination with the other developments within the various scenarios. Viewpoints should be specifically selected to illustrate cumulative effects.
- 5.47 The visual receptors should be categorised in terms of their importance and susceptibility to change. Judgement should then be made on the magnitude of visual effects, and consideration given to the way in which any sequential views would be experienced from roads and important routes such as National Cycle Routes and the Wales Coast Path.
- 5.48 The significance of effects of development on views is related to the nature and sensitivity of the receptor, the characteristics of the development being proposed and the extent, nature and characteristics of the views, which itself is a reflection of the landscape character.
- 5.49 GLVIA3 (para. 7.38) notes that typically higher levels of significance are considered to arise from:
- ‘Developments that are in close proximity to the main project and are clearly visible together in views from the selected viewpoints.
 - Developments that are highly inter-visible with overlapping ZTVs – even though the individual developments may be at some distance from the main project and from individual viewpoints, and when viewed individually not particularly significant, the overall combined cumulative effect on a viewer at a particular viewpoint may be more significant.’
- 5.50 It is recommended that the assessment initially considers potential effects on views to and from designated landscapes followed by an assessment of cumulative visual effects based on selected viewpoints, and an assessment of the cumulative visual effects on various receptors along the route (with the emphasis being on the identification of likely significant effects) .

Assessing Significance

- 5.51 The significance of identified cumulative landscape and visual effects should be assessed through the application of professional judgement, based on a combination of the sensitivity of the landscape/visual receptor, the magnitude of the change and whether the change is likely to be temporary or permanent, long or short term. The cumulative assessment should identify which effects are considered to be significant (in the context of the EIA Regulations for EIA development) as well as whether they are adverse or beneficial.