

APPENDIX 1 - LVIA METHODOLOGY

1 GUIDANCE ON LANDSCAPE AND VISUAL IMPACT APPRAISAL

1.1.1 This Landscape and Visual Appraisal has been prepared based upon the Guidelines for Landscape and Visual Impact Assessment, third edition (GLVIA3), published by the Landscape Institute and the Institute of Environmental Management and Assessment, in 2013.

1.1.2 In summary, the GLVIA3 states:

“Landscape and Visual impact assessment (LVIA), is a tool used to identify and assess the significance of and the effects of change resulting from development on both landscape as an environmental resource in its own right and on people’s views and visual amenity.” (GLVIA3 paragraph 1.1.)

1.1.3 GLVIA 3 states that when undertaking an LVIA, this should consider:

- *“Assessment of landscape effects; assessing effects on the landscape as a resource in its own right;*
- *Assessment of visual effects: assessing effects on specific views and on the general visual amenity experienced by people.” (GLVIA3 paragraph 2.21.)*

1.1.4 It goes on to note that:

“LVIA must deal with both and should be clear about the difference between them”.
(GLVIA 3 para 2.22 page 21)

1.1.5 The guidelines explain that both landscape and visual effects are dependent upon the sensitivity of the landscape resource or visual receptors and the magnitude of impact.

2 METHODOLOGY FOR THE APPRAISAL OF LANDSCAPE EFFECTS

2.1 General approach

- 2.1.1 The level of the effects on landscape character identified as part of the appraisal is determined by a consideration of the sensitivity of the landscape receptors and the magnitude of the impacts (change) on the landscape.
- 2.1.2 The nature or sensitivity of a landscape receptor combines judgements of their susceptibility to the type of change or development proposed and the value attached to the landscape, as defined in the GLVIA¹ glossary and in paragraph 5.39 of GLVIA 3. Paragraph 5.39 of GLVIA 3 also states that LVIA sensitivity is similar to the concept of landscape sensitivity used in landscape planning, but is not the same, as it is specific to the particular project or development proposed and the location in question. Thus, appraisal of sensitivity is not strictly part of the initial baseline study of landscape character; it is considered as part of the appraisal of the effects of the development.
- 2.1.3 The nature or magnitude of the impacts on the landscape receptors depends upon the size or scale of the changes, the geographical extent of the area influenced, and the duration and reversibility of the impacts.

2.2 Landscape receptors

- 2.2.1 The landscape receptors include the constituent elements of the landscape, its specific aesthetic or perceptual qualities, any identified and described landscape character studies applicable to the site or its study area, and the designated landscapes within the study area; this includes the impact on the landscape character of any designated landscapes within the study area. The impacts on the visual amenity of visitors to formally designated areas (such as Registered Parks and Gardens and Scheduled Monuments) which are open to the public, are addressed in the visual impact appraisal section of the chapter or report. The impacts on the sites and settings of such designations as heritage assets would typically be addressed by any Cultural Heritage appraisal.
- 2.2.2 For smaller scale developments such as housing sites, typically, Natural England's National Character Areas will not provide an adequate representation of the landscape character of the site or the variations in landscape character in the vicinity

¹ Guidelines for Landscape and Visual Impact Assessment, Third Edition, by the Landscape Institute and Institute of Environmental Management and Assessment (2013)

of the site. As such, the LVIA will typically include a regional, county or district / borough Landscape Character Assessment, carried out by the specialist assessor if a local authority assessment is not available at the local level. Such Landscape Character Assessments may identify local landscape typologies or discrete areas, or both, as appropriate. These are also landscape receptors considered as part of the appraisal of landscape effects; these will be described within the overall document.

2.2.3 The effects of the development on landscape character can therefore be appraised at three scales of landscape character, as applicable:

- the landscape character of the site itself and its immediate setting;
- any local, borough or district Landscape Character Assessments; and
- any County or regional Landscape Character Assessments.

2.2.4 The effects on any designated landscapes within the study area are considered separately as they may often cross character type boundaries; therefore, to understand the overall effects, the total area of the designation needs to be considered as a whole.

2.3 Susceptibility to change

2.3.1 This is defined as the ability of the landscape receptor (whether it be the overall character or quality/condition of a particular landscape type or area, or an individual element and/or feature, or particular aesthetic and perceptual aspects) to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies (see paragraph 5.40 of GLVIA 3).

2.3.2 Susceptibility is combined with landscape value (see below) to determine the overall sensitivity of a landscape receptor / receptor landscape to the type of change proposed. Susceptibility and sensitivity are not the same, therefore, in the context of LVIA.

2.3.3 Table 1, below, explains how criteria are applied to arrive at an assessment of susceptibility to change, in this appraisal.

Table 1: Criteria for the Assessment of Susceptibility to Change	
Level	Typical Criteria
High	Key characteristics of the landscape are highly vulnerable to change. The nature of the development would result in a significant change in character.
Medium	Some of the key characteristics of the landscape are vulnerable to change. Although the landscape may have some ability to absorb some development, it is likely to cause some change in character.
Low	Few of the key characteristics of the landscape are vulnerable to change. The landscape is likely to be able to accommodate development with only minor change in character.
Negligible	Key characteristics of the landscape are robust and would not be adversely affected by development.

2.3.4 Factors influencing the susceptibility of the landscape to change of the sort associated with a proposed development include:

- 1 Scale: whether or not the landscape includes human scale elements, and the presence or absence of enclosing features. The presence of human scale elements may suggest a lower susceptibility.
- 2 Landform: Landform may be undulating, rolling or flat, with more or less variation in form / gradient. Featureless, convex or flat landscapes with an absence of strong topographical variety suggests a lower susceptibility, with very complex landforms exhibiting strong topographical variety at the other end of the scale.
- 3 Landscape pattern and complexity: including presence or absence of cultural pattern; time depth; landscape structure/fabric; enclosure patterns; and interplay of colour and texture. Simple, large-scale patterns (such as plantations or arable fields), and/or regularly disturbed, fragmented land covers are less susceptible to change. Intricate, varied patterns, and undisturbed consistent patterns of land cover or land use, and historic field patterns are more susceptible to change.
- 4 Settlement and human influence: including time depth, age, nature, form and level of settlement. The following tend to indicate a lower susceptibility to change: concentrated settlement pattern, presence of contemporary structures e.g. utility, infrastructure or industrial elements, and hard or eroded settlement edges. A higher susceptibility to change may be indicated by: dispersed settlement pattern; absence of modern development; presence of small scale, historic or vernacular settlement; and a porous / soft landscape edge with settlement well integrated with the landscape.

- 5 Condition: Landscapes with a low level of intactness with landscape elements in poor state of repair are considered to have a lower susceptibility to change; with, on the other hand, landscapes having a high level of intactness and a very good state of repair having a higher susceptibility to change.
- 6 Typicality and Rarity: A lower susceptibility to change is associated with areas which have no rare features or a weak association with the key characteristics of the landscape. Conversely, a higher susceptibility to change is associated with areas which have rare features of importance to a particular area or region, or a very strong correspondence with the key characteristics of the landscape.
- 7 Perceptual aspects (such as tranquillity and sense of remoteness): Presence or greater proximity to human activity, noise and light, modern development or industrial structures (e.g. utilities, infrastructure) decreases susceptibility, and vice versa. Areas having a strong sense of remoteness; being either physically remote or having a perception of being remote; are considered to have a higher susceptibility to change.
- 8 Skylines: A visual component of landscape character but interdependent with topography. Where the development has no relationship to the skyline, or the skyline is either not prominent / screened, or developed and/or otherwise cluttered the susceptibility to change is lower. Where there is a strong relationship to prominent, simple and undeveloped skylines, or a skyline with important historic landmarks the opposite is the case.
- 9 Intervisibility: A visual component of landscape character but interdependent with enclosure. Landscapes which are self-contained with restricted intervisibility have a lower susceptibility to change than landscapes which are extensively intervisible and part of a wider landscape.
- 10 Views and Landmarks: A visual component of landscape character but has some relationship to typicality and rarity. An area which contains no landmarks and is not a feature in local views is considered to have a lower susceptibility. On the other hand, a landscape which includes important landmarks or is important in views across a wide area has a higher susceptibility.
- 11 Visual Receptors: A visual component of landscape character. Locations with greater opportunities for visibility from transport routes or larger numbers of properties are considered to have a higher susceptibility to change (depending

on the nature and extent of the change), whereas areas with a low number of viewers would have a lower susceptibility.

2.4 Landscape value

2.4.1 Assessment of value is concerned with the relative value attached to different landscapes by society. A consideration of value at the baseline stage informs judgements on the level of effects. Landscapes can be valued by different people for different reasons connected to a range of factors including landscape quality (condition), scenic quality, rarity, representativeness, conservation interests, recreation value, perceptual aspects and associations (see GLVIA 3 Box 5.1 for definitions). This consensus can be recognised at a local, regional or national or international scale. Table 2 explains how criteria are applied to arrive at an appraisal of landscape value for this project. It is derived from GLVIA 3.

Table 2 Criteria for the assessment of landscape value			
Value	Typical criteria	Typical scale	Typical examples
High	• Very good or excellent condition, high importance, scenic quality, rarity • No or very limited potential for substitution	International / National	World Heritage site, National Park, Area of Outstanding Natural Beauty (AONB), Registered Parks and Gardens
Medium	• Reasonably good condition, medium importance, scenic quality, rarity • Some potential for substitution	Regional / local	Registered Parks and Gardens, undesignated landscapes but valued for example for the high occurrence or number of important / protected features present therein, or in demonstrable use.
Low	• Poor or very poor condition, low importance, scenic quality, rarity	Local	Areas identified as having some redeeming feature or features and possibly identified for improvement, or Areas identified for recovery

2.5 Landscape sensitivity

2.5.1 As noted above, landscape sensitivity combines judgements on the susceptibility of landscape receptors to change of the type proposed, with the value attached to the landscape. Generally, a higher sensitivity will be ascribed to landscapes which have a high value, and which are highly susceptible to change, and vice versa. However, as GLVIA 3 (para. 5.46) recognises, these relationships are complex, particularly when considering change within or adjacent to designated landscapes.

2.5.2 Para. 5.46 states:

“For example:

- An internationally, nationally, or locally valued landscape does not automatically, or by definition, have a high susceptibility to all types of change;*
- It is possible for an internationally, nationally or locally important landscape to have relatively low susceptibility to change resulting from the particular type of development in question, by virtue of both the characteristics of the landscape and the nature of the proposal;*
- The particular type of change or development proposed may not compromise the specific basis for the value attached to the landscape.”*

2.5.3 For the purposes of this appraisal, landscape sensitivity is defined through the application of the typical criteria set out in Table 3, below.

Table 3: Criteria for the assessment of sensitivity of landscape receptors	
Level	Typical criteria
High	Many of the key characteristics and qualities of the landscape are susceptible to change from the type of development being assessed and/or the value ascribed to the landscape is high.
Medium	Some of the key characteristics and qualities of the landscape are susceptible to change from the type of development being assessed and/or the value ascribed to the landscape is medium
Low	The key characteristics and qualities of the landscape are robust and are less likely to be adversely affected by the type of development being assessed and/or the value ascribed to the landscape is low.

2.5.4 Planning policy is important and relevant to LVIA when it reflects a recognition of the value placed upon a particular landscape, or its attributes, by society. Thus, designations such as National Parks and Areas of Outstanding Natural Beauty (AONB) have relevance, since they identify a consensus about this aforesaid value. Reference to planning policy can therefore assist in an appraisal, in identifying sensitive receptors.

2.6 Magnitude of landscape impacts

2.6.1 Table 4 explains how criteria are applied to determine the magnitude of impacts; this has been developed specific to this LVIA and is derived from GLVIA 3.

Table 4 Criteria for the assessment of magnitude of landscape impacts	
Level	Typical Criteria
High	• Total loss of or major alteration to key features or perceptual aspects of the baseline and/or the addition of new features considered to be totally uncharacteristic when set within the attributes of the receiving landscape • The impacts would be of a large scale influencing several landscape character types/areas • The impacts would be long term and/or irreversible
Medium	• Partial loss of or alteration to key features or perceptual aspects of the baseline and/or the addition of new features that may be prominent but may not necessarily be considered to be substantially uncharacteristic when set within the attributes of the receiving landscape • The impacts would be at the scale of the landscape character type/area within which the proposal lies • The impacts would be medium term and/or partially reversible
Low	• Minor loss of or alteration to key features or perceptual aspects of the baseline and/or the addition of new features that may not necessarily be considered to be uncharacteristic when set within the attributes of the receiving landscape • The impacts would be at the level of the immediate setting of the site • The impacts would be short term and/or reversible
Negligible	• Very minor loss of or alteration to key features or perceptual aspects of the baseline and/or the addition of new features that are not uncharacteristic with the surrounding landscape - approximating the 'no change' situation • The impacts would be at the site level, within the development site itself • The impacts would be very short term and/or reversible
None	• No loss or alteration to the key characteristics/ features, representing 'no change'.

2.7 Level of landscape effects

2.7.1 A consideration of the sensitivity of the landscape receptors to the development and the magnitude of the impact resulting from the development, determines the level of the predicted effect.

2.7.2 The relationship between sensitivity and magnitude of impact to reach the level of effect is sometimes presented in the form of a matrix. However, such a matrix may lead to the same weighting of each criterion, which might not always be appropriate and may lead to a formulaic approach, therefore descriptions of how overall effects have been determined are provided and a conclusion is given on whether or not an effect is considered to be highly adverse or not (see paragraphs 3.34 and 3.35 of GLVIA 3).

- 2.7.3 Overall, effects may be adverse, neutral or beneficial, and are assigned a level on the scale: None-Negligible-Slight-Moderate-Substantial-Very Substantial, taking into account mitigation measures, and different stages of the project lifecycle.
- 2.7.4 Table 5 assigns typical criteria to each level, as applied in this appraisal; however, it should be noted that various different scenarios of susceptibility to change, landscape value, the size or scale, geographical extent and/or duration and reversibility of impacts could apply to result in highly adverse effects as described in the appraisal. The criteria in Table 5 are therefore provided as typical examples.
- 2.7.5 Intermediate levels, such as slight - moderate and moderate - substantial, may also apply.

Table 5	
Criteria for determining the level of landscape effects	
Level	Typical criteria
Very Substantial	The proposals are wholly out of character with the existing situation, both locally and on the wider scale, and/or the landscape receptors are of high sensitivity
Substantial	The proposals have a large and prominent impact within the context of the wider area or are wholly out of character with the existing situation, and/or the landscape receptors are of high sensitivity
Moderate	The proposals have a noticeable impact within the context of the wider area, and/or the landscape receptors are of medium sensitivity
Slight	The proposals have some, but only a limited impact within the mainly local context, and/or the landscape receptors are of low sensitivity
Negligible	The degree of change is so small as to have little or no impact, and/or the landscape receptors are of low sensitivity

- 2.7.6 It is relevant to note that the assessed levels of effect merely form one element of the way in which a proposed development is determined. Other factors (e.g. environmental, economic, societal) will also play a role in the decision-making process.

2.8 Approach to the Appraisal

- 2.8.1 To understand the potential impacts upon the landscape receptors, the sensitivity of the area with respect to the proposed development is considered. The appraisal of sensitivity of the landscape to the development considers whether the key physical and perceptual characteristics of the development site could be materially affected by the proposed development. This is then combined with an appraisal of landscape value to determine the overall sensitivity of the landscape to the proposed development.

- 2.8.2 Visual sensitivity is not included in the landscape appraisal, as visual effects are considered separately, in accordance with GLVIA3.
- 2.8.3 It is important to remember that sensitivity to any development constructed within a landscape receptor area depends on the defining characteristics of that area, and of the development. The defining characteristics of a receptor area which is not the host area can only be greatly affected if one of its defining characteristics is views of the host area.
- 2.8.4 The extent of the potential effects over the wider landscape receptor areas is considered spatially, by reviewing how much of the area would be influenced by the development.
- 2.8.5 However, sequential experience of change could also amount to a change of the experience of parts of a landscape receptor area outside the immediate ZTV of the development. If a large proportion of an area was to be adversely affected, then this would be likely to lead to loss of character over the whole of the area. The converse is also true.
- 2.8.6 The impacts on each landscape receptor area were appraised by a consideration of the susceptibility to change of the area to the development, the value of the landscape, and the magnitude of change as a result of the proposed development, all taken together.
- 2.8.7 The appraisal of effects upon landscape character in general cannot therefore just be carried out by considering discrete viewpoints alone, however representative they may be.
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3 METHODOLOGY FOR THE APPRAISAL OF VISUAL EFFECTS

3.1 General approach

3.1.1 As with landscape effects, a consideration of the sensitivity of visual receptors (people) and the magnitude of the impact determines the level of the predicted effect on views and visual amenity. The nature or sensitivity of visual receptor considers their susceptibility to the type of change or development proposed and the value people attach to the affected views (GLVIA 3, paragraph 6.31).

3.2 Sensitivity of visual receptors

3.2.1 Visual receptors include the public or community at large, residents, visitors, workers and people travelling through the landscape. The types of viewers, the numbers, the duration of the view and the importance of the view or views of and from valued areas contribute to defining the sensitivity of a visual receptor.

3.2.2 In the context of this development, the scale of the sensitivity of the visual receptors is as outlined in Table 6 and is derived from the GLVIA 3.

Table 6 Criteria for the assessment of sensitivity of visual receptors	
Level	Typical criteria
High	- Public views within areas of protected landscapes such as National Parks and Areas of Outstanding Natural Beauty (AONBs) - Users of outdoor recreational facilities including public rights of way, or visitors to heritage assets or other attractions whose attention or interest is focused on the landscape and where tolerance to change is likely to be low - Occupiers of residential properties with views affected by the development - users travelling through or past the affected landscape on recognised scenic routes
Medium	- Users travelling through or past the affected landscape by road, rail or other transport routes - Users of public rights of way/ footways where attention or interest is not primarily focussed on the landscape and/ or particular views - Users of outdoor recreation facilities whose attention or interest will include some views of the wider landscape and where there is some tolerance of change
Low	- People engaged in outdoor sport or recreation which does not involve or depend upon appreciation of views of the landscape so that the tolerance to change is high - People at their place of work, or engaged in similar activities, whose attention may be focused on their work or activity, not their surroundings, and where setting is not important to the quality of working life - Views from roads, footways, railways and industrial areas whose attention may be focused away from the landscape and where tolerance to change is likely to be high

3.3 Magnitude of visual impacts

3.3.1 The nature or magnitude of the impacts on visual receptors depends upon the size or scale of the changes, the geographical extent of the area influenced, and the duration and reversibility of the impacts. In visual appraisal, the magnitude is also determined by the distance from the viewer, the extent of change in the field of vision or visibility of the proposed development, the proportion or number of viewers affected and the permanence or transience within the view.

3.3.2 Table 7 explains how criteria are applied in the assessment of magnitude and is derived from GLVIA 3.

Table 7 Criteria for the assessment of magnitude of visual impacts	
Level	Typical Criteria
High	- Total loss of or major alteration to views and/or the addition of new features that would be incongruous, very prominent, and/or would greatly contrast with the existing view - Full, open views, experienced at a location or for the majority of a journey - The views would be close, direct and/or totally occupied by the proposed development
Medium	- Partial loss of or alteration to views and/or the addition of new features that would be prominent, and/or would contrast with the existing view - Partial views, experienced for part of a journey or activity - The views would be middle distance, partially oblique and/or partially occupied by the proposed development
Low	- Minor loss of or alteration to views and/or the addition of new features that would not be prominent, and/or would not contrast with the existing view - Glimpsed views, experienced for a small part of a journey or activity - The views would be distant, oblique and/or only a small part of the view would be occupied by the proposed development
Negligible	- Very minor loss of or alteration to views and/or the addition of new features that are unlikely to be readily perceived - Very brief glimpsed views - The views would be very distant, very oblique and/or only a tiny part of the view would be occupied by the proposed development
None	- Barely discernible alteration to views and/or the addition of new features that would be almost imperceptible - approximating the 'no change' situation - Views are not possible

3.3.3 The level of magnitude also takes into consideration the scheme's permanence and / or reversibility (i.e. whether the site could be returned to its current/ former use).

3.3.4 Magnitude at some viewpoint positions can vary greatly due to differing seasonal or weather conditions, changes in light at different times of the day, and whether a development is seen against the background of the sky or the landscape. The appraisal takes into account a worst-case scenario.

3.4 Level of visual effects

3.4.1 As with landscape effects, a consideration of the sensitivity of the visual receptors to the development and the magnitude of the impact resulting from the development, determines the overall level of the predicted effect. Again, a matrix is not used; descriptions of how the level of effect has been determined are provided.

3.4.2 Table 8 assigns examples of typical criteria to each level for visual effects, as applied in this appraisal; however, it should be noted that various different scenarios of susceptibility to change, the value of views, the size or scale, geographical extent and/or duration and reversibility of impacts could apply to result in highly adverse levels of effects as described in the appraisal.

3.4.3 Intermediate levels, such as slight-moderate and moderate-substantial, may also apply.

Table 8 Criteria for determining the level of visual effects	
Level	Typical criteria
Very Substantial	The proposals would dominate views and would be wholly out of character with the existing situation, the changes would be experienced by a very large number of people, and/or the visual receptors would be of high sensitivity to the changes.
Substantial	The proposals would be out of character with the existing situation or prominent and contrasting with the existing views, the changes would be experienced by a large number of people, and/or the visual receptors would be of high sensitivity to the changes.
Moderate	The proposals would be noticeable in views but not dominating, the changes would be experienced by a medium number of people, and/or the visual receptors would be of medium sensitivity to the changes.
Slight	The proposals would result in small changes to the views, the changes would be experienced by a small number of people, and/or the visual receptors would be of low sensitivity to the changes.
Negligible	The proposals would be not be readily perceived in views, the changes would be experienced by a very small number of people, and/or the visual receptors would be of low sensitivity to the changes.
None	The proposals would be difficult to perceive, or would not be visible.