



APPENDICES

Appendix 1

Landscape and Visual Impact Assessment Methodology

A.1 Landscape and Visual Impact Assessment Methodology

Relevant Guidance

- A.1.1 As a matter of best practice, this Landscape and Visual Impact Assessment (LVIA) has been undertaken based on the relevant guidance described in the following documents:
- *Landscape Character Assessment: Guidance for England and Scotland* (The Countryside Agency and Scottish Natural Heritage, 2002)
 - *Guidelines for Landscape and Visual Impact Assessment, Third Edition* (Landscape Institute and Institute of Environmental Management and Assessment, 2013) (GLVIA3)
 - *Technical Guidance Note 02/21: Assessing landscape value outside national designations* (Landscape Institute, May 2021)
 - *Technical Guidance Note-2024-01: Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment, Third Edition* (Landscape Institute, 2024).

Distinction Between Landscape and Visual Effects

- A.1.2 As set out in GLVIA3, paragraph 2.21, landscape and visual effects are assessed separately, although the procedure for assessing each is closely linked. A clear distinction has been drawn between landscape and visual effects as described below:
- Landscape effects relate to the effects of the Proposed Development on the physical and perceptual characteristics of the landscape and its resulting character and quality.
 - Visual effects relate to the effects on views experienced by visual receptors (e.g. local residents, visitors, footpath users, road users etc) and on the change in views experienced by people.

Assessment Criteria and Assignment of Significance of Effects

- A.1.3 GLVIA3 sets out broad guidelines rather than detailed prescriptive methodologies. The methodologies tailored for the assessment of this development is based on GLVIA3 guidance, which recommends that an assessment “*concentrates on principles and process*” and “*does not provide a detailed or formulaic recipe*” to assess effects, it being the “*responsibility of the professional to ensure that the approach and methodology are appropriate to the task in hand*” (preface to GLVIA3).
- A.1.4 The effects on the landscape resources or visual receptors (people) are assessed by considering the proposed change in the baseline conditions (the impact of the proposal) against the type of landscape resource or visual receptor (including the importance and sensitivity of that resource or receptor). The methodology is set out in detail below and summarised in Diagram A1. These factors are determined through a combination of quantitative (objective) and qualitative (subjective) assessment using professional judgement.

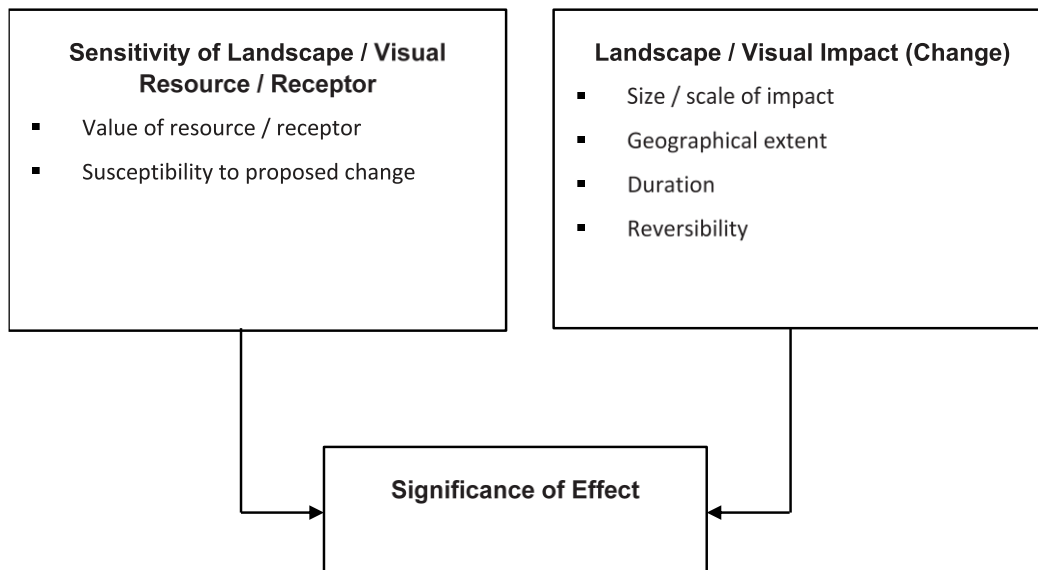


Diagram A1: Assessment Methodology Summary

Nature of Effects and Nature of Receptors

- A.1.5 As identified in the GLVIA3, landscape and visual effects are identified by establishing and describing the changes resulting from the different components of the development and the resulting effects on individual landscape or visual receptors. Assessment of the level of effects takes account of the nature of the effects ('**magnitude**'), as well as the nature of the receptors ('**sensitivity**') and differentiates between them according to the phases (construction, operational and demolition) of the development in which they would occur (GLVIA3, Box 3.1).
- A.1.6 Effects are also defined as **direct and in-direct**. Direct landscape effects relate to the host landscape and concern both physical and perceptual effects on the receptor.
- A.1.7 Indirect landscape effects relate to those landscapes and receptors which are separated by distance or are remote from the development and therefore are only affected in terms of perceptual effects. The Landscape Institute also defines indirect effects as those which are not a direct result of the development but are often produced away from it or as a result of a complex pathway.
- A.1.8 Visual effects are considered as direct effects, as the view itself may be directly altered by the Proposed Development.
- A.1.9 The aim of the LVIA is to provide an objective assessment of the relationship between the Proposed Development and the landscape in which it would be located and seen. As part of this, it is also important to consider the nature of the proposed change in the context of the key characteristics of the landscape. Being a large-scale development added to the landscape, it is unlikely that a beneficial nature of effect would be found, but neutral effects could occur where it is considered the Proposed Development does not change the defining characteristics of the landscape and/or has been well absorbed/integrated into its surrounding context.
- A.1.10 Generally, with the development of 'new' or large-scale industrial developments, a precautionary approach has been adopted, which assumes that significant landscape and visual effects are weighed on the adverse side of the planning balance. Unless it is stated otherwise, the effects considered in this assessment have been considered to be adverse.

- A.1.11 Whether an effect is Beneficial, Neutral or Adverse is identified based on professional judgement. GLVIA3, indicates at paragraph 2.15 that this is a “particularly challenging” aspect of assessment, particularly in the context of a changing landscape.
- A.1.12 The decision regarding the level of effect and the decision regarding whether an effect is beneficial or adverse are entirely separate.

Sensitivity

- A.1.13 Sensitivity is judged taking into account the component judgments about the value and susceptibility of the receptor.

Sensitivity of landscape receptors

- A.1.14 The sensitivity of a landscape receptor is a combination of “*judgements of their susceptibility to the type of change or development proposed and the value attached to the landscape*” (GLVIA3, para 5.39). For the purposes of this assessment, susceptibility and value of landscape receptors are defined as follows:
- Landscape susceptibility: “*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 a particular aesthetic and perceptual aspect) to accommodate the proposed change without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies*” (GLVIA3, para 5.40).
 - Value of the landscape receptor: “*The value of the Landscape Character Types or Areas that may be affected, based on review of designations at both national and local levels, and, where there are no designations, judgements based on criteria that can be used to establish landscape value; and, the value of individual contributors to landscape character, especially the key characteristics, which may include individual elements of the landscape, particularly landscape features, notable aesthetic, perceptual or experiential qualities, and combinations of these contributors*” (GLVIA3, para 5.44).
- A.1.15 The sensitivity of landscape receptors is defined as high, medium, or low based on professional interpretation, combining judgements of their value attached to the landscape and susceptibility to the type of change or development proposed.
- A.1.16 Landscape receptors include the different landscape character types or areas which may be affected by the Proposed Development, as well as landscape designations within the LVIA Study Area.

Landscape value

- A.1.17 The value attached to landscape receptors (both landscape fabric and landscape character) is reflected by landscape designations and the level of importance which they signify. *However, landscape designations are not the sole indicator of landscape value* (paragraph 5.26, GLVIA3).
- A.1.18 With reference to the Landscape Institute Technical Guidance Note 02/21 ‘Assessing landscape value outside national designations’, the following range of factors (not exclusive) are also considered in order to identify the value of the landscape:
- landscape quality /conditions;
 - perceptual/scenic quality;

- rarity/representativeness/ distinctiveness;
- conservation interest;
- aesthetic/perceptual aspects;
- recreational value; and
- cultural associations.

A.1.19 Table A.1 provides an example of how these factors (not exclusive) are considered in a scale of High, Medium, Low.

Table A1: Landscape value

Landscape	High	Medium	Low
Quality	Higher quality landscapes with consistent, intact and well-defined, distinctive attributes.		Lower quality landscapes with indistinct elements or features that detract from its inherent attributes.
Scenic quality	Aesthetic/scenic or perceptual aspects or features that contribute to landscape character.		Limited variety or distinctiveness.
Rarity	Rare or unique landscape character type/ unit, features or elements.		Common or unremarkable landscape character type/unit, features or elements.
Conservation interest	A strong sense of place with low potential for substitution.		Ordinary landscape with high potential for substitution.
Cultural associations	Landscape with strong cultural associations that contributes to its quality.		Landscape with few cultural associations.

A.1.20 Landscape value is the 'inherent' component', which is independent of the development proposal, while the other component, susceptibility, is development specific.

Landscape susceptibility

A.1.21 Susceptibility indicates the ability of a landscape 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' (LI and IEMA, 2013).

A.1.22 Susceptibility of landscape fabric/elements to direct change is defined as high, medium, or low based on an interpretation of a combination of parameters including:

- contribution of the landscape element which would be removed/affected to the key characteristics of the surrounding landscape; and
- extent to which the landscape element which would be removed/affected can be replaced.

A.1.23 Some landscape receptors are better able to accommodate development than others due to certain characteristics that are indicative of capacity to accommodate change.

A.1.24 Susceptibility of landscape character to change is defined as:

- High – with Low ability to accommodate the specific proposed change,
- Medium - with Moderate ability to accommodate the specific proposed change, or
- Low – with High ability to accommodate the specific proposed change.

A.1.25 Susceptibility of landscape character to change is dependent on an interpretation of a combination of parameters including:

- Scale and pattern of the landscape and its elements/features;

- Simplicity or complexity of the landscape;
- Landscape pattern and focus/the nature of skylines;
- Landscape quality or condition;
- Existing land use;
- Visual enclosure/openness or exposure;
- Tranquillity/ remoteness/ wilderness and
- Scope for mitigation, which would be in character with the existing landscape.

A.1.26 Table A.2 provides an example of how these parameters (not exclusive) are considered in a scale of High, Medium, Low.

Table A.2: Landscape Susceptibility

Landscape	High	Medium	Low
Scale	A landscape of a large enough scale to accommodate the development.	A smaller scale landscape, with complex, distinctive or small-scale.	
Simplicity or complexity	Aesthetic/scenic or perceptual aspects of designated wildlife, ecological or cultural heritage features that contribute to landscape character	Limited wildlife, ecological or cultural heritage features, or limited contribution to landscape character.	
Skyline	Distinctive undeveloped skylines with landmark features.	Developed, non-distinctive skylines without landmark features.	
Quality	Higher quality landscapes with consistent, intact and well-defined, distinctive attributes.	Lower quality landscapes with indistinct elements or features that detract from its inherent attributes.	
Existing land use	Untouched natural landscapes, with cultural heritage, recreational features	Landscape with infrastructure, industrial elements, commercial forestry, brown fields.	
Openness/ enclosure	Intimate smaller scale landscapes, can be more complex.	Open landscape with large scale and simple landform.	

A.1.27 An overall sensitivity assessment of the landscape receptor is made by combining the assessment of the value of the landscape character receptor and its susceptibility to change. The basis for the assessments will be made clear using evidence and professional judgement in the evaluation of sensitivity for each receptor.

Sensitivity of visual receptors

A.1.28 Visual receptors are always people. The sensitivity of each visual receptor (the person or group of people likely to be affected at a specific viewpoint) *“should be assessed in terms of both their susceptibility to change and in views and visual amenity and also the value attached to particular views”* (GLVIA3, para 6.31). For this assessment, susceptibility and value of visual receptors are defined as follows:

- Visual susceptibility: *“The susceptibility of different visual receptors to changes in views and visual amenity is mainly a function of: The occupation or activity of people experiencing views at the particular locations; and the extent to which their attention or interest may therefore be focused on the views and the visual amenity they experience at particular locations”* (GLVIA3, para 6.32).
- Value of views: Judgements made about the value of views should take account of: *“recognition of the value attached to particular views, for example in relation to heritage assets, or through planning designations; and, indicators of value attached to*

views by visitors, for example through appearances in guidebooks or on tourist maps, provision of facilities for their enjoyment (such as parking places, sign boards or interpretive material) and references to them in literature or art..." (GLVIA3, para 6.37).

A.1.29 Sensitivity is not readily graded in bands and GLVIA3 notes, with regards to visual sensitivity, that the division of who may or may not be sensitive to a particular change "*in reality, there will be a gradation in susceptibility to change*" (GLVIA3, para 6.35). To provide both consistency and transparency to the assessment process, however, Table A3, below defines the criteria which have guided the judgement as to the intrinsic susceptibility and value of the resource/receptor and subsequent sensitivity to the type of development proposed.

A.1.30 For visual receptors susceptibility and value are closely linked - the most valued views are also likely to be those where viewer's expectations will be highest.

Table A3: Definitions of visual sensitivity

Sensitivity Typical descriptors		
	Visual receptor susceptibility	Value of view
High	Residents at home; users of outdoor recreational facilities including strategic recreational footpaths, cycle routes or rights of way, whose attention may be focused on the landscape; visitors to heritage assets, important landscape features with physical, cultural, or historic attributes; beauty spots or picnic areas.	The value of public views, which is the focus of GLVIA3, is identified as national, regional or community and will vary depending on the nature, location and context of the view and the recognised importance of the view. Considerations include cultural associations; designation or policy protection; views of or from landmarks; and/or the scenic quality of the view. The value attributed relates to the value of the view, e.g. a National Trail is nationally valued for access, but not always for the available views from every section.
Medium	Travellers on road, rail, or other transport routes. Users of public open space and footpaths where the nature of the surroundings is not a significant factor in the enjoyment of the activity. Visitors to landscape and heritage resources and other attractions where views of the surroundings are a minor contributor to appreciation, experience, and/or enjoyment.	
Low	Users of high-speed roads and passengers in trains running at high speed. People engaged in outdoor sports or recreation (other than appreciation of the landscape), commercial buildings, and other locations where people's attention may be focused on their work or activity, not on their surroundings, and where the setting is not important to the quality of working life.	

A.1.31 Combining susceptibility to change and value attached to the view seems in practice to lower the visual sensitivity of receptors where the proposals do not align with the main direction of view. Therefore, there is potential for double counting this with the assessment of magnitude of change, which is also affected by direction of view. Therefore, this methodology places more emphasis on the nature and activity of the visual receptor, with residents / recreational receptors, all being high sensitivity to the type of development proposed.

A.1.32 Although intermediate ratings are avoided, in cases where intermediate ratings are given, e.g., "medium-low," then this indicates an effect that is both less than medium and more than low, rather than one which varies across the range.

Magnitude of Impact

A.1.33 The effect of the proposed development on each landscape or visual receptor is referred to as the magnitude of change or magnitude of impact. The magnitude of change is stated as combining consideration of the scale or size of effect with the extent of the area affected and duration / reversibility of that effect. (GLVIA3, para 3.24).

A.1.34 Judgements need to take account of:

- *“The extent of the existing landscape elements that will be lost, the proportion of the total extent that this represents and the contribution of that element to the character of the landscape...; the degree to which aesthetic or perceptual aspects of the landscape are altered either by removal of existing components of the landscape or by addition of new ones...” and, “whether the effect [impact] changes the key characteristics of the landscape, which are critical to its distinctive character” (GLVIA3, para 5.49).*
- *“the scale of the change [impact] in the view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the proposed development; the degree of contrast or integration of any new features or changes in the landscape with existing or remaining landscape elements and characteristics in terms of form, scale and mass, line, height, colour and texture; and, the nature of the view of the proposed development, in terms of the relative amount of time over which it will be experienced and whether views will be full, partial or glimpses” (GLVIA3, para 6.39).*

A.1.35 The relative weighting of the three main factors is not specifically discussed in the guidance. There are some practitioners who give them equal or almost equal weight. This means that there is potential for the overall magnitude of change to be less than the scale of effect alone. (For example, a high magnitude of change, based on size or scale, may be reduced to a lower rating if it occurred in a localised geographical area and for a short duration.) However, others give most weight to the scale of effect and extent (in terms of distance). As the Proposed Development is long-term, the overall magnitude of change is therefore often at the same level as the scale of effect. For a study of this nature, it is therefore considered sensible to take a precautionary approach and consider that the scale of effect is likely to be at a similar level to the magnitude of change.

A.1.36 The duration and reversibility are stated separately in relation to the assessed effects (i.e. as short/ medium/ long term and temporary/ permanent).

A.1.37 The magnitude of change arising from the Proposed Development in respect of landscape fabric/physical elements of the landscape (direct landscape change) is described as high, medium, low, or negligible based on the interpretation of a combination of largely quantifiable parameters, as follows:

- the extent of existing landscape elements that will be lost;
- the proportion of the total extent of the particular landscape elements that this represents;
- the degree to which aesthetic or perceptual aspects of the landscape would be altered by removal of existing components of the landscape and/ or introduction of new elements;
- the geographic area over which the loss of landscape elements will be perceived.

A.1.38 The magnitude of change arising from the Proposed Development at any particular landscape character or visual receptor is described as high, medium, low, or negligible based on the interpretation of a combination of the following parameters:

- **Distance:** the distance between the receptor and the Proposed Development. Generally, the greater the distance, the lower the magnitude of change.
- **Extent:** the extent of the area over which the change would appear.
- **Proportion:** the field of view occupied by the Proposed Development in proportion to the overall field of view. A panoramic view, where the Proposed Development takes up a small part of it, will generally be of lower magnitude than a narrow, focussed view, even if the arc of view occupied by the Proposed Development is similar.

- **Nature of view:** the duration of the effect in terms of the relative amount of time over which it will be experienced on whether views will be full, partial or glimpses.
- **Orientation:** the angle of the view in relation to the main receptor orientation, where there is a dominant direction to the vista.
- **Context:** the elements that combine to provide the setting and context to the Proposed Development. In particular, man-made structures within the context can decrease the magnitude of change.
- **Skyline/ Background:** the colour/ texture of the Proposed Development should reflect the predominant background colours/ textures in the locality. For example, skyline developments may appear more noticeable, particularly where they affect open and uninterrupted horizons.

A.1.39 The criteria utilised in ascribing magnitude of change to assist consistency of approach throughout the assessment is detailed in Table A3.

Table A3: Definitions of magnitude of impact

Magnitude of impact	Typical descriptors
	Landscape and Visual resource
High	Total loss or major alteration to key elements, features, or characteristics, such that post development the baseline will be fundamentally changed. The Proposed Development is highly prominent or even dominant and could become the defining characteristic of views and landscape character.
Medium	Represents a notable loss or alteration to key elements, features, or characteristics, such that post development the baseline will be noticeably changed. The Proposed Development appears as a prominent element/focus in the landscape and in views.
Low	Constitutes a partial loss to one or more key elements, features, or characteristics, such that post development the baseline will be largely unchanged despite noticeable differences. The addition of the Proposed Development is less distinct through having a limited characterising influence within the broader landscape and in views.
Negligible	Represents a barely discernible loss or alteration to one or more key elements, features, or characteristics of the baseline conditions. The underlying landscape character or view composition would be essentially unchanged.

A.1.40 Although intermediate ratings are avoided, in cases where intermediate ratings are given, e.g., “medium-low,” then this indicates an effect that is both less than medium and more than low, rather than one which varies across the range.

Duration and reversibility

A.1.41 The duration and reversibility of landscape and visual effects are based on the period over which the Proposed Development is likely to exist (during construction and operation) and the extent to which the Proposed Development will be removed (during decommissioning), with effects reversed at the end of that period. The duration of the impact is described using the following terms:

- long-term – more than 10 years (may be defined as permanent or reversible);
- medium-term – 6 to 10 years; and
- short-term – 1 to 5 years.

Cumulative Effects

A.1.42 Cumulative assessment relates to the assessment of the effects of more than one development. NatureScot’s guidance ‘Assessing the Cumulative Landscape and Visual

Impact of Onshore Wind Energy Developments (NatureScot, 2021) provides the basis for the cumulative assessment methodology, in addition to GLVIA3.

- A.1.43 Operational, and consented developments are treated as being part of the landscape and visual baseline i.e. it is assumed that consented schemes will be built except for occasional exceptions where there is good reason to assume that they will not be constructed.
- A.1.44 The cumulative effects have been assessed as the 'additional' effect over and above the baseline of other development as well as the 'combined' cumulative effect of a number of other developments including the Proposed Development.
- A.1.45 Cumulative change arising from the Proposed Development when considered in conjunction with other similar developments in the vicinity is determined taking account of the above criteria as well as the following:
- the number of existing, consented, and proposed developments visible;
 - the distance to each of the visible developments from the receptor location;
 - the direction of each development in relation to the receptor;
 - the extent of the view occupied by each development;
 - the cumulative effect of development upon the fabric or key landscape components; and
 - in the case of landscape character area, residential areas, and transportation/recreational routes: the proportion of the area or route subject to cumulative views.
- A.1.46 The criteria for defining cumulative magnitude in this chapter are outlined in Table A4.

Table

Table A4: Example definitions of cumulative magnitude of impact

Magnitude of impact	Typical descriptors
	Landscape and Visual resource
High	The Proposed Development would represent a considerable increase in the proportion of the landscape or view affected by similar development. The result of this change would be a fundamental change to baseline conditions.
Medium	The Proposed Development would represent a notable increase in the proportion of the landscape or view affected by similar development. Moderate cumulative change would represent prominent, but localised change.
Low	The Proposed Development would represent a minor addition to the proportion of the landscape or view affected by similar development. Cumulative change arising from the proposals would be discernible but the original baseline conditions would be fundamentally the same.
Negligible	The Proposed Development would represent a very minor addition to the proportion of the landscape or view affected by similar developments. Baseline conditions would fundamentally be unaltered. Cumulative change arising from the proposed Development would be barely distinguishable.

- A.1.47 Cumulative effects are described as:
- **Simultaneous or combined:** where two or more developments may be viewed from a single fixed viewpoint simultaneously, within the viewer's field of view and without requiring them to turn their head;
 - **Successive or repetitive:** where two or more developments may be viewed from a single viewpoint successively as the viewer turns their head or swivels through 360°; and

- **Sequential:** where a number of developments may be viewed sequentially or repeatedly at increased frequency, from a range of locations when travelling along a route within the LVIA Study Area.

A.1.48 Developments which have been refused at appeal or withdrawn or are at the scoping stage are not included in the assessment in line with NatureScot guidance .

A.1.49 The way in which the assessment is described and presented is varied depending on the number and nature of scenarios which may arise.

- The cumulative assessment considers scenarios within which developments of the same status (operational and consented) may be “grouped,” for instance two or more nearby cumulative development proposals may be considered in one scenario if it is considered that the cumulative effects arising if one or more are developed are likely to be similar;
- Receptors judged to receive a Negligible magnitude of change from the Proposed Development on its own are not considered for cumulative assessment on the basis that any significant effects arising would primarily be caused by the cumulative developments and unlikely to be contributed to by the Proposed Development; and
- Only those receptors judged likely to experience effects from the cumulative development(s) being considered within a given scenario are included in the assessment.

Level of effects and Significance of effects

A.1.50 The emphasis in LVIA is on identification and reporting of significant environmental effects. The determination of levels of significance requires the application of professional judgement and experience to gauge the balance of variables which, in every instance, are given different weight according to the site and its surroundings in terms of specific considerations.

A.1.51 Within this assessment, the assessment of effects has taken the following into account (as appropriate):

- Reference to regulations or standards
- Reference to best practice guidance
- Reference to policy objectives
- Reference to criteria, for example designations or protection status
- Outcomes of consultation to date
- Professional judgement based on local/ regional/ specialist experience.

A.1.52 Each effect is evaluated on a case-by-case basis. The matrix below provides general guidance on the relationship between magnitude of change and sensitivity of receptor. Where the landscape or visual impact has been classified as Major and Major/moderate this is considered to be equivalent to a significant effect. Moderate effects may or may not be significant, depending on the particular circumstances arising and professional judgement. In this instance justification will be provided in the receptor assessment.

A.1.53 Where intermediate ratings are given, e.g. “moderate / minor,” this indicates an effect that is less than moderate but more than minor, rather than one which varies across the range. In such cases, the higher rating will always be given first; this does not mean that the impact is closer to that higher rating but is done to facilitate the identification of the more significant impacts within tables. Intermediate judgements may also be used for judgements of magnitude and sensitivity.

Table A5: Assessment of significance of effects matrix

Sensitivity	Magnitude of impact			
	High	Medium	Low	Negligible
High	Major	Major/Moderate	Moderate	Minor
Medium	Major/Moderate	Moderate	Minor	Minor/Negligible
Low	Moderate/Minor	Minor	Minor/Negligible	Negligible

A.1.54 LVIA is a means of documenting professional judgement, rather than a formulaic process. In line with GLVIA 3, the matrix is not used as a prescriptive tool, and the methodology and analysis of potential effects at any particular location must allow for the exercise of professional judgement. Thus, in some instances, a particular parameter may be considered as having a determining effect on the analysis.

A.1.55 It should also be noted that whilst an effect may be significant, that does not necessarily mean that such an impact would be unacceptable or should necessarily be regarded as an “*undue consequence*” (GLVIA3, para 5.40). What is important is that the likely effects of any proposal are transparently assessed and understood so that the determining authority can bring a balanced and well-informed judgement to bear when making any decision. This judgement should be based upon weighing up the proposal's benefits against the anticipated positive and negative effects.