Appendix 14A Landscape and Visual Impact Assessment Methodology

14. LANDSCAPE AND VISUAL IMPACT ASSESSMENT METHODOLOGY

14A.1. General Approach

14A.1.1. For the purpose of the Environmental Impact Assessment (EIA) process, a clear distinction is drawn between landscape and visual impacts:

- landscape impacts relate to the impacts of development upon the physical characteristics or components of the landscape, which together form the character of that landscape, e.g. landform, vegetation and buildings; and
- visual impacts relate to the changes arising from development to individual "receptor's" views of that landscape, e.g. local residents or motorists passing through the area.

14A.1.2. The method of landscape and visual impact assessment adopted in order to assess the proposed development has been devised in order to address the specific issues raised by a development of this scale and nature.

14A.1.3. The landscape and visual impact assessment has been based on the following best practice guidance:

- Guidelines for Landscape and Visual Impact Assessment, Third Edition (Landscape Institute and Institute of Environmental Management and Assessment, 2013) (Ref 14A -1);
- Landscape Character Assessment; Guidance for England and Scotland (The Countryside Agency and Scottish Natural Heritage, 2002) (Ref 14A-2).

14A.2. Impact Assessment

14A.2.1. For the purposes of comparison and in order to establish a 'control' scenario against which impacts may be assessed, the baseline conditions are projected forward to produce a 'no development' alternative to the proposed development. The key potential impacts of the proposed development upon the baseline landscape and identified receptor groups' views of that landscape are then identified and assessed. Potential landscape and visual impacts (both positive and negative) are considered at three scenarios; construction, opening and operation.

14A.2.2. Through the assessment of impacts at these three points in time, distinctions may be drawn between temporary, permanent, short term and long-term impacts.

14A.2.3. Landscape and visual impacts may be further categorised as being either direct impacts i.e. within the study area as defined by the visual envelope, or indirect impacts, e.g. off-site visual impact of construction traffic.

14A.3. Landscape Impact Assessment Methodology

14A.3.1. In assessing the predicted effects from any likely impacts to the landscape resulting from the proposed development, the following criteria are considered:

- landscape character;
- landscape sensitivity;
- landscape capacity;
- magnitude of likely impacts that may affect the landscape; and
- significance of landscape effects.

14A.3.2. Landscape impacts and effects are predicted primarily on the basis of the change to baseline conditions prevalent in 2013 and projected forward to the future baseline year. This prediction is a subjective but systematic and structured assessment process.

14A.3.3. Landscape impacts are considered, including both the direct and indirect impacts of the proposed development upon landscape elements and features (or components), as well as the impact upon the general landscape character of the surrounding area.

14A.4. Landscape Sensitivity

14A.4.1. The sensitivity of the landscape to change is not absolute and varies according to the existing landscape, the form and type of proposed development and the type of change being proposed. Accordingly the concept of 'sensitivity to change' is not part of the baseline description of the landscape of the study area, but it is considered in relation to the assessment of the effects of the proposed development. In general terms, areas of high landscape quality and value are more sensitive to change than areas of lesser quality and value. General guidance on the evaluation of sensitivity is provided in Table 14A.1 below. However the actual sensitivity would depend on the attributes of the landscape receiving the development. Assessment of sensitivity is based on consideration of the following parameters, together with the nature of the proposed development during the course of the assessment process;

- the distinctiveness of character of existing landscape;
- key features of the existing landscape;
- the nature of predicted impacts;
- degree of change to key features;
- the ability of the landscape to accommodate change (i.e. sensitivity); and
- the significance of change to the landscape resource in local, regional and national context.

14A.4.2. Table 14A.1 defines those criteria that determine the degree of sensitivity of the landscape to potential changes.

Table 14A.1: Classification of sensitivity

Sensitivity	Description
High	Areas where landscape character, elements and associated land uses, value and quality, would present a low landscape capacity or scope for change in the form of development or enhancement. Examples of which are high value landscapes, protected at an international or national level (World Heritage Site/National Park/Area of Outstanding Natural Beauty), where the principal management objectives are likely to be conservation of the existing character. Note that landscape quality and value are not interchangeable.
Medium	Areas where landscape character, elements and associated land uses, value and quality, there could be some landscape capacity and scope for development and /or enhancement. Examples of which are landscapes which have a designation of protection at a regional level or at non-designated local level where there is evidence of local value and use (e.g. acknowledged as having landscape value in guidebooks and/or has identifiable elements that have been noted as providing for the enjoyment of the particular landscape).

Low	Areas where landscape character, elements and associated land uses, value and quality, where there would be a higher landscape capacity or scope for change from development or enhancement. Typically this would include lower value and no-designated landscapes that may also have some elements or features of recognisable quality, where landscape management objectives include, enhancement, repair and restoration.

14A.5. Magnitude of Landscape Impacts

14A.5.1. The magnitude of landscape impact relates to:

- the size, extent or degree of change to landscape character or individual landscape components;
- whether there is a direct impact resulting in the loss of landscape components, or a change beyond the land take of the scheme having an impact on the character of the area; and
- whether the impact is permanent or temporary.

14A.5.2. Table 14A.2 presents the criteria used to define the magnitude of landscape impacts as set out in the Landscape Institute and Institute of Environmental Assessment and Management. Guidelines for Landscape and Visual Impact Assessment (2013).

Table 14A.2: Classification of magnitude of landscape impact

Magnitude	Description
High	Change that would be large in extent and scale with the loss of critically important landscape elements and features, that may also involve the introduction of new uncharacteristic elements or features that either singularly or in combination contribute to the overall change of the landscape in terms of character, value and quality. This would also require a consideration of the effects the proposed mitigation measures.
Medium	Changes that are more limited in extent and scale involving the loss of landscape characteristics or elements that may also involve the introduction of new uncharacteristic elements or features that either singularly or cumulatively would lead to changes in landscape character, and quality.
Low	A change affecting small areas of landscape character and quality, together with the loss of some less characteristic landscape elements or the addition of new features or elements.
Very Low	Changes affecting small or very restricted areas of landscape character. This may include the limited loss of some elements or the addition of some new features or elements that are characteristic of the existing host landscape or hardly perceivable.

14A.5.3. The relationship between sensitivity and magnitude of impact allows an assessment of the significance of predicted landscape effects to be made. The sensitivity of the landscape to change is the degree to which a particular Landscape Character Area (LCA) or feature can accommodate changes or new features without unacceptable detrimental effects to its essential characteristics.

14A.5.4. The magnitude of a predicted landscape impact relates to the size, extent or degree of change likely to be experienced as a result of the proposed development. The magnitude takes into account whether there is a direct impact resulting in the loss of landscape components, or a change beyond the land-take of the scheme that might have an effect on the character of the area, and whether the impact is permanent or temporary.

14A.6. Significance of Landscape Effects

14A.6.1. The relationship between the sensitivity of receptors and the magnitude of likely impacts allows the relative significance of predicted effects on the landscape to be defined. Table 14A.3 below provides a matrix used to describe this relationship, and so allow a relative level of significance of any predicted landscape effects to be categorised. Where this differs from the matrix defined for the overall Environmental Assessment it is due to the definition of how magnitude and sensitivity are defined, as set out in Tables 14A.1 and 14A.2

Table 14A.3: Significance of landscape effects

Sensitivity of Receptor	Magnitude of Impact			
	High	Medium	Low	Very Low
High	Major	Moderate	Minor	Negligible
Medium	Moderate	Moderate	Minor	Negligible
Low	Minor	Minor	Negligible	Negligible

14A.6.2. Table 14A.4 summarises the effects on landscape character.

Table 14A.4: Classification of significance of landscape effects

Significance	Definition
Major adverse	The Proposed Development would result in effects that are at a complete variance with the landform, scale and pattern of the landscape; Cannot be fully mitigated and may cumulatively amount to a sever adverse effect; Would permanently degrade, diminish or destroy the integrity of valued characteristic features, elements and/or their setting; and Would cause a very high quality landscape to be permanently changed and its quality diminished.
Moderate adverse	The Proposed Development would result in effects that cannot be fully mitigated and may cumulatively amount to a severe adverse effect; Are at a considerable variance to the landscape degrading the integrity of the landscape or at odds with the local pattern and landform; and Will be substantially damaging to a high quality landscape.
Minor adverse	The Proposed Development would be out of scale with the landscape or at odds with the local pattern and landform; and Will leave an adverse impact on a landscape of recognised quality.
Negligible adverse	The Proposed Development would be in scale with the landscape and the local pattern and landform; and Will leave a barely discernible but adverse impact on a landscape of recognised

	quality.
Neutral	The Proposed Development would not affect landscape quality.
Negligible beneficial	The Proposed Development fits with the scale, landform and pattern of the landscape; and Has a barely discernible (but beneficial) impact on landscape quality and character.
Minor beneficial	The Proposed Development has the potential to improve the landscape quality and character; Fit in with the scale, landform and pattern of the landscape; and Enable the restoration of valued characteristic features partially lost through other land uses.
Moderate beneficial	The Proposed Development would have the potential to fit very well with the landscape character; and Improve the quality of the landscape through removal of damage caused by existing land uses.
Major beneficial	The Proposed Development would have the potential to fit seamlessly into the landscape character; Preserve the integrity of valued characteristic features, elements and/or their setting; and Provide an improvement to the quality of the existing landscape through removal of existing damage caused by existing land use and introduce additional landscape elements complementary to the existing landscape character.

14A.7. Visual Impact Assessment Methodology

14A.7.1. The assessment of effects likely to result from visual impacts is structured by receptor groups (residents, users of recreational spaces, business users and motorists). Individual receptors are identified through the definition of the Zone of Theoretical Visibility (ZTV), within which views of the development are likely to be possible. Individuals are subsequently categorised into receptor groups within different areas. The sensitivity of each receptor group is then evaluated as being high, medium or low.

14A.7.2. Each viewpoint is recorded, including grid reference, distance from the proposed development site (as the crow flies), receptor type, sensitivity and a short description of the view. Views described as 'long range' are determined to be from more than 10 km, medium range views are more than 1 km and less than 10 km, with close range views within 1 km.

14A.8. Visual Sensitivity

- Visual impacts result from change to the appearance of the landscape as a result of the development proposals either intruding into, or obstructing existing views, or by their overall impact on visual amenity and character. Where relevant, seasonal differences in effect are identified. The sensitivity of receptors relates principally to three factors as below:
- receptor's function whilst exposed to view (work, recreational activities, resident)
- degree of exposure to view; and
- period of exposure to view.

14A.8.1. The sensitivity of the potential visual receptors will vary depending on the location and context of the viewpoint, the activity of the receptor and the importance of the view. Visual receptor sensitivity is defined as high, medium or low in accordance with Table 15A.5 below.

14A.8.2. The criteria used to assess the magnitude of visual impacts are as follows:

- value of existing views;
- degree of change to existing views;
- the availability and amenity value of the alternative views; and
- distance of the receptor.

Table 14A.5: Classification of sensitive visual receptors

Sensitivity of Receptor	Definition
High	Primary views from residential properties and users of the highest value and nationally or internationally designated landscapes including the use of locations accessible for recreational and amenity purposes and where the activities are focused on the landscape. This would also apply to frequency of use and the overall visual context of the particular viewpoint.
Medium	May include views from properties and users of valued landscapes with protected designations or noted local value, recreational space, local footpaths and where the activities are focused on the landscape. Receptors would also include walkers, cyclists, road users, travelling through the landscape.
Low	People within non-designated farmland, moorland and landscapes of lower value and low public right of way or recreational use. Receptors here often include people at their place of work or partaking of activities not involving an appreciation of the landscape

14A.8.3. Those receptors living within view of the proposed development are usually regarded as the highest sensitivity group along with those engaged in outdoor pursuits for whom landscape experience is the primary objective. The threshold for significance of visual effects relies to a great extent on professional judgement. Criteria and local circumstances require close study and consideration to decide if the effect on a single property will warrant classification as a highly significant issue and will be rare, however it may combine with similar impacts on several properties to give rise to a more general impact of high significance.

14A.9. Magnitude of Visual Impacts

14A.9.1. Table 14A.6 below presents the criteria used to define the magnitude of visual impacts.

Table 14A.6: Classification of visual impact magnitude

Magnitude of Impact	Definition
High	The proposals form a significant and immediately apparent part of the scene that affects and changes its overall character.
Medium	The proposals may form a visible and recognisable new element within the overall scene and may be readily noticed by the observer or receptor.

Low	The proposal constitutes only a minor component of the wider view, which might be missed by the casual observer or receptor. Awareness of the proposals would not have a marked effect on the overall quality of the scene.
Very Low	Only a very small part of the proposals is discernible and/or they are at such a distance that they are scarcely appreciated. Consequently they have very little effect on the scene.

14A.10. Significance of Visual Effects

14A.10.1. For the purposes of assessment, the sensitivity of a receptor and the magnitude of a likely impact are combined to assess the effects that the development is predicted to have on existing baseline visual conditions for that given receptor. As previously described for the landscape impact assessment, specific terminology is used to describe the magnitude of impact. Table 14A.7 sets out the criteria used to assess the relative significance of visual effects.

Table 14A.7: Matrix defining the relative significance of landscape visual effects

Sensitivity of Receptor	**Magnitude of Impact**			
	High	**Medium**	**Low**	**Very Low**
High	Major	Moderate	Minor	Negligible
Medium	Moderate	Moderate	Minor	Negligible
Low	Minor	Minor	Negligible	Negligible

14A.10.2. For example:

- Major (adverse) effects may be defined as highly sensitive receptors exposed to intrusion, obstruction or change of severe magnitude for prolonged periods;
- Moderate (adverse) effects may be defined as the result of medium sensitive receptors exposed to intrusion, obstruction or change of a moderate magnitude;
- Minor (adverse) effects may be defined as the result of receptors of low sensitivity exposed to intrusion, obstruction or change of a slight magnitude for a short period of time; and
- A neutral effect may be defined as the result of receptors of low sensitivity exposed to little or no discernible intrusion, obstruction or change.
- Effects may be considered as beneficial (positive) to visual receptors as well as adverse. Positive effects may be defined as impacts that are beneficial in terms of enhancing the quality of the receptor's views.

14A.11. References

Ref 14A-1 Landscape Institute and Institute of Environmental Management and Assessment Landscape (2013) *Guidelines for Landscape and Visual Impact Assessment*, Third Edition

Ref 14A-2 The Countryside Agency and Scottish Natural Heritage (2002) *Landscape Character Assessment; Guidance for England and Scotland*