

Appendix A: Methodology

Landscape Effects

Assessing the Landscape Effects requires methodical consideration of each effect identified and, for each one, assessment of the sensitivity of the landscape receptors and the magnitude of the effect of the landscape.

The initial landscape appraisal begins with a baseline study, which includes data collection and a desktop review of information relating to the components, character and scenic quality of the townscape, and landscape, including:

- Ordnance Survey maps
- Aerial photographs
- Relevant planning policy and guidance
- Landscape, historic and environmental designations; and
- National, regional and local scale landscape character assessments.

The objective of the baseline study for the landscape is to provide an understanding of the landscape in the area that may be affected – its constituent elements, its character, spatial patterns, its geographic extent, its history, its condition, the way in which landscape is experienced and the value attached to it. This information is then reviewed alongside the description of the Proposed Development to form the basis for the identification and description of the changes that will result in the landscape effects of the proposal.

Landscape Sensitivity

The landscape receptors are firstly assessed in terms of their sensitivity, which combines judgements of their susceptibility to change to the type of development proposed and the value attached to the landscape. The susceptibility to change according to the GLVIA3 means *the ability of the landscape receptor to accommodate the Proposed Development without undue consequences for the maintenance of the baseline conditions and/or the achievement of landscape planning policies and strategies.* Judgements in relation to susceptibility are recorded as High, Medium or Low and include assessment of the physical and aesthetic characteristics and the potential scope for mitigation.

The judgements regarding susceptibility and value of the landscape receptor are identified within the sensitivity table included within Appendix B. Examples and further guidance on the evaluation of landscape sensitivity are provided below:

- **High:** Landscape character, characteristics and elements which would generally be of lower landscape capacity or scope for landscape change and high landscape value and quality. These are landscapes that may be considered to be of particular importance to conserve and which may be particularly sensitive to change if in appropriately dealt with.
- **Medium:** Landscape character, characteristics and elements where there would be a medium landscape capacity or some scope for landscape change. Often include landscapes of medium landscape value and quality which may be locally designated.
- **Low:** Landscape character, characteristics and elements where there would be higher landscape capacity or scope for landscape change to accommodate the proposed type of development. Usually applies to landscapes with a lower landscape susceptibility or higher landscape capacity for the Proposed Development.

The level of landscape effects are defined in relation to the individual development and its location, using well informed and reasoned judgements.

The value of the landscape receptors is established in the baseline conditions and covers the value of the Landscape Character Types and Areas that may be affected, based on review of any designations at both national and local level. Where there are no designations judgement is based on the value of individual contributors to landscape character, especially the key characteristics, which may include individual elements of the landscape, particular landscape features, and notable aesthetic and perceptual or experiential qualities.

The table below gives an indicator of the values attached to landscape designations when assessing landscape value. It should be noted that the presence or absence of designations does not dictate the value assessment and are only indications of likely value judgements.

Criteria for Assessing Landscape Value

Value		Typical Criteria	Typical Scale	Examples
High	Exceptional	High Importance and rarity. No/very limited potential for substitution.	International, National.	World Heritage Sites, AONB, National Park, National Scenic Area
	High	High Importance and rarity. Limited potential for substitution.	National, regional, local	AONB, National Park, National Scenic Area
Moderate	Moderate	Medium importance and rarity. Limited potential for substitution.	Regional, local.	Regional Scenic Area.
	Moderate-low	Medium importance and rarity. Some/good potential for substitution.	Regional, local.	Undesignated but value expressed in demonstrable use.
Low	Low	Low importance and rarity.	Local.	Area identified as having some aspect of local value but with scope for improvement.
	Very low	Low importance and rarity.	Local.	Area identified for recovery/enhancement.

The sensitivity of the landscape receptors is then calculated by combining the susceptibility to change and the landscape value. If the susceptibility to change is high and the landscape value is high, then the sensitivity of the landscape would be judged as high. If the susceptibility to change is low and the landscape value is low, then the sensitivity of the landscape receptor would be judged as low.

Magnitude of Change for Landscape Receptors

The magnitude of change for landscape receptors arising from the Proposed Development is classified as substantial, moderate, slight or negligible, again dependent on interpretation of a number of factors, but unlike assessments of sensitivity, these are largely quantifiable. Each

effect of the Proposed Development on landscape receptors then needs to be assessed in terms the following criteria:

- degree or loss or alteration to key landscape features/elements or characteristics;
- distance from the development;
- duration of effect;
- landscape backdrop to the development;
- landscape context of other build development, particularly vertical elements;
- in order to differentiate between different levels of magnitude the following definitions are provided in the table below:

Criteria for assessing magnitude of change for Landscape Receptors

Level	Typical Criteria
Substantial	<ul style="list-style-type: none"> • Total loss of or major alteration to key elements/features/characteristics of the baseline landscape. • Introduction of elements considered to be totally uncharacteristic in the context of the baseline landscape altering the aesthetic or perceptual aspects of the landscape. • Removal of elements considered to be important aesthetic or perceptual aspects of the landscape. • Landscape effects felt over a large geographical scale, influencing several landscape types or character areas.
Moderate	<ul style="list-style-type: none"> • Partial loss of or alteration to key elements/characteristics of the baseline landscape. • Introduction of elements that may be prominent but may not necessarily be considered substantially uncharacteristic in the context of the baseline landscape and moderately altering the aesthetic or perceptual aspects of the landscape. • Removal of elements considered to contribute to aesthetic or perceptual aspects of the landscape. • Landscape effects at the scale of the landscape type or character area within which the proposal lies.
Slight	<ul style="list-style-type: none"> • Minor loss of or alteration to key elements/features/characteristics of the baseline landscape. • Landscape effects within the immediate setting of the site and at site level.
Negligible	<ul style="list-style-type: none"> • Very minor loss of or alteration to key elements/features/characteristics of the baseline landscape.

Visual Sensitivity

Visual receptors are represented by people, meaning the particular person or group of people likely to be affected at a specific viewpoint. As in the landscape assessment the visual sensitivity is assessed in terms of the susceptibility to change in views and visual amenity as well as the value attached to particular views.

The susceptibility of different visual receptors to changes in views and visual amenity depends upon the occupation or activity of people experiencing the view at different locations and the extent to which their attention or interest may therefore be focused on the views.

As in the landscape assessment, visual receptor susceptibility to change is defined as high, medium, low or negligible as follows:

Criteria for assessing the susceptibility of visual receptors to change

Level of susceptibility to change	Type of visual receptor
High	<ul style="list-style-type: none"> • Residential properties – ground floor • Visitors to heritage assets, or to other attractions, where views of the surroundings are an important contributor to the experience • Beauty spots, public viewing areas and picnic areas • People, whether residents or visitors, who are engaged in outdoor recreation, including the use of public rights of way, whose attention or interest is focused on the landscape and on particular views • Communities where views contribute to the landscape setting enjoyed by residents in the area
Medium	<ul style="list-style-type: none"> • Residential properties with less significant views from living rooms/gardens • Walkers using local networks of footpaths and tracks • Transport users of local roads, train lines, rivers and canals
Low	<ul style="list-style-type: none"> • Those engaged in outdoor sports or recreation which does not involve or depend upon appreciation of views of the landscape • Those using major roads and motorways in the region • People at their place of work whose attention may be focussed on their work or activity, not on their surroundings, and where the setting is not important to the quality of working life
Negligible	<ul style="list-style-type: none"> • Views from towns, conurbations and heavily industrialised areas

Judgements are also made about the value attached to the views experienced. This takes into account the following:

- Recognition of the value attached to particular views, for example in relation to heritage assets, or through planning designations
- Indicators of the value attached to views by visitors, for example through appearances in guidebooks or on tourist maps, provision of facilities for their enjoyment and references to them in literature or art.

The sensitivity of the visual receptors is then calculated by combining the susceptibility to change and the visual value. If the susceptibility to change is high and the visual value is high, then the sensitivity of the visual receptor would be judged as high. If the susceptibility to change is low and the visual value is low, then the sensitivity of the visual receptor would be judged as low.

Magnitude of Change for Visual Receptors

The magnitude of change for visual receptors arising from the Proposed Development is classified as substantial, moderate, slight or negligible, again dependent on interpretation of a number of factors, but unlike assessments of sensitivity, these are largely quantifiable. Each effect on visual receptors then needs to be assessed in terms of its size or scale, the geographical extent or the area influenced and takes into account:

- Distance of viewpoint from the development;

- Proportion of the field of view occupied by the development (measured as a percentage of the views presented in the photomontages);
- Orientation or angle of view to the centre of the development;
- Background to the development;
- Extent of other built development, especially vertical elements.

Criteria for assessing magnitude of change for Visual Receptors

Level	Typical Criteria
Substantial	A large number of sensitive receptors experiencing a major or fundamental change in nature of the baseline view, particularly in near views with the baseline urban skyline substantially changed.
Moderate	A moderate, but not fundamental, change in nature of view affecting a notable number of sensitive receptors. Open, uninterrupted views with some middle distance obstruction of part of that view resulting from the Proposed Development; baseline urban skyline not adversely infringed in view typically seen over medium/long distance,
Slight	Minor but non material change in nature of view; long distance views across urban landscape panorama, or restricted views (upstairs bedroom windows only) with relatively few receptors affected.
Negligible	Changes unlikely to be perceived by the majority of visual receptors.

Significance of Effects for Landscape and Visual Receptors

The purpose of an assessment of the landscape is to identify any significant effects on landscape and visual amenity arising from the Proposed Development. In this report the level of effect on landscape and visual amenity arising from the combined effects of sensitivity and magnitude are assessed and then professional judgement applied to assess whether the effect is significant or not.

Thresholds determining significance are not provided in the EC Directive 2011/12/EU or the Town and Country Planning (Environmental Impact Assessment) Regulations 2017. The report provides a guide to correlating sensitivity to change and magnitude of change, in order to determine the significance of effects. However, professional judgement using the combined criteria of sensitivity and magnitude is used to determine the overall level of effects. The level of landscape and visual effects has been assessed as major, moderate, minor or none. As is now common practice, these categories have been determined by considering the combination of landscape or visual sensitivity with the predicted magnitude of change.

Correlation of Sensitivity & Magnitude of Change to determine Significance of Effects

	High	Moderate/ Minor	Moderate	Major/ Moderate	Major
Landscape & Visual Sensitivity	Medium	Minor	Moderate/ Minor	Moderate	Major/ Moderate
	Low	Minor/ None	Minor	Moderate/ Minor	Moderate
	Negligible	None	Minor/ None	Minor	Moderate/ Minor
		Negligible	Slight	Moderate	Substantial
	Magnitude of Change				

In this report, those effects described as Major and Major/Moderate are considered to be significant effects as required by the Town and Country Planning (Environmental Impact Assessment) Regulations 2017. These are the effects that the assessor considers to be material in the decision making process.

Type of Effect

Landscape and visual effects are described with reference to type (direct, indirect, secondary or cumulative), timeframe, (short, medium, long term, permanent and temporary) and whether they are positive and negative (beneficial or adverse). The various types of effect are described as follows:

Temporary/Residual effects

If a proposal would result in an alteration to an environment whose attributes can be quickly recovered then judgements concerning the significance of effects should be tempered in that light. Commercial development applications typically include permanent, long term elements as well as minor alterations to landform resulting in residual landscape and visual effects.

Direct/Indirect

Direct and indirect landscape and visual effects are defined in the 'Guidelines for Landscape and Visual Impact Assessment (GVLIA). Direct effects are defined as '*result directly from the development itself,*' (Para 3.22). An indirect or secondary effect is one that results '*from consequential change resulting from the development,*' (Para 3.22) and is often produced away from the proposed development or as a result of a secondary association. The direct or physical effects of a proposed development are generally limited to an area around the development itself.

Beneficial/Adverse

Landscape and visual effects can be beneficial or adverse and in some cases neutral. Beneficial effects upon landscape receptors may result from changes to the landscape involving positive enhancement measures or through the addition of well-designed features which add to the landscape experience or sense of place in a complimentary manner. In relation to adverse effects, changes to a rural landscape involving construction of manmade objects of a large scale are generally considered to be adverse, as they are not usually actively promoted as part of a district wide landscape strategy and therefore in the assessment of effects they are assumed to be adverse, unless specified otherwise.

It is important to recognise that there are occasions whereby the visual effects may be considered as adverse or beneficial. This depends on the viewer's disposition towards change within the landscape and also the principle of commercial building features within the landscape. Taking a precautionary note in making an assessment of the 'worst case scenario', the assessment considers that all effects on views which would result for the construction and operation of the Proposed Development (in particular the buildings, roads and hard standing) to be adverse, unless specified otherwise in the text, it is noted, however, that not all people would consider the effects to be adverse.

Visualisation Methodology

Zone of Theoretical Visibility Maps

Computer generated Zone of Theoretical Visibility (ZTV) Maps will be prepared to assist in viewpoint selection and to indicate the potential influence of the development in the wider landscape.

The ZTV map will be prepared at 1:40,000 scale to indicate the extent of potential visibility on the basis of bare ground and will not include the screening effects of established hedgerow and tree cover or built elements. The ZTV map indicates areas from which it may be theoretically possible to secure views of part, or parts of the Proposed Development. However, use of the ZTV map needs to be qualified on the following basis:

- There are a number of areas within the ZTV from which there is potential to view parts of the proposal, but which comprise open agricultural, or other land where the general public do not have regular access;
- The large scale ZTV does not take into account for the screening and filtering effects of intervening features such as buildings, trees, woodland and hedgerows;
- The ZTV does not account for the likely orientation of the viewer – for example when travelling.

In addition, the accuracy of the ZTV has to be considered. In particular, the 1:50,000 scale ZTV map will be generated from Ordnance Survey (OS) Terrain 5 digital data based on a contour model at 2m intervals. The resolution of this model cannot accurately represent small scale terrain features, which can otherwise give rise to inaccuracy in the predicted visibility. This can lead to an underestimation of visibility eg a raised area of ground permitting views over an intervening obstruction – or can lead to an overestimation of visibility – such as where a roadside embankment obscures a view.

Visualisations

The appraisal of landscape and visual effects will be carried out from representative selection of viewpoints. The viewpoint analysis is illustrated with reference to illustrative material, comprising photographs.

The photography was undertaken in accordance with accepted good practice and the Landscape Institute guidance “LI Technical Guidance Note 06/19, Visual representation of Development Proposals, Landscape Institute, 2019”. The baseline photography has been undertaken with a high quality digital SLR camera with full frame sensor and a 50mm fixed focal length lens in combination with a panoramic head equipped tripod in accordance with accepted good practice. The resulting photos are combined into panoramas using specialist computer software (ie Adobe Photoshop) and saved as planar projection versions for use in visualisation production.