



Greater Cambridge Partnership

CAMBOURNE TO CAMBRIDGE

Appendix TR8.1: Landscape and Visual Assessment Methodology





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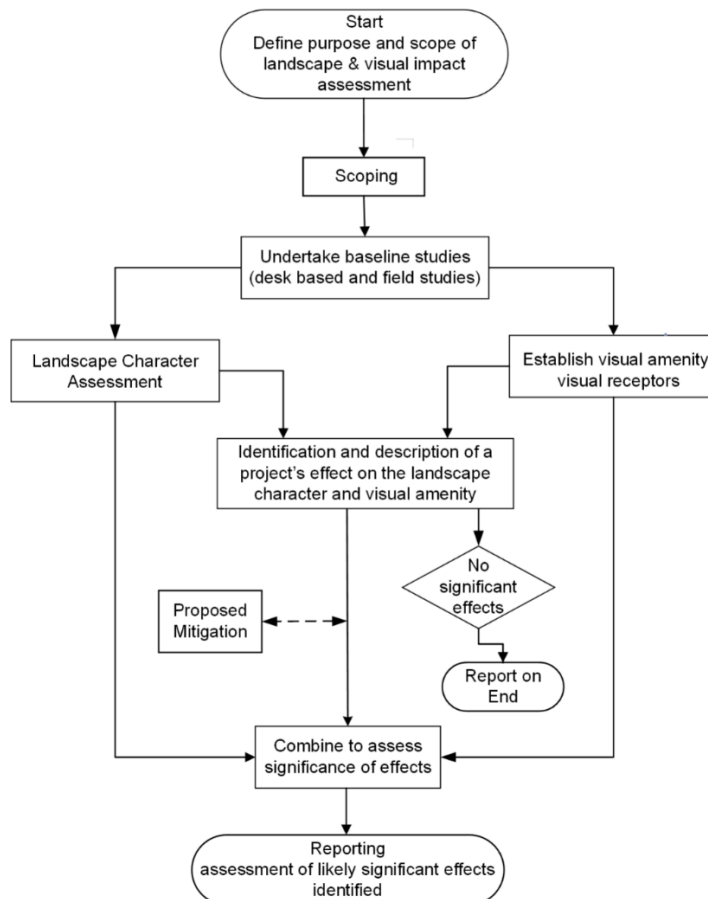
1 OVERVIEW

1.1 INTRODUCTION

1.1.1. The methodology employed in carrying out Landscape and Visual Assessment (LVIA) has been undertaken in accordance with best practice and drawn from:

- The Landscape Institute & IEMA guidelines (GLVIA3)¹ ;
- An Approach to Landscape Character Assessment. 2014, Natural England;
- Townscape Character Assessment – Technical Information Note 05/2017, Revised April 2018, Landscape Institute;
- Visual Representation of Development Proposals - Technical Guidance Note 06/2019, Landscape Institute;
- DMRB LA 104 Environmental Assessment and Monitoring².and
- DMRB LA 107 Landscape and Visual Effects³.

1.1.2. The LVIA approach and process are summarised in the flow diagram below from LA 107.



¹ Landscape Institute and Institute of Environmental Management and Assessment, 2013, Guidelines for Landscape and Visual Impact Assessment, 3rd edition

² Highway England, Design Manual for Roads and Bridges, 2020, LA 104 Environmental Assessment and Monitoring

³ Highway England, Design Manual for Roads and Bridges, 2020, LA 107 Landscape and Visual Effects

- 1.1.3. In the text below there are tables setting out the decision-making framework for assessing sensitivity and magnitude and how these are considered together to reach an assessment of significance. In all cases these tables are guidelines, not hard and fast rules. Conclusions about the sensitivity of receptors, the magnitude of impact and the significance of effects are always based on professional judgement⁴.
- 1.1.4. In line with the Landscape Institute guidance GLVIA3⁵, this LVIA considers the magnitude of impact and significance of effect at year 1 and at year 15 taking regard of embedded mitigation including proposed planting.
- 1.1.5. Year 1 is considered as the ‘worst-case scenario’ during winter months when leaf cover is at its lowest, visibility is at its highest from the surrounding landscape, and embedded mitigation has not had time to establish. Year 15 is considered during summer months when leaf cover is at its highest, restricting visibility from the surrounding landscape, and embedded mitigation has had time to establish.

1.2 DESIGN AND MITIGATION

- 1.2.1. The C2C Scheme design and LVIA are iterative, with stages overlapping in part. Landscape architects are involved in an iterative approach to ensure that the likely landscape and visual effects of a development proposal play an important part in the evolution of the design.
- 1.2.2. In accordance with the EIA Regulations, mitigation measures to prevent/avoid, reduce and where possible offset or remedy (or compensate for) any significant adverse landscape and visual effects are described and considered to fall into:
- Primary mitigation (Embedded) measures which are developed through the iterative design process and have become integrated into the design for example:
 - to avoid or reduce impact by ensuring the form of the C2C Scheme is sympathetic with the existing baseline; or
 - to remedy impact by planting to integrate the C2C Scheme into the landscape;
 - to compensate impact by replacing removed woodland by new woodland; or
 - enhancement by creation new landscape or habitat
 - Best practice construction and operational management practices for avoiding and reducing environmental effects;
 - Secondary mitigation (Additional) measures which are not built into the final development proposals but would be secured, and are designed to address any residual adverse effects remaining after primary measures and standards construction practices have been incorporated into the scheme. Typical secondary mitigation strategies are for example:
 - additional recommended measures accompanying the proposal to reduce adverse effects such as additional landscape detail design approaches, a Landscape Management and Maintenance Plan; or

⁴ Appendix ES2: Statement of Competence (Document reference: C2C-10-00-Environmental Statement (Volume 1)

⁵ Landscape Institute and Institute of Environmental Management and Assessment, 2013, Guidelines for Landscape and Visual Impact Assessment, 3rd edition



- a programme of appropriate monitoring of proposed planting may be agreed with the regulatory authority, so that compliance and effectiveness can be readily monitored and evaluated.

2 ASSIGNING VALUE AND SENSITIVITY

2.1 LANDSCAPE RECEPTORS

2.1.1. Landscape effects can be defined as the changes in the character and quality of the landscape as a result of a development, through:

- direct impacts upon the landscape fabric (specific features and elements that make up the landscape);
- indirect effects on the overall patterns of elements and on the perceptual and aesthetic aspects that give rise to landscape character and regional and local distinctiveness; and
- effects upon valued landscapes such as public open space, designated or otherwise valued landscapes including wild land.

2.1.2. The sensitivity of the landscape receptors has been arrived at by considering the landscape receptor value and the susceptibility of the landscape receptor to the change proposed, using professional judgement. The Assessment of landscape effects is structured around the identification of Landscape Character Areas (LCAs) within the Study Area, based on a combination of desktop analysis, field survey and professional judgement.

LANDSCAPE VALUE

2.1.3. The GLVIA3 defines landscape value as the relative value that is attached to different landscapes by society. A landscape may be valued by different stakeholders for a whole variety of reasons as set out in **Table TR 2-1**.

Table TR 2-1 - Landscape Receptor Value

Value	Recognition	Features	Quality / Condition
Very High	A landscape or feature of international scale and very limited potential for substitution: World Heritage Sites (where designated for landscape reasons)	Internationally acclaimed landscapes with very strong sense of place. Particular planning policy may apply to conservation of landscape/features.	A very high-quality landscape / feature; attractive landscape / feature; exceptional / distinctive.
High	Typically, a landscape or feature of national recognition: National Scenic Areas / Areas of Outstanding Natural Beauty, National Parks, designed landscapes on the English Heritage Register e.g., Registered Parks and Gardens.	Typically, a strong sense of place with landscape / features worthy of conservation; no or few detracting features.	A high-quality landscape / feature; attractive landscape / feature; exceptional / distinctive.
Medium	Regional recognition or undesignated, but locally valued landscape / features: Local Landscape Areas, Regional Scenic Areas, locally listed designed	Typically, contains distinguishing features worthy of conservation; evidence of some degradation and / or some detracting elements.	Ordinary to good quality landscape / feature with some potential for substitution; a reasonably attractive landscape / feature; fairly typical and commonplace.

Value	Recognition	Features	Quality / Condition
	landscapes and Regional Parks.		
Low	Typically, an undesignated landscape / feature.	Few landscape features worthy of conservation, evidence of degradation with many detracting features.	Ordinary landscape / feature with high potential for substitution; quality that is typically commonplace and unremarkable; limited variety or distinctiveness.
Negligible	Typically, an undesignated landscape / feature.	No landscape features worthy of conservation; evidence of degradation with many detracting features.	Low quality landscape / feature with very high potential for substitution; limited variety or distinctiveness; commonplace.

LANDSCAPE SUSCEPTIBILITY

- 2.1.4. Susceptibility is the ability of a defined landscape receptor to accommodate the specific proposed development without undue negative consequences. Susceptibility to accommodate the proposed change is categorised as High, Medium, Low or Negligible in **Table TR 2-2** below.

Table TR 2-2 - Susceptibility of the Landscape Receptor to change

Susceptibility to proposed change	
High	Low ability to accommodate the specific proposed change; undue consequences for the maintenance of the baseline situation (receptor value) and / or achievement of relevant planning policies / strategies.
Medium	Moderate ability to accommodate the specific proposed change; some undue consequences for the maintenance of the baseline situation (receptor value) and / or achievement of relevant planning policies / strategies.
Low	High ability to accommodate the specific proposed change; little or no undue consequences for the maintenance of the baseline situation (receptor value) and / or achievement of relevant planning policies / strategies.
Negligible	Very high ability to accommodate the specific proposed change; no undue consequences for the maintenance of the baseline situation (receptor value) and/or achievement of relevant planning policies / strategies.

LANDSCAPE SENSITIVITY

- 2.1.5. A combination of value and susceptibility forms the basis to reach the sensitivity of Landscape Receptor. It is generally accepted that a combination of high susceptibility and high value is likely to result in the highest sensitivity, whereas a low susceptibility and low value is likely to result in the lowest level of sensitivity. As noted in GLVIA3 there can be complex relationships between the value attributed to a landscape and its susceptibility to change, which can be particularly important when considering change in or close to designated landscapes.

- 2.1.6. Landscapes considered highly susceptible to the proposed change are normally considered to be of high sensitivity unless there are particularly strong reasons associated with the landscape value that lead to a reduction in sensitivity. Similarly, receptors considered of low or medium susceptibility are usually in the same category of sensitivity, unless there are reasons associated with the landscape value that lead to an increase in sensitivity.
- 2.1.7. **Table TR 2-3**, below, summarises typical characteristics of the different levels of sensitivity for landscape receptors. It should be noted that the levels are indicative, and arbitrary divisions of a continuum. Professional judgement is always used to determine the overall level.

Table TR 2-3 - Landscape Receptor Sensitivity

Level of sensitivity	Typical characteristics
Very High	Landscapes of very high international/national importance and rarity or value with no or very limited ability to accommodate change without substantial loss/gain (i.e. national parks, internationally acclaimed landscapes - UNESCO World Heritage Sites).
High	Landscapes of high national importance containing distinctive features/elements with limited ability to accommodate change without incurring substantial loss/gain (i.e. designated areas, areas of strong sense of place - registered parks and gardens, country parks).
Medium	Landscapes of local or regional recognition of importance able to accommodate some change (i.e. features worthy of conservation, some sense of place or value through use/perception).
Low	Local landscape areas or receptors of low to medium importance with ability to accommodate change (i.e. non-designated or designated areas of local recognition or areas of little sense of place).
Negligible	Landscapes of very low importance and rarity able to accommodate change.

2.2 VISUAL RECEPTORS

- 2.2.1. Visual effects relate to changes in available views of the landscape and the effect of those changes on people, including:
- the direct effects of the proposed development on the content and character of views (e.g. through intrusion or obstruction and / or the change or loss of existing elements in the view); and
 - the overall effect on the change on visual amenity.
- 2.2.2. The sensitivity of a visual receptor reflects their susceptibility to change and any values which may be associated with the specific view. It varies depending on a number of factors such as the activity of the viewer, their reasons for being there and their expectations and the duration of view.
- 2.2.3. Certain views are highly valued for either their cultural or historical associations, which can increase the sensitivity of the viewer. However, whilst a valued view may serve to increase the overall visual receptor sensitivity, a low value will not necessarily reduce sensitivity.
- 2.2.4. GLVIA3 advises that it is helpful to consider (but not restricted to) the following:
- Nature of the view (full, partial or glimpsed);

- Proportion of the proposed development visible (full, most, part or none);
- Distance of the viewpoint from the proposed development and whether it would be the focus of the view or only a small element;
- Whether the view is stationary, transient or sequential; and
- The nature of the changes to the view.

2.2.5. Additionally, the seasonal effects of vegetation are considered, in particular the varying degree of screening and filtering of views.

VALUE OF VISUAL RECEPTOR

2.2.6. The sensitivity of a visual receptor is a consideration of the value of the view and the susceptibility of the visual receptor to the type of change proposed, using professional judgement. The value associated with the particular view is described by the criteria set out in **Table TR 2-4** below:

Table TR 2-4 - Visual Receptor Value

Value	Recognition	Indicators of value
High	Recognised views from nationally or internationally important landscape or heritage resources, Scheduled Monuments; may be identified in planning policies or statutory documents.	High value / celebrated view; referred to in national or international guidebooks, tourist guides etc.; literary and art references; presence of interpretive facilities (e.g. visitor centre).
Medium	Recognised views from local or regionally important landscape or heritage resource, such as Local Landscape Areas or Conservation Areas; may be identified in local planning policies or supplementary planning documents.	Moderately valued view; referred to in local or regional guidebooks, tourist maps etc.; local literary and art references; presence of some interpretive facilities (e.g. parking places or sign boards)
Low	Views from locations with no local or regional importance with minimal or no cultural associations	Low valued view; without designation or reference at national, regional, or local level.

SUSCEPTIBILITY OF VISUAL RECEPTOR

2.2.7. The criteria for the Assessment of visual susceptibility are set out in **Table TR 2-5** below.

Table TR 2-5 - Susceptibility of the Visual Receptor to change

Susceptibility to proposed change	Criteria
High	<ul style="list-style-type: none"> Residents within a dwelling; Walkers on long distance trails and mountain access routes, Users of footpaths where the attractive nature of the countryside is a significant factor in the enjoyment of the walk, Cyclists on national and local cycle routes designed to provide an attractive experience; Road users on recognised tourist routes; Visitors to landscape and heritage resources and other attractions where views of the surroundings are an important contributor to appreciation, experience and/or enjoyment.
Medium	<ul style="list-style-type: none"> General road users; Passengers on rail lines where the trains run at low or moderate speeds; 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	<ul style="list-style-type: none"> People at their place of work or shopping; Users of high-speed roads and passengers in trains running at high speed. People engaged in recreational activities where the view of the surroundings is secondary to the enjoyment of the activity (such as playing or spectating at outdoor sports facilities) Users of public open space and footpaths where the nature of the surroundings is irrelevant to the enjoyment of the activity
Negligible	<ul style="list-style-type: none"> Users of indoor facilities where the view is irrelevant to their activity

VISUAL SENSITIVITY

2.2.8. As with landscape, susceptibility and value can be combined in different ways to form a judgement about the sensitivity of a given receptor. It is generally accepted that a combination of high susceptibility and high value is likely to result in the highest sensitivity, whereas a low susceptibility and low value is likely to result in the lowest level of sensitivity.

2.2.9. However, whilst a valued view may serve to increase the overall sensitivity of the visual receptor, a low value will not necessarily reduce sensitivity. Visual receptors considered highly susceptible to the proposed change are normally considered to be of high sensitivity unless there are particularly strong reasons associated with the value of the view that lead to a reduction in sensitivity. Similarly,

receptors considered of low or medium susceptibility are usually in the same category of sensitivity, unless there are reasons associated with the value of the view that lead to an increase in sensitivity.

2.2.10. **Table TR 2-6** below, summarises typical characteristics used in this LVIA of the different levels of sensitivity. It should be noted that the levels are indicative, and the levels shown are arbitrary divisions of a continuum.

Table TR 2-6 - Visual Sensitivity

Level of sensitivity	Criteria
Very High	<ol style="list-style-type: none"> 1) Static views from and of major tourist attractions; 2) Views from and of very important national/international landscapes, cultural/historical sites (e.g. National Parks, UNESCO World Heritage sites); 3) Receptors engaged in specific activities for enjoyment of dark skies.
High	<ol style="list-style-type: none"> 1) Views by users of nationally important PRoW / recreational trails (e.g. national trails, long distance footpaths); 2) Views by users of public open spaces for enjoyment of the countryside (e.g. country parks); 3) Static views from dense residential areas, longer transient views from designated public open space, recreational areas; 4) Views from and of rare designated landscapes of national importance.
Medium	<ol style="list-style-type: none"> 1) Static views from less populated residential areas, schools and other institutional buildings and their outdoor areas; 2) Views by outdoor workers; 3) Transient views from local/regional areas such as public open space, scenic roads, railways or waterways, users of local/regional designated tourist routes of moderate importance; 4) Views from and of landscapes of regional importance.
Low	<ol style="list-style-type: none"> 1) Views by users of main roads or passengers in public transport on main arterial routes; 2) Views by indoor workers; 3) Views by users of recreational/formal sports facilities where the landscape is secondary to enjoyment of the sport; 4) Views by users of local public open spaces of limited importance with limited variety or distinctiveness.
Negligible	<ol style="list-style-type: none"> 1) Quick transient views such as from fast moving vehicles; 2) Views from industrial area, land awaiting re-development; 3) Views from landscapes of no importance with no variety or distinctiveness.

3 ASSESSING MAGNITUDE OF IMPACT

3.1.1. The magnitude of landscape and visual impact depends upon a combination of factors including the size, scale and nature of change in relation to the context; the geographical extent of the area influenced; and its duration and reversibility. Criteria used in this LVIA are given in **Table TR 3-1** below.

Table TR 3-1 - Magnitude of Landscape and Visual Impact (change)

Value	Size, Scale and Nature	Geographical Extent	Duration and Reversibility
High	<ul style="list-style-type: none"> • Occupies much of the view. • Obstructs a significant portion of the view. • Forms a large or very noticeable or discordant element in the view. • Considerable change to key features or many existing elements of the landscape. • Introduces elements considered totally uncharacteristic to the existing landscape. • A very noticeable change to the character of the landscape. 	Ranging from notable change over extensive area to intensive change over a more limited area.	Long term (15-25 years); permanent / non-reversible or partially reversible.
Moderate	<ul style="list-style-type: none"> • Occupies a noticeable portion of the view. • Obstructs a significant portion of the view. • Forms a large or very noticeable or discordant element in the view. • Some considerable change to existing landscape elements and /or landscape character; discernibly changes the surroundings of a receptor, such that its baseline is partly altered. • Readily noticeable. 	Moderate changes in a localised area.	Medium term (5-15 years); semi-permanent or partially reversible.
Minor	<ul style="list-style-type: none"> • Occupies a small portion of the view. • Small change to existing landscape elements and / or landscape character.; • Slight, but detectable impacts that do not alter the baseline of the receptor materially. • Not readily noticeable. 	Minor changes in a localised area.	Short term (0-5 years) / temporary; partially reversible or reversible.
Negligible	<ul style="list-style-type: none"> • Occupies little or no portion of the view. • Hardly noticeable. • Limited or no change in existing landscape elements and / or landscape character. • Barely distinguishable change from baseline conditions. 	No change discernible.	Short term (0-5 years) / temporary reversible.

Value	Size, Scale and Nature	Geographical Extent	Duration and Reversibility
No Change	<ul style="list-style-type: none">No noticeable alteration or improvement, temporary or permanent, of landscape character of existing features and elements.		

4 LEVEL OF EFFECT AND SIGNIFICANCE

- 4.1.1. Professional judgement is used to combine sensitivity and magnitude to gauge the level of effect and determine whether it is significant or not.
- 4.1.2. The gradations of magnitude of change and level of effect used in the Assessment represent a continuum, which are described in a five-point scale: high; moderate; minor; negligible, no-change. Where appropriate, this LVIA uses intermediate descriptors, such as minor to negligible, minor to moderate or moderate to high, where the assessor considers that the effect falls between the levels used in **Table TR 4-1**.
- 4.1.3. Effects can be either beneficial or adverse and, in some cases, neutral (neither beneficial nor adverse). Effects assessed as moderate or greater are considered to be significant in terms of the EIA Regulations.
- 4.1.1. The effects diagram provided below illustrates the typical relationship between the magnitude of impact and the sensitivity of the receptor.

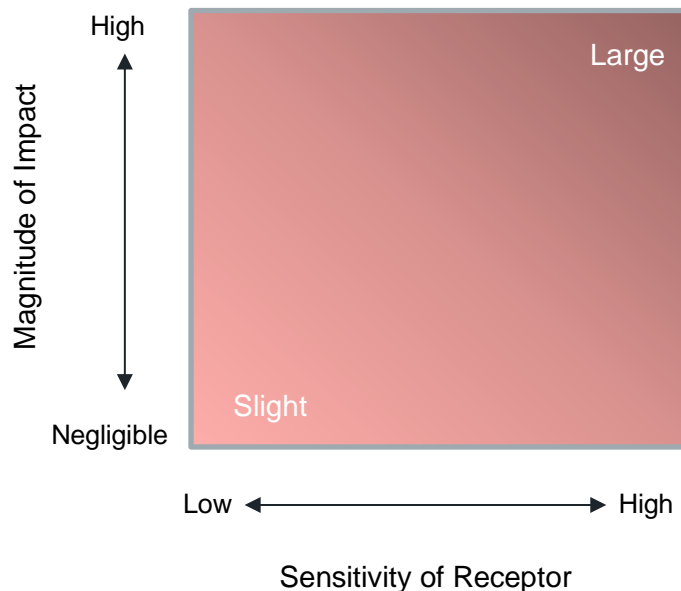


Table TR 4-1 - Level of Landscape and Visual Effect

Level of Effect	Landscape effect	Visual effect
Large	Considerable change over an extensive area of a highly sensitive landscape, fundamentally affecting the key characteristics and the overall impression of its character.	<p>The development would be a prominent feature or a noticeably discordant or enhancing feature substantially affecting overall visual amenity or would result in a clearly noticeable change to a highly sensitive and well composed existing view.</p> <p>A clearly noticeable or substantial improvement or deterioration of the existing view.</p>
Moderate	Small or noticeable change to a highly sensitive landscape or more intensive change to a landscape of medium or low sensitivity, affecting some key characteristics and the overall impression of its character.	<p>The development would be a noticeable feature or a somewhat discordant or enhancing feature affecting overall visual amenity or would result in a noticeable change to a highly sensitive and well composed existing view or would be prominent within a less well composed and less sensitive view.</p> <p>A noticeable improvement or deterioration of the existing view.</p>
Slight	Small change to a limited area of landscape of high or medium sensitivity or a more widespread area of a less sensitive landscape, affecting few characteristics without altering the overall impression of its character.	<p>The development would be a visible but not particularly noticeable feature or a slightly discordant or enhancing feature affecting overall visual amenity or would result in a small change to a highly sensitive and well composed existing view or would be noticeable within a less well composed and less sensitive view.</p> <p>A small improvement or deterioration of the existing view.</p>
Neutral	No discernible improvement or deterioration to the existing landscape character.	No discernible improvement or deterioration in the existing view.



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