A83 Rest and Be Thankful

LTS EIAR VOLUME 4, APPENDIX 10.1 - VISUAL EFFECTS METHODOLOGY

Transport Scotland

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A10-1.Visual Assessment Methodology

A10-1.1. Introduction

A10-1.1.1. The assessment approach was informed by the DMRB LA 107 Landscape and visual effects and DMRB LA 104 Environmental assessment and monitoring standards and the Guidelines for Landscape and Visual Impact Assessment (GLVIA3). The Special Landscape Qualities of the Loch Lomond and Trossachs National Park and the Guidance for Assessment of Effects on Special Landscape Qualities (AESLQ) | NatureScot (Consultation on this guidance closed in July 2024. Currently Draft status). In addition, the Landscape Character Assessment: Loch Lomond and the Trossachs – Landscape Evolution and Influences report has been considered.

A10-1.1.2. The assessment was undertaken by two Chartered Landscape Architects and comprised of desk study, field surveys and consultation. Site surveys at DMRB Stage 3 were undertaken in August 2023 and October 2023.

A10-1.1.3. The assessment has considered the effect of the Proposed Scheme in the winter of year 1 and the summer of year 15 in line with DMRB standard, as well as potentially significant temporary effects during construction.

A10-1.1.4. The effects of the Proposed Scheme have been assessed with potential mitigation i.e., both embedded mitigation during construction and essential mitigation in year 15.

A10-1.1.5. Offsite Natural Capital and Biodiversity Net Gain enhancement areas are also considered in the assessment.

A10-1.2. Consultation

A10-1.2.1. Consultation was undertaken throughout the DMRB Stage 1, DMRB Stage 2 and DMRB Stage 3 process through the A83 Environmental Steering Group (ESG) which included, in relation to visual, The Loch Lomond and The Trossachs National Park Authority and Scottish Forestry.

A10-1.2.2. Following consultation with LLTNPA, a request was made to consider an additional viewpoint from Beinn an Lochan. This was subsequently added to the visual assessment.

A10-1.3. Assessment Criteria

A10-1.3.1. In accordance with DMRB LA 107 and LA 104 and GLVIA 3, the assessment has considered the sensitivity of the visual receptor, the magnitude of effect of the Proposed Scheme upon it and resulted in a determination of the significance of effect of the Proposed Scheme on the visual receptor.

A10-1.3.2. The visual assessment considered a range of receptors including residential, recreational and road users. In addition, the following were also considered in relation to each receptor:

- accessibility
- the viewpoint distance
- direction of view and elevation
- the nature of the viewing experience (static or sequential) and
- the view type (panorama or glimpses)

A10-1.3.3. The Zone of Theoretical Visibility (ZTV) has been used to assist in establishing the potential direction and extent of theoretical views from visual receptors that the Proposed Scheme is likely to influence within and up to a defined 3km study area. Actual visibility was checked for receptors during site surveys. The ZTV was based on a bare earth model and does not, therefore, take into consideration land use cover such as buildings and vegetation, which were considered during field survey assessments. The ZTV has been mapped at a height of 10.050m comprising of 9.050m to top of cope and an extra 1m parapet from the existing road to consider height of the debris flow shelter, the movement of traffic, including Heavy Goods Vehicles (HGVs), and potential effects arising from this. Whilst it is feasible that the existing A83, along with any changes arising as a result of the Proposed Scheme, may be perceptible within the wider landscape, i.e. beyond the 3km study area; a combination of distance, intervening landform and/or vegetation is predicted to avoid the

potential for these changes to be significant. No further assessment has been carried out to inform potential visual effects beyond the study area.

A10-1.3.4. Accurate Visual Representations (AVR) or 'verified views' are computer generated images, often generated from industry standard 3D modelling software, that have been montaged into photographs. These representative images are from agreed viewpoints to show what a proposed scheme might look like and are often used in Visual Impact Analysis and examined at public enquiry. The verified views are created to a high level of accuracy which is verifiable using collected survey data, precise photography techniques (see detail below) and a recorded process which can be traced back and demonstrated.

Methodology for Baseline Photography

A10-1.3.5. Once a view has been selected, the location is visited, confirmed, and assessed with the aid of a wireline or similar visualisation in the field. The viewpoint location is micro-sited to avoid as far as reasonable foreground clutter and photographed during fair weather and light conditions. A photographic record is taken to record the view and the details of the viewpoint location and associated data are recorded to assist in the production of visualisations and to validate their accuracy.

A10-1.3.6. The following photographic information is recorded:

- date, time, weather conditions and visual range
- GPS recorded 12 figure grid reference accurate to -5-10m
- GPS recorded Above Ordnance Datum (AOD) height data
- the focal length of lens is confirmed
- horizontal field of view (in degrees) and
- bearing to Target Site (proposed development).

A10-1.3.7. All photographs included in this assessment were recorded with a digital SLR camera set to produce photographs equivalent to that of a manual full frame

(35mm) SLR camera with a fixed 50mm focal length lens using a large maximum aperture (f/1.8 or 'faster').

A10-1.3.8. All the resulting visualisations have been prepared to show other cumulative development in order that they may assist the cumulative assessment as well as the LVIA.

A10-1.3.9. While no 2 dimensional image can fully represent the real viewing experience, the visualisation aims to provide a realistic representation of the Proposed Development based on current information and photomontage methodology.

Weather Conditions

A10-1.3.10. GLVIA 3 para. 8.22 states that;

"*in preparing photomontages, weather conditions shown in the photographs should (with justification provided for the choice) be either:*

- *Representative of those generally prevailing in the area; or*
- *Taken in good visibility, seeking to represent a maximum visibility scenario when the development may be highly visible".*

A10-1.3.11. In preparing photomontages for the LVIA, photographs will be taken in favourable weather conditions that are representative of the weather conditions generally and where possible, will be taken during periods of 'good' or 'excellent' visibility conditions.

Methodology for Production of Visualisations

A10-1.3.12. Each view has been illustrated with a photograph and a select number of views with a photomontage indicating the Proposed Scheme. Definitions of each of these is described as follows:

- Baseline photograph: A photograph of the existing view recorded in fair weather conditions and usually presented as a panorama that represents a 90 degree or 53.5 degree Field of View (FoV) photograph.

- Photomontage is visualisation which superimposes an image of the Proposed Development upon the baseline photograph, which is then rendered by computer software to produce an image of how the Proposed Scheme would appear from that viewpoint. Photomontage is a widespread and popular visualisation technique, which allows changes in views and visual amenity to be illustrated and assessed.

Baseline Photograph Production

A10-1.3.13. Photographs are then taken using a digital SLR camera in combination with a panoramic head equipped tripod. Detailed information is then recorded on site to enable the accurate alignment of the photographs with the wireline model (data such as GPS grid co-ordinates; ground level information; compass bearings; and any other known references and viewpoint information).

A10-1.3.14. To create the baseline panorama, the photographs from the viewpoint are then digitally joined using Adobe Photoshop or PTGui software to form a planar of cylindrical projection image or panorama using computer software to remove 'barrel distortion' caused by the camera lens. There are practical limitations to shooting viewpoint photographs only in very good or excellent visibility and at particular times of day or from locations that avoid foreground clutter or other vertical features such as telegraph poles, particularly where this is a true representation of the view from that viewpoint area.

Visual Sensitivity

A10-1.3.15. The sensitivity of the visual receptor takes account of the value of the receptor and the susceptibility of the receptor to the specific change proposed (as per GLVIA 3).

Value

A10-1.3.16. Value can be related to the hierarchy of designation - for example, the value attached to particular views in relation to heritage assets, or through planning designations. Value attached to views can also be expressed through published or interpretive material.

Table A10-1.1: Value of Views Criteria

Value	Criteria
High	Views from within, or looking towards internationally or nationally important landscapes typically recognised by designation, or from a highly popular visitor attraction where the view forms an important part of the experience or where the view has an important cultural association.
Medium	Views from within, or looking towards landscapes of regional or district importance recognised by designation or from a moderately popular visitor attraction where the view forms part of the experience or where the view has a local cultural association. Or where the view is of local value.
Low	Views from within landscapes of no designation and where the view is not associated with a visitor attraction and has little or no cultural association.

Susceptibility

A10-1.3.17. Susceptibility relates to how each receptor/group of receptors is affected by a specific proposal (in this case the Proposed Scheme) at a specific viewpoint. Susceptibility is mainly a function of:

- the occupation or activity of people experiencing the view at particular locations
- the extent to which their attention or interest may therefore be focused on the views and the visual amenity they experience at particular location.

Table A10-1.2 Susceptibility Criteria

Susceptibility	Criteria
High	Residents. People engaged in outdoor recreation whose interest is likely to be focused on the landscape. Visitors to heritage assets and other attractions where views are important to the experience. Communities where views contribute to the landscape setting enjoyed by residents. Travellers on scenic routes where awareness of views is likely to be high.
Medium	Travellers on road, rail or other transport routes likely to have an awareness of views of their surroundings. People at their place of work whose focus may be on the setting or surroundings as part of their work.
Low	People engaged in outdoor sport or recreation which does not depend on appreciation of views. People at their place of work whose focus is not normally on the setting or surroundings.

Sensitivity

A10-1.3.18. Value and Susceptibility help to inform the Sensitivity. Table A10-1.3 shows the criteria used to determine sensitivity.

Table A10-1.3: Sensitivity Criteria

Sensitivity (susceptibility and value)	Typical descriptions
Very High	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) and 3) Receptors engaged in specific activities for enjoyment of dark skies.

Sensitivity (susceptibility and value)	Typical descriptions
High	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 and 4) Views from and of rare designated landscapes of national importance.
Moderate	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 and 4) Views from and of landscapes of regional importance.
Low	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 and 4) Views by users of local public open spaces of limited importance with limited variety or distinctiveness.

Sensitivity (susceptibility and value)	Typical descriptions
Negligible	1) Quick transient views such as from fast moving vehicles 2) Views from industrial area, land awaiting re-development and 3) Views from landscapes of no importance with no variety or distinctiveness.

Magnitude of Impact

A10-1.3.19. The magnitude of visual effect was derived from size or scale, geographical extent, duration and reversibility of the proposal on the visual receptors, as set out in LA107.

Table A10-1.4: Magnitude Criteria

Magnitude (change) of visual effect	Typical descriptions
Major	The project, or a part of it, would become the dominant feature or focal point of the view.
Moderate	The project, or a part of it, would form a noticeable feature or element of the view which is readily apparent to the receptor.
Minor	The project, or a part of it, would be perceptible but not alter the overall balance of features and elements that comprise the existing view.
Negligible	Only a very small part of the project work or activity would be discernible, or being at such a distance it would form a barely noticeable feature or element of the view.
No change	No part of the project work or activity would be discernible.

Significance of Effect

A10-1.3.20. The significance of visual effect has been determined using professional judgement through consideration of the sensitivity of the visual receptor and the magnitude of impact upon it arising from the Proposed Scheme. This approach relies on a robust and transparent narrative based on the available guidance (GLVIA3).

Table A10-1.5: Significance Criteria

Significance Level	Criteria
Very Large	Adverse: The Proposed Scheme would cause complete deterioration to a view or loss of a view from a very highly sensitive receptor and would constitute a major discordant element in the view. Beneficial: The Proposed Scheme would lead to a substantial improvement in the view form a very highly sensitive receptor.
Large	Adverse: The Proposed Scheme would cause major deterioration to a view or loss of a view from a highly sensitive receptor and would constitute a major discordant element in the view. Beneficial: The Proposed Scheme would lead to a major improvement in the view form a highly sensitive receptor.
Moderate	Adverse: The Proposed Scheme would cause obvious deterioration to a view from a moderately sensitive receptor, perceptible damage to a view from a more sensitive receptor. Beneficial: The Proposed Scheme would cause obvious improvement to a view from a moderately sensitive receptor, or a perceptible improvement to a view from a more sensitive receptor

Significance Level	Criteria
Slight	Adverse: The Proposed Scheme would cause limited deterioration to a view from a receptor of medium sensitivity or cause greater deterioration to a view from a receptor of low sensitivity. Beneficial: The Proposed Scheme would cause limited improvement to a view from a receptor of medium sensitivity or would cause greater improvement to a view from a receptor of low sensitivity.
Negligible/None (Neutral)	No perceptible change in the view.

A10-1.3.21. DMRB provides a matrix for the significance criteria as set out below.

Table A10-1.6: Significance Matrix

Environmental Value (sensitivity)	Magnitude of impact - No change	Magnitude of impact - Negligible	Magnitude of impact - Minor	Magnitude of impact - Moderate	Magnitude of impact - Major
Very high	Neutral	Slight	Moderate or large	Large or very large	Very large
High	Neutral	Slight	Slight or moderate	Moderate or large	Large or very large
Medium	Neutral	Neutral or slight	Slight	Moderate	Moderate or large
Low	Neutral	Neutral or slight	Neutral or slight	Slight	Slight or moderate
Negligible	Neutral	Neutral	Neutral or slight	Neutral or slight	Slight

A10-1.3.22. Visual effect is considered significant where it is moderate or above. Divisions between levels of significance are not absolute and combined levels may be recorded.

A10-1.4. Limitations of the Assessment

A10-1.4.1. Viewpoints were generally located at publicly accessible locations. Where access to private land was required, this was agreed with landowners in advance.