

A303 Amesbury to Berwick Down

TR010025

6.3 Environmental Statement Appendices

Appendix 7.2 LVIA Methodology

APFP Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed
Forms and Procedure) Regulations 2009

October 2018



7.2 LVIA Methodology

7.2.1 This Appendix sets out the Landscape and Visual Impact Assessment (LVIA) methodology for the assessment of the scheme.

7.2.2 The LVIA methodology is based upon the methodology presented in the Scoping Report, with some additional detail added in response to comments from the Inspectorate. This additional detail has been agreed with Wiltshire Council Landscape Architects.

7.2.3 The LVIA methodology draws upon the Guidelines for Landscape and Visual Impact Assessment, Third Edition⁶, 2013, (GLVIA 3) and Highways England Interim Advice Note 135/10⁷, 2010, (IAN135/10).

7.2.4 IAN135/10 and GLVIA3 form the standard reference for undertaking LVIA for major roads schemes in the UK. The guidance is not prescriptive and therefore a tailored approach is required which is flexible and recognises the importance of professional judgement.

7.2.5 The LVIA methodology involves the following stages:

- a) Baseline review;
- b) Sensitivity (nature of the receptor);
- c) Impact (nature of effect); and
- d) Significance of Effects.

Baseline Review

7.2.6 For this assessment, GLVIA 3 has been followed for establishing the landscape and visual baseline and the sensitivity of the receptors.

7.2.7 Landscape and visual receptors have been identified via a review of published landscape character assessments and relevant policy, computer generated Zones of Theoretical Visibility (ZTVs) and field work (between July 2017 and September 2017 when the vegetation was in leaf and between January 2018 and April 2018 when the vegetation was not in leaf).

Methodology for Zones of Theoretical Visibility (ZTVs)

7.2.8 ZTVs have been modelled using the 'Viewshed' tool in ESRI ArcMap GIS Software.

7.2.9 For the ZTV prepared of the operational scheme (Figure 7.9), a 5m resolution digital terrain model (DTM) was used incorporating woodland derived from the

⁶ Landscape Institute with the Institute of Environmental Management and Assessment, (2013). *Guidelines for Landscape and Visual Impact Assessment 3rd Edition*. Routledge: Abingdon.

⁷ Highways England, (2010). *Interim Advice Note 135/10 Landscape and Visual Effects Assessment*. [online]. Available at: <<http://www.standardsforhighways.co.uk/ha/standards/ians/pdfs/ian135.pdf>> [Last accessed 2nd May 2018].

Forestry Commission National Forest Inventory modelled at 10m height, and buildings derived from OS MasterMap modelled at 8m height.

- 7.2.10 For the ZTVs prepared for Appendix 7.3 Area of Search (Figures 7A.1 to 7A.8), a 5m resolution 'bare-earth' DTM was used, accounting only for the terrain and not including features such as buildings and vegetation.
- 7.2.11 For all of the ZTVs an assumed viewing height of 1.7m above ground level has been used to simulate a person of average height.
- 7.2.12 Details of the process used to model the heights of individual elements and features in the ZTVs are presented on the respective ZTV figures. Individual elements have included construction compounds, embankments, vehicles on the dual carriageway and a selection of large scale signs that would be positioned on new embankments (variable message signs). Where features such as variable message signs would be located at existing ground levels, (i.e. at the eastern edge of the Scheme), their potential visibility has been established via the field work, rather than the ZTV process.

Methodology for Field Work Photography and Photomontages

- 7.2.13 The field work photograph information is provided on the representative view sheets, Figures 7.14 to 7.49.
- 7.2.14 The methodology for the photomontages is presented in Appendix 7.11 with the photograph information provides on the photomontage sheets, Figures 7.51 to 7.68.

Sensitivity (nature of the receptor)

- 7.2.15 GLVIA 3 has been used to identify the sensitivity of landscape and visual receptors. This is appropriate as GLVIA 3 reflects current best practice in establishing the sensitivity of a receptor through the assessment of their value and susceptibility.

Landscape Sensitivity

- 7.2.16 GLVIA 3 paragraph 3.24 notes that the value attached to the receptor and its susceptibility to change arising from the specific proposal, should be considered separately and then combined to determine sensitivity.

Landscape Value

- 7.2.17 Box 5.1 of GLVIA3 sets out a range of factors that can help in the identification of landscape value, comprising;
- a) Landscape quality;
 - b) Scenic quality;
 - c) Rarity;
 - d) Representativeness;
 - e) Conservation interests;

- f) Recreation value;
- g) Perceptual aspects; and
- h) Associations.

7.2.18 In addition consideration is also given to the geographic scale of the landscape, as per the table 7.2.1.

Table 7.2.1: Geographic Value Criteria

Classification	Criteria
National	Landscape with elements of national importance, e.g. protected by legislation
Regional	Landscape with elements of regional importance designated regional leisure routes and conservation areas.
Local	Landscape with elements which are protected or valued through local or neighbourhood planning policies, such as protected open space or groups of listed buildings or buildings of townscape merit
Community	Landscape with relatively common elements which are likely to be valued by the community which lives and works in the area
Limited	Landscape with weak or discordant elements and characteristics which detract from the quality of the area.

7.2.19 From the consideration of Box 5.1 and the geographic scale in Table 7.2.1 the assessment of landscape value is set out in Table 7.2.2:

Table 7.2.2: Landscape Value Criteria

Classification	Value of LCA
High	The landscape is likely to be valued for one or more of its attributes at a national or regional level, and may be protected by a statutory landscape designation, e.g. National Park or AONB. The landscape may contain elements/features which are rare or perceived as very representative of the national or regional attributes and cultural associations. The landscape may provide a high scenic and landscape quality as well as many recreational opportunities.
Medium	The landscape is likely to be valued for one or more of its attributes at a community or local level and may be designated by a landscape policy designation, e.g. Special Landscape Area. The landscape may contain elements/features which are representative of the community or local level attributes and cultural associations. The landscape may provide some scenic and landscape quality and some recreational opportunities.
Low	The landscape is likely to be valued at a limited level only and not covered by any landscape designations. The landscape may contain features which are common and therefore do not specifically contribute to the wider landscape or cultural association. The landscape may provide a limited scenic and landscape quality and few recreational opportunities.

Landscape Susceptibility

7.2.20 GLVIA 3 paragraph 5.40 defines landscape susceptibility as:

“the ability of the landscape receptor (whether it be overall character or condition of a particular landscape type or area, or an individual element and/or features, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without undue consequences for the maintenance of the baseline situation” (paragraph 5.40).

7.2.21 GLVIA 3 paragraph 5.43 it states that judgements about susceptibility of landscape receptors to change should be recorded on a verbal scale. This is set out in Table 7.2.3.

Table 7.2.3: Landscape Susceptibility

Classification	Description
High	the receptor has a low capacity to accommodate the proposed development without effects upon its overall integrity. The landscape is likely to have a strong pattern/texture or is a simple but distinctive landscape and/or with high value features and essentially intact.
Medium	the receptor has some capacity to accommodate the proposed development without effects upon its overall integrity. The pattern of the landscape is mostly intact and/or with a degree of complexity and with features mostly in reasonable condition
Low	the receptor is robust; it can accommodate the proposed development without effects upon its overall integrity. The landscape is likely to be simple, monotonous and/or partially degraded with common/indistinct features and minimal variation in landscape pattern

Landscape Sensitivity

7.2.22 The judgements for landscape value and landscape susceptibility define the sensitivity of the landscape receptor, as set out in Table 7.2.4.

Table 7.2.4: Landscape Sensitivity

Classification	Description
High	Landscape of national or regional value with distinctive elements and characteristics, highly susceptible to small changes of the type of development proposed without undue consequences for the maintenance of the baseline situation. Typically these would be; <ul style="list-style-type: none"> • Of high quality with distinctive elements and features making a positive contribution to character and sense of place. • Likely to be designated, but the aspects which underpin such value may also be present outside designated areas, especially at the local scale. • Areas of special recognised value through use, perception or historic and cultural associations. • Likely to contain features and elements that are rare and could not be replaced.
Medium	Landscape of local or community value, with mostly common elements and characteristics, which by nature of their character would be able to partly accommodate change of the type proposed without undue consequences for the maintenance of the baseline situation. Typically these would be;

Classification	Description
	<ul style="list-style-type: none"> • Comprised of mostly commonplace elements and features creating generally unremarkable character but may include some rarer elements and with some sense of place. • Locally designated, or value may be expressed through non-statutory local publications. • Containing some features of value through use, perception or historic and cultural associations. • Likely to contain some features and elements that could not be replaced.
Low	<p>Landscape of community or limited value and relatively inconsequential elements and characteristics, the nature of which is potentially tolerant of substantial change of the type proposed. Typically these would be;</p> <ul style="list-style-type: none"> • Comprised of some features and elements that are discordant, derelict or in decline, resulting in indistinct character with little or no sense of place. • Not designated. • Containing few, if any, features of value through use, perception or historic and cultural associations. • Likely to contain few, if any, features and elements that could not be replaced.
Limited	Despoiled or degraded landscape with little or no evidence of being valued by the community

Visual Sensitivity

7.2.23 GLVIA 3 notes that visual sensitivity is dependent upon:

“the susceptibility (of different receptors) to change in views and visual amenity they experience at particular locations.”

7.2.24 Visual sensitivity includes a combination of parameters, such as the activity/occupation/pastime of the receptors at particular locations; the extent to which their attention or interest may be focused on the views and the visual amenity they experience. It will comprise the location, relative focus and orientation of particular views, the quality or importance of the existing view and its attractiveness / or scenic quality; the principal or secondary interest in that particular view; the static or sequential nature of views; the ability of the view to accommodate the type of development and the frequency and duration of the view.

Visual Value

7.2.25 GLVIA 3 paragraph 6.37 outlines the importance of considering the value of views, for example in relation to heritage assets, or through planning designations and provides a list of indicators of the value attached to views in including:

- a) Appearance in guidebooks or tourist maps;
- b) Provision of facilities, such as parking places, sign boards and interpretive materials; and
- c) References in literature or art

7.2.26 The assessment of the value of views is also informed by the location of the viewing place and the quality or designation of the existing elements in the view, as set out in Table 7.2.5.

Table 7.2.5: Visual Geographic Value

Classification	Criteria
Regional	Views or viewing places identified in landscape frameworks or regional strategies
Local	Views across high quality landscape which might include features of interest, such as landmarks, which may be identified in the Local Plan
Community	Views of relatively common landscape elements, likely to be valued by the communities which experience the view
Limited	Views across poor quality landscape with a high degree of detracting or common elements

7.2.27 The overall assessment of the visual value of the view will be as per the criteria set out in Table 7.2.6:

Table 7.2.6: Visual Value

Visual Value	Value of view
High	The view is likely to be recognised as a high quality view, which may be well frequented and/or promoted as a beauty spot/visitor destination at a national or regional level. The view may have strong cultural associations (recognised in art, literature or other media) and which is likely to be an important part or the primary reason for the receptor being present at the location.
Medium	The view is likely to be recognised at a community or local level, and whilst frequented and has an inherent quality to the view, it is not likely to be a widely recognised view, and may not be the primary reason for the receptor being present at the location
Low	The view is likely to be recognised at a limited level only. The view may not be frequented very often or is not a location visited specifically to experience the view, such that whilst the view is appreciated by the receptor, it is incidental to the reason the receptor is present at the location. The view may be of a landscape which is of poor scenic quality or contains detracting features

Visual Susceptibility

7.2.28 GLVIA 3 paragraph 6.35 notes that the divisions between categories are not always clear cut and “*in reality there will be a graduation in the susceptibility to change*”, (paragraph 6.35).

7.2.29 For the purposes of this assessment therefore, susceptibility of visual receptors to change will consider the balance between aspects in Table 7.2.7.

Table 7.2.7: Susceptibility to change of views

Visual Receptor	Susceptibility to change		
	High	Medium	Low

Visual Receptor	Susceptibility to change		
	High	Medium	Low
Occupation or activity	People living in the area or visiting areas because of their high landscape value	People passing through the area on designated routes	People working inside or passing through the area on public roads or railway lines
Degree of attention on the view	Views are an important part of the experience of the landscape	Views are relevant to the experience or activity but not central to it	Views are likely to be focused on the activity of the receptor, rather than the view
Degree of exposure to the view	Views are likely to be open	Views may be framed, partially screened or filtered	Views are likely to be limited to glimpses or are heavily screened
Length of exposure to the view	Views are likely to be experienced daily or for long periods of time	Views may be fleeting or experienced as a sequence of views moving through the area	Views are likely to be short

7.2.30 From the consideration of the visual value and visual susceptibility the visual sensitivity of the receptors is set out in table 7.2.8.

Table 7.2.8: Sensitivity of visual receptors

Classification	Sensitivity of Visual Receptors
High	Activity resulting in a particular interest or appreciation of the view (e.g. residents or people engaged in outdoor recreation whose attention is focused on the landscape and where people might visit purely to experience the view, such as promoted viewpoints) and/or a view of national value (e.g. within/towards a designated landscape).
Medium	Activity resulting in a general interest or appreciation of the view (e.g. outdoor workers, people in schools or other institutional buildings and hotels and people passing through the landscape) and/or a view of local or limited value (e.g. agricultural land or urban areas).
Low	Activity where interest, appreciation or period of exposure to the view is limited (e.g. people at work, motorists travelling through the area or people engaged in outdoor recreation that does not focus on an appreciation of the landscape) and/or a view of limited value (e.g. industrial areas or derelict land).

Impact (magnitude)

Landscape

7.2.31 IAN135/10 is used to define the Landscape impact of the scheme, as set out in Table 7.2.9.

Table 7.2.9: IAN 135/10 Magnitude of landscape impact criteria

Magnitude of impact	IAN 135/10 Typical criteria descriptors
Major Adverse	Total loss or large scale damage to existing character or distinctive features and elements, and/or the addition of new but uncharacteristic conspicuous

Magnitude of impact	IAN 135/10 Typical criteria descriptors
	features and elements.
Moderate Adverse	Partial loss or noticeable damage to existing character or distinctive features and elements, and/or the addition of new but uncharacteristic noticeable features and elements.
Minor Adverse	Slight loss or damage to existing character or features and elements, and/or the addition of new but uncharacteristic features and elements.
Negligible Adverse	Barely noticeable loss or damage to existing character or features and elements, and/or the addition of new but uncharacteristic features and elements.
No change	No noticeable loss, damage or alteration to character or features or elements.
Negligible Beneficial	Barely noticeable improvement of character by the restoration of existing features and elements, and/or the removal of uncharacteristic features and elements, or by the addition of new characteristic elements.
Minor Beneficial	Slight improvement of character by the restoration of existing features and elements, and/or the removal of uncharacteristic features and elements, or by the addition of new characteristic elements.
Moderate Beneficial	Partial or noticeable improvement of character by the restoration of existing features and elements, and/or the removal of uncharacteristic and noticeable features and elements, or by the addition of new characteristic features.
Major Beneficial	Large scale improvement of character by the restoration of features and elements, and/or the removal of uncharacteristic and conspicuous features and elements, or by the addition of new distinctive features.

Visual

7.2.32 IAN135/10 is used to define the Visual impact of the scheme, as set out in the Table 7.2.10.

Table 7.2.10: IAN135/10 Visual Impact Criteria

Magnitude of Visual Impact	IAN 135/10 Typical visual criteria descriptors
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 would be discernible, or it is at such a distance that it would form a barely noticeable feature or element of the view.
No Change	No part of the project, or work or activity associated with it, is discernible.

Significance of Effect

7.2.33 The significance of landscape and visual effects will be determined using IAN 135/10. In doing so, it will consider the relationship between the sensitivity of the receptor and the impact. A matrix format is used, as per IAN135/10, to guide this relationship, however should professional judgement consider that the

effect is different to that in the matrix, and then a reasoned justification will be provided in the narrative.

7.2.34 For both landscape and visual receptors, significance of effects of very large, large or moderate are 'significant effects'. Significance of effects of slight and neutral are 'not significant'.

Table 7.2.11: IAN135/10 Significance of landscape and visual effect categories

Sensitivity of landscape/visual receptor	Magnitude of landscape/visual impact				
	No change	Negligible	Minor	Moderate	Major
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

7.2.35 IAN135/10 will be used for the definition of landscape and effects as set out in Table 7.2.12.

Table 7.2.12: IAN 135/10 Landscape and Visual Typical Effect Descriptions

Effect	Landscape	Visual
Very large Beneficial	<p>The project would:</p> <ul style="list-style-type: none"> Greatly enhance the character (including quality and value) of the landscape Create an iconic high quality feature and/or series of elements. Enable a sense of place to be created or greatly enhanced. 	<p>The project would create an iconic new feature that would greatly enhance the view.</p>
Large Beneficial	<p>The project would:</p> <ul style="list-style-type: none"> Enhance the character (including quality and value) of the landscape. Enable the restoration of characteristic features and elements lost as a result of changes from inappropriate management or development. Enable a sense of place to be enhanced. 	<p>The project would lead to a major improvement in a view from a highly sensitive receptor.</p>

Effect	Landscape	Visual
Moderate Beneficial	<p>The project would:</p> <ul style="list-style-type: none"> • Improve the character (including quality and value) of the landscape. • Enable the restoration of characteristic features and elements partially lost or diminished as a result of changes from inappropriate management or development. • Enable a sense of place to be restored 	<p>The proposals would cause obvious improvement to a view from a moderately sensitive receptor, or perceptible improvement to a view from a more sensitive receptor.</p>
Slight Beneficial	<p>The project would:</p> <ul style="list-style-type: none"> • Complement the character (including quality and value) of the landscape. • Maintain or enhance characteristic features and elements. • Enable some sense of place to be restored. 	<p>The project 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.</p>
Neutral	<p>The project would:</p> <ul style="list-style-type: none"> • Maintain the character (including quality and value) of the landscape. • Blend in with characteristic features and elements. • Enable a sense of place to be retained. 	<p>No perceptible change in the view.</p>
Slight Adverse	<p>The project would:</p> <ul style="list-style-type: none"> • Not quite fit the character (including quality and value) of the landscape. • Be at variance with characteristic features and elements. • Distract from a sense of place. 	<p>The project 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.</p>
Moderate Adverse	<p>The project would:</p> <ul style="list-style-type: none"> • Conflict with the character (including quality and value) of the landscape. • Have an adverse impact on characteristic features or elements. • Diminish a sense of place 	<p>The project would cause obvious deterioration to a view from a moderately sensitive receptor, or perceptible damage to a view from a more sensitive receptor.</p>
Large Adverse	<p>The project would:</p> <ul style="list-style-type: none"> • Be at considerable variance with the character (including quality and value) of the landscape. • Degrade or diminish the integrity of a range of characteristic features and elements. • Damage a sense of place. 	<p>The project would cause major deterioration to a view from a highly sensitive receptor, and would constitute a major discordant element in the view.</p>

Effect	Landscape	Visual
Very Large Adverse	<p>The project would:</p> <ul style="list-style-type: none"> • Be at complete variance with the character (including quality and value) of the landscape. • Cause the integrity of characteristic features and elements to be lost. • Cause a sense of place to be lost. 	<p>The project would cause the loss of views from a highly sensitive receptor, and would constitute a dominant discordant feature in the view.</p>

Night Time Lighting Assessment

- 7.2.36 The night time lighting assessment uses the same study area and landscape and visual receptors identified for the 'day-time' LVIA.
- 7.2.37 As part of the baseline review for the existing character of the night sky, reference is made to:
- a) Campaign to Protect Rural England Dark Skies⁸;
 - b) Institution of Lighting Professionals, Guidance for the Reduction of Obtrusive Light⁹; and
 - c) Commission for Dark Skies (CfDS) Lighting: types, qualities and impacts.¹⁰
- 7.2.38 Field work has also been undertaken from publically accessible locations.
- 7.2.39 Where existing light sources are identified, a subjective judgement is made on the existing levels of glare or upwards lighting, such that the existing night time baseline can be related to the Institution of Lighting Professionals 'Environmental Zones'.
- 7.2.40 The assessment of new lighting is based upon identifying the potential sources of light and a subjective judgement on the impact to the night sky within the study area, resulting from new glare or additional upwards lighting. The impact and effects criteria are as per the 'day-time' LVIA.
- 7.2.41 Recreational receptors on footpaths within the study area are scoped out of the assessment, as it is considered that people would not be walking these routes at night.

⁸ Campaign to Protect Rural England, Dark Skies, http://www.cpre.org.uk/resources?q=&filter_order=date&filter_order_Dir=desc&t%5B%5D=3562, accessed on-line December 2017

⁹ Institution of Lighting Professionals, Guidance for the Reduction of Obtrusive Light, January 2012, <https://www.theilp.org.uk/documents/obtrusive-light/>, accessed on-line December 2017.

¹⁰ Mizon, Lighting: types, qualities and impacts, Commission for Dark Skies (CfDS) March 2016, http://www.ccwwdaonb.org.uk/uploads/docs/Our_Work/AONB_lights_fittings_BMizon.pdf, accessed on-line, January 2018

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