Landscape and Visual Impact

March 2018 Highways England
M6 Cumbria – retaining and respecting sense of place

Landscape Design
Landscape Design and the SRN

• The SRN forms part of the landscape; has an affect on the landscape; and the landscape affects it.

• Landscape plays an important role in design development and should be at the heart of good design.

• Design should be iterative and therefore important to have an understanding of:
  • the project being developed;
  • the landscape character of the area the project will affect;
  • understand the visual effects the project could have; and
  • to determine the level of assessment required to influence the design

• The Road to Good Design principles should influence landscape design
Landscape Design and the SRN (Cont’d)

- DMRB Vol 10, Sections 1, New Roads & Section 2, Improving Existing Roads (referred to as The Good Roads Guide) – good principles and guidance, examples still applicable for:
  - Environmental objectives fundamental to good design (Section 0 - HA86/01)
    - Landscape Objective – to respect the landscape character and quality of an area through sensitive road alignment, earthworks, use of appropriate materials and planting
  - Environmental functions (Section 0 - HA87/01)
    - Visual screening, visual amenity, landscape integration
  - Landscape and environmental elements (Section 0 - HA 88/01, HA 89/01)
    - Grassland, woodland, native planting, ornamental planting, wetland habitats, hard landscaping, pests and injurious weeds
  - New Road Landform and Alignment (Section 1 - HA 55/92),
  - New Roads Planting, Vegetation and Soils (Section 1- HA 56/92),
  - New Roads Integration (Section 1 – HA 57/92),
  - The Road Corridor (Section 1 – HA 58/92)
A21 Lamberhurst Bypass
Green Bridge/Wildlife corridor linking
• Historical access to Scotney Castle
• Dormouse habitat together
• Woodland habitat
Most of the public appreciation of the wider landscape comes through the window of a moving vehicle!
Landscape Guidance

An Approach to Landscape Character Assessment

October 2014
Christine Tudor, Natural England

www.gov.uk/natural-england
Landscape Assessment & Visual Impact Guidance

• DMRB Volume 11, Section 2, Part 5 Landscape Effects
  • sets out principles
• Replaced by IAN 135/10 Landscape and Visual Effects Assessment
  • provides methodology for determining landscape and visual effects to be followed
  • separate processes to be undertaken to ascertain
    • Landscape effects
    • Visual Effects
  • to be replaced by updated version of DMRB Vol 11 Landscape and Visual Effects, December 2018
• Guidelines for Landscape and Visual Impact Assessment (GLVIA) v. 3, 2013 – Joint Authors -Landscape Institute (LI) & Institute of Environmental Management & Assessment (IEMA)
  • Non-prescriptive,
  • provides framework for detailed assessment methodologies to be developed
Landscape Assessment & Visual Impact Guidance (Cont’d)

• LI technical publications – Technical Notes
  • Landscape Character Assessment, Technical Information Note 08/2015
  • Green Bridges, Technical Guidance Note 09/2015
  • Connectivity and Ecological Networks, Technical Information Note 01/2016
  • Ecosystem services, Technical Information Note 02/2016
  • Tranquillity – An overview – Technical Information Note 01/2017

• Natural England
  • Landscape Character Assessment Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity, Scottish Natural Heritage & The Countryside Agency
  • An Approach to Landscape Character Assessment, 2014
  • National Character Areas profiles: data for local decision making, 2014
Landscape Assessment & Visual Impact Guidance (Cont’d)

- DEFRA
  - 25 Year Environmental Plan, 2018, DEFRA
    - Key areas – create and improve green infrastructure, ‘environmental net gain’
  - English national parks and the broads: UK government vision and circular 2010

- National Planning Policy Framework (NPPF) refers to ‘protecting and enhancing valued landscapes’

- National Policy Statement for National Networks (NPS NN) section on Landscape and visual impacts refers to:
  - design needs to avoid or minimise harm to the landscape
  - ‘conserving landscape and scenic beauty in nationally designated areas’
  - visual effects on sensitive receptors need consideration
Landscape Character Assessment

- Landscape Character Assessment – managing and guiding change:
  - informs the assessment process by describing the purpose and scale
  - explains the methodology followed
  - robust evidence base required to understand the place, setting, elements
    - baseline evidence at an appropriate scale required to inform decisions – scale and appearance (built/natural features and elements, size, pattern, seasonal and night time change)
    - landscape occurs at all scales, Landscape Character Assessment can be taken at all scales – land cover, pattern and texture
    - holistic approach to whole geographical/landscape area required including local designations as well as designated/protected areas – AONBs, National Parks, Ancient Woodlands
  - understanding of peoples perception / experience of the landscape – cultural, and tranquillity
  - identify key characteristics – unique character, sense of place.
  - Integrate natural consideration with socio-cultural considerations - how a place is experienced, perceived and valued by the people.
M5 River Exe Estuary
Landscape Character Assessment - Process

• Step 1 Scoping – defining purpose and scope of assessment
  • purpose clearly defined and understood
  • will influence scope and scale of the assessment

• Step 2 Baseline Information – desk based study
  • collection and review of documents and spatial data
  • analysis identifies areas of common character and future field surveys or stakeholder engagement

• Step 3 Site – field survey
  • captures aesthetic, experienced and perceptual qualities of a landscape
  • identifies other factors not evident in desk based study

• Step 4 – classification & description of landscape types/areas
  • explains difference between landscape character types, areas, their use
Landscape Character Assessment – Process (Cont’d)

• Next step – landscape effects
  • Assessment involves identification of impacts and assessment of significance of landscape effects – information obtained in Steps 1-4 (i.e. impact of traffic, lighting, height scale form of street furniture/structures)
  • Assessment should be proportionate to the type and size of project vs sensitivity of the landscape (i.e. DMRB simple and detailed assessment)
  • Assessment should include day night time situations compared against no project taken forward
    • Includes assessment of seasonal differences (summer, winter); trees in full foliage – summer or bare branch – winter
  • Assessment can include photomontages
  • Assessment needs to consider magnitude of impact after mitigation (adverse or beneficial)
  • Assessments needs to consider sensitivity of the landscape (high or low)
Landscape Character Assessment – Process (Cont’d)

• Significance of landscape effects is derived by assessing sensitivity against magnitude of impact (very large beneficial to very large negative)

NOTE: Assessment of magnitude and sensitivity can be subjective based on professional judgement as each case might be different but MUST be undertaken by a suitably qualified landscape professional
<table>
<thead>
<tr>
<th>Significance Category</th>
<th>Typical Descriptors Of Effect</th>
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| 1 Very Large Beneficial (Positive) Effect | The project would:  
- 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. |
| 2 Large Beneficial (Positive) Effect | The project would:  
- 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. |
| 3 Moderate Beneficial (Positive) Effect | The project would:  
- 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. |
| 4 Slight Beneficial (Positive) Effect | The project would:  
- Complement the character (including quality and value) of the landscape.  
- Maintain or enhance characteristic features and elements.  
- Enable some sense of place to be retained. |
| 5 Neutral Effect | The project would:  
- 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. |
| 6 Slight Adverse (Negative) Effect | The project would:  
- Not quite fit the character (including quality and value) of the landscape.  
- Be at variance with characteristic features and elements.  
- Detract from a sense of place. |
| 7 Moderate Adverse (Negative) Effect | The project would:  
- 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. |
| 8 Large Adverse (Negative) Effect | The project would:  
- 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. |
| 9 Very Large Adverse (Negative) Effect | The project would:  
- 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. |
Old A3 Hindhead Devil’s Punch Bowl

Reinstated Devil’s Punch Bowl 6 years later
Landscape Character Assessment – Process (Cont’d)

Reporting

• Reporting assessment of landscape effects
  • Purpose, scope of the assessment
  • Context of the study area – description of the project/study area, including a map(s), photograph(s), diagrams and/or sketches as appropriate
    • Not all projects require this level of detail
  • Clear, accurate, brief description of each landscape character types/areas identifying key characteristics, landscape value (character and quality)
  • DMRB refers to simple and detailed assessment
    • assessment must be proportionate to the scale and impact of the project understanding the significance of the landscape the project is being proposed in
Visual Impact Assessment
Visual Impact Assessment

• Involves an understanding of the ‘visual amenity’ of an area informed by the landscape character
• Visual impact assessment considers the ‘potential extent of viability of the project’
• Involves the ‘Zone of Visual Influence’ (ZVI) (‘an area within which a proposed development may have an influence or effect on visual amenity’ – GLVIA) also referred to as the Zone of Theoretical Visibility (ZTV)
Methodology for Assessing Visual Effects

Identify the Visual Baseline:
- Type of view
- Quality of view
- Type of Receptors
- Sensitivity of receptors
- Publicly accessible viewpoints
- Representative viewpoints
Derive overall extent of Visibility (ZVI)

Define Project Characteristics, for example:
- Size and extent
- Location and alignment
- Type
- Massing
- Duration of construction, and predict potential (generic) landscape impacts

Assess magnitude of visual impact(s) for each viewpoint, with reference to:
- Scheme design
- Scale of change (loss of existing view, introduction of new elements/views)
- Nature of changes

Develop mitigation measures (iterative process)
- Inherent in design
- Designed to lessen landscape effects

Evaluate significance of visual effect(s), with reference to significance matrix (taking account of mitigation)

Report residual visual effects for each receptor
Visual Impact Assessment - Process

- **Step 1** – determine extent of visibility of the project, and ZVI
  - collect and collate visual context of the project
  - identifying receptors and evaluating their sensitivity - viewpoints
  - describe the degree of visual change the project will cause
  - identify mitigation measures – part of the iterative design process to avoid, reduce or where possible remedy adverse effects

- **Step 2** – desk study
  - usually informed by contoured Ordnance Survey Maps and aerial photos
  - consultation with stakeholders at an early stage is advised

- **Step 3** – site survey
  - crucial to verify and expand on desk based study
  - recording of viewpoints and photos taken (LI technical advice)
  - Identify visual sensitivity
Visual Impact Assessment – Process (Cont’d)

• Step 4 – identifying impacts and assessment of significance of visual effects and should:
  • account for construction period – noting length of construction
  • include winter’s day of opening to traffic or fully operational
  • include summer’s day in 15th year after opening
  • recording visual effects to receptors
    • contoured OS base a ZVI map, together with a Visual Effects Drawing (VED) and with an accompanying Visual Effects Schedule (VES)
  • visual assessment should note date(s) and weather conditions
  • identify mitigation measures
  • assess magnitude of impact (major to no change) by considering:
    • scale, nature, duration of change, distance, as well as screening, direction and focus of view, numbers and types of receptors
    • mitigation measures proposed to avoid, reduce or remedy impacts
Visual Impact Assessment – Process (Cont’d)

• Assessing significance of visual effects (very large beneficial to very large adverse)
  • derived from assessing the sensitivity of the receptor against degree of change by the project
  • supported by clear and reasoned justification

NOTE: Assessment of magnitude and sensitivity can be subjective based on professional judgement as each case may be different but MUST be undertaken by a suitably qualified landscape professional
Reporting of visual impact assessment

Scoping - a combination of desk-based studies and site surveys
- identify major constraints
- identify further work required

Context of the study area – nature of the project, number and sensitivity of the visual receptors, ZVI
- Not all projects require this level of detail

Clear, accurate, and brief description of the effects on each visual receptor, its sensitivity to change, mapping of ZVI along with a photographic record

DMRB refers to simple and detailed assessment
- assessment must be proportionate to the scale and impact of the project understanding the significance of the landscape it is being proposed in
A14 Cambridge to Huntington Proposed Route

Cumulative Effects
Consideration of Cumulative Effects

• Consideration must be given to cumulative effects on the landscape
• Assessment of cumulative effects a requirement of the EIA Regulations, 2017