

**Lower Thames Crossing proposal
November 2018**

**The headline issues relating to the
PEIR assessment of effects on
landscape character and visual
amenity**

Report to Gravesham Borough Council

**Version: Final Draft
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Introduction

A Preliminary Environmental Information Report (PEIR) has been produced by Highways England, for a proposal to develop a Lower Thames Crossing (LTC). The PEIR has been produced following production of, and consultation on, a previous Scoping Report in 2017.

This Summary Report highlights the headline issues that have emerged from an appraisal of the PEIR in its assessment of the landscape and visual effects of the LTC proposal in the study area south of the River Thames.

This report raises key issues concerning the methodology used to undertake the process of Landscape and Visual Impact Assessment and its application and suggests further work that is now necessary.

Some issues overlap with other disciplines, notably Cultural Heritage, Biodiversity and Tranquillity (noise). Also, this response may include and overlap with issues covered by the Kent Downs Area of Outstanding Natural Beauty (KDAONB) Unit in their response to the PEIR.

This report responds to the issues raised by the Planning Inspectorate (PINS) and Gravesham Borough Council at the Environmental Impact Assessment (EIA) Scoping Report stage. This report may cover some issues more extensively, in order to expand the point and cover other headline issues.

This report also appraises the mitigation proposals and raises further potential mitigation and/or compensation issues for consideration.

Approach

This report is based on an appraisal of Chapter 8 in Volume 1 of the PEIR, and other documents in the PEIR suite of documents.

Landscape and Visual Impact Assessment (LVIA) as part of an Environmental Impact Assessment usually follows a prescribed methodology. The aim of the methodology is to systematically appraise the existing landscape condition, to identify all the significant physical and visual characteristics and assess their quality or value as well as their sensitivity and the perceived visual amenity value. These then provide a baseline against which the key landscape and visual effects can be predicted and evaluated, and their magnitude and significance assessed. Table 1.0 response to question 1 (below) appraises the methodology used in the PEIR assessment.

The precise methodology for a LVIA can vary between different guidance sources, but generally follows a similar approach, namely:

For all stages of the project:-

- i. Baseline Study
- ii. Legislation and planning policy context
- iii. Extent of study area
- iv. Identify landscape and visual receptors
- v. Project description
- vi. Identification of landscape and visual effects
- vii. The scale, extent and duration of the project proposal, and the magnitude and type of its potential effects at various stages
- viii. Assessment of significance of effects

ix. Proposed mitigation

The PEIR includes the selection of assessment type (see Table 3.0 response to question 3 below). This suggests the assessment is following methodology from the DMRB and the relevant Interim Advice Note¹

DMRB Volume 11 provides guidance on Environmental Assessment. It appears that Chapter 8 of the PEIR may have followed this guidance. DMRB Volume 11 states that assessment levels are dependent on the potential environmental effects, the stage of project planning and the next project decision. The level of assessment carried out may be either Scoping, Simple or Detailed. These stages are not sequential, but consequential i.e. the results of one assessment level may determine further assessment work required.

In this case the criteria for a 'Detailed Assessment' appear to be met in that they include the likelihood of significant landscape and/or visual effects. **However, the assessment appears to be part 'Detailed Assessment' and part 'Simple Assessment'. It is not clear.**

General points

The Landscape chapter is not easy to read. The information is not laid out in a way that makes the assessment and its stages clear.

It is not clear which methodology is used in the assessment. This can cause some confusion. For example, there needs to be a clear distinction between the terms 'impact' and 'effect', and a consistent approach in their use. This follows best-practice national guidance² and is important in conveying information to a non-technical audience. Terms used to describe landscape and visual effects vary and it is not easy to follow which guidance has been used.

Comments on Methodology used in the PEIR

i. Baseline Study: To assess landscape, there needs to be an understanding of the value of the landscape. This is assessed from a range of factors including condition, quality and perceptual and other factors. National Character Areas (NCAs) are referenced in the PEIR, with extracts from the Statement of Environmental Opportunity (SEO) for each NCA³. However, **the descriptions and key characteristics of the NCAs are missing.** The descriptions are vital in highlighting the important features of the areas and must not be discounted. For example, the Greater Thames Estuary NCA describes the rich historical associations of the area, including the distinctive military heritage along the coastline. The retention of views between these historic forts is a part of the heritage of the forts, but it is not mentioned and not reflected in the assessment.

¹IAN 135/10 - this advice note sets out the requirements for the Highways Agency (Highways England) and Service Providers on the assessment of landscape and visual effects of highways projects.

² National best-practice guidance for Landscape and Visual Impact Assessment is provided in 'Guidelines for Landscape and Visual Impact Assessment – Third Edition' by the Landscape Institute and Institute of Environmental Management & Assessment

³ Natural England publishes profiles for England's 159 National Character Areas (NCAs). The profiles are guidance documents to support the planning of conservation initiatives, and to inform choices about how land is managed and can change. They provide a description of the natural and cultural features that shape our landscapes, how the landscape has changed over time, the current key drivers for ongoing change, and a broad analysis of each area's characteristics. Statements of Environmental Opportunity (SEOs) provide guidance on the critical issues, which could help to achieve sustainable growth and a more secure environmental future. NCAs 81, 113 and 119 are relevant to this proposal.

The PEIR barely mentions heritage in its use of the NCAs. Similarly, there is no information on field patterns; a significant issue in an open, flattish landscape. Also, the NCA landscape change data is not mentioned. **These are significant omissions, as the pressures on the landscape and the current landscape quality should be important factors in the assessment.**

The use of local landscape characterisation is better as it includes a wider range of issues. Characteristics of nine of the 23 Local Character Areas (LCAs) have been considered. It is stated that those not considered will be reviewed at a later stage.

The evaluation of landscape needs to consider both the LCA and the historic landscape characterisation. The assessment also needs to address the many historic features which are important in their own right as well as features of the landscape.

Historic Landscape Characterisation Reports are not included, but they are available for this area and should be considered. Sites of heritage importance, Registered Parks and Gardens and Conservation Areas are included in the PEIR, and sites with sensitive biodiversity are mentioned. However, the issue of impacts on the historic environment, and the effects on the setting of heritage assets of the proposal – including the proposed mitigation - do not appear to be considered in the assessment process.

ii. Legislation and planning policy context: National and local policy requirements are included in the PEIR. However, legislative requirements are also included in the list of NPSNN requirements, and it is unclear as to whether the current version of the assessment responds to the NPSNN requirements, other than to list them.

In addition, **the assessment does not include GBC Local Plan Policy CS02** which relates to the scale and distribution of development and includes reference to development being compatible with national policies for protecting the Green Belt.

Also missing from the PEIR, the requirements in **Policy CS12** include account to be taken of the **KDAONB Management Plan (2014-2019), The Gravesham Landscape Character Assessment (2009), and the Cluster Studies (notably The Shorne to Shore Cluster Study)**. Other important and relevant guidance documents not referenced in the PEIR include Local Plan policy evidence documents - **Gravesham Green Belt Study, PPG 17 Open Space, Sport and Recreation Study 2010, and Gravesham Landscape Sensitivity and Capacity Study by LUC (March 2016)**

iii. Extent of study area: Visual Baseline is informed by Landscape Character Assessment data and the potential extent of visibility of the project. See Table 1.0 responses to questions 2 and 3 (below).

iv. Identify landscape and visual receptors: See Baseline Study section above for information on landscape receptors.

Visual Receptors (i.e. people who might be able to see the proposal and be affected by it) and the extent and quality of their views are identified, and with the exception of road users in vehicles and HS1 train passengers (who are not considered) appear to be representative of the range of receptors that might be affected by the project.

Visual Receptors: A number of viewpoints were selected to illustrate the effects of the proposal on 'visual receptors'. 18 viewpoints were selected in the Gravesham area (i.e. the LTC area south of the Thames); 6 of which were reproduced as visualisations with proposals shown in place, and 5 of the 18 views were also taken at night to show the effects of lighting.

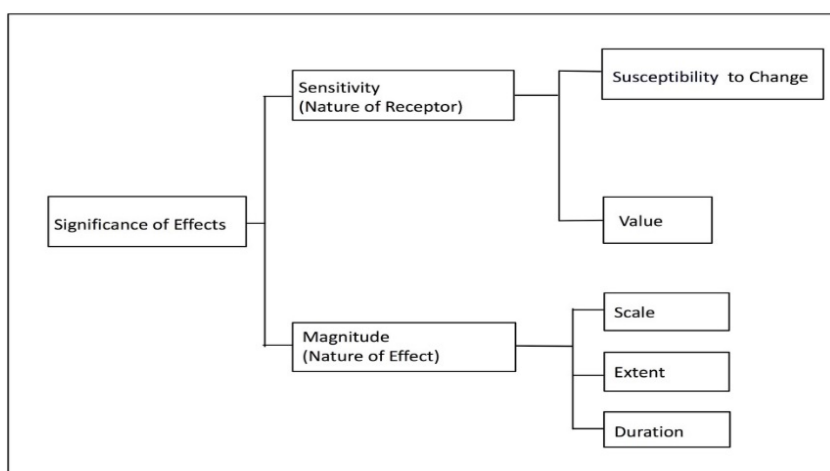
The results of the selection of viewpoints:

- View 2 visualisation fails to provide a realistic image. Existing screening vegetation is shown in place. In reality the viewer may be able to see the parallel feeder roads to the A2 and possibly the HS1 track.
- View 4 should provide a night view as it could be affected by lighting and the loss of screening vegetation.
- View 5 visualisation shows a view from a bridge that will be demolished; and shows the view of a nearby proposed bridge. This is very unhelpful and should show the viewpoint from the new bridge (which might reveal an expansive view of the proposed A2/LTC junction).
- View 6b is a view from Jeskyn’s Woodland towards the proposed A2/LTC junction. Again, it may be misleading in retaining the HS1 screening vegetation. The reality may be a starker view of the junction infrastructure.
- View 7 visualisation of a view from Thong Village provides little for the reader to understand, and it is not clear at what stage of the project the view is meant to represent.
- Views 8 and 9 should also show night views, so that the potential contrast may be seen.
- View 12 visualisation is unhelpful. All the existing vegetation is in place, and the landform has not changed.
- View 17 from the Saxon Shore Way should be added to with a view north across the Thames to Essex, as the works north of river may have visual effects on the visual receptor along the south coast.
- There are only 2 viewpoints along the A2 transport corridor. This is a key part of the AONB where significant changes can be anticipated as a result of this proposal.

It is recommended that further work be carried out to increase the number of viewpoints, and to address the issues set out above.

v. Project description: This is not included in Chapter 8 but is found elsewhere in the PEIR suite of documents

Figure 1.0 Flow-chart of LVIA process



vi. Identification of landscape and visual effects: (With reference to Figure 1.0 above)

The significance of **landscape effects** is assessed from a combination of landscape character, sensitivity to change, and value, considered with the magnitude of the proposal.

Landscape Value: All AONB landscape receptors are assessed as being of **High Value** (this is the highest value in the scale from IAN 135/10). Other areas outside the AONB are assessed as either **High or Medium Value**. This is considered appropriate.

The PEIR states that some issues relating to the valuing of the landscape are to be considered at a later stage of the PEIR. It is recommended that the approach taken includes additional issues that may contribute to understanding value (see Appendix X). These are also set out in the GLVIA.

The significance of **visual effects** is assessed by considering the sensitivity of the receptor with the magnitude of the proposal.

Visual Sensitivity: With the exception of the Golf Course receptor (**Medium Sensitivity**) all visual receptors and viewpoints are assessed as having **High Sensitivity**. This is the highest category in the scale used (IAN 135/10) and is considered appropriate.

vii. The scale, extent and duration of the project proposal, and the magnitude and type of its potential landscape and visual effects at various stages:

The scale and detail necessary to fully assess the effects of the proposal are not yet finalised. **It is therefore impossible to fully assess the effects on landscape and visual receptors with any certainty.**

It is understood that the construction phase is estimated at 7 years. However, more detail will be required as to the programming of the different elements of work and their potential effects.

Areas of concern, where more information is needed to adequately assess effects, include:

The scale, mass and height of the proposed junction of the A2 and LTC; the land-take, removal of screening vegetation, change in character and effective severance of the AONB along the A2 transport corridor; the extent, depth and type of cuttings at the main road junction and northwards along the route to the tunnel south portal, the new landforms created by the route and its proposed mitigation over the short, medium and long-term. It is recommended that more realistic photomontages and 3D modelling are developed to better represent the proposal.

viii. Assessment of significance of effects

The PEIR has assessed the potential likely significant effects of the project, both in its construction phase and when operational. However, the PEIR makes clear that the process of assessment is ongoing and is subject to change.

The guidance in IAN 135/10 (Section 3.29) states that “In general, more significance is likely to be placed on large long term or permanent changes than small short-term temporary ones”.

For Landscape effects:

Construction Phase: All landscape effects are considered to be **negative (or adverse**, depending on the guidance followed), and either **Major, Moderate or Minor** in their significance. This is considered acceptable given the criteria and guidance used. However, **it is recommended that this be reviewed when revised views and photomontage images are available.**

At completion: All landscape effects are considered to be **negative (or adverse**, depending on the guidance followed), and either **Major, Moderate or Negligible** in their significance. This is considered acceptable given the criteria and guidance used. However, **it is recommended that this be reviewed when revised views and photomontage images are available.**

For Visual effects:

Construction phase: All visual effects are considered to be **negative (or adverse**, depending on the guidance followed), and either **Major, Moderate or Minor** in their significance. This is considered acceptable given the criteria and guidance used. However, **it is recommended that this be reviewed when revised views and photomontage images are available.**

At completion: All visual effects are considered to be **negative (or adverse**, depending on the guidance followed), and either **Major, Moderate or Minor** in their significance. This is considered acceptable given the criteria and guidance used. However, **it is recommended that this be reviewed when revised views and photomontage images are available.**

Points to note from the assessment of significance of effects include:

Construction phase: the removal of existing vegetation; in particular the removal of vegetation that is part of the mitigation for the route of HS1 (and may still be part of an agreement for its retention) and along the A2 transport corridor will result in significant impacts to the landscape and visual quality of the area as experienced by a range of users/receptors. This is recognised by the PEIR as a significant issue but is repeated here for emphasis.

All significant effects are assessed as **Negative**.

The guidance (IAN 135/10) indicates that at worst the 'Major Negative' category⁴, 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

A Moderate Negative effect 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

This will require a strategic and large-scale approach to mitigation. The PEIR, however, considers each element of mitigation separately.

The results of the assessment would suggest that overall, the size, massing and siting of the proposal appears to be out of scale and character with the surrounding landscape. A junction comprising large, multi-level, hard-built elements within the setting of the AONB, with deep cuttings, and set against a flattish, open landscape will be problematic to mitigate.

ix. Proposed mitigation:

Initial mitigation measures are shown in the PEIR document - Outline Environmental Masterplan (EMP), and mitigation proposals are listed for each landscape receptor at construction and completion stage.

⁴ IAN 135/10 does not use the term Major in its description of effects but uses the terms Very Large or Large to apply to negative effects (NB It is assumed this means 'Major' as applied to the assessment)

It is considered that the listed proposals are overly detailed and premature; and the EMP is too broad-brush and may be inappropriate for the character of the landscape. For example, the land-take constraints imposed on the scheme in the A2 corridor mean that vertical elements of mitigation are proposed to reduce the impact of noise and visual intrusion through the corridor. Elements which may not be appropriate for the setting should not be used in order to improve a poor choice of route.

Mitigation should not disrupt or change the character of this landscape (e.g. by extensive coverage of woodland planting in a traditionally open landscape with Green Belt status, or by introducing new landforms). The current proposals (in the EMP) do not appear to take account of the heritage interest of the area or the setting of important heritage features or landscape elements.

In addition, large-scale acquisition and mitigation could affect the archaeological interests of the area.

The guidance in the NPSNN (Sections 5.159-5.161) states that the reduction in scale of the proposals or otherwise amending the design may help to mitigate the visual and landscape effects of the proposal. **It is recommended that options are developed to reflect this guidance.**

Explanation is required as to how mitigation is to be secured, and the means by which land management in the operational phase is to be secured (i.e. retained within the highways estate or returned to management by other landowners).

Although mitigation is mentioned as should be the first resort, compensation should also be considered.

The guidance (NPSNN Section 5.162) indicates that improvements to local access and open space may assist in providing mitigation. In this way **Green Infrastructure as part of the mitigation scheme could provide positive environmental and economic benefits.** This is an important area for consideration by the promoters of this proposal, as Gravesham BC has made clear its aspirations to develop the Green Grid within an overall Green Infrastructure Network in the area included in the proposal.

NPSNN Section 5.175 requires the protection of green infrastructure networks from development, and for strengthening of the networks. This section of the guidance also refers to the value of linear infrastructure in supporting biodiversity and ecosystems.

The proposed severance of the KDAONB along the widened A2 corridor and A2/LTC junction, and removal of central reservation from the A2 along this section, will not only have a **significant effect on the landscape, and on access routes, but may also have an effect on the biodiversity interests of sites** to the immediate north and south. In addition, the experience of walkers, riders and cyclists crossing the newly widened road corridor will be significantly affected by the proposal.

If the proposal goes ahead, there will be a **need for a green crossing** (or more than one crossing) of the transport corridor. The crossing would need to be carefully designed to ensure that it could function as a wildlife corridor, as well as a landscape function in providing a continuation of the landscapes to either side of the road corridor. So, it would need to be big. The green bridge could be an exemplar, and a lasting legacy for the future. The Landscape Institute has published advice on best practice in Green Bridge Design⁵

⁵ See Landscape Institute – Guidance on Designing Green Bridges (2015) at <https://www.landscapeinstitute.org/wp-content/uploads/2018/01/tgn-09-2015-green-bridges.pdf>

The above issues are further reinforced by the guidance in NPSNN Section 5.164 which refers to the Green Belt and the aim to keep land permanently open, and section 5.178 regarding Green Belts and inappropriate development. **The guidance thus supports mitigation proposals that provide open space, access opportunities and retaining an open landscape.**

Sections 5.180 and 5.184 are relevant to the access network. **The functionality and connectivity of the network will be compromised by the proposal.** Diversions of routes must be carefully designed with the involvement of a range of stakeholders to ensure that the network is viable, and the experience of users is not unduly compromised.

Noise is considered in a separate topic report. However, there is a link with the enjoyment of the landscape, in particular those areas of the landscape that are currently tranquil. This is relevant to areas of the KDAONB, and notably areas within Shorne Woods Country Park. Mitigation proposals should consider how to minimise the noise pollution to these areas.

The guidance provided by IAN 135/10 requires mitigation measures to be developed as part of an iterative design process. This is useful, as the full extent and significance of effects may not be fully appreciated until further stages of design are developed.

The PEIR states that a fully detailed assessment of mitigation required will be undertaken before submission of the DCO. This is to be supported. **It is recommended that local stakeholders are consulted - in the case of professional stakeholders, this should be both individually and collectively - during this process.**

Given the factors outlined in the previous sections plus the complexity of this project, its ongoing development and refinement, an approach to mitigation which aims to address the issues individually and by topic is unlikely to be effective. The setting and scale of proposals are important, as the landscape is so varied across the study area. **It is recommended that a mitigation strategy is needed for a project of this scale and complexity.**

This approach accords with the aims outlined in the NPSNN to mitigate environmental and social impacts, improve accessibility, support sustainable transport, reduce severance, retain and enhance landscape character and retain the openness of the landscape as required of its Green Belt status.

A Mitigation Strategy (which may extend beyond the scope of works associated with the road scheme) could:-

- take a strategic approach to the whole landscape to be affected and the wider impacts,
- be in place to take short, medium and long-term actions forward as necessary over the life of the scheme and beyond, and develop alongside the road design,
- address the severance of the protected landscape,
- address the loss of local amenity use to adjoining populations,
- address the severance and diversion of access routes, and the qualitative impacts on users (receptors)
- reconnect and enhance habitats, the setting of heritage features and enhance landscape character,

- maintain and enhance long views and local views; to include long views to and across the Thames and from the Kent Downs,
- make links with the biodiversity and cultural heritage topics affected by this proposal,
- examine the remaining open space, cultural, environmental and access assets, and propose new, coherent networks that will make a positive contribution to the Green Network
- Support the investment needed for infrastructure in the Green Network
- contribute to modal shift and promote sustainable transport in the area
- address the needs of cyclists and pedestrians
- have the potential to address local deficits of open space and recreational facilities identified in the Gravesham Open Space, Sport and Recreation Study

A good example of a similar - and local - initiative is the Cobham Ashenbank Management Scheme (CAMS). As a result of HS1 (then Channel Tunnel Rail Link) the Cobham Ashenbank Management Scheme was set up with an endowment from the developer of £750,000⁶

CAMS created a series of projects which delivered over £7m worth of work in the local and wider area because of the impact on the historic park.

Two separate initiatives, one either side of the River Thames, with shared aims and objectives, may prove more practical in terms of management.

Potential sources of funding (mitigation and) compensation initiative:

Potentially a strategic initiative could be included for funding through the (HE) Designated Funds Programme.

Under the HE's Road Investment Strategy funds are being awarded to improve the surroundings of the Strategic Road Network in a way that 'supports and protects people and the things we value for quality of life, both now and in the future'.

The Designated Funds Programme aims to deliver 'environmental, social and economic benefits to the people, communities and businesses who live and work alongside our strategic road network'.

Gravesham BC's CIL allocations as well as external bidding by Gravesham BC, Medway Council, Kent County Council and others may also be considered for inclusion where topic areas overlap; thus providing match-funding for the initiative.

Conclusions

The landscape assessment component of the PEIR appears to be informed by a number of sources of guidance, but not consistently, and the assessment appears to be neither a Simple nor a Detailed Assessment under the terms of the guidance.

Further information is needed to better inform all stages of the assessment before it is revised prior to DCO submission.

⁶ 1996 prices; equates to £1.4million at 2018 prices ref <http://www.in2013dollars.com/1996-GBP-in-2017?amount=750000>

Cumulative effects are not mentioned.

The assessment is confusing and not easy to read.

It is clear that many of the potential effects of this proposal are interconnected, and they should be considered together. This is due to the nature of this area - its protected landscape, its areas of sensitive landscape (some internationally recognised), its range of cultural heritage assets and historic landscape elements, the proximity of residential populations, the effects of the proposal on the access network - and the scale of the proposal.

The proposals are likely to result in significant changes to the landscape, with degraded quality of the landscape overall, at least in the short to medium-term. **A mitigation strategy is vital to ensure that a comprehensive and cross-cutting approach is taken that will recognise the special qualities and character of the component areas, and deal with the difficult issue of phasing works and limiting the landscape and visual effects throughout the process.**

The selection of the LTC route has serious implications for the KDAONB. The effects on views which are part of the cultural heritage, the severance of the northern part of the AONB, and the erosion of landscape and visual quality of the AONB as a result of the proposed scheme along the A2 transport corridor, which change the nature of the landscape to a hard-edged and urban environment, out of scale with the existing landscape and stripped of screening vegetation.

The choice of route also means that a new and alien piece of transport infrastructure is to be introduced into a protected landscape and its setting.

The effects of noise are dealt with in another topic of the PEIR. However, the effects of noise on the area should be considered alongside visual and landscape impacts as they are so closely connected, and noise can exacerbate other issues.

Appendix A: Issues raised previously

Table 1.0 PINS Scoping Report issues

Issues raised in PINS Scoping Report re Landscape Assessment component of the EIA Scoping Report
1. References to DMRB and IAN 135/10 need to be checked for consistency with the NPSNN, NPPF and the 2017 Environmental Regulations - all of which take precedence.
The Highways Agency is guided by The National Policy Statement for National Networks (NPSNN) as well as other key legislative/policy requirements.
The NPSNN sets out Government's policies to deliver development of nationally significant infrastructure projects (NSIPs) on the national road.
The Client has advised that 'Analysis on all topics should start from the basis of the NPSNN requirements not from any other guidance'. (quote from GBC's response to scoping report Dec 2017)
The NPSNN refers to some of the nationally recognised best practice guidance in the 'Guidelines for Landscape and Visual Impact Assessment, 3rd Edition, April 2013 (GLVIA)' The PEIR states the intention to consider the GLVIA in its assessment. However, the methodology appears to diverge from this guidance in places, and considers other documents, including the Design Manual for Roads and

Bridges (DMRB) and Interim Advice Note (IAN) 135/10 which may be out of date in respect of landscape and visual impact assessment, as it pre-dates the latest (Third edition) GLVIA.

Recommended: NPSNN 2014 and GLVIA (Third edition) 2013 are the most relevant and up to date guidance documents. However, DMRB Vol 10 provides very detailed guidance on environmental design in relation to new roads, and in this respect should be read alongside the NPSNN and GLVIA.

2. The Zone of Visual Impact (ZVI) should extend as far as is necessary and not be subject to an arbitrary 2km limit. It needs to take into account the height of structures (bridges, gantries etc.). This will need to be agreed with the Borough Council.
3. Study area for visual amenity: How is the 2km ZVI justified? It needs to be adequate to establish the likely impacts of the proposal. The ZVI should be agreed with consultees.

Visibility is a significant issue - of both the works and the completed scheme. The study area includes protected landscapes, historic landscapes and associated views, and the flatter landscape of the Green Belt land affords long and distant views. The ZVI should extend as far as is necessary and not be subject to an arbitrary 2km limit. It needs to consider the height of structures (bridges, gantries etc.), and views to and from the (works on the) northern side of the River Thames.

The GLVIA recommends that a Zone of Theoretical Influence (ZTV) should also be identified and updated as the scheme is refined.

The PEIR states that the 2km ZVI is “the extent to which potential significant landscape and visual effects are likely to occur”. And “to verify this, a ZTV has also been prepared for a wider 5km study area”.

Recommended: The 2km ZVI and 5km ZTV proposed in the PEIR are acceptable at this stage but should be kept under review as the project develops, and more information on the visibility of the scheme and its elements is made available. This will need to be agreed with the Borough Council.

4. Receptors: Thorough consideration of the views to and from the KDAONB

See above

5. Assessment periods: the estimated construction duration should be clear and accurate.

Seven years is stated in the PEIR documents.

6. Description of effects: The terms short-term, medium-term and long-term should be defined and consistent.

Cannot verify in the PEIR

7. Mitigation (operational phase): Explanation is required as to how mitigation is to be secured, and the means by which land management in the operational phase is to be secured (i.e. retained within the highways estate or returned to management by other landowners).

This appears to remain an issue. See above

Table 2.0 Gravesham BC Scoping Report issues

Gravesham BC issues raised on the landscape assessment component of the EIA Scoping Report

1. The 2016 consultation failed to properly consider Green Belt as a significant policy constraint

All land in the study area (south of the Thames) is either within the KDAONB or Metropolitan Green Belt.

Green Belt needs to be considered for its role as a permanent and open landscape.

The PEIR references Green Belt and its inclusion in Section 9 of the NPPF. Paragraph 79 of the NPPF states “the essential characteristics of Green Belts are their openness and their permanence.”

The PEIR also lists the reference to paragraph 5.164 of the NPSNN which recognises Green Belts and states the “fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open”.

However, the PEIR⁷ notes that Green Belt is considered in the landscape assessment chapter in terms of its role as a planning designation and importance at the national level (i.e. not in terms of its permanence and open landscape)

The PEIR does not include a reference to Gravesham BC’s Local Plan Strategic Objective SO8 which aims to preserve the openness of the Green Belt, maintain its national and local planning purposes and protect it from inappropriate development. Policies to deliver the objective include CS02 which relates to the scale and distribution of development. It includes reference to development being compatible with national policies for protecting the Green Belt.

2. There is a lack of clarity in the scheme description of what is being proposed along the A2 corridor within the North Downs AONB, or the layout of the A2 junction which affects the setting of the AONB.

The works are described, but there is a lack of visual material to support the description, and at all stages of the project development (see above)

3. As a result of the revised proposals there is likely to be a significant impact from the removal of existing vegetation with consequential impacts on the AONB.

4. This corridor contains substantial landscaping from the construction of HS1 and the widening of the A2 to 4 lanes, along with the separation of the existing carriageways. Potentially, on the basis of the red line boundary, there could be severe disruption during construction and considerable damage to existing landscaping and planting.

5. A worst case would be a hard-built form corridor of road and rail combined which is of much greater width (and therefore impact) than at present. It will be necessary to consider the combined impact of both the widened A2 and HS1.

6. The possible need to reconstruct or modify existing bridge structures over the A2 could have significant further impacts.

7. There is potential for significant reduction in tranquillity as a result of both construction and the final scheme.

The issue of vegetation removal, and notably the removal of screening vegetation for HS1 is not adequately dealt with in the assessment and is included in the appraisal of the assessment methodology (above).

It appears that the A2 transport corridor is to be intensified in terms of hard-built roads and removal of soft landscaping. This is also dealt with in the response – see above.

The PEIR states that tranquillity is to be dealt with at a later stage and is discussed in the response to the assessment – above.

8. The scheme from the tunnel portal to the A2 has implications for the setting of the AONB as well as the open landscape east of Gravesend and views from the North Kent Marshes and possibly from Thurrock.

⁷ PEIR Volume One Chapter 8 section 8.3.12

The response to the assessment includes these issues – see above.
9. The cutting leading up to Thong Lane could be a white scar if it has steep sides with no seeding. Seeding is proposed in some areas, but this is likely to remain an issue during the construction phase. More detail is needed as the design develops.
10. Views of residents in Riverview Park, along Thong Lane and in the village of Thong could be significantly impacted upon. Mitigation is proposed in the PEIR, including the use of hoardings, but there will be significant negative effects.
11. At Chalk as well as visual intrusion the scale of any buildings at the tunnel portal (including any ventilation stack) could be significant in the flatter landscape. This is not clear from the visualisations, partly due to the large scale of the views, and partly because no visualisations are provided showing tunnel cranes, buildings in the construction compound or ventilation shafts.
12. It is unclear if the scheme has any implications for Three Crutches/Strood residents. The viewpoints do not extend further east than Park Pale.
13. The noise (chapter) part of the analysis deals with impact on receptors, but it is important to note that the impact of the scheme on tranquillity in such places as Jeskyns, Cobham Park and Shorne Country Park is also relevant. The PEIR states that tranquillity studies will be carried out.
14. In some areas the geographical scope needs to be expanded. It is a subject area where the impacts appear to be major/highly significant. Recommended: The ZVI and ZTV should be kept under review as the proposals develop.
15. Reference is made to local development plans and policies, but these do not seem to be referenced anywhere in the Scoping Report. The Local Plan and its policies are referenced, but the list is incomplete (see also Comments on Methodology above)
16. It is assumed that the analysis will start from the assumption that the whole route is lit (the A2 is already). This is assumed. Recommended: Visualisations need to provide more realistic night-time views, without screening landscaping where it has been removed as part of the works.
17. The area south of the A2 needs to be subject to as much analysis as the north. This is in addition to the PROW network and local routes like the Darnley Trail. Recommended: Further visual analysis is carried out along the A2 transport corridor and south of the A2 in the KDAONB.
18. Reference is made to the setting of AONB north of the A2 but this also applies to the south at Jeskyns (Forestry Commission) which straddles the AONB boundary. The PEIR refers to the sites within the KDAONB both to the immediate south and north of the A2. All sites in the KDAONB located near to the A2 are likely to suffer some landscape and visual effects as a result of the proposal in the short, medium and long-term.
19. Potential landscape impacts are a product of the current route choice and design parameters. Both these elements will need to be reviewed. In particular reducing the design speed of the crossing to 50 mph would have major benefits in mitigating the impact on landscape and other features. At this stage, not enough is known about the detailed design proposals or the noise effects of the proposal. For example, the shape of the land profiling in cuttings along the route could have a significant effect on noise, but also on the landscape effects and the usability of the surrounding land. Recommended: Consideration to be given to a comparison of noise effects for different design speeds of the road.
20. Although mitigation is mentioned as should be the first resort, compensation should also be considered. See section on Mitigation above.

21. The promoter should be required to commission a 3D computer generated landscape model of the project to evaluate landscape impacts and the effectiveness of mitigation over time.

Fly-through? Doesn't provide an accurate representation of the likely viewpoints of people on the ground. **Better 3D modelling is required to help a wider audience visualise the proposals.**

Table 3.0 Standard Questions raised by the Client (Gravesham BC)

Standard Questions to be answered
1. Whether issues previously raised have been addressed
PEIR Volume 1 requires the EIA to reflect PINS Scoping Opinion. See Table 1.0 above for detailed response
2. Is the methodology appropriate to the topic area?
<p>The EIA Regulations define the PEIR as information which 'is reasonably required for the consultation bodies to develop an informed view of the likely significant environmental effects of the development (and of any associated development)'</p> <p>In addition, the EIA Regulations state that A good PEI document is one that enables consultees (both specialist and non-specialist) to understand the likely environmental effects of the Proposed Development and helps to inform their consultation responses on the Proposed Development during the pre-application stage. The level of detail and type of PEI may vary according to when in the design process the consultation is carried out, the target audience and the complexity of the Proposed Development and the receiving environment.</p> <p>HE guidance for LVIAs is set out in the NPSNN which in turn refers to the GLVIA (Third edition) The PEIR uses guidance from the NPSNN and the IAN 135/10 and DMRB (see also Table 1.0 above)</p> <p>The methodology is confusing due to referencing a number of guidance sources, but the approach is considered appropriate.</p> <p>The question is whether the approach taken to landscape assessment may be easily understood by non-specialists. At present that answer is probably no. There is no appropriate 3D modelling that illustrates the landscape and views in relation to the scheme in its construction phase and when complete.</p>
3. Has that methodology been correctly applied?
<p>It appears that Chapter 8 of the PEIR may have followed guidance in DMRB Volume 11, in setting out the principles of assessment. The guidance states that assessment levels are dependent on the potential environmental effects, the stage of project planning and the next project decision. The assessment levels stated are Scoping Assessment, Simple Assessment, and Detailed Assessment. The assessment in Chapter 8 appears to be a hybrid of a Simple and a Detailed Assessment. Further work is therefore needed to develop a Detailed Assessment for the Environmental Statement.</p> <p>Regarding the KDAONB, the methodology makes clear (NPSNN Sections 5.150-5.152) the importance of conserving scenic beauty in AONBs. It goes on to state that permission for development may only be granted in exceptional circumstances and states a strong presumption against road widening or building in AONBs.</p>

The guidance (NPSNN Sections 5.170-5.171) states the presumption against development in the Green Belt.

The guidance also addresses developments outside nationally designated areas (in this case the KDAONB) which might affect them.

The PEIR establishes that the area of the proposal within Kent and outside the AONB is the setting for the AONB. In this regard, it could be argued that the elements of the proposal outside the KDAONB could have an effect on it and should therefore be taken into account when considering effects on the AONB.

Guidance from IAN 135/10 is also used in the assessment. It is confusing.

A potential weakness in the process for this large-scale and complex scheme is the consultation process thus far, which has taken place with stakeholders on an individual or group basis; with the potential for responses to be made by topic, organisation or area basis.

The large-scale nature of this proposal requires a similarly large-scale and strategic response; one which includes the breadth of topics and full extent of the scheme area (see also Mitigation section above).

4. Has the significance of the impact(s) been assessed and is the result reasonable?

Significance of landscape and visual receptors has been assessed and the magnitude (i.e. nature of effect). This is based on currently available information and is considered to be incomplete. See above.

5. Is there a clear link between analysis and the emerging design?

It is unclear. The route and design come first at this stage, and the assessment appears to be retrofitting mitigation proposals.

6. What further work needs to be done?

The PEIR states the following work is needed:-

Chapter 8 of the PEIR Volume 1 (Section 8.5) recognises the need to assess townscape effects on built form in Thong Village. And Chapter 7 (Cultural Heritage) confirms that... a landscape design proposal will take account of the setting of Thong Village...

Further visual analysis will also take place over the next few months. Surveys will also be carried out to identify existing areas of tranquillity.

An extended vertical analysis will be carried out. This should help to visualise the effect of some of the vertical elements of the proposal and may reveal additional visual receptors to add to the LVIA.

Further receptor viewpoints will also be discussed with the KDAONB and Gravesham BC.

It is further recommended that:-

A full detailed LVIA is required for the ES.

Further information on the proposal is also required, and at all stages of the development.

The ZVI/ZTV should be re-examined as the proposal develops.

Local stakeholders (including land managers) should be involved in the collecting of further data, in particular the work to identify areas of tranquillity, and the identification of further visual receptors.

7. Appropriate mitigation and/or compensation

See above

Appendix X: Issues to be considered in assessing the value of landscapes

Landscape condition and/or quality. This should be available in NCAs or LCAs but is currently missing from the information base.

Cultural heritage interests. These are listed in the LCA summaries but not fully addressed, and need to be cross-referenced with the Cultural Heritage chapter and response.

Perceptual qualities, such as the tranquillity of the western area of Shorne Woods Country Park amongst other sites in the KDAONB in this area (it is suggested that this be included in any further studies).

Associations, such as the link with Humphrey Repton at Cobham (landscape designer for the parkland around Cobham Hall). The landscape has been recently undergoing restoration including key views. NB the literary link with Charles Dickens and the Thames Marshes has been mentioned in the proposal report. Also, the relevance of the pattern of historic routeways that may be affected by the proposal.

Also, Rarity, Representativeness, Conservation interests and Recreational value, such as recognition of the publicly accessible - and jointly promoted - group of sites to the immediate north and south of the A2, including Shorne Woods CP, Jeskyn's Woodland, Ashenbank Woods, Cobham Park and Ranscombe Country Park which welcome hundreds of thousands of visitors each year.

Specially promoted views, such as the view from Darnley Mausoleum, views from Shorne Woods Country Park, the view northwards from Jeskyn's Park and views from Cobham Hall. Also the views from promoted access routes – such as the National Cycle Routes, Saxon Shore Way and Darnley Trail, and the Timeball and Telegraph Long Distance Walk, which links from Deal to Greenwich. NB Some views are included in the PEIR.

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