

# Lower Thames Crossing

## 6.3 Environmental Statement Appendices Appendix 7.13 – Views from the Road Assessment

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# Lower Thames Crossing

## 6.3 Environmental Statement Appendices

### Appendix 7.13 – Views from the Road Assessment

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# 1 Views from the Road Assessment

## 1.1 Introduction

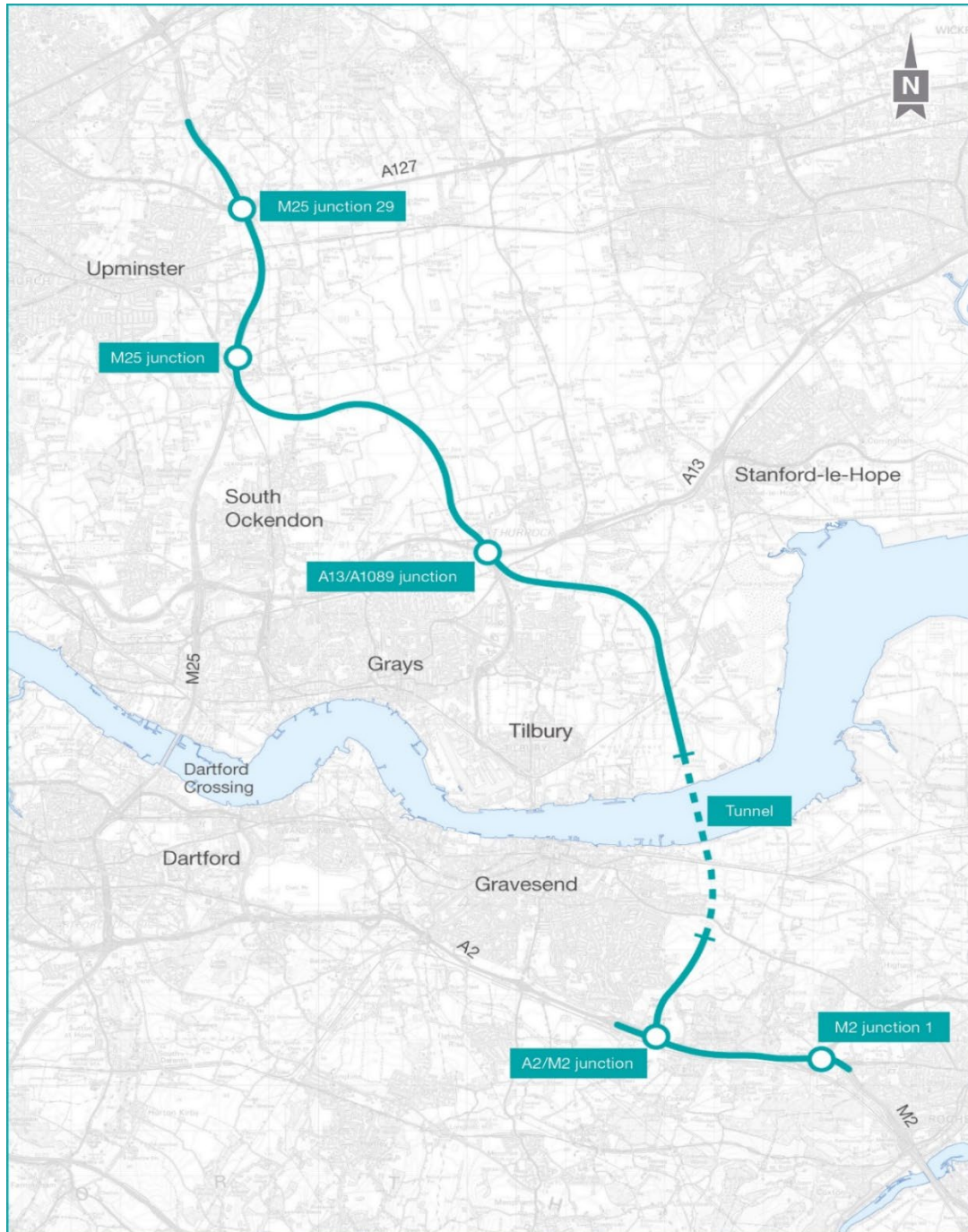
### The Project

- 1.1.1 The A122 Lower Thames Crossing (the Project) would provide a connection between the A2 and M2 in Kent and the M25 south of junction 29, crossing under the River Thames through a tunnel. The Project route is presented in Plate 1.1.
- 1.1.2 The A122 would be approximately 23km long, 4.25km of which would be in tunnel. On the south side of the River Thames, the Project route would link the tunnel to the A2 and M2. On the north side, it would link to the A13, M25 junction 29 and the M25 south of junction 29. The tunnel portals would be located to the east of the village of Chalk on the south of the River Thames and to the west of East Tilbury on the north side.
- 1.1.3 Junctions are proposed at the following locations:
- New junction with the A2 to the south-east of Gravesend
  - Modified junction with the A13/A1089 in Thurrock
  - New junction with the M25 between junctions 29 and 30
- 1.1.4 To align with National Policy Statement for National Networks (Department for Transport, 2014) policy and to help the Project meet the Scheme Objectives, it is proposed that road user charges would be levied in line with the Dartford Crossing. Vehicles would be charged for using the new tunnel.
- 1.1.5 The Project route would be three lanes in both directions, except for:
- link roads
  - stretches of the carriageway through junctions
  - the southbound carriageway from the M25 to the junction with the A13/A1089, which would be two lanes
- 1.1.6 In common with most A-roads, the A122 would operate with no hard shoulder but would feature a 1m hard strip on either side of the carriageway. It would also feature technology including stopped vehicle and incident detection, lane control, variable speed limits and electronic signage and signalling. The A122 design outside the tunnel would include emergency areas. The tunnel would include a range of enhanced systems and response measures instead of emergency areas.
- 1.1.7 The A122 would be classified as an ‘all-purpose trunk road’ with green signs. For safety reasons, walkers, cyclists, horse riders and slow-moving vehicles would be prohibited from using it.
- 1.1.8 The Project would include adjustment to a number of local roads. There would also be changes to a number of Public Rights of Way, used by walkers, cyclists and horse riders. Construction of the Project would also require the installation and diversion of a number of utilities, including gas pipelines, overhead

electricity powerlines and underground electricity cables, as well as water supplies and telecommunications assets and associated infrastructure.

- 1.1.9 The Project has been developed to avoid or minimise effects on the environment. The measures adopted include landscaping, noise mitigation, green bridges, floodplain compensation, new areas of ecological habitat and two new parks.

**Plate 1.1 Lower Thames Crossing route**



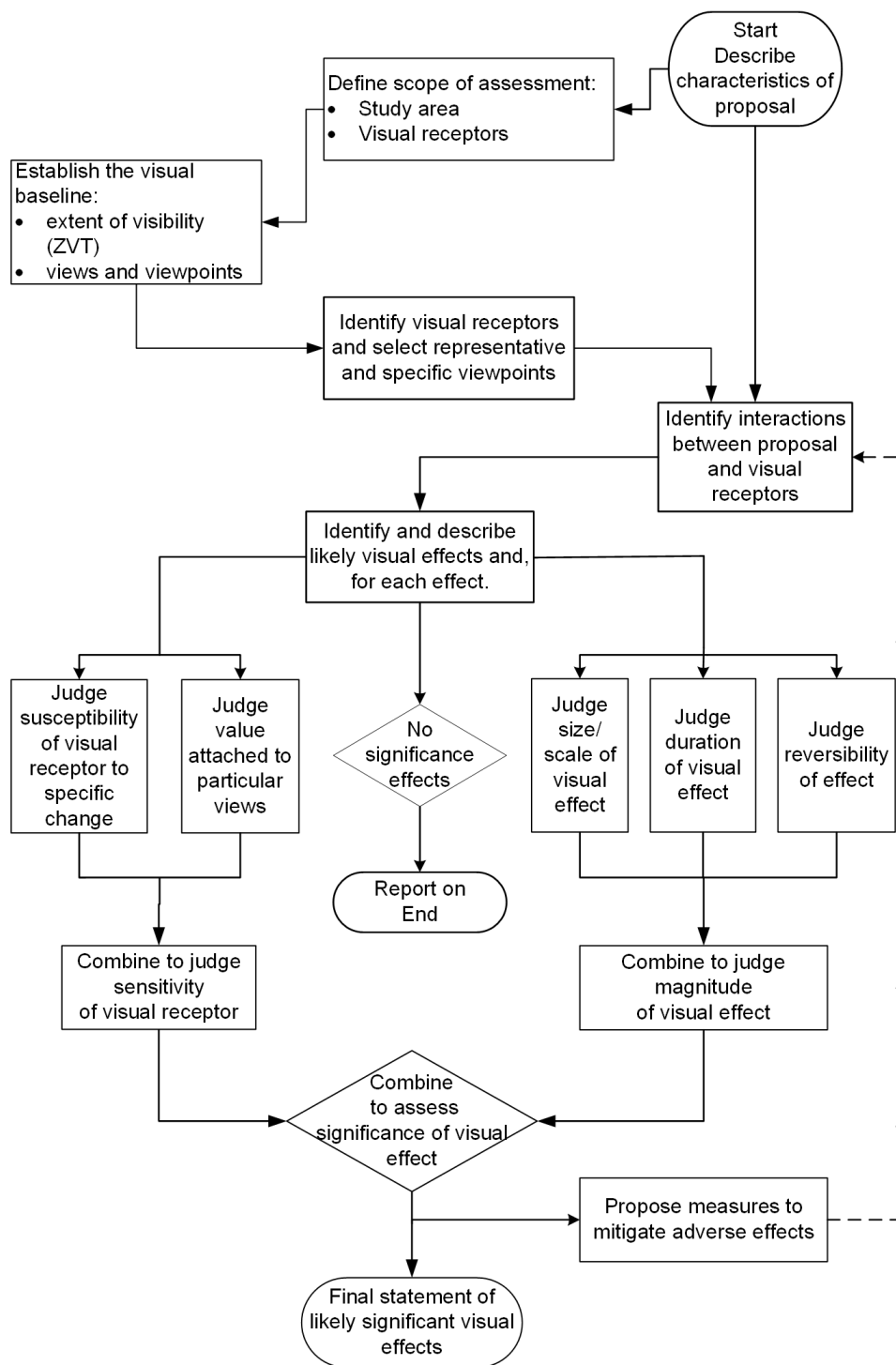
## 1.2 Background

- 1.2.1 This View from the Road (VftR) assessment reports on the views likely to be experienced by drivers on the Project road. It does not assess the effects on existing views from surrounding roads which are assessed separately in Chapter 7: Landscape and Visual (Application Document 6.3) and specifically in Appendix 7.10.
- 1.2.2 The National Highways Strategic Design Panel has stressed the importance of design narrative and an understanding of VftR is an important design tool. This appendix captures the analysis of the VftR that has informed the development of the road design, particularly the landscape and architectural elements.

## 1.3 Methodology

- 1.3.1 The methodology for this VftR assessment is set out in detail below and follows the principles set out in the Design Manual for Roads and Bridges (DMRB) LA 107 (Highways England, 2020a), utilising the process illustrated in Plate 1.2.

**Plate 1.2 DMRB LA 107 process (Figure 3.38 of DMRB LA 107)**



1.3.2 The key considerations for the VftR assessment methodology are as follows:

### Viewpoints

1.3.3 The experience of travelling along the route would be influenced by the cumulative sequential views that the road user would experience. Road users experience rapid changes in the view as they move along a road, and pass through a range of visual experiences. This issue has been addressed by identifying key representative points of the journey and defining these as viewpoints. Locations where the view from the road is unexceptional or likely

changes in view are minimal have not been considered. The selected viewpoints supplement the off-road viewpoints that are assessed of the main LVIA chapter.

### Establishing the baseline

- 1.3.4 Sections of the Project would be new road where none currently exists. In these locations, there is no existing view from the road. Establishing the baseline view in these locations is problematic as there is no existing receptor. In this assessment for these locations, the existing view prior to the construction of the Project is described, but the formal baseline for assessment is taken as the point where there would be road users and a view from the road exists, which would be in the opening year (year 1).
- 1.3.5 In locations where there is an existing road, the baseline is taken as the view from that road prior to the construction of the Project. This occurs on the A2/M2, and at the A13 junction.
- 1.3.6 For undertaking the VftR assessment and following DMRB LA 107, the specific methodology has comprised the following stages:
- a. Identify viewpoints
  - b. Establish the baseline:
    - i. Assess the value of the view
    - ii. Assess the susceptibility of the receptor
  - c. Define the sensitivity of the baseline receptors and nature of the view:
    - i. Set out a narrative around each viewpoint
    - ii. Establish magnitude for each viewpoint
    - iii. Combine sensitivity and magnitude to establish significance
    - iv. Set out potential measures to mitigate and enhance visual experience
  - d. Summarise the VftR effects

### Sensitivity

- 1.3.7 The assessment of sensitivity is based on the DMRB LA 107 requirement to *'judge the susceptibility of the receptor to change and value of the views separately, combining them together to arrive at the sensitivity of the visual receptor or visual sensitivity'* (Highways England, 2020a).
- 1.3.8 The value of the view is established through a review of the designations and a detailed consideration of the importance of the view in a local context. The susceptibility is derived from an understanding of the nature of the receptors and their ability to accommodate the proposed change.
- 1.3.9 Drivers should be visually alert, assessing the road and gauging the movements of vehicles around them. The background to this activity is the wider view beyond the carriageway. Road users have a clear awareness of this visual backdrop. It can be either the surrounding landscape or the immediate road corridor if the road is in a cutting and/or heavily planted.



1.3.10 While some users may give little or no attention to their surroundings, there are others who have a keen interest in the adjoining landscape.

1.3.11 The assessment looks at sensitivity through a review of the value of the views and the receptors' susceptibility to the change in view. As road users would be consistent along the route, their susceptibility would be the same along the route, whereas the value of the VftR would vary in different locations as explained below.

### **Value**

1.3.12 There are limited landscape designations along the route. The southern section of the Project would pass through the Kent Downs AONB; this part is a highly valued landscape as reflected in its designation.

1.3.13 Generally, the Project is unlikely to be used as a 'scenic' route and, outside of the AONB, it is not considered that the views from the road would be valued highly.

### **Susceptibility**

1.3.14 The road users would be using the route for functional purposes and views would not be a key aspect of the journey. The primary visual focus of drivers would always be functional: on the carriageway ahead and the vehicles around them. However, the views of the immediate road corridor and the wider landscape do register with users and form an important, if secondary, contribution to the user experience. There would be a strong awareness of the view, even if it is not the primary focus of drivers.

1.3.15 The view is the backdrop to activity on the road and has a degree of importance. The road user's susceptibility to the change of the view is considered to be low throughout the Project.

### **Magnitude**

1.3.16 The requirement for the assessment of magnitude is described in DMRB LA 107 (Highways England, 2020a) The reporting on the magnitude of visual effects is informed by the following:

- a. Scale of change
- b. Nature of change
- c. Duration of change
- d. Distance
- e. Screening
- f. Direction and focus of the view
- g. Year 1 (opening year) and year 15 (design year), including summer and winter
- h. Removal of past mitigation or existing vegetation
- i. Whether the receptor is static or moving

- 1.3.17 Table 1.1 sets out the descriptors for magnitude used in this assessment. The descriptors have been derived from those set out in DMRB LA 107 and adapted slightly to be more appropriate for the VftR assessment.

**Table 1.1 Indicative criteria used to define magnitude and nature of visual effect**

VftR magnitude	Typical descriptions
Major	The change in view would become the dominant feature or focal point to the receptor
Moderate	There would be a noticeable change in view, readily apparent to the receptor.
Minor	There would be a perceptible change in view but this would not alter the overall balance of features and elements that comprise the existing view.
Negligible	Only a very small change in view would be discernible.
No change	There would be no discernible change in view

- 1.3.18 The effects in the opening year are considered, as well as any changes that are anticipated to have occurred by the design year due to establishing and maturing vegetation.

### Significance

- 1.3.19 The significance of the effect on the view from the road is assessed by combining the allocated sensitivity with the identified magnitude of change, in accordance with the significance matrix set out in DMRB LA 104 Environmental Assessment and Monitoring (Highways England, 2020b). An effect of moderate or above is identified as significant.

## 1.4 Baseline

### Viewpoints

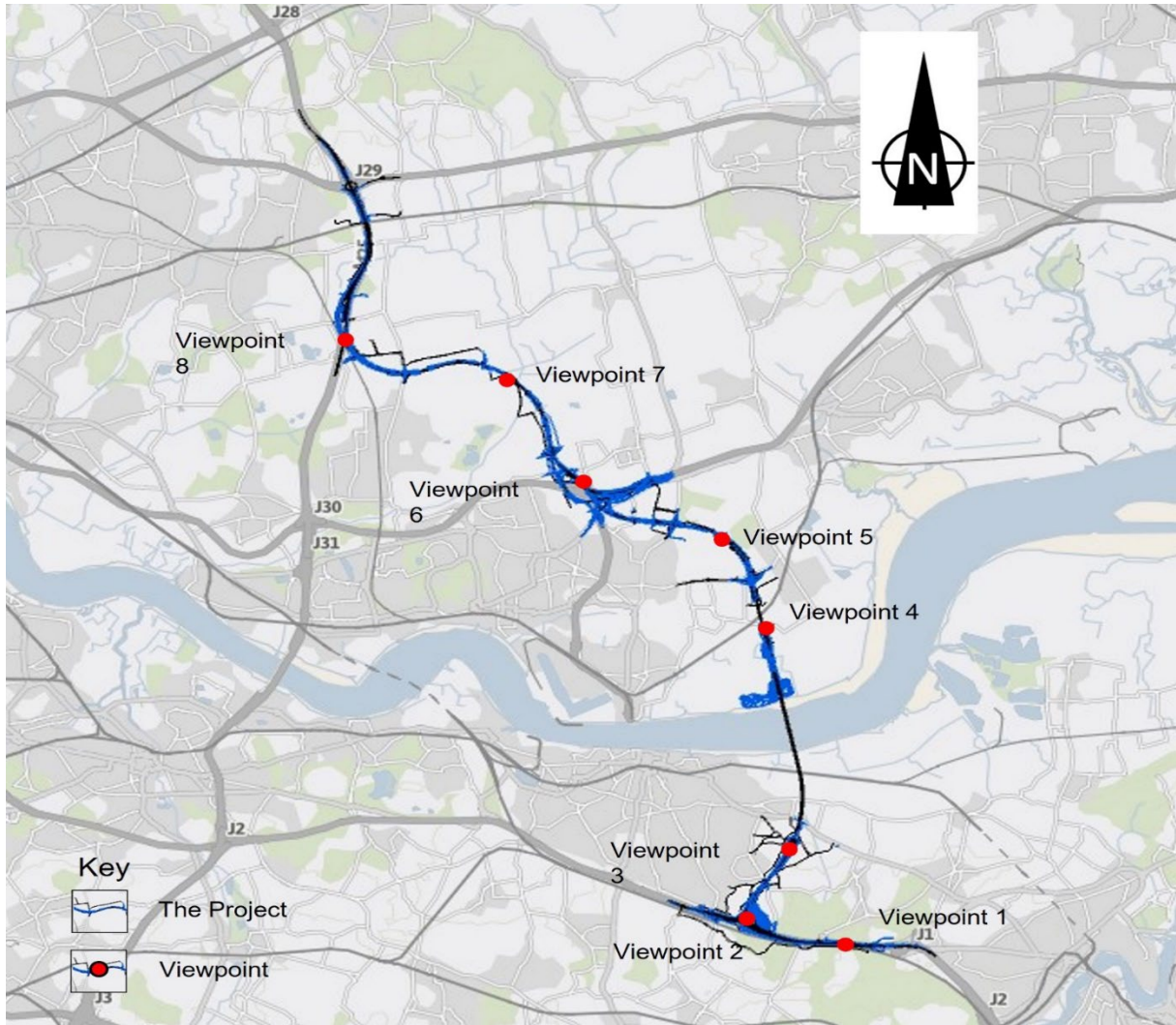
- 1.4.1 The key viewpoints have been selected from along the route. Some viewpoints are elevated with expansive views, but others are within cuttings. The extent of the view from the viewpoints varies due to variations in existing topography, built form and landscape features. For example, visibility along the A2 corridor is restricted by the surrounding mature woodland, whereas more open views are available across Orsett Fen as a result of the low-lying, flat nature of this landscape.

### Sensitivity

- 1.4.2 As stated in the methodology section, combining the value associated with the view from the road and the susceptibility to change of the receptor gives an indication of the level of sensitivity.
- 1.4.3 The nature of the receptors, the road users, is consistent throughout the assessment. The susceptibility is therefore consistent throughout the Project.
- 1.4.4 Table 7.4 of Chapter 7: Landscape and Visual (Application Document 6.3) sets out typical descriptions for levels of visual sensitivity. This is taken from Table 3.41 of DMRB LA 107 (Highways England, 2020a). It sets out typical descriptors for sensitivity (susceptibility and value) and suggests that users of main roads should be allocated a low sensitivity, whereas transient views from scenic roads should be allocated a moderate sensitivity.
- 1.4.5 No part of the Project is designated as a scenic route. Despite the sections within the AONB, much of the landscape through which the road passes is urban edge in character with extensive and highly visible infrastructure.
- 1.4.6 Each viewpoint is allocated its own evidenced sensitivity.

1.4.7 The receptors identified for this VftR assessment are specific as they are in key locations. These are shown in Plate 1.3. The selection of viewpoints includes both locations where the A122 Lower Thames Crossing, is on the line of existing roads [eg M2/A2 and A13 junction] and also ‘green-field’ locations where a new road will be constructed.

**Plate 1.3 VftR specific viewpoints**



**Table 1.2 Viewpoints**

Viewpoint	Name	Description
Viewpoint 1:	A2/M2 Brewers Wood	Within the North Kent Downs AONB
Viewpoint 2:	M2/A2/Project junction	On the existing A2/M2 alignment
Viewpoint 3	South Portal approach	No existing road - this area is currently a golf course
Viewpoint 4:	North Portal approach	No existing road - there is a small local road
Viewpoint 5	Mucking Heath	No existing road - arable fields

Viewpoint	Name	Description
Viewpoint 6:	A13/A1089/Project junction	Existing elevated A13 junction
Viewpoint 7:	Mardyke	No existing road - open agricultural landscape
Viewpoint 8	Hall Farm near M25	No existing road - arable fields

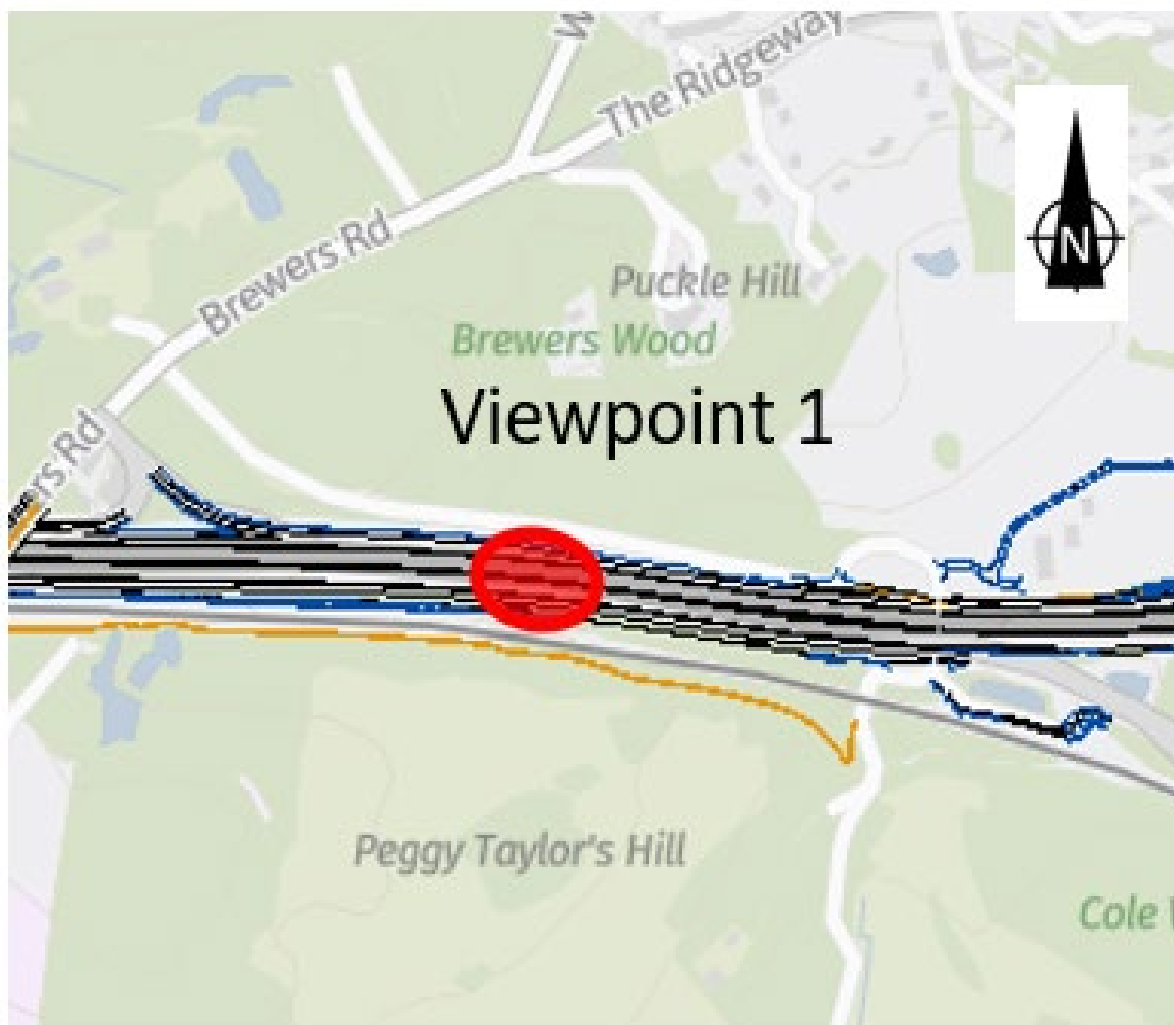
## 1.5 Design

- 1.5.1 A design narrative has been produced to explore how the design responds to high level factors to make the experience of using the route safe and enjoyable. Detailed opportunities to further enhance the user experience would be developed as part of the detailed design. Details of the design narrative and the design evolution are set out in the Project Design Report (Application Document 7.4).
- 1.5.2 There are various design elements that influence the foreground of the view from the road. These include vehicle restraint barriers, signs, gantries, lighting columns and associated infrastructure. Structures have a major effect on the view from the road. The design of overbridges and tunnel portals are particularly important in the creation of a positive journey experience.
- 1.5.3 The VftR will change through the seasons as the loss of foliage from deciduous trees and shrubs enables wider views for the road user. This seasonal variation enriches the user experience.
- 1.5.4 The experience for road users at night is important. Whilst only illuminated objects will be visible, the lighting of key structures e.g., tunnel portals will greatly contribute to the night-time experience.

## 1.6 Assessment of effects

### Viewpoint 1: A2/M2 Brewers Wood

Plate 1.4 VftR viewpoint 1



- 1.6.1 This section of the Project is on the same alignment as the existing A2/M2 and within the North Kent Downs AONB.

#### Existing landscape and view

- 1.6.2 This section of the A2/M2 is enclosed with split/separated carriageways and dense mature woodland close to the road edge. This heavily wooded landscape is characteristic of this part of the AONB. There is a substantial woodland belt within the central reserve.
- 1.6.3 The user experience both eastbound and westbound is one of enclosure, passing through woodland. The associated road infrastructure is lost in the woodland edge. For users of the A2, there is very limited visual linkage to the surrounding landscape.
- 1.6.4 Westbound traffic has glimpses of the High Speed 1 (HS1) railway line, but these are mostly restricted by earth mounds or vegetation. A gentle curve of the

road restricts the view ahead. For eastbound travellers, the horizon is densely wooded, compounding the impression of passing through expansive woodland.

- 1.6.5 The view is consistent within the extents of this viewpoint; there is no great change in the view, despite the gentle curve of the A2 at this point, as the enclosure is consistent.
- 1.6.6 The existing view is taken as the baseline.

### **Sensitivity**

#### *Value*

- 1.6.7 This section of the M2 is within the North Kent Downs AONB. This landscape designation confers a high value on the location. However, the views from the road are dominated by the road infrastructure itself and do not reflect the special qualities associated with the landscape designation.

#### *Susceptibility*

- 1.6.8 The A2/M2 is a major road; the immediate experience for road users is dominated by the road infrastructure and the surrounding traffic. The susceptibility to change for travellers is low as the appreciation of the wider landscape is limited and the road itself is the main feature of the visual experience.

#### *Sensitivity*

- 1.6.9 All the views from the road in this location are of the AONB. This would suggest that the viewpoint has a high sensitivity. However, the views are dominated by road infrastructure, rather than any of the special qualities associated with the AONB designation, so this would indicate a reduced sensitivity.
- 1.6.10 A high value and a low susceptibility would suggest that an allocation of medium sensitivity would be appropriate for this location.

### **Assessment**

#### **Magnitude of change**

- 1.6.11 The proposed new view from the road would be more open due to tree loss. The assessment of the magnitude of change is set out below based on the criteria set out in DMRB LA 107. The magnitude of change is the same for both eastbound and westbound travellers.

#### *Construction phase*

- 1.6.12 There would be some vegetation loss on both the north and south sides of the existing road. The largest effect would be due to the felling of the trees between the carriageways and on the south side of the road. The actual construction of the adjoining access roads would have limited visual impact. The works to the A2/M2 infrastructure and the new Brewers Road green bridge would have a greater impact, particularly with the associated traffic management. The Magnitude of change would be **minor adverse** as the road infrastructure already dominates the view.

### *Opening year*

- 1.6.13 There would be impacts on the woodland to the north of the A2. There would be notable loss of trees within Shorne Woods further to the west of Brewers Road due to the new access road, but limited loss in this section between Park Pale and the A2. The existing trees and vegetation between Park Pale and the A2 would be bolstered with additional new shrub and tree planting. The woodland in the central reservation and some of the screening between the A2 and HS1 would be lost. The woodland south of HS1 would not be greatly affected, although there would be some loss adjacent to Brewers Road south of HS1. While wider views would still be restricted by woodland, the overall sense of enclosure would be diminished. The loss of woodland within the infrastructure corridor from the central reserve and immediately adjoining the westbound carriageway would set back the immediate visual boundaries. The opposite carriageway would become visible. There would be little seasonal variation in the view as the absence of trees would be the key change. During winter, the sense of enclosure would be further reduced.
- 1.6.14 This section of the A2/M2 is lit and would remain so. There is little visible illumination beyond the road, so the change in the view at night would be limited to the more open view of the opposite carriageway.
- 1.6.15 Eastbound travellers would have a more open view than previously, particularly to the south side across the central reserve to the westbound carriageway and over to the HS1 railway line with the woodland of the golf course on Peggy Taylor's Hill beyond.
- 1.6.16 There would be increased visibility of the new road infrastructure with new gantries, signs and barriers clearly seen across both carriageways, rather than the single carriageway currently visible.
- 1.6.17 Westbound traffic would similarly have a more open view that would include a view of the eastbound traffic. The loss of vegetation between the M2 and HS1 would open up the view to the south, but the trees between the Rochester and Chobham Park golf course and HS1 would remain to limit the views.
- 1.6.18 The magnitude of change at opening is assessed as **minor adverse**, despite the loss of trees between the carriageways, as road infrastructure would remain the dominant feature of the view.

### *Design year*

- 1.6.19 The key difference for both eastbound and westbound road users from opening year would be the new maturing planting between M2 and HS1 and the creation of enclosure on the south side of the road. As the woodland in the central reservation between the carriageways would not have been replaced, the full width of the A2/M2 corridor would be visible to all road users.
- 1.6.20 The magnitude of change at year 15 is also assessed as **minor adverse**. The new woodland on the south side would be maturing and reintroduce some enclosure, but the loss of trees between the carriageways would remain as the key feature of the change.

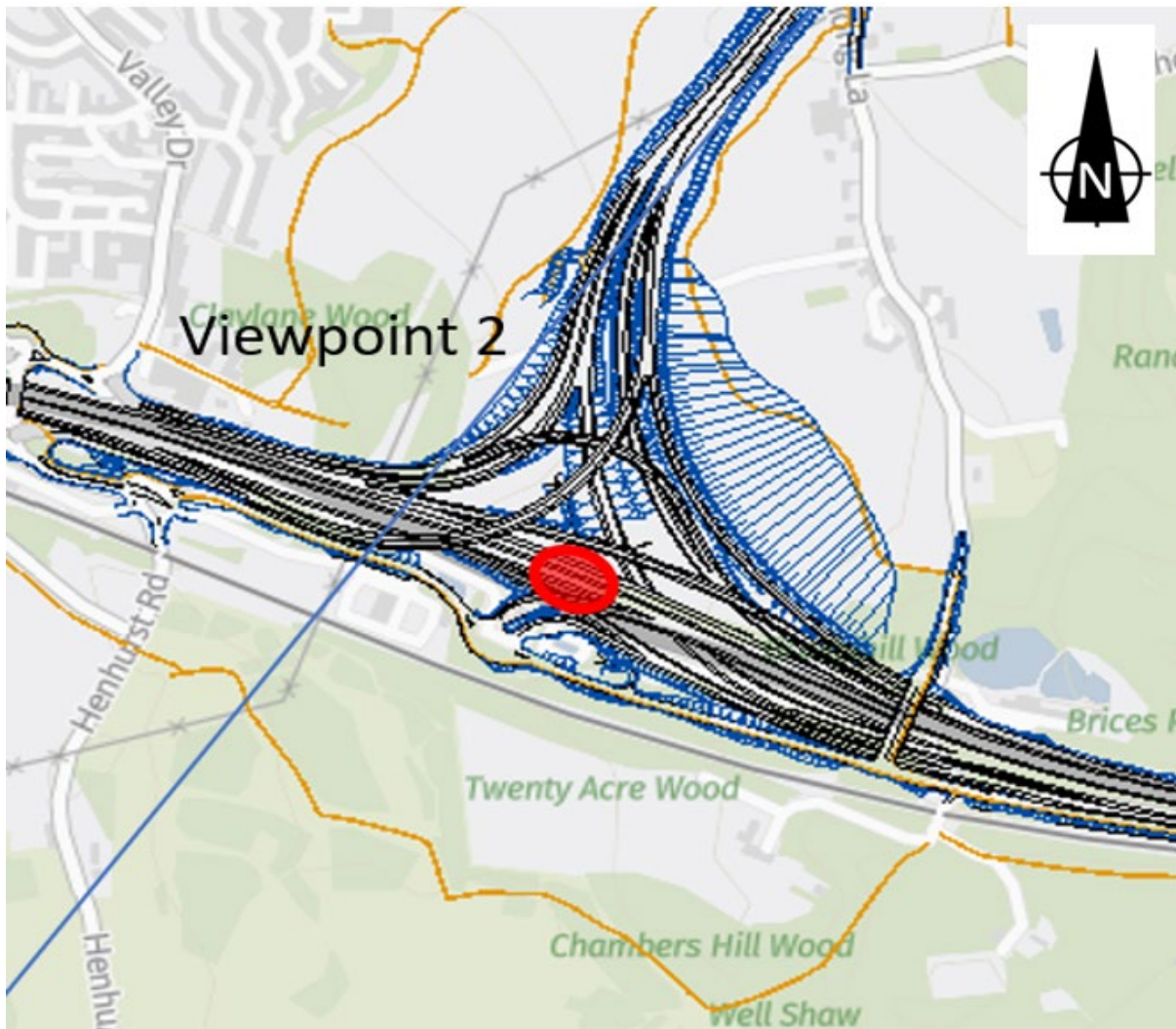


## Significance

- 1.6.21 The sensitivity for both eastbound and westbound travellers would be medium and the magnitude of change would be minor adverse at all stages. The significance of effect would therefore be **slight adverse** and not significant. This would be the same for construction, opening and design year.

## Viewpoint 2: M2/A2/Project junction

Plate 1.5 VftR viewpoint 2



- 1.6.22 This section of the Project is on the same alignment as the existing A2/M2, but outside the North Kent Downs AONB.

### Existing landscape and view

- 1.6.23 Recent planting on the north side of the existing A2/M2 alignment has started to restrict views of the open arable landscape. Most of the proposed junction sits in what is currently open arable land with expansive fields. There is significant road infrastructure, including gantries and lighting columns. The pylons are associated with the electricity transmission lines. The dense area of Claylane Wood restricts some views west. Existing views south from the A2 are restricted by woodland. The petrol station and its associated signage are a

dominant feature of the view for both eastbound and westbound carriageways. The existing view is taken as the baseline.

### Sensitivity

#### Value

- 1.6.24 This location is just outside the AONB but close to the boundary and therefore within its setting, so the receptor would appear to have relatively high value due to its proximity to the designation. However, there are very limited views within the AONB from this location as the land is screened by vegetation and topography, so the allocation of a high value would be unreasonable. The existing view is dominated by the existing highway and petrol station infrastructure, which are not associated with high value.

#### Susceptibility

- 1.6.25 Road user susceptibility in both directions would be low as set out in the methodology section.

#### Sensitivity

- 1.6.26 Given the absence of high value and the low susceptibility, despite its proximity to the AONB, the sensitivity of this receptor is low. The receptor corresponds to the DMRB LA 107 descriptor of '*Views by users of main roads*'.

### Assessment

#### Magnitude of change

- 1.6.27 The scale of change would be substantial due to the creation of the extensive, free-flow junction. The nature of the view would not change as it would remain highway dominated, but the new junction infrastructure would increase this.
- 1.6.28 The change would be permanent. The new junction and infrastructure would limit views to the north. Mitigation planting to the south and within the new junction would create new screening.
- 1.6.29 For both eastbound and westbound travellers, the views along the road would dominate. The new junction would be busy and the complex interplay of traffic streams moving in different directions and at various levels. The new bridge over the A2/M2, Thong Lane green bridge south, would be a key additional element and the detailing of this structure would be an important aspect for the user experience.

#### Construction phase

- 1.6.30 The construction impacts associated with the construction of the new junction would be extensive. Large-scale traffic management would be required to build the various bridges and underpasses. There would be vegetation loss on both the north and south sides of the existing road in order to create the new junction. The construction impacts would be similar for both eastbound and westbound travellers.

#### Opening year

- 1.6.31 The new view would be dominated by the existing and new road infrastructure. The views to the south would be slightly more open as the filling station and

some existing vegetation would be removed, but these would not be expansive as the woodland beyond limits wider views. The extensive infrastructure of the new junction would change the essentially linear experience of the existing road. Link roads would pass over and under the A2, as well as there being new connections to local roads. The magnitude of change is assessed as **moderate** in the opening year due to the change from a linear road to a complex junction. The change is one of scale rather than nature, but the change would be adverse rather than beneficial, even with positive design.

#### *Design year*

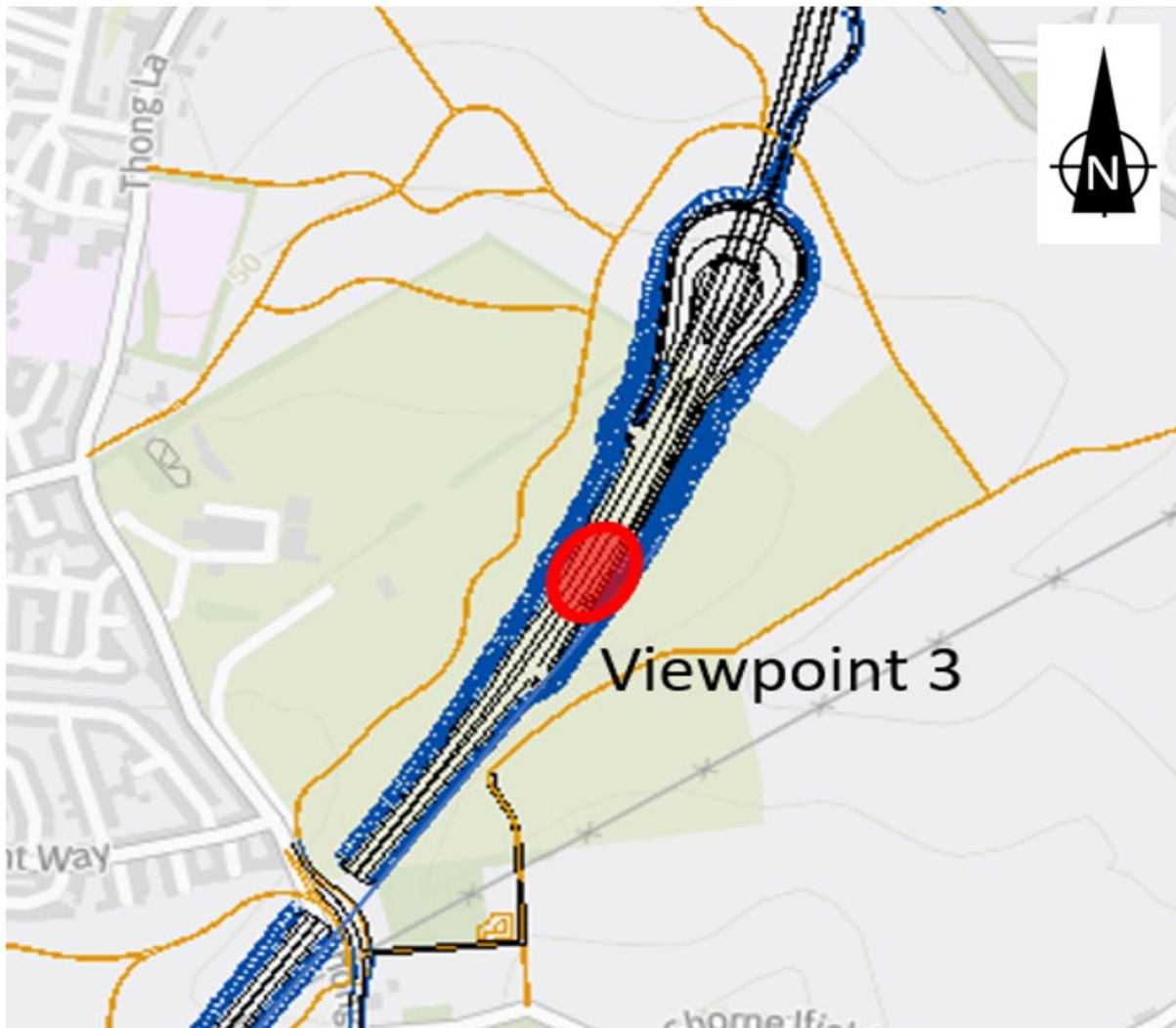
- 1.6.32 The views to the south would become more restricted as the new woodland planting immediately to the south matured. There is extensive new planting proposed within the junction and this would soften the embankments and abutments associated with the new overbridges. However, the new junction infrastructure would still be a key part of the view, and during the winter months, more of the infrastructure would be visible.
- 1.6.33 After 15 years, the magnitude of change is still assessed as **minor adverse**. The overbridge and raised sections of road would still be visible and part of the view, but the new planting to the south and within the junction would integrate the various elements of the junction and soften the view of the extensive infrastructure.

#### **Significance**

- 1.6.34 The sensitivity for both eastbound and westbound travellers would be low and the magnitude of change at the opening year would be major. The significance of effect would therefore be **slight adverse** at construction. By the design year, the mitigation planting would be maturing and the significance of effect would reduce but would still be categorised as **slight adverse** rather than neutral.

## Viewpoint 3: South Portal approach

Plate 1.6 VftR viewpoint 3



- 1.6.35 This section of the Project between the new tunnel portal and the Thong Lane Green bridge north over the new road would be entirely offline. The viewpoint is in a cutting some 10m below the existing ground level.

### Existing landscape and view

- 1.6.36 The area is currently the Southern Valley Golf Course. The viewpoint is located in the centre of the course. The location is mostly open manicured grassland with scattered shrubs and trees. Users of the course have open views, particularly to the north-east as far as the Langdon Hills in Essex. There are views of the River Thames from the northern parts of the course.
- 1.6.37 Views to the south are generally limited by woodland, while views to the west are contained by housing. Although there are some views towards Gravesend, the general visual experience for the golf course users is of openness and expansive views.
- 1.6.38 As there are no road users for the existing view, this view is not considered as the baseline. The completed road at opening year is considered the baseline.

## Baseline

### *Opening year 1*

- 1.6.39 The new road would be in a deep cutting. The views east and west would be completely restricted by the cutting slopes. The new view would be 10m lower than the existing ground level.
- 1.6.40 Northbound travellers would get their first glimpse of the South Portal entrance after passing under the proposed Thong Lane green bridge north, where the road curves gently to the north opening up views of the portal. The approach cutting would be through chalk and it is intended that the rock would be exposed with a very thin vegetation cover established by the opening year.
- 1.6.41 The tunnel ahead with its portal would form the focus of the view from this viewpoint. The portal would be a large dominating structure with a proposed continuous curved lintel linking the exposed chalk approach slopes on either side.
- 1.6.42 Within the cutting there would be signage and lighting columns. The concrete barriers adjoining the carriageway would be visually important features.
- 1.6.43 Southbound traffic would emerge from the tunnel to similarly restricted views. The curving cutting would limit all views other than the chalk face of the slope, including views ahead. Only beyond the portal curve would users be able to see any distance ahead. The Thong Lane green bridge north would form a focus for southbound views and restrict wider views. This structure would have a weathering steel face to the bridge deck.
- 1.6.44 The skyline ahead glimpsed underneath the structure would be mostly wooded, but this would not include any part of the AONB.
- 1.6.45 The views at opening year are taken as the baseline view for this assessment.

## Sensitivity

### *Value*

- 1.6.46 Using the new road as the baseline, the value is assessed on the views approaching and leaving the South Portal. Southbound travellers would have a distant view of the wooded skyline beyond Thong Lane green bridge north. This wooded skyline is not part of the AONB, so no part of the view from the road would be designated. The view emerging from the tunnel would be undesignated and restricted by the cutting and the curve of the road.
- 1.6.47 Northbound road users are likely to have a very limited view that would be focused on the cutting and tunnel portal. This is undesignated and would have relatively low value, despite the potential drama of the approaching tunnel entrance.

### *Susceptibility*

- 1.6.48 Road user susceptibility in both directions would be low as set out in the methodology section.

### *Sensitivity*

- 1.6.49 The view south emerging from the tunnel would be of low sensitivity as both the value of the view and susceptibility of the receptor would be low.
- 1.6.50 Northbound road user sensitivity is also assessed as low.

### **Assessment**

#### **Magnitude of change**

##### *Design year*

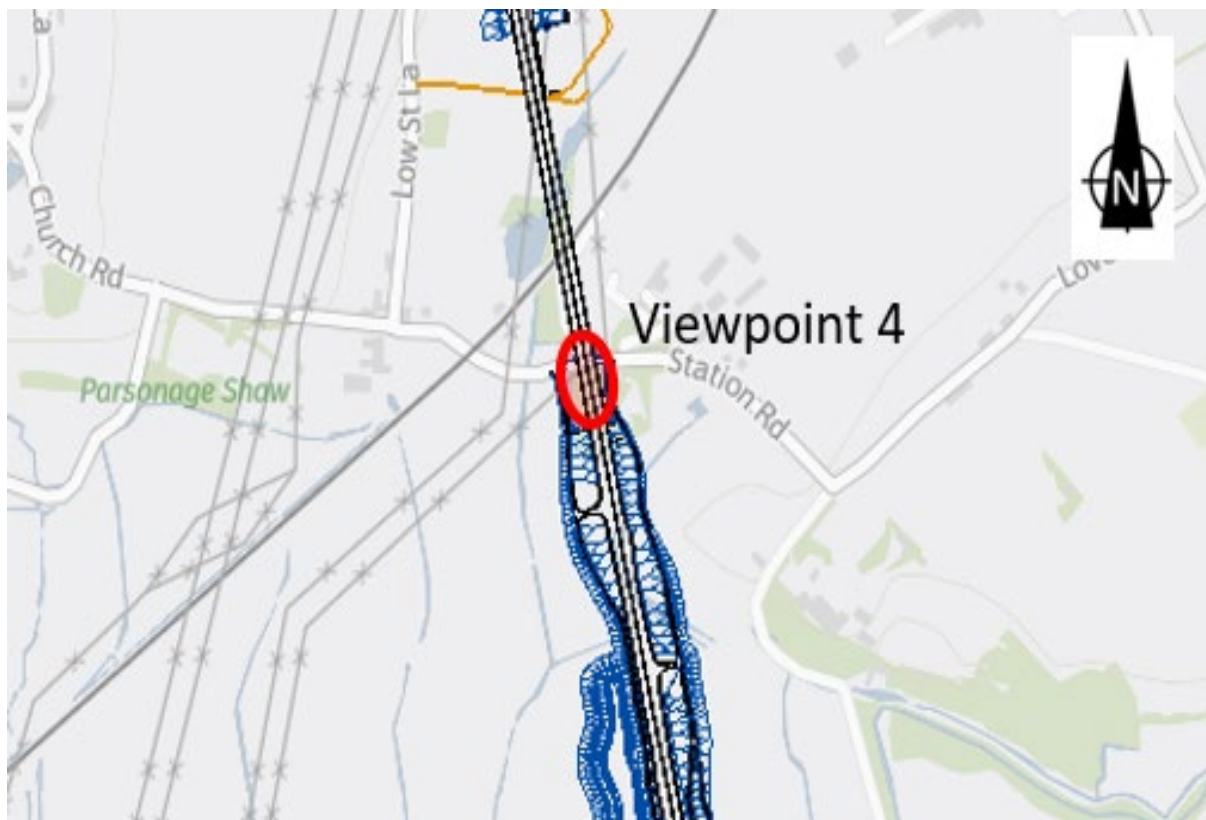
- 1.6.51 The key difference after 15 years for both northbound and southbound travellers would be that the cutting slopes would become partially vegetated with chalk grassland. However, this would still be only a partial cover of the slope. The tree planting at the top of the cutting would be maturing and become visible, increasing the sense of enclosure.
- 1.6.52 The vegetation on the Thong Lane green bridge north would have established, helping to integrate the structure into the adjoining woodland. This vegetation would be partially established by the design year.
- 1.6.53 The cutting slopes would have thin grass covering at year 1 and this would thicken up by year 15, but would still only partially cover the slope.
- 1.6.54 The change in view from opening to design year is minor and can be categorised as **minor beneficial**.

#### **Significance**

- 1.6.55 The sensitivity of this receptor would be low and the magnitude of change would be minor beneficial. The significance of effect would therefore be **neutral** as the greening of the chalk slopes is likely to be incomplete even by year 15.

## Viewpoint 4: North Portal approach

Plate 1.7 VftR viewpoint 4



- 1.6.56 This section of the Project is offline. There is a local road in this location – Station Road. The visual effects on users of Station Road are separately assessed as ‘Transport’ receptors in the main chapter.

### Existing landscape and view

- 1.6.57 The existing view from Station Road is open to the south across the open marshes. The views to the north and west are more limited as trees and hedgerows enclose the view. The road is purely local, connecting East and West Tilbury. The view is dominated by the pylon towers associated with the electricity transmission lines. There are water bodies close to the road that form an attractive foreground to the views from this road.

### Baseline

#### *Opening year 1*

- 1.6.58 The new road would be on a short viaduct. The view would be some 6m higher than the existing ground level. The views east and west would be wide and expansive as the land is relatively flat and there are large arable fields on either side. Pylons and overhead power lines will dominate the view. Both north and south bound travellers will experience the open views, however south bound road users are likely to be focussed on the approaching tunnel portal.
- 1.6.59 The new viaduct would have associated infrastructure of signs, gantries, parapets and barriers which would form the foreground of the view.

## Sensitivity

### *Value*

- 1.6.60 Using the new road as the baseline, the value is assessed on the views from the new viaduct. Whilst the views will be expansive in most directions none of the area is designated and the value of the views are low.

### *Susceptibility*

- 1.6.61 Road user susceptibility in both directions would be low as set out in the methodology section.

### *Sensitivity*

- 1.6.62 The view both north and south would be of low sensitivity as both the value of the view and susceptibility of the receptor would be low.

## Assessment

### Magnitude of change

#### *Design year*

- 1.6.63 There would be little change to the view in either direction 15 years after opening. The mitigation planting associated with the embankment to the south of the viewpoint will have matured, but this would not greatly impact the views from the viewpoint itself as the planting is around the base of the viaduct. The magnitude of change would be negligible. There would be little variation between seasons. At night there would be no change at all between opening and design year.

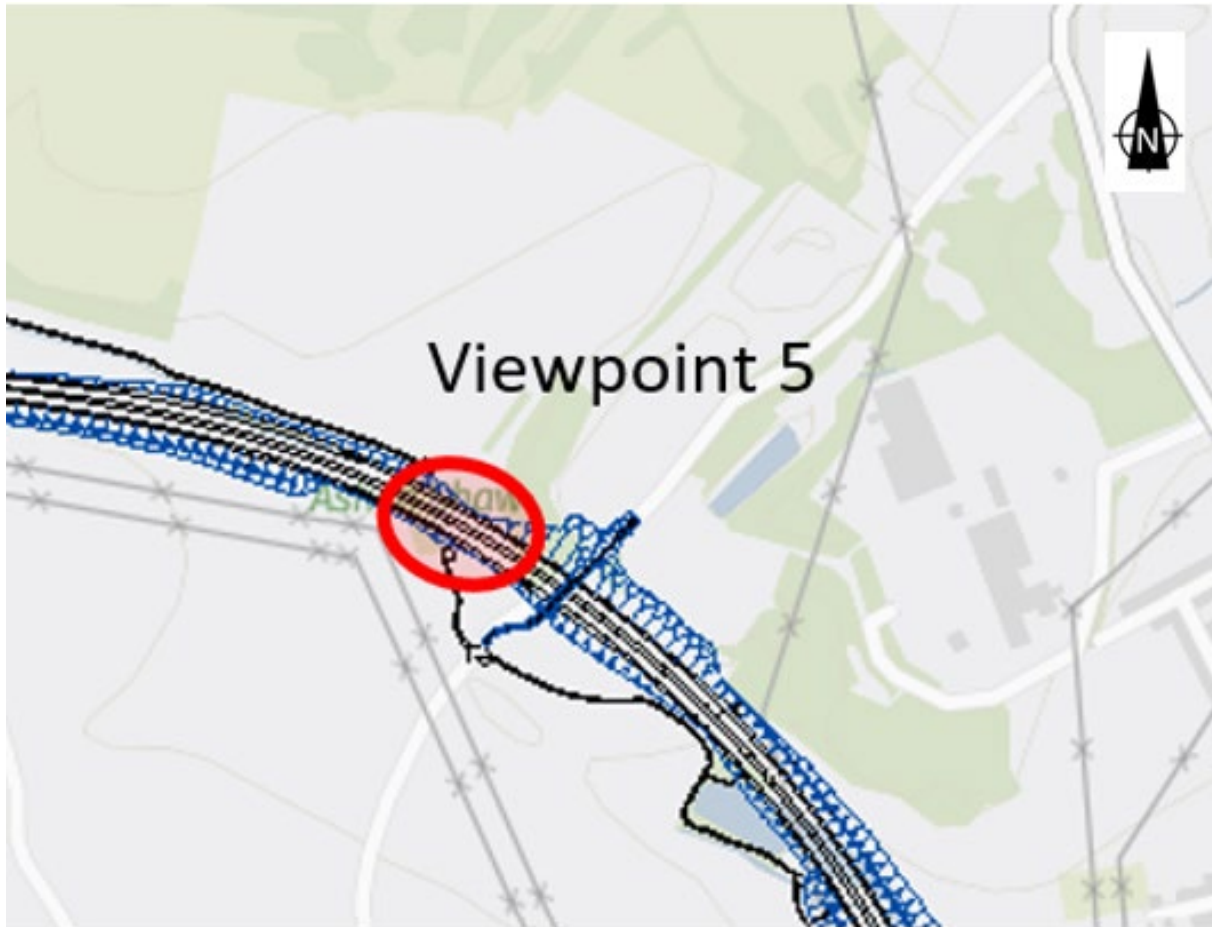
### Significance

- 1.6.64 The sensitivity of this receptor is low and the magnitude of change would be negligible. The significance of effect would therefore be **neutral** for the design year.



## Viewpoint 5: Mucking Heath

### Plate 1.8 VftR viewpoint 5



- 1.6.65 This section of the Project is offline. The existing view is not taken as the baseline for the assessment. The opening year is used as the baseline.

#### Baseline

##### Existing view

- 1.6.66 The existing view from the nearby Hoford Road Public Right of Way (PRoW) is open to the south across large open arable fields, but more enclosed to the north due to woodland and topography. The existing pylons are dominant visual features to the south. The urban edge of Chadwell St Mary and the three tower blocks are clearly visible.

##### Opening year

- 1.6.67 The new road would be at the same level as the adjoining land at this point, curving from a north–south to an east–west orientation. The new view south would be similar to the existing view. Travellers in both directions would experience some views south-west across large open arable fields towards the urban edge of Chadwell St Mary. However, the visibility would be limited by the rising topography.

- 1.6.68 Travellers in both directions would be presented with an expansive view to the south-west, but existing woodland and the topography would limit views north. The pylons to the south would remain key features of the view.
- 1.6.69 The vegetation on the embankment and false cutting slopes would be newly planted.
- 1.6.70 The opening year is taken as the baseline.

### Sensitivity

#### Value

- 1.6.71 The area around Hoford Road is undesignated and the views have low value.

### Susceptibility

- 1.6.72 Road user susceptibility in both directions would be low as set out in the methodology section.

### Sensitivity

- 1.6.73 Traveller sensitivity has been assessed as low for both north and southbound users, as both the value of the view and susceptibility of the receptor would be low. The open view to the south/west would be relatively transient.

### Assessment

#### Magnitude of impact

##### *Design year*

- 1.6.74 The change in view between opening and design year would be **negligible**. The planting on the embankment and false cutting slopes would establish and mature, but this would not change the key characteristic of the view from the road which is the open view towards Chadwell St Mary to the south.

### Significance

- 1.6.75 The sensitivity of this receptor is low and the magnitude of change would be negligible. The significance of effect would therefore be **neutral**.

## Viewpoint 6: A13/A1089/Project junction

### Plate 1.9 VftR viewpoint 6



- 1.6.76 This section of the Project adjoins the existing A1089 and part of the existing junction. Whilst the viewpoint could be considered to be offline, it is so close to the existing road that it can be considered to be online. The existing A13/A1089 junction would be enlarged to accommodate the Project.

#### Existing landscape and view

- 1.6.77 The existing view from the A1089 is limited by existing roadside vegetation, but is relatively open to the south and east across large open fields. The pylons are a dominant visual feature to the south. The urban edge of Chadwell St Mary and the three tower blocks are clearly visible. The view west is obscured by mature woodland associated with the junction. The existing view from the A1089 is taken as the baseline.

#### Sensitivity

- 1.6.78 The sensitivity of the receptor is assessed by considering the value of the viewpoint in relation to the susceptibility of the viewer, based on the sensitivity descriptors set out in DMRB LA 107.

#### Value

- 1.6.79 The existing view from A13/A1089 is undesignated and the area has low/negligible value.

### Susceptibility

- 1.6.80 The susceptibility to change of users of the existing road is low.

### Sensitivity

- 1.6.81 Traveller sensitivity has been assessed as low.

### Assessment

#### Magnitude of impact

##### *Construction phase*

- 1.6.82 During construction, there would be receptors in this location as the A13/A1089 would remain open to vehicular traffic. There would be no road users on the Project itself during this period. There would be significant works in this location in order to construct the new junction. Some of the existing roadside vegetation would be removed at the start of construction. The magnitude of change is assessed as moderate.

##### *Opening year*

- 1.6.83 Travellers in both directions would be presented with a constrained view to both the east and west due to existing and new infrastructure. Overbridges would limit views north and south. The new road would be in a slight cutting at this location and would be restricted to both the east and west.
- 1.6.84 The infrastructure associated with the new junction would be the dominant visual feature, while the road would be the biggest change in the view. The magnitude of impact would be **minor** as the key characteristics of the view would remain as existing. The magnitude of impact would be consistent through the seasons as the new planting would not be established.

##### *Design year*

- 1.6.85 There would be some change to the view in both directions after 15 years. The mitigation planting associated with the junction will mature and soften the junction infrastructure. However, the key elements of view for road users would not change throughout this period. The magnitude of impact would remain minor.

### Significance

- 1.6.86 The sensitivity of this receptor would be low and the magnitude of change would be moderate at construction and minor at the opening and design year. The significance of effect would be **slight** during construction and reduce **neutral** at both opening and design year.

## Viewpoint 7: Mardyke

Plate 1.10 VftR viewpoint 7



- 1.6.87 This section of the Project would be offline. The new road would cross the Mardyke as an elevated structure. There is an existing PRow and bridleway in this location. As there is no existing road in this location, the baseline view from the road is taken as the opening year.

### Baseline

#### Existing landscape and view

- 1.6.88 The existing view from the Mardyke Way PRow is expansive and open. There is little topographic variation and fields are large. Hedgerows, copses and shelterbelts partially limit the extended view, but the view is expansive, particularly to the east.

#### Opening year

- 1.6.89 The new road would be elevated on a viaduct some 7m above the existing ground level, so the new view would be similar to the existing view but more open and expansive. It would extend over the broad open fields in this area. This view is taken as the baseline.

## Sensitivity

### *Value*

- 1.6.90 The area is undesignated, so no part of the view is formally valued despite its attractive nature. The value is assessed as low.

### *Susceptibility*

- 1.6.91 The susceptibility to change of the travellers in both directions on the A122 would be low.

### *Sensitivity*

- 1.6.92 Traveller sensitivity to the view from the road has been assessed as low.

## Assessment

### Magnitude of change

#### *Design year*

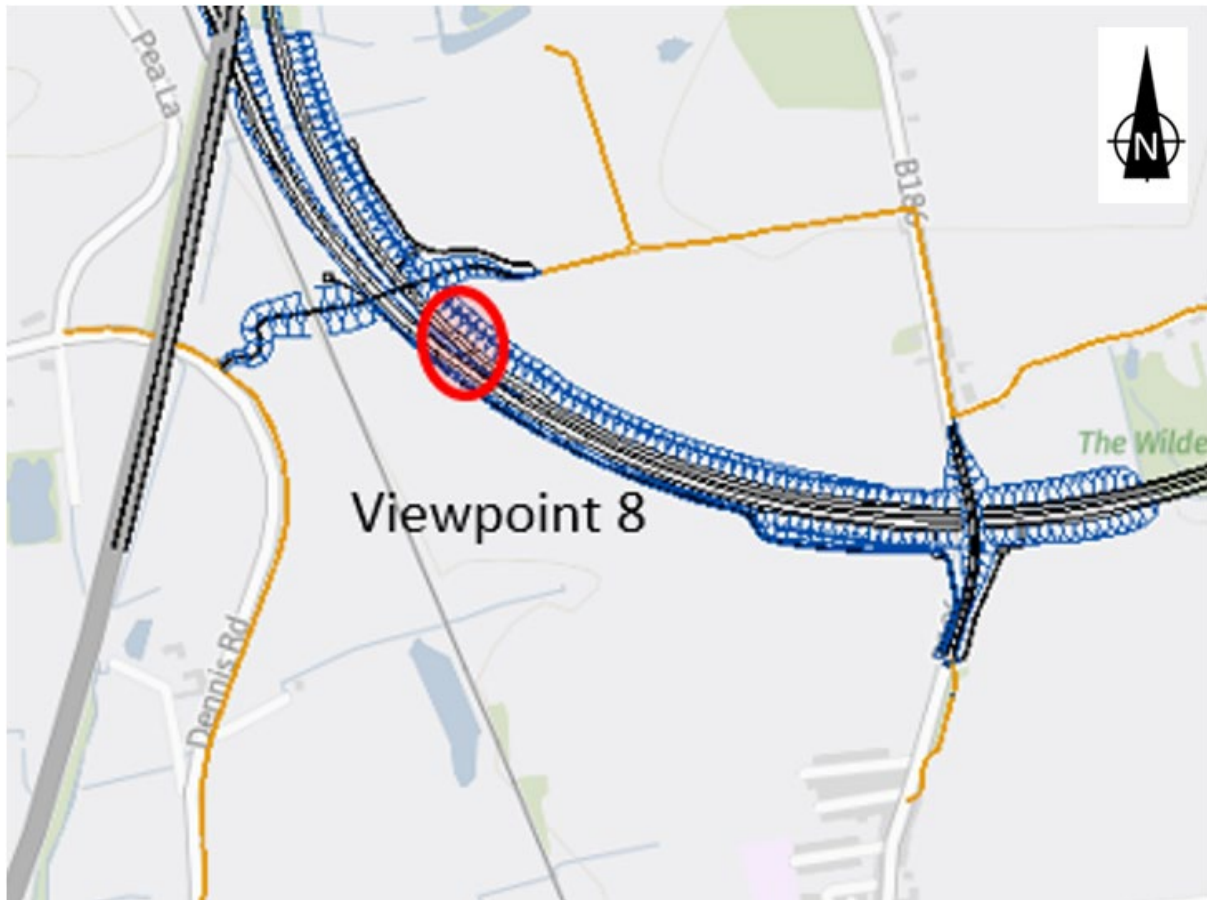
- 1.6.93 Due to the new road being on a viaduct in this location, there would be negligible change to the view in both directions after 15 years. Any mitigation planting associated with the road would not be visible from the elevated viaduct.

#### *Significance*

- 1.6.94 The sensitivity of this receptor would be low and the magnitude of change would not change, so the significance of effect would therefore be **neutral**.

## Viewpoint 8: Hall Farm near M25

Plate 1.11 VftR viewpoint 8



- 1.6.95 This section of the Project would be offline. There is no existing road in this location. The baseline is therefore taken as the opening year rather than the existing view.

### Baseline

### Existing view

- 1.6.96 The landscape is relatively open here with large arable fields allowing extensive views of the agricultural landscape to the north, east and south. The vegetation associated with the railway and the M25 enclose views to the west.

### New view opening year

- 1.6.97 The new road has a false cutting to the north which would prevent any views in this direction. The railway and M25 limit views to the west. Only southbound travellers would experience the expansive view across fields to the south. The infrastructure associated with the new road would be a key feature of the view. This view is taken as the baseline.

### Sensitivity

- 1.6.98 The sensitivity of the receptor is assessed by considering the value of the viewpoint in relation to the susceptibility of the receptor.

### *Value*

- 1.6.99 The new view from the Project is undesignated and the area has limited value.

### *Susceptibility*

- 1.6.100 The susceptibility to change of the road users would be low.

### *Sensitivity*

- 1.6.101 Traveller sensitivity to the view from the road has been assessed as low.

## **Assessment**

### **Design year**

- 1.6.102 There would be negligible further change to the view after 15 years. The roadside woodland planting on the false cutting slopes would mature and establish, but this would only reinforce the enclosed nature of the view. The magnitude of change would be minor

### **Significance**

- 1.6.103 The sensitivity of this receptor is low and the magnitude of change would be minor. The significance of effect would therefore be **neutral**.

## **Summary**

- 1.6.104 The views from the above ground sections of the Project would be experienced by very large numbers of road users. This assessment identifies the change in views for the road user from the existing view where an existing road would be incorporated into the Project route and from the opening year of the Project where there is no road at the moment.

- 1.6.105 A range of effects were identified and the significance of the effects established. An effect is deemed significant if the identified significance is moderate or above. The residual visual effects at the design year, 15 years after opening, are as follows:

- a. Viewpoint 1 A2/M2 Brewers Wood [online] **slight adverse**
- b. Viewpoint 2 M2/A2/Project junction [online] **slight adverse**
- c. Viewpoint 3 South Portal approach [offline] **neutral**
- d. Viewpoint 4 North Portal approach [offline] **neutral**
- e. Viewpoint 5 Mucking Heath [offline] **neutral**
- f. Viewpoint 6 A13/A1089/Project junction [online] **neutral**
- g. Viewpoint 7 Mardyke [offline] **neutral**
- h. Viewpoint 8 Hall Farm near M25 [offline] **neutral**

- 1.6.106 No significant effects of moderate or above were identified as part of the assessment. The overall effect for online viewpoints is slight adverse and the overall effect for offline viewpoints is neutral. The overall effect for the VftR for the Project is identified as **slight adverse** and therefore not significant.



## References

Highways England (2020a). Design Manual for Roads and Bridges, LA 107 Landscape and visual effects. Revision 2. Accessed March 2020.

Highways England (2020b). Design Manual for Roads and Bridges, LA 104 Environmental assessment and monitoring. Revision 1. Accessed August 2022.

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