Preliminary Environmental Information Report

Volume 2

Chapter 12: Landscape and Visual Amenity

12 Landscape and Visual Amenity

12.1 Introduction

12.1.1.1 This chapter of our Preliminary Environmental Information Report (PEIR) considers the effects from construction and operation of the River Thames Scheme (RTS) ('the project') in relation to landscape and visual amenity. Within this chapter we have included topic specific sections on:

- Legislation, policy and guidance (noting any changes since Environmental Impact Assessment (EIA) scoping);
- Engagement with consultees, including responses to comments received on the RTS EIA Scoping Report;
- The assessment methodology for this topic (again noting any changes or updates since EIA scoping);
- Key environmental considerations and opportunities;
- Primary and tertiary mitigation;
- Our preliminary assessment of effects;
- Secondary mitigation; and
- Future work for this topic of our EIA.

12.1.1.2 For a summary of the key baseline elements associated with landscape and visual amenity see Section 5.8 of this PEIR.

12.1.1.3 The study area for the assessment of landscape character and visual effects is shaped by the provisional perceived extents of any effects from the proposed channel works, the range of landscape and biodiversity design proposals being considered, and the changes to the flooding regime as a result of the project. This is broadly the same study area used for the landscape and visual amenity chapter of the RTS EIA Scoping Report (Environment Agency and Surrey County Council, October 2022) ('the EIA Scoping Report'). However, the study area for the PEIR has slight differences due to minor changes in the project boundary. The revised study area is shown on Figure 12.1: LVIA Study Area and Viewpoint Locations.

12.1.1.4 The assessment of landscape effects deals with the effects of change and development of the landscape as a resource in its own right. The

assessment of visual effects deals with the effects of change and development on the views available to people and their visual amenity.

12.1.1.5 Historic landscape character is considered within the Landscape and Visual Impact Assessment (LVIA) as an aspect of Landscape Character Assessment (LCA) and continues to be informed by an ongoing collaboration between landscape and cultural heritage specialists, utilising some similar baseline information. Historic landscape is further detailed within Chapter 10: Cultural Heritage, Archaeology and Built Heritage where effects on the heritage assets and their settings will be assessed.

12.1.1.6 Further information on ecological baseline can be found in Chapter 7: Biodiversity. The methodology we will apply for a separate Lighting Impact Assessment of the RTS is set out in Appendix 12.1.

12.2 Legislation, Policy and Guidance

12.2.1.1 A summary of the key legislation, policy and guidance relevant to landscape and visual amenity is provided in Appendix M of the EIA Scoping Report.

12.2.1.2 Since the publication of the EIA Scoping Report in October 2022, the National Policy Statement (NPS) for Water Resources Infrastructure (Department for Environment, Food and Rural Affairs (Defra), 2023a) ('the 2023 NPS') has been finalised and was designated in September 2023. Changes to the NPS relevant to LVIA (Section 4.9 of the NPS) since the draft version was released in 2018 are:

- The omission of the potential land use impacts of water resources Nationally Significant Infrastructure Projects (NSIPs) tables. This amendment has not changed the methodology or assessment of effects for this topic.

12.2.1.3 Since October 2022 the following new guidance has been identified:

- Elmbridge Borough Council Local Green Space Study (EBC, 2022a); and
- Runnymede 2035 Open Space Study 2016 (RBC, 2016, republished 2017).

12.2.1.4 Both guidance documents suggest provision for public amenity is likely to improve with potentially more areas being opened up for public access, or areas of importance to the local community provided with increased protection e.g. designated as Local Green Space.

12.2.1.5 In order to follow good practice and effectively satisfy the requirements of the Development Consent Order (DCO) process, LVIA methodology follows the principles set out in *Guidelines for Landscape and Visual Impact Assessment 3* GLVIA3 (Landscape Institute and Institute of Environmental Management and Assessment (IEMA), 2013).

12.3 Engagement

12.3.1 Responses to EIA Scoping

12.3.1.1 Table 12.1 below summarises the comments and responses received on the Scoping Report following formal submission to the Planning Inspectorate (PINS) including the PINS EIA Scoping Opinion (dated 15 November 2022) ('the PINS Scoping Opinion') and any key comments received from statutory consultees. Full responses to consultee comments on our EIA Scoping Report and our responses to these comments are provided in Appendix 4.1.

Table 12-1: Responses to comments received on the EIA Scoping Report

Consultee or Organisation	Summary of Comment	Project Response
PINS	The ES should explain the likely maintenance activities and provide an outline of the operational maintenance plan, demonstrating how this would mitigate any likely significant effects.	Maintenance of the channel to restore the design profile has been scoped into this topic in response to the PINS scoping opinion. An operational maintenance plan will be provided at ES stage.
Local Planning Authority Project Group	Lighting should be assessed in the LVIA and consideration should be given to the need for night-time viewpoint photography, particularly for key sensitive receptors / key representative viewpoints.	It is thought unlikely that night time viewpoint photography will be necessary, but it will be considered in relation to sensitive locations once further design detail/location is understood. A separate lighting

Consultee or Organisation	Summary of Comment	Project Response
		assessment will be completed, in accordance with the approach set out in Appendix 12.1.

12.3.2 Other Engagement since EIA Scoping

12.3.2.1 Section 12.2.2 of our EIA Scoping Report summarises the stakeholder engagement relevant to the LVIA topic that was undertaken prior to submission of the EIA Scoping Report.

12.3.2.2 We have since engaged with the relevant local planning authorities (LPAs) to present and agree the provisional Indicative Viewpoint Locations to be used for the LVIA.

12.3.2.3 There has been ongoing engagement with stakeholders and local communities regarding the landscape and green infrastructure design, in particular the design of the areas of enhanced public connection and new green and blue open spaces under consideration. This has included discussions with interest groups representing users of existing green spaces and rights of way and has provided reassurance that the project includes elements that stakeholders would like to see.

12.4 Methodology

12.4.1 Introduction

12.4.1.1 This section should be read in conjunction with Chapter 4 ‘Approach to the Environmental Assessment’ which sets out relevant information on the design parameters and information that have informed the PEIR assessment, and how we have approached various aspects of the assessment including:

- The scope of the assessment;
- The methodology (including the approach to defining the baseline environment, topic study areas, and assessment methodology and criteria);
- The approach to mitigation; and
- The approach to cumulative effects.

12.4.1.2 The assessment methodology used for the LVIA in this PEIR and to be used in the Environmental Statement (ES) is presented in Chapter 12 of the EIA Scoping Report.

12.4.1.3 The LVIA is dealt with as two discrete parts within the EIA, considering physical changes to the landscape character and the visual effects of the project as perceived by people. The separation of these two aspects is in accordance with the recommendations of GLVIA3 However, they remain closely related and will inform and cross-reference each other where appropriate.

12.4.1.4 The assessment has defined the key landscape characteristics and visual context of the site and its surrounds, including the baseline landscape character and landscape receptors upon which the effects of the project are assessed. These are shown on Figure 12.3. It has also set out the sensitivity of the landscape and visual receptors based upon their value, and their susceptibility to change. Further detail of this including figure references is provided in the Site Description Section 5.8.1 Existing Baseline. A selection of viewpoint locations representative of these receptors have provisionally been agreed with the LPAs and for which Type 1 annotated viewpoint photographs will be prepared. Baseline photography will comply with Landscape Institute-Technical Guidance Note - 06/19 (LI TGN 06/19) for a Type 3 Visualisation for all viewpoint locations and will also capture a wider panoramic view. There will be further consultation with the LPAs for the ES regarding which will be developed as visualisations to illustrate the project in the landscape. It is considered likely that these will be Type 2 or Type 3 Visualisations (as detailed in the LI TGN 06/19). These will include aspects of the proposals that have been embedded in the design to avoid, reduce or compensate for any likely significant negative landscape and visual effects or to achieve positive effects, and other mitigation and enhancement measures. The provisional Indicative Viewpoint Locations that have been agreed with the relevant LPAs are shown on Figure 12.1: LVIA Study Area and Viewpoint Locations. The development of these viewpoints from those originally agreed with the LPAs is set out in the EIA Scoping Report.

12.4.1.5 The nature of the resulting effect that is likely to occur has been assessed for this PEIR, i.e. the magnitude of change brought about by the RTS to the landscape as a resource and the identified visual receptors. This has

been combined with each receptor's sensitivity to produce a preliminary assessment of level of significance of effect.

12.4.1.6 Section 12.7 of the EIA Scoping Report describes in full the proposed assessment methodology for the assessment of landscape and visual amenity. It defines the significance criteria for the sensitivity of receptors and the magnitude of effect.

12.5 Key Environmental Considerations and Opportunities

12.5.1.1 The key considerations with respect to landscape and visual amenity are:

- A relatively complex landscape in which to suitably place a major linear infrastructure project.
- Despite the frequency of PRoW and roads, the area is relatively enclosed, and generally only short to medium length views predominate. Flood management components are being introduced to a landscape that is already characterised by similar infrastructure.
- The presence of the Thames Path National Trail, a long distance walking route designated by the Government and managed to a set of quality standards.
- Valued views experienced by receptors within the study area and susceptible to influence from development.
- Landscape complexities (such as below ground landfill) that may restrict the future planting of trees and other vegetation.
- A relatively active landscape in which movement and 'bustle' both on the ground and in the air, are part of its overall character, though smaller pockets of comparatively more tranquil landscapes can be found, such as at Desborough Island and Shepperton waterside. The landscape character of the study area is sensitive to change from development and changes to recreational use of the area.
- Existing vegetation including protected trees within the project boundary are sensitive to land use changes and development which many result in their loss.
- Existing engineered infrastructure and utilities including the motorways, railways and pipelines pose a risk to future access and landscape improvement opportunities.
- Green Belt, Metropolitan Open Land and other planning policies that may restrict the provision and extent of built development.

12.5.1.2 The key opportunities with respect to landscape and visual amenity are:

- The creation of a range of accessible public spaces for active and passive use, enhanced active travel links, new planting, habitat creation and enhancement.
- Identifying existing characteristics of the landscape that will be used to inform the developing landscape design of the project, with opportunities for strengthening existing landscape character within both an historic and fragmented landscape.
- The overall landscape enhancement through the provision and long-term management of landscape and green infrastructure initiatives including tree, woodland and hedgerow planting, wildflower meadows and marginal and aquatic planting of waterbodies.
- Enhancement opportunities throughout the local area including increased public access to green infrastructure and amenity spaces, and the provision of wider associated benefits, including improved connections to wider existing green space and Public Right of Way (PRoW) networks.

12.6 Primary and Tertiary Mitigation

12.6.1 Primary Mitigation

12.6.1.1 A project goal of the RTS is to provide an area of landscape and green infrastructure that positively effects the local community, through accessible green space provision, enhancements to biodiversity and the provision of new active travel. The following primary mitigation is proposed in relation to landscape and visual effects from construction and operation:

- An integrated landscape design process, which wherever possible aims to sensitively integrate all project components within the existing landscape to reduce landscape and visual effects from both construction and operation. This will include:
  - Sensitively locating material stockpiles.
  - Screening of construction components.
  - Consideration of material finishes to buildings and structures including use of local materials and design vernacular.

  - Consideration of the form and contouring of proposed earthwork profiles into existing landform to visually settle features.
  - Consideration of sensitive landscape design and planting in relation to the setting of Scheduled Monuments.
  - Consideration of public space and its use to be inclusive and meet the needs of vulnerable groups.
  - Incorporation of existing green infrastructure including trees and vegetation to visually assist in complementing and settling the project components.
  - New planting including that to achieve carbon mitigation and Natural Capital outcomes, and in relevant locations to screen project components.
  - A management and maintenance programme to ensure that the objectives of the landscape and green infrastructure components are continually realised.
- Habitat creation, mitigation or enhancement to achieve Biodiversity Net Gain, mitigation and/or compensation for other effects on habitats or species.
- Application of the mitigation hierarchy for habitats and species as a part of the integrated design development. This would reduce visual effects by settling built project elements into the landscape.
- Enhancement of habitats immediately downstream of three weirs on the River Thames in the reach bypassed by the flood channel (at Penton Hook, Chertsey and Shepperton). This would reduce visual effects by settling built project elements into the landscape.

12.6.2 Tertiary Mitigation

12.6.2.1 The following tertiary mitigation is proposed in relation to landscape and visual effects assessed within our PEIR:

- Standard construction practices to protect amenity and reduce landscape and visual effects from construction. For example, mitigation measures such as (this is not an exhaustive list):
  - Appropriate designs of construction fencing and hoarding surrounding construction areas to reduce visual effects from construction;

  - Protection of retained vegetation in accordance with BS:5837 (2012) reducing potential visual effects by reducing changes to existing views;
  - Notices and information provision/project updates at local events; and
  - Production of a Construction Traffic Management Plan and Construction Logistics Plan. These will proactively manage and influence workforce (and visitor) travel to and from worksites to limit traffic movement and reduce disruption to landscape and visual receptors in the vicinity of the site. See Chapter 17: Traffic and Transport for details of this mitigation measure.
- Construction PRoW management plan to include details of temporary PRoW stopping up and diversion processes, management measures and restoration to reduce negative effects to the views experienced by users of existing PRoW.
- Artificial lighting to be restricted to control light spill that may otherwise have negative effects upon views. Detail is provided in Appendix 12.1.
- Stakeholder Engagement with residents, businesses and other members of the public to keep them informed about the proposed construction works (e.g. locations, timing, duration, any effects on access etc.) and potential visual effects (such as restricted views).

12.7 Preliminary Assessment of Likely Significant Effects

12.7.1 Introduction

12.7.1.1 Our PEIR adopts a precautionary approach. Assessments reported within this chapter are a preliminary assessment of potential likely significant environmental effects based on the design parameters set out in Chapter 2. This precautionary approach has been taken for the PEIR as there is some information on the project that is currently incomplete and the parameters within Chapter 2 are high level and account for a range of uses and allowance for design development within a boundary that could possibly be refined once this work has been completed. For example, some designs, construction and mitigation details (and therefore also land requirements) or baseline information is still required from further surveys, assessments and/or consultation feedback. In making a determination of likely significant effects, we have considered the sensitivity of receptors (a

receptor being a feature of the environment that responds to change) and the potential magnitude (i.e. size) of change caused by the RTS. The methodology for defining sensitivity and magnitude vary by topic and are defined in Section 12.2 of our EIA Scoping Report.

12.7.1.2 We are committed to including mitigation measures as necessary to address likely significant negative environmental effects as far as reasonably practicable. Both primary and tertiary mitigation are considered to form part of the RTS; those applicable to this topic are set out in Section 12.6. Several of these mitigation measures are still being developed, and therefore as a precaution, the preliminary assessment of effects for our PEIR does not assume full achievement of these in considering if a project effect is likely to be significant (Appendix 4.2 identifies the implementation status of primary and tertiary mitigation for the PEIR assessment). Furthermore, the potential likely significant effects reported within our PEIR have been assessed prior to the implementation of secondary mitigation measures, those applicable to this topic are set out in Section 12.7.5. These secondary mitigation measures are the subject of further development; and given they are still being developed, are not able to be applied to develop a 'residual' effects assessment.

12.7.1.3 Our PEIR is based on the latest design and construction parameters and baseline information. As such the findings of the preliminary environmental appraisal presented within our PEIR may be subject to change as the design progresses, as mitigation is further developed or information from further studies becomes available, such as design development and the location of certain project elements. The final assessment of effects undertaken as part of the EIA and reported within the ES will be based on the latest information available at that time.

12.7.2 Potential Likely Significant Effects

12.7.2.1 Our preliminary assessment of likely significant environmental effects has identified the potential for the following likely significant effects from construction in relation to landscape and visual amenity. All would be temporary.

- Negative visual effects to some users (such as pedestrians, cyclists and equestrians) of the Thames Path National Trail and users of the

Sustrans National Cycle Route 4. The effects are associated with changes in view due to:

- Temporary flood channel inlet and outlet construction;
- Associated general construction activities including construction of new pedestrian / cycle bridges at Chertsey and Desborough;
- Erection of temporary screens or fences; and
- The use of temporary wharfs and mobile pontoons.

- Negative visual effects from changes in view for residents between Devil's Lane and Chertsey Road, north of Royal Hythe, adjacent to Royal Hythe on Chertsey Road and north of Ferry Avenue. The effects are associated with:
  - Views of temporary flood channel construction;
  - General construction activities; and
  - Creation and/or use of construction compounds and material processing and storage sites.
- Associated general construction activities could include the following and would be clearly visible in some of the views above:
  - Material excavation;
  - General construction activities;
  - Movement of vehicles, equipment and operatives, processing/placement of waste;
  - Sheet piling;
  - Temporary screens and fences; and
  - Use of compounds.

12.7.2.2 Our preliminary assessment of likely significant environmental effects has identified the potential for the following significant effects on landscape and visual amenity in Year 0 of the project operation. As designs are still emerging and developing at this PEIR stage a precautionary approach is being taken in assessing likely significant effects for Year 0. It is anticipated that some significant visual effects will be reduced when assessed for the ES with potential for further neutral / positive effects.

- Negative visual effects, reducing in time with the establishment of mitigation proposals and resulting in neutral and positive effects to:
  - Recreational users of sections of the public footpaths and cycle routes who would experience changes in some views into a more managed and publicly accessible landscape with new permanent components including the flood channel, landforms and

temporary operational activities including channel maintenance to restore design profile.

- As the project design develops, negative and/or positive effects might be achieved between new landform and the emerging blue-green infrastructure including green open spaces. Embedded planting would assist in screening and settling project components into the landscape, reducing visual effects from Year 0 to Year 15.
- Negative visual effects, reducing in time with the establishment of mitigation proposals and resulting in neutral and positive effects to:
  - Residents at home within an approximate 100 metre radius between Thames Side and Wheatsheaf Lane and between Ferry Avenue and 103 Chertsey Lane (see Figure 12.2 LVIA Visual Receptor Locations - reference RES-001). These receptors will have a change in view from a riparian residential outlook to new permanent components including the channel inlet structure (and glimpsed views of the new green open space beyond including new landforms). Robust landscape design mitigation including planting would assist in screening and settling project components into the riverscape, reducing significance from Year 0 to Year 15.
  - Residents at home within an approximate 100 metre radius location between Devil's Lane and Chertsey Road, north of Royal Hythe and adjacent to Royal Hythe on Chertsey Road and north of Ferry Avenue, and south of Chertsey Road adjacent to Sheepwalk (see Figure 12.2 LVIA Visual Receptor Locations - references RES-002 and RES-004). These receptors will have a change in view to new permanent components including the flood channel, landforms, road realignment and temporary effects from operation. As the project design develops, negative and/or positive effects might be achieved between new landform and the emerging blue-green infrastructure including green open spaces. Embedded planting would assist in screening and settling project components into the landscape, reducing visual effects from Year 0 to Year 15.
- Negative landscape effects to:
  - The key characteristics of RTS Landscape Character Areas 2d Farmland and 2f Settlement (see Figure 12.3 LVIA Landscape Receptors) from project components including the existence of

the flood channel and other components, priority areas for habitat creation, enhancement or mitigation; new pedestrian bridges across the River Thames, permanent new green open space and raised landforms.

12.7.2.3 Planting will mature and develop and by Year 15 bring about a positively improved, richer and more diverse landscape character within Landscape Character Areas 2d Farmland and 2f Settlement that will assist in conserving and restoring original characteristics of the historic floodplain, by virtue of putting them into areas of green open space and habitat creation.

12.7.2.4 Key components of the project including the bridges and potential raised landforms would settle and become part of the key characteristics of those landscape character areas. Planting around landforms would establish and the proposed bridges contribute to the movement of receptors and their visual experience of the landscape. Over time these elements would become part of an ongoing understanding of a landscape, where adaptation and appreciation of change in the Thames floodplain has historically developed.

12.7.2.5 It is considered that the potential likely significant effects on landscape and visual amenity in Year 15 of the project operation are:

- Positive landscape effects to the key characteristics of RTS Landscape Character Areas Farmland (2d), Settlement (2f) and Farmland (2n) (see Figure 12.3 LVIA Landscape Receptors) from project components when planting has been established and the project has settled into the landscape context.
- Positive visual effects to recreational users of sections of the PRoW, residents at home within an approximate 100 metre radius location between Thames Side and Wheatsheaf Lane and between Ferry Avenue and 103 Chertsey Lane and some residents at home between Devil's Lane and Chertsey Road, north of Royal Hythe and adjacent to Royal Hythe on Chertsey Road, and south of Chertsey Road adjacent to Sheepwalk from project components, when planting has been established and the project has settled into the visual context.

12.7.2.6 Further details of the potential likely significant effects from construction and operation with respect to receptors, project components and project activities, in relation to landscape and visual amenity can be found in Table 1 and 2 in Appendix 12.2.

12.7.3 Potential Likely Non-Significant Effects

12.7.3.1 Further details of the non-significant effects from construction and operation with respect to receptors, project components and project activities, in relation to landscape and visual amenity can be found in Table 3 and 4 in Appendix 12.2.

12.7.3.2 Some examples of LVIA non-significant effects include (this is not an exhaustive list):

- None of the key characteristics of the Landscape Character Area will be lost or significantly altered, nor the aesthetic or perceptual aspect of the receptor changed through the introduction of the new habitats and permanent project components.
- The permanent introduction of increased habitats and planting would form a small component of a wider view with a positive but non-significant effect on its overall quality.
- Permanent changes in distant views due to permanent features including new green open space and enhanced public connection including raised earthworks and new bridge.
- Permanent changes in glimpsed views across the broad extents of the floodplain area. Permanent project components will be difficult to distinguish amongst the broad range of urban, industrial and landscape features within the view.

12.7.4 In-Combination Climate Impact

12.7.4.1 Consideration of ‘In-Combination Climate Impact’ (ICCI) has been undertaken. The preliminary environmental assessment has considered a future climate scenario and has determined that the potential likely significant environmental effects identified for this topic are unlikely to be exacerbated further by climate change (see Chapter 8: Climatic Factors). Further consideration of ICCI will be included in the ES.

12.7.5 Secondary Mitigation

12.7.5.1 As noted in paragraph 12.7.1.2, primary and tertiary mitigation are still being developed, and therefore as a precaution, the preliminary assessment of effects for the PEIR does not assume full achievement of these in considering if a project effect is likely to be significant. Furthermore, the potential likely significant effects reported within this PEIR have been assessed prior to the implementation of secondary mitigation measures. For the majority of the identified likely significant environmental effects it is considered likely that the primary and tertiary mitigation will be sufficient at ES stage such that no secondary mitigation will be required. Where secondary mitigation is already under consideration for potential significant environmental effects, this is detailed below.

12.7.5.2 It is anticipated that limited secondary mitigation will be required for effects from construction and operation, as an integrated landscape design process is being embedded into the project as detailed in paragraph 12.6.1.1. Nevertheless, as a secondary mitigation measure, we will consider selective advance boundary planting of certain construction elements to assist in filtering views and reducing visual effects from sensitive receptors towards areas of construction.

12.8 Further Work for the EIA

12.8.1.1 The assessment of landscape and visual effects will continue to be undertaken following the methodology set out in Section 12.7 of the EIA Scoping Report and the principles set out in GLVIA3. This will be further informed by the PINS Scoping Opinion and other consultation feedback on baseline, methodology and effects scoped into the assessment.

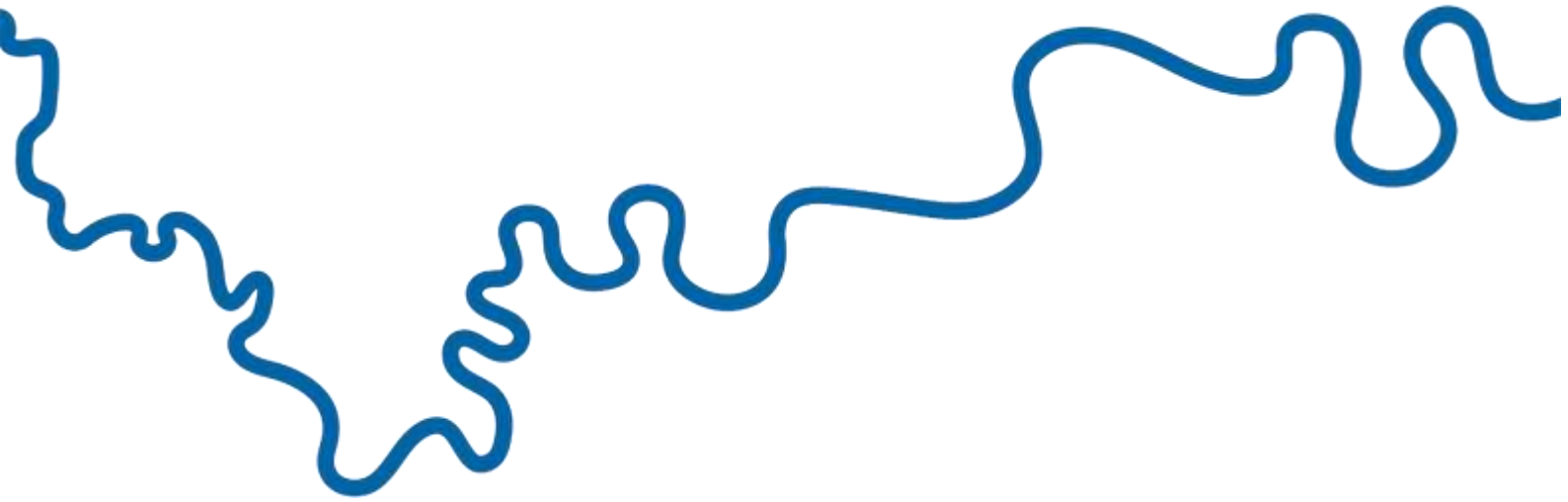
12.8.1.2 Further to the assessment presented within this PEIR, the following has been undertaken as part of the LVIA:

- Presentation, discussion and agreement with LPAs on viewpoint locations.
- Commencement of summer viewpoint photography to provide the baseline for the identified visual receptors and to allow for more targeted mitigation measures and assessment of effects.

12.8.1.3 Further to the assessment presented within this PEIR, the following will be undertaken as part of the LVIA to inform the ES:

- Refinement of the LVIA study area through visual envelope mapping and/or Zone of Theoretical Visibility (ZTV) mapping, and taking into account those receptors assessed in this PEIR as having no significant landscape or visual effects (Table 3 and 4 in Appendix 12.2).
- Winter viewpoint photography.
- Further consideration of lighting effects to landscape and visual receptors as the lighting design for the project progresses and the Lighting Assessment is produced.
- Further continuing involvement with the development of design iterations to reduce landscape and visual effects.

12.8.1.4 We consider that the further development of the project design and mitigation measures which will be reflected in the ES and DCO application, will enable a reduction in the scale of identified negative likely significant effects as set out in this chapter.



SURREY COUNTY COUNCIL

Environment Agency

The River Thames Scheme represents a new landscape-based approach to creating healthier, more resilient and more sustainable communities by reducing the risk of flooding and creating high quality natural environments.

River Thames
Scheme