



# **Preliminary Environmental Information Report**

## **Volume 4 Appendix 2.1**

Verification of the PEIR outcomes against the Design for  
Statutory Consultation

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# Verification of the PEIR outcomes against the Design for Statutory Consultation

## 1 Introduction

- 1.1.1 Our ongoing design of the River Thames Scheme (RTS) is being informed by consultation, technical surveys and assessments. As such, our understanding of the potential environmental effects of the RTS is still developing and therefore our assessment provided within the Preliminary Environmental Information Report (PEIR) is preliminary and precautionary. The PEIR is an early step in our iterative Environmental Impact Assessment (EIA) process; and our ongoing surveys, assessments and design refinements (including further incorporation of mitigation) will be used to inform the Environmental Statement (ES) that will support our application for Development Consent Order (DCO). This is further discussed in the 'Environmental Effects of the RTS: Next Steps' document also published at statutory consultation.
- 1.1.2 In accordance with PINS Advice Note Nine: Rochdale Envelope, where aspects of the construction, operation and footprint of the RTS are not confirmed, we have established relevant parameters (assumptions) about these that cover the range of uncertainty as understood at the time of the PEIR assessment, to enable an appraisal of the reasonable worst-case scenario. The parameters will continue to be refined as we progress the design and assessments to inform the DCO application.
- 1.1.3 To enable work to commence on the PEIR, we identified the relevant limits of uncertainty or required flexibility in the design at that time and translated them into a set of parameters to inform the assessment (as described in Chapter 2 of the PEIR). Examples of those parameters include:
- Maximum heights of raised landforms at eight metres above existing ground levels,
  - A maximum of 26 types of uses and facilities being considered within new green (land-based) open spaces, and
  - A maximum flow in the flood channel of 1m<sup>3</sup>/s (termed an 'augmented flow') when it is not being used to manage flood risk

- A range in the minimum and maximum number of potential new green open spaces and lakes considered for new blue open spaces from zero to five and two respectively.
- A maximum extent of 'enhanced public connection', with a range of uses possible, including active travel routes.

1.1.4 The design of the project has progressed since that time to ensure that it can be progressed as quickly as possible, with the design for Statutory Consultation being confirmed in October 2023. This Appendix is therefore intended to provide a summary of:

- Which parameters are affected by the design development between the design for the PEIR and the design for Statutory Consultation;
- How the interaction of the design for Statutory Consultation with the parameters considered for the PEIR influences the reported effects reported in the PEIR; and
- How the preliminary assessment of likely significant effects identified in the PEIR remain valid when considering the design for Statutory Consultation.

## 2 Updated Parameters of Design for Statutory Consultation

### 2.1 Overview

2.1.1 The majority of design and construction parameters defined for the PEIR remain the same as those in the design for Statutory Consultation.

2.1.2 The landscape and green infrastructure (L&GI) aspects of the design for Statutory Consultation have since evolved and drawings have been developed for Statutory Consultation (provided in the Map Book for Statutory Consultation) to illustrate our latest thinking on the specific likely locations and form of the L&GI aspects, alongside the engineering design of the flood relief channel. The L&GI aspects of the drawings are deliberately schematic, as feedback from Statutory Consultation will continue to shape our thinking on the design. However, they do provide a greater level of design development than the design which defined the broader parameters for the PEIR.

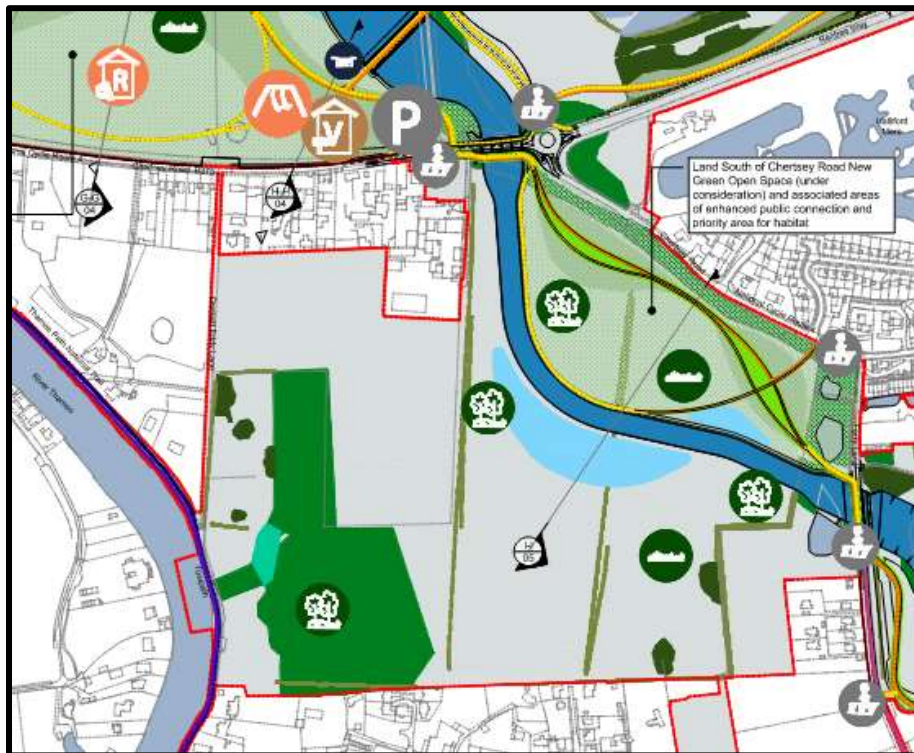
2.1.3 Nevertheless, the maximum parameters of the design for Statutory Consultation are almost entirely the same as those previously set for the PEIR, with just two matters of deviation as summarised in the sections below.

## 2.2 Maximum number of possible New Green and Blue Open Spaces

2.2.1 Chapter 2 Project Description of the PEIR notes that the project design would likely include the provision of new green open spaces, at any or all of Royal Hythe, Penton Park, Manor Farm, Sheepwalk; and Land South of Chertsey Road, and may include the provision of new blue (water-based) open spaces, at Abbey 1 Lake, Littleton North Lake, and sections of the flood channel adjacent to new green open spaces under consideration (see PEIR Figure 2.1 in Volume 3 for locations of these).

2.2.2 Based on the latest status of the L&GI design, it is likely that Manor Farm and the portion of Land South of Chertsey Road to the south/west of the flood channel (i.e. the right bank of the flood channel) will no longer be included for the provision of new green open space and will have a narrower range of uses or facilities than previously identified (i.e. to instead be lower key and focus on new or enhanced habitats) (see Plates 2.1 and 2.2). It is also anticipated that Littleton North Lake will no longer be considered for the provision of new blue open space as Abbey 1 is considered to be better located and more easily accessible for such provision within the L&GI design. These locations do however still fall within the project boundary and are still being considered for other project components including works associated with the flood channel, areas for habitat creation, mitigation or enhancement, and areas of enhanced public connection (the latter with the associated active travel uses is identified in the PEIR section 2.1.8).

**Plate 2.1: Extract of the design for Statutory Consultation at Land south of Chertsey Road (see the Map Book for Statutory Consultation for further detail)**



**Plate 2.2: Extract of the design for Statutory Consultation at Manor Farm (see the Map Book for Statutory Consultation for further detail)**







## 2.3 Additional areas within the Project Boundary for Statutory Consultation

2.3.1 There are some minor increases in the area within the project boundary between the project boundary for EIA PEIR and the project boundary for Statutory Consultation (as included in the Map Book for Statutory Consultation). These changes are summarised Table 2.1.



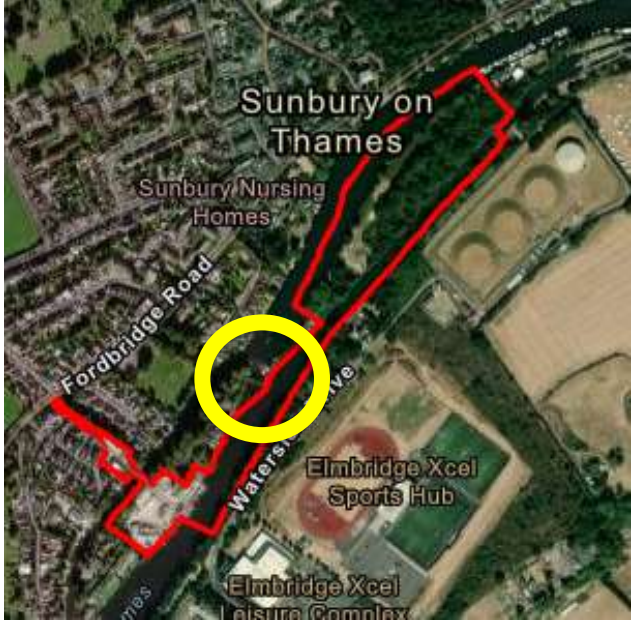

2.3.2 In addition to the above, to mitigate for construction disturbance to traffic on roads local to the project boundary for EIA PEIR, off-site car parks for construction workers are being considered. Six potential locations remote from the project boundary for EIA PEIR are being considered for these car parks (shown on Figure 2.2 of the PEIR). The project has collected little or no baseline information associated with these sites to date. Therefore, as a precautionary measure, environmental effects associated with these car park locations have therefore been assumed to be significant for all topics within the PEIR and will be assessed further in the ES. Given this approach, no additional effects are anticipated as a result of any increased parameters associated the car parks, and this is not considered further in this report.





**Table 2-1: Summary of changes between the project boundary for EIA PEIR and the project boundary for Statutory Consultation (image source: Maxar, Microsoft | Esri Community Maps Contributors, Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS)**

Change	Project Boundary for EIA PEIR		Project Boundary for Statutory Consultation	
An extension of the project boundary in the westernmost corner of Royal Hythe to allow for potential upgrades to an existing public right of way (location of change circled yellow)				
Additional area of the River Thames at Penton Hook identified as containing flow dependent habitat, to allow for mitigation measures to habitats within the river if required				



Change	Project Boundary for EIA PEIR		Project Boundary for Statutory Consultation	
Additional areas of the River Thames in proximity to Shepperton Weir identified as containing flow dependent habitat, to allow for mitigation measures to habitats within the river if required				
Small extension to the project boundary into the River Thames southwest of Sunbury Weir B to allow sufficient construction working area for potential fish pass provision at this location (location of change circled yellow)				

Change	Project Boundary for EIA PEIR		Project Boundary for Statutory Consultation	
An extension of the project boundary on Renfree Way to allow for the potential relocation of an existing bus stop (location of change circled yellow)				

## 2.4 Erroneous areas within the project boundary for PEIR and Statutory Consultation

2.4.1 It is noted that both the project boundary for EIA PEIR and project boundary for Statutory Consultation contain some small areas that have been included in error as a result of a mapping discrepancy during the finalisation of the Statutory Consultation material.

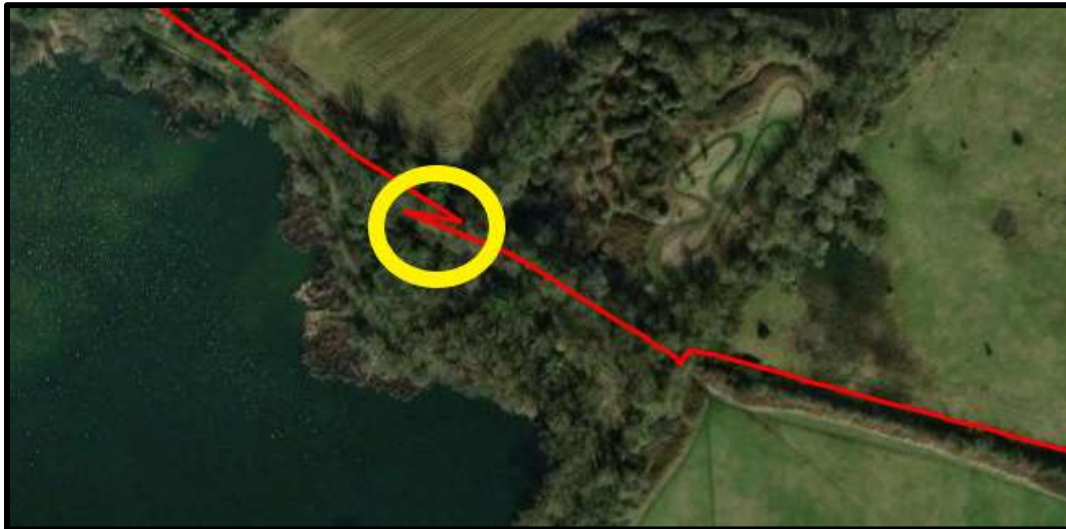
2.4.2 These areas include:

- Land to the south of the Royal Hythe new green open space under consideration (as shown in Plate 2.3 below).
- Residential land to the south of the Abbey River (right bank) near Chertsey (as shown in Plate 2.4 below).
- Land between the former Laleham Golf Course and Chertsey Water Treatment Works (as shown in Plate 2.5 below)
- Land adjacent to the Thames Court pub, Shepperton (as shown in Plate 2.6 below)

2.4.3 We can confirm that it is not the project's intention for these areas to form part of the project and they should therefore be disregarded for the purposes of our Statutory Consultation proposals. In light of this, it is the case that the PEIR does not assess direct impacts to receptors within these small areas of land as they are not directly affected by the project.



**Plate 2.3: Extract of the project boundary for PEIR and the project boundary for Statutory Consultation to the south of Royal Hythe:** The area circled yellow encompassed by the 'zigzag' has been included in error and does not form part of the project (image source: Maxar, Microsoft | Esri Community Maps Contributors, Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS)



**Plate 2.4: Extract of the project boundary for PEIR and the project boundary for Statutory Consultation adjacent to Abbey River near Chertsey:** The residential areas, including three buildings circled yellow, have been included in error and do not form part of the project. (image source: Maxar, Microsoft | Esri Community Maps Contributors, Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS)





**Plate 2.5: Extract of the project boundary for PEIR and the project boundary for Statutory Consultation between the former Laleham Golf Course and Chertsey Water Treatment Works:** The rectangular area, highlighted in yellow, has been included in error and does not form part of the project (image source: Maxar, Microsoft | Esri Community Maps Contributors, Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS)



**Plate 2.6: Extract of the project boundary for PEIR and the project boundary for Statutory Consultation at the Thames Court Pub, Shepperton:** The rectangular area, highlighted in yellow, has been included in error and does not form part of the project (image source: Maxar, Microsoft | Esri Community Maps Contributors, Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS)



## 3 Implications of updated parameters on PEIR assessment

### 3.1 Overview

3.1.1 The implications to the PEIR of the change in potential new green and blue open spaces and the minor amendments to the project boundary for Statutory Consultation are considered below.

### 3.2 Maximum number of possible New Green and Blue Open Spaces

3.2.1 We do not consider that the reduction in the maximum number of potential new green and blue open spaces within the design will add or remove any receptors or associated likely significant effects beyond those identified in the preliminary environmental assessment presented in the PEIR, given that:

- The areas remain within the project boundary for the PEIR and are identified for other uses that may be subject to construction or operation effects,
- Receptors have been grouped at a fairly high level for the PEIR (for example 'reptiles' are a single receptor), rather than being site specific, and
- The scale of change in updated parameters is fairly small, i.e. the effects of potential new green open spaces and lakes considered for new blue open spaces are still accounted for in the PEIR, as the potential number has reduced from five to four and two to one respectively.

3.2.2 In respect of the above, we recognise that certain negative effects are anticipated to be smaller in scale with a lower number of potential new green and blue open spaces (see Section 3.4).

### 3.3 Additional areas within the Project Boundary for Statutory Consultation

3.3.1 Excluding consideration of off-site car parking for construction workers (as noted in section 2.3 above) we do not consider that the other small areas added to the project boundary for Statutory Consultation will result in any

additional receptors or associated likely significant effects beyond those identified and presented in the PEIR, given:

- The additional areas within the project are small. The PEIR study areas for topics that may experience effects on receptors as a result of the types of work proposed in these additional areas already extend into these areas, so receptors have already been identified. The study areas for the ES will consider the latest project boundary, and
- The nature of the proposals in these additional areas already fall within the existing project components being subject to assessment (for example the effects of works on fish passage at Sunbury and flow dependant habitats on the River Thames have already been considered within the PEIR, particularly in relation to biodiversity and the water environment of the River Thames).

### 3.4 Implications for Environmental topics

3.4.1 A summary of the implications on each of the environmental topics included in the PEIR is provided below. This summary only relates to receptors that are applicable to the updated parameters.

3.4.2 **Air Quality, climatic factors, traffic and transport and noise and vibration:** The main consequence of the updated parameters to these topics is the reduced number of potential new green and blue open spaces and the associated reductions in traffic and public usage. Although we acknowledge that there may be lower numbers of construction and operation vehicles using the areas that have been removed from consideration as potential new green and blue open spaces, with associated reductions in air emissions and noise and vibration (i.e. and therefore reduced potential for operational effects to receptors adjacent to the areas that are no longer proposed for the new green open space activities, such as St Nicholas Primary School and dwellings to the east of Manor Farm; or residents in dwellings on Dockett Eddy Lane, to the south of Land South of Chertsey Road). At this time whilst mitigation measures are still developing for overall activities, we do not anticipate that this change will be sufficient to change the likely significant effects identified for the PEIR.

- 3.4.3 **Biodiversity:** No new adverse effects to nature conservation sites, habitats and/or species arise from the updated parameters as no new biodiversity receptors or effects are introduced. Nevertheless, given that approximately half of Manor Farm is designated as the Charlton Quarry Site of Nature Conservation Interest (SNCI) and Littleton North Lake is part of the Shepperton Quarry SNCI, our reduced proposals for public use in these locations are likely to result in less disturbance, whilst our proposals to carry out biodiversity enhancements here will continue to provide positive effects.
- 3.4.4 **Cultural Heritage, Archaeology and Built Heritage:** The change in project parameters does not affect the PEIR in relation to buried archaeology given that the areas removed from consideration as new green and blue open spaces have negligible or low archaeological potential, as do the small additional areas added to the project boundary at Royal Hythe and Renfree Way. The work on the River Thames at Sunbury Weir and at flow dependant habitats is already noted as a potential likely significant effect within the PEIR. Also, there are unlikely to be changes to the significant temporary negative effects or the non-significant permanent negative effects on setting of the nearby Conservation Areas at Shepperton from the increased working area needed for upgrades to the River Thames weirs already considered in the PEIR.
- 3.4.5 **Flood Risk:** The updated parameters for Design for Statutory Consultation remove certain non 'water compatible uses' from consideration in Land South of Chertsey Road, Littleton North Lake and Manor Farm, the bulk of which are in the functional floodplain. As noted in Chapter 10 of the PEIR, the project is using the Sequential Approach to design, as defined by the NPPF to determine the location and design of project elements. Whilst the updated parameters will not affect the potential likely significant effects relating to flood risk identified in the PEIR as works will predominantly still take place in the floodplain, removal of these non 'water compatible uses' from consideration is in line with application of the sequential approach to flood risk mitigation in these areas.
- 3.4.6 **Soils and Materials and waste:** The likely significant effects we have identified in the PEIR associated with the placement of project components and excavated materials on and off site are not affected by the updated parameters, given that large scale earth movements are still



proposed. Whilst Littleton North Lake is no longer considered as a new blue open space, it is still part of the Spelthorne Channel and therefore the potential negative effects identified in the PEIR regarding the loss of the former Shepperton Quarry as a potential future landfill site remains.

- 3.4.7 **Socio-economic and health:** There is potential for some minor changes to the temporary and permanent effects on access and use of land based recreational facilities and health effects associated with the updated parameters. The addition of the improvement works to the existing public right of way at Royal Hythe will improve access between the active travel route and local communities, whilst the removal of new green open spaces from consideration at Manor Farm and part of Land South of Chertsey Road would reduce the scale of positive effects. Nevertheless, these two sites are still identified as areas of enhanced public connection, providing new, inclusive provision for pedestrians, cyclists and equestrians where suitable so the changes are not anticipated to affect the overall significance of effects identified in the PEIR.
- 3.4.8 There may be lesser potential for new business ventures as a result of Littleton North Lake no longer being considered as a new blue open space and Manor Farm and part of Land South of Chertsey Road no longer being considered as new green open spaces. However, as the other new green and blue open spaces remain under consideration, significant potential positive effects remain and will be assessed in further detail within the ES.
- 3.4.9 **Landscape and Visual amenity:** Given the limited changes in project footprint and the nature of works under the updated parameters, the significance of construction or operation effects assessed in the PEIR remains as reported. Nevertheless, the L&VI design drawings for Statutory Consultation indicate a visually appealing landscape form that is likely to improve positive visual effects and minimise any negative effects. This will be recognised more over time once the new features become settled into the landscape (i.e. from year 15) and will be assessed further in the ES.
- 3.4.10 **Water environment:** Whilst the extent of new green and blue open spaces under consideration has been reduced, the waterbodies within Manor Farm and Land South of Chertsey Road as well as Littleton North Lake will still potentially be affected by other project components. Furthermore, effects on the River Thames have already been identified as

likely to be significant within the PEIR and therefore the change in the project boundary to include flow dependent habitats (as noted in Table 2-1) will not affect the overall significance of effects identified in the PEIR.

- 3.4.11 **Cumulative effects:** The updated parameters are localised to the area in close proximity to the RTS which has already been considered within the Zones of Influence for the cumulative effects assessment (as noted in chapter 19 of the PEIR).

## 4 Conclusion

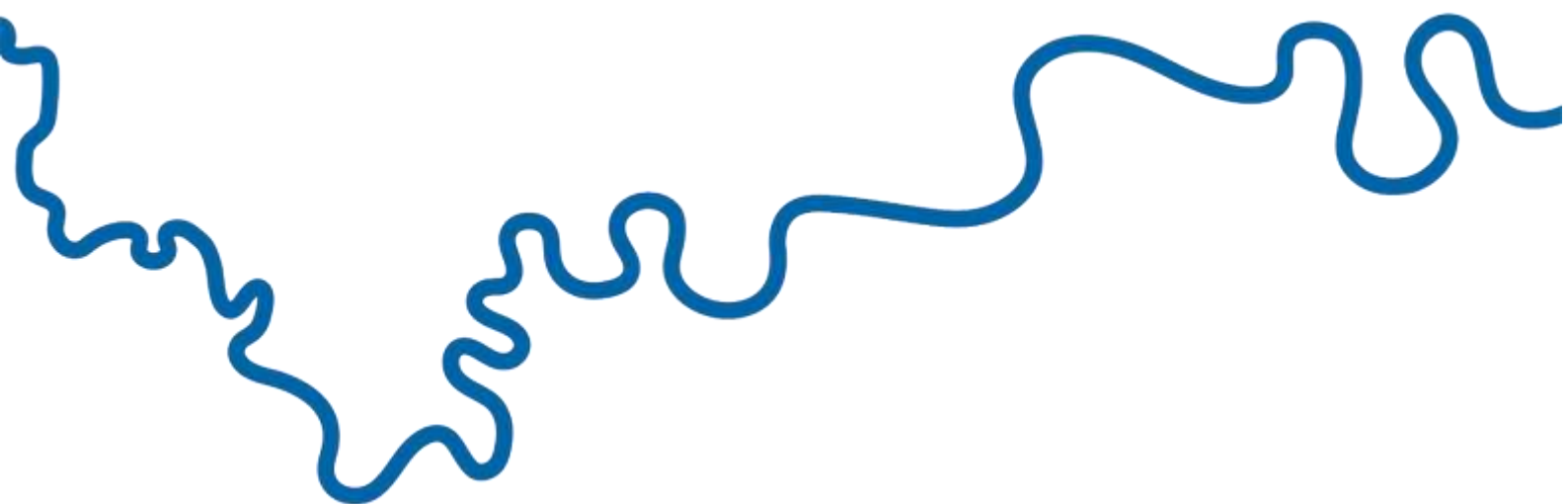
- 4.1.1 The parameters applied to our design for statutory consultation are slightly different to those assessed within the PEIR. These changes do not result in any notable change to the scale or nature of any of the potential likely significant effects reported within the PEIR. We therefore anticipate that the effects identified in the PEIR continue to represent the reasonable worst-case scenario. These will be assessed further and refined at the ES stage in order to improve positive likely significant effects and minimise negative likely significant effects where possible.

- 4.1.2 A detailed assessment of environmental effects will be included within the ES in accordance with the methodologies set out within the EIA Scoping Report and PEIR. The assessment will be based upon the effects scoped into the assessment and as per those included within the PEIR. It will also consider the feedback from any ongoing stakeholder engagement and any additional baseline information that may become available and as outlined in the 'Further work for the EIA' sub-section of each topic chapter within the PEIR. This will be based on the latest design information and will include information from activities, such as:

- Flood risk scenario testing to further inform the sequential approach to design,
- Ongoing surface and groundwater quality and level monitoring,
- Ecological, archaeological and other environmental surveys,
- Geotechnical site investigations,
- Geomorphological (fluvial) surveys and sediment sampling,
- Integrated groundwater and surface water modelling,

- Hydro(geo)logical assessment, and
- Detailed Water Framework Directive compliance assessment and Habitats Regulations Assessment.

4.1.3 As noted, the project parameters will continue to be refined as we progress the design and assessments to inform the DCO application. Refined parameters will be developed to inform our work on the ES and supporting assessments.



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.