



Teddington Direct River Abstraction

Preliminary Environmental Information Report
Chapter 9 – Townscape and Visual

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9. Townscape and Visual

9.1 Introduction

- 9.1.1 This chapter of the Preliminary Environmental Information (PEI) Report provides preliminary information relating to townscape and visual, to allow stakeholders and the local community to understand and develop an informed view of the likely significant environmental effects of the Teddington Direct River Abstraction (TDRA) Project (hereafter referred to as 'the Project') at this stage of the programme. This should be read in conjunction with the description of the Project as presented in Chapter 2: Project Description. Furthermore, this chapter comprises a preliminary assessment of the likely significant effects of the Project during the construction and operational stages on the townscape and visual resource within a defined study area.
- 9.1.2 Historical and ecological designations described in Section 9.6 are relevant to establishing the townscape baseline, including the location of viewpoints (VPs). Likely significant effects on heritage assets are considered within Chapter 8: Historic Environment and likely significant effects on ecological receptors are considered within Chapter 7: Terrestrial Ecology.
- 9.1.3 This preliminary assessment focuses on likely significant effects associated with the Mogden Sewage Treatment Works (STW), Ham Playing Fields, Burnell Avenue and Tudor Drive above ground sites. These sites are shown on Figure 1.1 and described within Chapter 2: Project Description.
- 9.1.4 Any highway works that may be required in relation to the Tunnel Boring Machine (TBM) delivery to the Mogden STW site would be set within an urban context. Whilst some pruning of trees would potentially be required at the roundabout immediately south of Mogden STW, this would not involve the removal of trees. Significant townscape and visual effects in relation to the TBM delivery to the Mogden STW would be unlikely, and the TBM delivery to this site is not therefore considered further in this preliminary assessment. Although townscape and visual effects are also unlikely to be significant in relation to other areas of highway works, such as at Ham Street, Beaufort Road, Burnell Avenue and Dysart Avenue, and potential temporary compensation residential parking at Riverside Drive, these works fall within the townscape receptors identified for assessment and will therefore be considered. Tunnel infrastructure would be underground and would therefore not affect townscape or visual receptors. Therefore, underground elements are not considered in this preliminary assessment.
- 9.1.5 The two separate but related matters addressed in this chapter are defined as follows:
- Townscape effects: likely effects on the townscape as a resource as a result of the construction and operation of the Project
 - Visual effects: likely effects on people's views and visual amenity as a result of the construction and operation of the Project

- 9.1.6 Townscape is defined within the Guidelines for Landscape and Visual Impact Assessment 3rd Edition (GLVIA3) (Landscape Institute and Institute of Environmental Management and Assessment (IEMA), 2013) as ‘*The character and composition of the built environment including the buildings and the relationships between them, the different types of urban open space, including green spaces, and the relationship between buildings and open spaces.*’
- 9.1.7 For simplicity, the term ‘townscape’ has generally been used throughout this chapter to describe areas of townscape and landscape, given the urban context of the study area. However, where legislation, policy and guidance refer to landscape, this shall be read to be equally applicable to townscape. This is in line with GLVIA3, which does not separate the approach to assessment of townscape and landscape effects.
- 9.1.8 This chapter is supported by the following Volume 2 PEI Report Figures:
- a. Figure 9.1 Townscape Constraints
 - b. Figure 9.2 Townscape Character Areas
 - c. Figure 9.3 Viewpoints and Photomontage Locations
- 9.1.9 This chapter is supported by the following Volume 3 PEI Report Appendices:
- a. Appendix 9.1 Townscape Character
 - b. Appendix 9.2 Townscape and Visual Impact Assessment Methodology

9.2 Legislation, policy and guidance

- 9.2.1 A summary of legislation and policy is provided in Appendix 1.1 National Planning Policy and Legislation.
- 9.2.2 Further detail on the legislation, policy and guidance relevant to townscape and visual is provided below.

Legislation

- 9.2.3 The European Landscape Convention (Council of Europe, 2000) promotes ‘*the protection, management and/or planning of the landscapes...*’. European objectives for landscape are relevant to the Project, which includes areas of open space.
- 9.2.4 The following Acts are relevant to informing the assessment of townscape sensitivity and the location of representative VPs:
- a. Countryside and Rights of Way Act 2000, which provides a public right of access to areas mapped as ‘open country’ or registered common land
 - b. Richmond, Petersham and Ham Open Spaces Act 1902, which was enacted to protect the views from Richmond Hill. Ham and Petersham Commons are also protected under the act for purposes of public enjoyment

- 9.2.5 The following legislation sets out prohibited activities in relation to protected trees, and is relevant to the assessment because of the presence of trees protected by Tree Preservation Orders (TPOs) and trees within conservation areas within the study area:
- Town and Country Planning Act 1990. Section 202C – Tree preservation regulations: prohibited activities
 - The Town and Country Planning (Tree Preservation) (England) Regulations 2012. Regulation 13 – Prohibited activities
- 9.2.6 For UK legislation relating to heritage assets, refer to Chapter 8: Historic Environment.

National policy

National Policy Statement for Water Resources Infrastructure

- 9.2.7 Key policy relevant to townscape and visual effects set out in the National Policy Statement (NPS) for Water Resources Infrastructure (Department of Environment, Food and Rural Affairs, 2023) is provided in Table 9.1.

Table 9.1 Key policy from the NPS for Water Resources Infrastructure

Paragraph(s)	Requirement for the Applicant	How the Project addressed this
3.6.1 – 3.6.4	Paragraphs 3.6.1 – 3.6.4 set out the criteria for ‘good design’ for water resources infrastructure. These include effective engagement with communities and local planning authorities (LPAs), as well as establishing design principles to guide the development in order to achieve a good site layout design that responds to the ‘ <i>existing landscape and historical character and function, landscape permeability, landform and vegetation whilst integrating biodiversity and nature conservation interests</i> ’.	Engagement with Design Council, LPAs, stakeholders and communities, including through statutory consultation, is being used to inform good design. Published townscape character studies, which have regard to existing townscape and historical character and function, landscape permeability, landform and vegetation, as well as an understanding of the biodiversity and nature conservation context of the Project sites, are being used to inform the design development. Design principles are being developed, as presented within the Draft Overarching Design Principles document.
4.3.18	Seeks to protect ancient woodland, ancient and veteran trees, stating that: ‘ <i>The Secretary of State should not grant development consent for any development that would result in the loss or deterioration of irreplaceable habitats</i> ’	There is no ancient woodland recorded on the National Inventory for Ancient Woodland (Natural England, 2024), or veteran or ancient trees recorded on the Ancient Tree Inventory (Woodland Trust, 2024) within 15m of the draft Order limits. Arboricultural surveys have confirmed

Paragraph(s)	Requirement for the Applicant	How the Project addressed this
	<i>including ancient woodland and the loss of ancient or veteran trees found outside ancient woodland, unless there are wholly exceptional reasons for the development, and a suitable compensation strategy exists’.</i>	there are no potential veteran and ancient trees within 15m of the draft Order limits. The assessment of impacts on townscape components, including trees and woodland, is considered within the assessment of impacts on townscape character.
4.9.1	Requires that landscape and visual effects also include tranquility effects, and that the applicant should consult at the earliest opportunity with the relevant local authority.	The assessment of impacts on perceptual and aesthetic aspects, such as tranquility, is considered within the assessment of impacts on townscape character. Engagement with LPAs regarding the sensitive townscape and visual receptors to be scoped into the assessment was carried out in August 2024 and March/April 2025 (refer to Section 9.3).
4.9.2	Requires the applicant to undertake an assessment of any likely significant landscape and visual impacts, including cumulative impacts. The assessment should include reference to any landscape character assessment or National Character Area profiles and relevant policies based on these assessments.	The likely significant townscape and visual effects are assessed, reference made to published townscape character assessments, National Character Area profiles and relevant associated policies. Cumulative effects are considered within the PEI Report Chapter 19: Cumulative Effects and will be considered within a separate cumulative effects chapter of the Environmental Statement (ES).
4.9.3	Requires that assessment should include significant effects during construction and operation on landscape components and landscape character, including historic characterisation.	The likely significant townscape effects during construction and operation are assessed. The assessment of impacts on townscape components including trees and woodland are considered within the assessment of impacts on townscape character. The effect on the setting of historic assets is included in Chapter 8: Historic Environment of the PEI Report. However, the effects on historic characterisation are considered out of scope.
4.9.4	Requires that assessment of visual effects should include significant effects during	The effects on views and visual amenity during the construction and

Paragraph(s)	Requirement for the Applicant	How the Project addressed this
	construction and operation and notes that ' <i>This should include any noise and light pollution effects, including on local amenity, tranquility and nature conservation.</i> '	operational phases of the Project are assessed. Effects on tranquility, including effects associated with noise and lighting, are included as part of the assessment of effects on townscape character. Effects on nature conservation are considered within Chapter 6: Aquatic Ecology and Chapter 7: Terrestrial Ecology of the PEI Report and will be set out in the ecology chapters of the ES.
4.9.7 – 4.9.9	<p>Paragraphs 4.9.7 – 4.9.9 relate to mitigation and are summarised as follows:</p> <p>Reducing the scale of a project or making changes to its operation can help to avoid or mitigate the visual and landscape effects of a proposed project.</p> <p>Adverse landscape and visual effects may be minimised through appropriate siting of infrastructure, design (including choice of materials) and landscaping schemes.</p> <p>It may be appropriate to undertake landscaping off site, although if such landscaping was proposed to be consented by Development Consent Order (DCO), it would have to be included within the order limits for that application.</p>	The design development of the Project is exploring ways to avoid and reduce harm to the townscape and incorporate appropriate mitigation and enhancements as far as practicable within the draft Order limits.

National Planning Policy Framework

- 9.2.8 The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government (MHCLG), 2024) includes the following chapters relevant to townscape and visual effects:
- Chapter 12 – Achieving well-designed places
 - Chapter 15 – Conserving and enhancing the natural environment

- 9.2.9 The requirements of the NPPF that are relevant to townscape and visual effects and the Project, focus on encouraging good design and protecting and enhancing valued landscapes, ancient woodland and ancient and veteran trees.

Regional and local policy

- 9.2.10 In addition to the national policy set out above, the Project must also have regard to relevant regional and local plans and policy.
- 9.2.11 The following regional and local plans are relevant to the assessment of townscape and visual effects:
- a. The London Plan 2021 (Greater London Authority (GLA), 2021)
 - b. The London Borough of Hounslow (LBH) Local Plan 2015 – 2030 (LBH, 2015); and the Hounslow Local Plan 2020 – 2041 Proposed Submission Version (Regulation 19) (LBH, 2024a) (emerging policy)
 - c. London Borough of Richmond upon Thames (LBR) Local Plan 2018 (LBR, 2018); and the LBR Publication Draft (Regulation 19) Local Plan (LBR, 2023) (emerging policy)
 - d. The Royal Borough of Kingston upon Thames (RBK) Core Strategy 2012 (RBK, 2012); and Kingston's Local Plan 2019 – 2041 (Regulation 18) (RBK, 2019) (emerging policy)
- 9.2.12 Local planning policies that are relevant to townscape and visual effects and the Project encourage good design which responds to local character, promote reduced light pollution and seek to protect and enhance green and blue infrastructure i.e. the network of green spaces such as parks, and blue spaces such as rivers. Relevant policies also seek to protect and enhance local open space, townscape character, amenity value, views and vistas identified within local plans and townscape features such as trees.
- 9.2.13 The Thames Policy Area, defined within the London Plan (GLA, 2021) and local planning policy for LBH, LBR and RBK, is relevant to the Project within LBR and RBK and coincides with the Ham Playing Fields and the Burnell Avenue sites. The Thames Policy Area is highly valued for its landscape, and local policy aims to protect and enhance the area's special character. The Thames Policy Area is illustrated on Figure 9.1.
- 9.2.14 RBK Core Strategy (RBK, 2012) identifies areas in recognition of high quality townscape, architecture and landscape under heritage assets: The Thames-Side Strategic Area of Special Character follows the River Thames south from the RBK district boundary within the southern part of Ham, and part of the Burnell Avenue site coincides with the northern part of the designated area. Tudor Estate Local Area of Special Character is located immediately east of the Tudor Drive site, and the draft Order limits along Tudor Road fall partly within the Tudor Estate Local Area of Special Character. These heritage assets are illustrated on Figure 8.2.

Guidance

- 9.2.15 Planning Practice Guidance (PPG) relevant to this aspect comprises Natural environment (MHCLG, 2025a); and Tree Preservation Orders and trees in conservation areas (MHCLG, 2025b). The information relevant to this aspect within these PPGs is consistent with wider planning policy.
- 9.2.16 Supplementary Planning Documents (SPDs) and Supplementary Planning Guidance (SPG) used in the preparation of this chapter and supporting appendices include:
- a. Hounslow Character, Sustainability and Design Codes SPD (LBH, 2024b) and Hounslow Characterisation and Growth Study (LBH, 2024c)
 - b. London View Management Framework SPG (GLA, 2012a)
 - c. Green infrastructure and Open Environments: The All London Green Grid SPG (GLA, 2012b)
 - d. Consultation Draft Local View SPD (LBR, 2022)

9.3 Consultation, engagement and scoping

- 9.3.1 Table 9.2 presents the section of the Scoping Opinion relating to Townscape and Visual and the Applicant's response to those comments.

Table 9.2 Key scoping opinion comments for Townscape and Visual

PINS ID reference	Comment	Response
3.7.1	<i>‘Whilst this matter [Townscape and visual effects from underground tunnels – all phases] is not addressed in Table 12.11, the Inspectorate has assumed for the purpose of this Opinion that the Applicant is seeking to scope this matter out of the ES as the Scoping Report states that all proposed tunnel infrastructure will be underground and not experienced by townscape or visual receptors, and underground elements are not considered as development that informs the assessment. The Inspectorate agrees that this matter can be scoped out of further assessment on the basis presented.’</i>	<p>The EIA Scoping Opinion (Planning Inspectorate, 2024) PINS ID 3.7.1 – 3.7.3 sets out that PINS is in agreement with the scope of the townscape and visual assessment presented within the EIA Scoping Report (Thames Water, 2024).</p> <p>However, townscape and visual receptors have been reviewed in response to feedback from stakeholders within the EIA Scoping Opinion, consultation and engagement with LPAs, desktop review and site survey. Townscape Character Areas (TCAs) and VPs have been incorporated in addition to those identified within the Teddington Direct River Abstraction EIA Scoping Report, and the revised receptors for assessment within the PEI Report/ES are presented in Table 9.4 and Table 9.6.</p> <p>In summary, the TCAs within the EIA Scoping Report were reviewed as follows:</p> <p>LBH: TCAs reviewed in line with up to date published townscape character assessment.</p> <p>LBR: TCAs B3 Hampton Wick Residential and C3 Twickenham Riverside incorporated in addition to the TCAs identified within the EIA Scoping Report in response to LPA comment</p>
3.7.2	<i>‘The Scoping Report states that most of the published TCAs are self-contained and that the existing urban context and Mogden STW embankment mean that the Proposed Development (both cranes during construction and new built form) would be imperceptible or would not alter the overarching townscape character. Based on the information presented in the Scoping Report, the Inspectorate agrees that this matter [Townscape effects to published townscape character areas outside of the scoping boundary but within the study area, other than those identified in Table 12.11 – all phases] can be scoped out of further assessment.’</i>	

PINS ID reference	Comment	Response
3.7.3	<p><i>'The Scoping Report seeks to scope out effects to townscape and visual receptors listed below based on the scale of the permanent infrastructure proposed in these locations, which is described as access hatches that are not out of character with the existing urban setting. Figure 2.11 of the Scoping Report is a photograph of a typical shaft access hatch. It is assumed that any planting lost would be replaced and that, once matured, there would be no change to baseline because of the Proposed Development.</i></p> <ul style="list-style-type: none"> <i>• TCA E2 Ham Common and Riverside</i> <i>• TCA 1 Tudor and Sub Area 3 YMCA Riverside Lands;</i> <i>• 108 designated views across the River Thames outside the Hawker Centre YMCA near Lower Ham;</i> <i>• residential receptors at Northweald Lane or Tudor Drive;</i> <i>• recreational users of the Thames Path, including north and south bank;</i> <i>• recreational users of Sustrans Route 4;</i> <i>• users of National Trust Ham Street Car Park;</i> <i>• recreational users on the River Thames;</i> <i>• designated view E1.1 Ham House to River Thames;</i> <i>• designated view E3.2 Petersham Park; and</i> <i>• designated view F1.1 Richmond Terrace and Richmond Hill.</i> 	<p>(refer to paragraph 9.3.8). TCA E1 Ham and Petersham Residential also added to cover the full extent of the Burnell Avenue site.</p> <p>RBK: TCAs 9 St George's Industrial Estate and 11 The Tudor Estate incorporated in addition to the TCAs identified within the EIA Scoping Report to consider effects of the Tudor Drive site.</p> <p>Additional VPs 9 – 17 were proposed in response to the EIA Scoping Opinion, including comments from LPAs, and following desktop review and site surveys. VP 18 was added in response to the engagement with LPAs in March/April 2025 and subsequent site survey.</p> <p>It is acknowledged that it should be clear in the ES what assumptions have been made about replacement planting and how this measure is proposed to be delivered.</p>

PINS ID reference	Comment	Response
	<p><i>On the basis described in the Scoping Report, the Inspectorate agrees that significant effects are unlikely and is content for this matter [Townscape and visual effects due to the presence of infrastructure at Ham Lands and Northweald Lane or Tudor Drive – operation] to be scoped out of further assessment but advises that it should be clear in the ES what assumptions have been made about replacement planting and how this measure is proposed to be delivered.'</i></p>	
3.7.4	<p><i>'A study area of 2.5km offset from the scoping boundary is proposed. It is stated that for this case a [zone of Theoretical Visibility] ZTV model would not be a useful basis to understand likely visibility of the Proposed Development due to the densely developed nature of the surroundings and the predominantly flat topography. Professional experience and understanding of the baseline context have instead been used to determine the study area. The Inspectorate advises that the final study area selected for visual effects from Mogden STW should reflect the extent of land from which there is a visual connection with the Proposed Development. If ZTV modelling is not used to inform this, then an alternative approach should be used and the ES should explain, with reference to relevant guidance, why this approach is appropriate. Effort should be made to agree the study area, and the approach to establishing it, with relevant consultation bodies.'</i></p>	<p>The study area for the assessment of townscape and visual effects within the PEI Report/ES has been defined in line with the approach set out in Section 9.5.</p> <p>Engagement with LPAs on the study area was carried out in August 2024, through the submission of the EIA Scoping Report and as part of engagement with LPAs carried out in March/April 2025 and discussions are ongoing.</p>

PINS ID reference	Comment	Response
3.7.5	<i>'Eight representative viewpoints are proposed to support the assessment of visual effects. Locations are shown on Figures 12.3 and described in Table 12.7. Effort should be made to agree the final viewpoint selection with the local authorities and the ES should include evidence of any agreement reached. Where agreement is not reached, the ES should explain the basis on which a suggested viewpoint was discounted. The Applicant's attention is drawn to the comments of London Borough of Richmond upon Thames (Appendix 2 of this Opinion) regarding proposed additional viewpoint locations. Viewpoints 3 to 7 are proposed from designated viewpoints in London Borough of Richmond upon Thames to take in construction activity at Ham Lands. It is not proposed to produce operational phase visualisations from these viewpoints. Based on the description of permanent infrastructure proposed at Ham Lands in Scoping Report, section 2, which states that it would be limited to access hatches, the Inspectorate is content with this approach'.</i>	<p>Further engagement was carried out in March/April 2025 with LPAs on the VP locations and the number and location of photomontages as described in paragraphs 9.3.14 – 9.3.16.</p> <p>Further VPs, photomontage locations and TCAs have been added in response to comments from LBR as described in more detail in paragraph 9.3.8.</p>
3.7.6	<i>'The Inspectorate considers that effort should be made to agree the number and location of photomontages, including Type 4 photomontages (as defined by the Landscape Institute's Technical Guidance Note (TGN) 06/19), with relevant consultation bodies.'</i>	<p>Further engagement was carried out in March/April 2025 with LPAs on the VP locations and the number and location of photomontages as described in paragraphs 9.3.14 – 9.3.16.</p> <p>Further VPs, photomontage locations and TCAs have been added in response to comments from LBR as described in more detail in paragraph 9.3.8.</p>

PINS ID reference	Comment	Response
3.7.7	<i>'The ES should set out what opportunities have been considered for advanced planting and confirm which are proposed to be taken forward and which have been discounted, together with the reasons. The ES should include a management plan for mitigation planting demonstrating how it will be maintained to ensure it reaches the extent and quality of mitigation assumed in the assessment of residual effects at Year 15 of operation of the Proposed Development.'</i>	This is acknowledged and opportunities for advanced planting will be considered and reported within the Townscape and Visual Impact Assessment (TVIA) of the ES. A management plan for mitigation planting will be provided as part of an Outline Landscape and Ecology Management Plan, which will be submitted with the DCO application.
3.7.8	<i>'The Scoping Report states that lighting design is a proposed secondary mitigation to reduce light spill. The design standards that lighting during construction and operation will be required to meet should be described in the ES, including any measures incorporated to avoid intrusive lighting impacts for sensitive receptors.'</i>	This is acknowledged and will be incorporated within the ES.
3.7.9	<i>'The Inspectorate notes that the Proposed Development has potential to affect existing trees at Mogden STW, with some potentially being removed. In addition, London Borough of Richmond upon Thames (Appendix 2 of this Opinion) identifies that there are protected trees at Park Gate woods. The ES should describe the contribution these trees make to the existing townscape character, if any, and confirm if they are subject to any designations. Any likely significant effects should be assessed in the ES, including consideration of the duration that any replacement planting would take to mature.'</i>	The contribution trees make to the existing townscape character is described within paragraphs 9.6.7 – 9.6.10, and designations relevant to trees are presented within Table 9.5. In accordance with the methodology for the TVIA set out within Appendix 9.2, the assessment of impacts on townscape components, such as trees and woodland, and perceptual and aesthetic aspects will be considered within the assessment of impacts on townscape character. The duration that replacement planting would take to establish and to be effective in mitigating townscape and visual effects is 15 years.

PINS ID reference	Comment	Response
3.7.10	<i>‘The Applicant’s attention is drawn to the comments of London Borough of Richmond upon Thames (Appendix 2 of this Opinion), in which several additional townscape and visual receptors are identified. These receptors should be assessed in the ES or it should explain why significant effects are not likely to occur to them.’</i>	This is acknowledged. Refer to responses to LBR comments within paragraphs 9.3.8 – 9.3.10. In summary, VPs 13 – 15 and TCAs B3 Hampton Wick Residential and C3 Twickenham Riverside have been included as a result of LBR comments within the EIA Scoping Opinion.

- 9.3.2 Stakeholder feedback on the EIA Scoping Report was received from Natural England, LBH, LBR and Port of London Authority.
- 9.3.3 Comments from Natural England are summarised as follows:
- a. The assessment should refer to the relevant National Character Areas.
 - b. The EIA should include a full assessment of the potential impacts of the development on local landscape character.
 - c. A landscape and visual impact assessment should be carried out. Natural England recommends use of the GLVIA3.
 - d. The siting and design of the proposed development should reflect local characteristics, and account should be taken of local design policies, design codes and guides as well as guidance in the National Design Guide and National Model Design Code (MHCLG, 2021). The ES should set out the measures to be taken to ensure the development will deliver high standards of design and green infrastructure. It should also set out detail of layout alternatives, where appropriate, with a justification of the selected option in terms of landscape impact and benefit.
 - e. The National Infrastructure Commission has produced Climate; People; Places; Value; Design Principles for National Infrastructure (National Infrastructure Commission, 2020), endorsed by Government in the National Infrastructure Strategy (HM Treasury, 2020).
 - f. The ES should assess the impacts of the proposals on any ancient woodland, ancient and veteran trees, assess the scope to avoid and mitigate adverse impacts, and consider opportunities for enhancement.
- 9.3.4 Comments from Natural England have been addressed within the PEI Report and will be addressed within the ES. Assessment of effects upon local published TCAs is scoped into the TVIA and will be addressed within the ES. Given the urban location of the Project, a TVIA will be carried out and reported within the ES in line with the GLVIA3.
- 9.3.5 Regarding point e, on the siting and design of the proposed development, this will be addressed within the Applicant's DCO submission. The design principles set out within the Water Resources: Design Principles and User Guidance (All Company Working Group, 2023), which align with the Climate; People; Places; Value; Design Principles for National Infrastructure, are being used to guide the design development.
- 9.3.6 Regarding point g, there is no ancient woodland recorded on the National Inventory for Ancient Woodland, nor veteran or ancient trees recorded on the Ancient Tree Inventory (Woodland Trust, 2024) within 15m of the draft Order limits. Arboricultural surveys have confirmed that there are no potential veteran and ancient trees within 15m of the draft Order limits.
- 9.3.7 LBH noted that reference should be made to the Hounslow Characterisation and Growth Study (LBH, 2024c). This is acknowledged; and the related study Hounslow Character, Sustainability and Design Codes SPD (LBH, 2024b) will be considered within the PEI Report/ES.

- 9.3.8 LBR suggested omissions regarding areas that should be scoped into the TVIA, and potentially sensitive visual receptors that are not covered by the VPs proposed within the EIA Scoping Report. LBR also requested Type 4 visualisations in specific areas. In response, the following additional VPs and TCAs have been incorporated. Type 4 visualisations will be included within the ES (refer to Table 9.6), including at new VP 14 and VP15 as requested, subject to landowner agreement for VP15 to allow baseline photography to be captured:
- VP13: Representative view from Ham Lands Open Space and Local Nature Reserve (LNR)
 - VP14: Representative view from Burnell Avenue Open Space, residential properties at Burnell Avenue, Beaufort Road, Dysart Avenue and Northweald Lane
 - VP15: Representative view from the Lensbury Hotel and Watersports Centre, residential properties on Broom Water, Broom Water West, River Reach and Trowlock Island
 - TCAs C3 Twickenham Riverside and B3 Hampton Wick Residential, as defined within London Borough of Richmond Upon Thames Urban Design Study (Arup, 2023)
 - A VP has not been added at the Allianz Stadium, south of Mogden STW, because views from visitors to the stadium would likely be focused within the stadium itself and effects would be unlikely to be significant.
- 9.3.9 LBR noted that Thames Landscape Strategy (The Thames Landscape Strategy Steering Group, 2012) vistas should be considered and that users of the River Thames should be incorporated. In response, Thames Landscape Strategy identified vistas have been reviewed and the relevant vista to the above ground sites for the Project is covered by VP3 and VP5, located at either end of the Thames Landscape Strategy vista between Radnor Gardens and the Royal Star and Garter. However, site survey work undertaken suggests that this is a historic vista and that intervening vegetation screens the views between the two locations. Recreational users of the River Thames are identified as visual receptors at VP2, VP4, VP6, VP8, VP15 and VP18.
- 9.3.10 LBR flagged that protected trees in the vicinity of Park Gate Woods and the Burnell Avenue site should be scoped in. In response, Table 9.5 identifies protected trees, including these trees which are protected by TPO. The assessment of impacts on townscape components, such as trees and woodland, and perceptual and aesthetic aspects will be considered within the assessment of effects on townscape character.
- 9.3.11 The Port of London Authority supports the scope of the TVIA and welcomes the reference to the need to consider recreational users of the river. This will be particularly important with regard to the Support Work Area at the Ham Playing Fields site, which serves as an access point to the river. In response, recreational users of the River Thames are identified as visual receptors at VP2, VP4, VP6, VP8, VP15 and VP18. VP6 is relevant to the Support Work Area at the Ham Playing Fields site. Recreational users of the River Thames

are considered within Chapter 15: Socioeconomic, Community, Access and Recreation of the PEI Report, and will also be considered within the Socioeconomic, Community, Access and Recreation chapter of the ES.

- 9.3.12 Regarding the Thames Landscape Strategy, the Port of London Authority stated that a new landscape strategy is being prepared which will need to be taken into account as part of the proposals. This is acknowledged and when published, will be considered by the Applicant.
- 9.3.13 Engagement with LPAs was carried out in August 2024. The baseline environment in relation to the townscape and visual amenity was presented along with the proposed assessment methodology, proposed study area, townscape and visual receptors for assessment and an outline of which aspects were proposed to be scoped in and which were proposed to be scoped out. Regard was had to feedback raised by the LPAs and was incorporated within the EIA Scoping Report.
- 9.3.14 Further engagement with LPAs was carried out in March/April 2025. The purpose of this engagement was:
- a. To present the proposed townscape and visual receptors for the TVIA of the ES for the Project following review of the EIA Scoping Opinion, feedback from LPAs, desktop review and site surveys carried out in winter 2024/2025 (refer to paragraphs 9.3.15 – 9.3.16)
 - b. To set out proposed simplifications and clarifications to the TVIA methodology for the ES further to the publication of the EIA Scoping Report (refer to paragraph 9.3.17)
- 9.3.15 The proposed TCAs for assessment within the TVIA were presented to the LPAs. Townscape receptors within the EIA Scoping Report were reviewed to incorporate up to date published townscape character assessments and additional TCAs in response to the EIA Scoping Opinion, including comments from LPAs, and following desktop review and site surveys.
- 9.3.16 Proposed VPs for assessment within the TVIA and locations for Type 4 visualisations (photomontages) were also presented to the LPAs. Additional VPs were proposed by Thames Water in response to the EIA Scoping Opinion, including comments from LPAs, and following desktop review and site surveys.
- 9.3.17 A revised version of the methodology for the TVIA of the ES, including townscape and visual receptors, study area and assessment criteria was provided to the LPAs. A summary of the revisions made to the methodology for the TVIA of the ES, incorporated within the EIA Scoping Report, was presented to the LPAs as follows:
- a. Townscape and visual receptors for assessment reviewed (refer to paragraphs 9.3.15 – 9.3.16)
 - b. Simplified – removed lengthy sections of text lifted from GLVIA3
 - c. Updated for consistency:

- i. Townscape receptor sensitivity criteria – separate tables with criteria for assessing townscape value and townscape susceptibility replaced by one table with townscape sensitivity criteria, which combines considerations on townscape value and susceptibility and is consistent with the approach to assessing visual receptor sensitivity
- ii. Visual receptor sensitivity criteria - integrated considerations relating to visual receptor value and refined to make relevant to the study area, e.g. with reference to users of waterways
- d. Aligned with the overall EIA approach, for example:
 - i. Added 'negligible' category to sensitivity criteria and 'negligible/no change' added to magnitude criteria
 - ii. Effects of moderate or greater significance will be deemed significant
 - iii. Cross reference to the overall significance matrix applied to the EIA rather than incorporation of a different matrix for TVIA
- e. Clarifications made regarding assumptions, for example:
 - i. The assessment of effects during construction and year 1 will assume the worst-case during winter
 - ii. Both day and night-time changes for townscape and visual receptors will be considered as part of the overall assessment of townscape and visual effects
 - iii. The results of the arboricultural survey will be used to inform the design of the Project and the TVIA

9.3.18 Agreement was reached on the townscape receptors for assessment and the simplifications and clarifications to the TVIA methodology for the ES. The key issues raised by LPAs were in relation to:

- a. Lack of clarity regarding the parameters and visual appearance of the proposed infrastructure, making it difficult for LPAs to comment on the proposed VPs
- b. The need for a ZTV
- c. VP selection
- d. Visualisations

9.3.19 Post meeting points of clarification were issued to the LPAs, comprising a summary of published illustrative images of proposed infrastructure, the proposed approach regarding a ZTV (refer to Section 9.5), VP selection and visualisations.

9.3.20 Following the engagement with LPAs and subsequent field work, an additional VP (18) was proposed from the Thames Path National Trail itself at Burnell Avenue Open Space, looking north-west towards Teddington Weir.

9.3.21 Engagement with LPAs will continue regarding key issues raised in March/April 2025, as well as any queries held by the LPAs with regard to TVIA, during or following the statutory consultation period.

Scope of the assessment

9.3.22 Table 9.3 provides a summary of the townscape and visual scope. Townscape and visual receptors for assessment are presented within Table 9.4 and Table 9.6.

Table 9.3 Townscape and visual scope

Matter	Scoped in – construction	Scoped in – operation (winter year 1 and summer year 15)
Effects on townscape character	✓	✓
Visual effects	✓	✓

9.4 Embedded design (primary) mitigation and standard good practice (tertiary)

Embedded design (primary) mitigation

9.4.1 The Applicant has worked through the design process to avoid or reduce environmental impacts through the use of embedded mitigation. This is referred to as embedded design (primary) mitigation. Chapter 3: Consideration of Alternatives, details the design alternatives that have been considered, including the environmental factors which have influenced the decision making. Landscape proposals included within embedded design (primary) mitigation are illustrated on Figure 2.5 Preliminary Townscape and Environmental Master Plan.

9.4.2 Embedded design (primary) mitigation relevant to this aspect includes:

- a. Design and siting of permanent buildings, structures and infrastructure to limit visual intrusion as far as reasonably practicable (Appendix 4.2 Commitments Register, Provisional Commitment Reference (PCR) (PCR 35)
- b. Existing vegetation within the Order limits including temporary works areas would be retained as far as reasonably practicable. Particular attention would be given to the retention of mature vegetation including the following:
 - i. Trees subject to TPOs
 - ii. Trees within conservation areas
 - iii. Category A and B trees as defined in BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations (British Standards Institution, 2012), identified through arboricultural survey (PCR 36)
- c. Planting to help integrate the Project into the surrounding townscape (PCR 38)
- d. All land used temporarily would be restored and returned to an appropriate condition relevant to its previous use wherever reasonably practicable and appropriate, including the ripping, minor regrading and re-spreading of topsoil. Walls and other features would be reinstated to a similar style and quality to those that were removed with landowner agreement. Where it

would be necessary to remove vegetation within temporary works areas, such as construction compounds, access roads and areas allocated for the stockpiling of materials this would be replaced on completion of construction using the same or similar species to that removed where reasonably practicable subject to planting over and around easements and utilities, and consideration of species with regards to climate change, and resilience to pests and disease, and landowner agreement (PCR 94)

- e. Where it is necessary to remove trees subject to TPOs or within conservation areas, future design stages would illustrate how they would be replaced on completion of construction using the same or similar species to that removed as close to the location of the original as reasonably practicable, subject to consideration of species with regard to climate change and resilience to pests and disease (PCR 93)
- f. The landscape proposals illustrated on Figure 2.5 Preliminary Townscape and Environmental Master Plan will be refined at future design stages based on the design principles for people and place presented within the Overarching Design Principles document (PCR 95)

Standard good practice (tertiary)

9.4.3 Standard good practice (tertiary), set out within the Code of Construction Practice, would occur as a matter of course due to legislative requirements or standard sector practices. Standard good practice (tertiary) for this aspect includes:

- a. Implementation of a landscape and ecology management plan, detailing how landscape and ecology mitigation and management will be delivered (PCR 104)
- b. A five-year aftercare period would be adopted for all soft environmental features of the Project, with monitoring of condition and replacement planting of vegetation that has died or failed to establish (PCR 96)
- c. Sensitive lighting design during construction and operation, such as light emitting diodes, to reduce light spill as far as practicable (PCR 39)
- d. All trees to be retained would be protected throughout the construction period in accordance with BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations (British Standards Institution, 2012) (PCR 37)
- e. Routes of final utility diversions and methods of construction to be selected to retain as much existing vegetation as reasonably practicable, in particular mature vegetation subject to the agreement of the utility asset owner (PCR 97)
- f. Works to trees subject to TPOs would be supervised by the Ecological Clerk of Works and supported by an experienced arboriculturist. In the event tree canopy pruning is required to facilitate the works, this would be undertaken by suitably qualified and experienced staff working to BS 3998:2010 Tree work – Recommendations (British Standards Institution, 2010) (PCR 98)
- g. An Arboricultural Method Statement and Tree Protection Plan shall be prepared to support the final design, appended to the Construction Environmental Management Plan and implemented prior to commencement

of works affecting trees. The Arboricultural Method Statement and Tree Protection Plan shall identify areas of special measures to protect and retain features that would be subject to encroachment and localised removal. This would be based on the special measure areas, construction exclusion zones and outline tree protection measures presented within the Arboricultural Impact Assessment (PCR 99)

- h. Soil stockpile heights shall be in accordance with the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Department for Environment, Food and Rural Affairs, 2009), and shall be kept as low as reasonably practicable (PCR 100)
- i. The supply, storage, handling, planting and maintenance of proposed planting would be undertaken in accordance with relevant British Standards, including BS 4428:1989 Code of practice for general landscape operations (excluding hard surfaces) (British Standards Institution, 1989) (PCR 40)

9.5 Assessment Methodology

General approach

- 9.5.1 The assessment within this chapter of the PEI Report follows the principles of the GLVIA3. This assessment has been informed by mapping, relevant national, regional and local policy, and a desktop review of background documentation as set out in Section 9.6. Townscape and visual site surveys were carried out during winter 2024/2025.
- 9.5.2 This assessment has been based on design information presented in Chapter 2: Project Description, including Figure 2.5 Preliminary Townscape and Environmental Master Plan. Professional judgement has been used to provide the preliminary assessment at this PEI Report stage.

Study area

- 9.5.3 In relation to the need for a ZTV, the EIA Scoping Report explained that:

‘The GLVIA3 advocate a proportionate approach to the TVIA process, with emphasis placed on the potential for significant effects. The likelihood of significant landscape and visual effects diminishes with increasing distance from a scheme. Often at the scoping stage, a bare earth ZTV model may be produced, in order to agree an appropriate study area. However, in this case, due to the densely developed nature of the surroundings, and the predominantly flat topography, it was judged that a bare earth ZTV will not provide a useful basis of understanding the likely visibility.’
- 9.5.4 The EIA Scoping Opinion does not request a ZTV, however PINS requested an explanation regarding an alternative approach to defining the study area (refer to Table 9.2 PINS ID 3.7.4). This alternative approach is presented in this section.
- 9.5.5 GLVIA3 recommends ZTV modelling based on ‘bare earth’, which does not take account of potential screening by vegetation and buildings, and notes that the use of digitally mapped areas of visibility are ‘...less commonly used in urban

areas because of the difficulty of mapping and modelling accurately the buildings and structures that would influence potential visibility.'

- 9.5.6 A bare earth ZTV for the Project would likely cover an extensive area, which would not give a realistic impression of the extent of visibility given the urban context and associated intervening built form as well as trees. A ZTV is not, therefore, considered a useful or informative tool to inform the extent of the study area or the selection of VPs.
- 9.5.7 The study area for this aspect was shared with LPAs in engagement carried out pre scoping in August 2024, presented in the EIA Scoping Report and in the revised methodology circulated post scoping in the March/April 2025 engagement with LPAs (refer to Section 9.3). No comments on the extent of the study area have been made by LPAs.
- 9.5.8 The study area for the PEI Report and the TVIA of the ES has been informed by consideration of the nature of the development and the extent to which the Project is likely to be visible from the surrounding townscape. The approach taken is in accordance with guidance provided in the GLVIA3 which advocates a proportionate approach to the assessment process, with emphasis placed on the potential for significant effects. Paragraph 5.2 of GLVIA3 states that, '*The study area should include the site itself and the full extent of the wider landscape around it which the proposed development may influence in a significant manner. This will usually be based on the extent of Landscape Character Areas likely to be significantly affected either directly or indirectly.*' Further to this, paragraph 6.2 notes in relation to the study area that, '*The emphasis must be on a reasonable approach which is proportional to the scale and nature of the proposed development.*'
- 9.5.9 The likelihood of significant townscape and visual effects diminishes with increasing distance from a scheme, and existing built form combined with predominantly flat topography restricts the extent of views. As presented in engagement with stakeholders and in the EIA Scoping Report, the study area for the townscape and visual assessment extends 2.5km from the draft Order limits as shown on Figure 9.3 and has been developed using the baseline townscape and visual context and professional judgement. Significant effects are unlikely to be experienced beyond 2.5km.

Receptors for assessment

- 9.5.10 The townscape and visual receptors identified for assessment comprise the published TCAs presented within Table 9.4 and people at the VPs identified within Table 9.6. The townscape and visual receptors have been informed by Chapter 12: Townscape and Visual Amenity of the EIA Scoping Report, the EIA Scoping Opinion, consultation and engagement with LPAs, desktop review and site surveys carried out during winter 2024/2025.

Assessment timeframes

- 9.5.11 Townscape and visual effects have been considered at the following timeframes and seasons, which are based on standard practice and guidance within GLVIA3. The timeframes for assessment were presented in engagement with LPAs carried out in August 2024. The methodology circulated prior to engagement with LPAs in March/April 2025 also incorporated timeframes and seasons for assessment.
- a. **Construction:** Considers construction activities, temporary works and construction traffic during the construction period
 - b. **Operation winter year 1:** Considers the effects in winter year 1, when the Project is operational, but planting mitigation would not yet be fully effective. This reflects the worst case during operation before planting mitigation would be established
 - c. **Operation summer year 15:** Considers the effects in summer in the fifteenth year, when the Project is operational, and planting mitigation would have taken effect. This demonstrates the effectiveness of planting mitigation once established during operation

Approach to preliminary assessment of likely significant effects

- 9.5.12 A preliminary, high-level, assessment has been made of the likely significant townscape and visual effects. Whilst this assessment has been underpinned by consideration of the sensitivity of townscape and visual receptors and the likely magnitude of change, this assessment relies on professional judgement.
- 9.5.13 The assessment of impacts on townscape components such as trees and woodland, and perceptual and aesthetic aspects have been considered within the preliminary assessment of likely significant effects on townscape character.
- 9.5.14 Both day and night-time changes for townscape and visual receptors have been considered within the preliminary assessment of likely significant townscape and visual effects.
- 9.5.15 The approach and assessment criteria that will be applied to the TVIA of the ES have been used as a guide to help inform this preliminary assessment. The methodology for the TVIA is presented in Appendix 9.2 for information.

9.6 Baseline conditions

- 9.6.1 Baseline conditions have been ascertained from desktop survey and field work (refer to Appendix 9.2 for further information on site surveys carried out). This section sets out the townscape and visual baseline and identifies the townscape and visual receptors in Table 9.4 and Table 9.6 that have been considered within this assessment and will also be assessed within the TVIA of the ES.
- 9.6.2 The principal data sources used to inform the assessment of potential effects, comprise the following:
- a. Ordnance Survey Mapping at 1:25,000
 - b. Aerial photography shown on Google Maps (Google, 2025)

- c. GIS data sets for statutory and non-statutory designations, public rights of way and cycle routes identified on Magic Interactive Map (Natural England, 2025)
- d. National, regional and local planning policy referred to in Section 9.2
- e. Hounslow Character, Sustainability and Design Codes SPD (LBH, 2024b); and Hounslow Characterisation and Growth Study (LBH, 2024c)
- f. LBR Urban Design Study (Arup, 2023)
- g. Kingston, Towards a Sense of Place: A Borough Character Study to Support the Kingston Local Development Framework (RBK, 2011)
- h. London View Management Framework SPG (GLA, 2012a)
- i. Green infrastructure and Open Environments: The All London Green Grid SPG (GLA, 2012b)
- j. Thames Landscape Strategy (The Thames Landscape Strategy Steering Group, 2012)
- k. Consultation Draft Local View SPD (LBR, 2022)
- l. The Royal Borough of Kingston Upon Thames Views Study Report (RBK, Bradley Murphy Design Ltd, Wagstaffs. VU.City, 2018)

Townscape context

- 9.6.3 This section describes the townscape context of the study area and each of the above ground sites, describing the contribution trees make to the existing townscape character and making reference to key designations for context. A full list of designations relevant to townscape is included in Table 9.5.
- 9.6.4 Within south-west London, covering parts of the LBH, LBR and RBK, the study area comprises a varied mosaic of residential, industrial, recreational and infrastructure land uses. The age, layout, architectural style, height and materials of built form are variable.
- 9.6.5 The landform is low lying and relatively level, containing the River Thames and tributaries. However, the land rises across Richmond Hill east of Ham and Petersham and at Marble Hill, north of Ham and the River Thames. The River Thames meanders through the study area from north-east of Isleworth, running between the urban areas of Richmond and Twickenham and between Teddington and Ham. Areas of open land within the study area include land at the Royal Botanic Gardens, Kew, east of Isleworth, and land associated with Ham House and Ham Lands LNR, east of the River Thames and north and west of Ham. The land is less built up east of Ham and Petersham, where open space extends across Ham Common, Petersham Park and Richmond Golf Club, and south of Teddington.
- 9.6.6 The Campaign to Protect Rural England (CPRE) (now known as CPRE, the countryside charity) has mapped levels of light pollution and tranquillity across England. The map of England's Light Pollution and Dark Skies (CPRE, 2019) shows the study area to be heavily affected by light pollution. Pockets of less developed land, such as Ham Lands, Marble Hill Park and Richmond Park, are

shown to be relatively less affected by light pollution compared with built up areas within the study area. The Tranquillity Map for England (CPRE, 2007) shows the study area to fall within the least tranquil category.

- 9.6.7 The townscape surrounding the Mogden STW site comprises densely developed residential properties of varying ages and styles, interspersed with pockets of industrial and commercial development and small areas of public open space including Redlees Park to the north-east. Mogden STW site is located within the grounds of the existing Thames Water Mogden STW which contains a number of Art Deco infrastructure buildings. A raised bund covered by vegetation, including established trees, wraps around the majority of the site's perimeter. Tree belts segregate different areas within the Mogden STW site, and follow the route of the Duke of Northumberland's River and the Duke's River Walk, which cut through the centre of the site. The majority of the existing infrastructure within the STW is positioned on lower ground, either side of the Duke's River Walk.
- 9.6.8 The Ham Playing Fields site is situated within Ham Lands Open Space, a semi-rural and well treed setting south of the River Thames and Thames Path National Trail and north of Ham. This above ground site is west of Ham House (National Trust Property) and associated Registered Park and Garden (RPG), and east of Ham Lands LNR, Ham Playing Fields and allotments. Ham Lands LNR is partially wooded, and trees define the access routes to Ham House and the route of the River Thames in this location. Trees are protected within the Ham House Conservation Area, which coincides with part of the Ham Playing Fields site.
- 9.6.9 The Burnell Avenue site is located on the River Thames and riverbank west of Ham, south-east of Teddington Lock and Teddington Footbridge (grade II listed). North of the River Thames, the Thames Path National Trail and National Cycle Network (NCN) Route 4/EuroVelo 2 – Capitals Coast Route run through Burnell Avenue Open Space, which forms part of the wider Ham Lands Open Space, comprising small fields and areas of woodland. Trees are protected by TPO at the Burnell Avenue site and between Dysart Avenue and Northweald Lane. Part of the Burnell Avenue site coincides with the Riverside North Conservation Area and the fringe of the Teddington Lock Conservation Area, and trees within these conservation areas are also protected. South of the River Thames, the Lensbury Hotel and Watersports Centre and residential properties within Broom Water Conservation Area are separated by sports fields that form part of the Lensbury Club grounds.
- 9.6.10 The Tudor Drive site is set within the residential context of Ham and St George's Industrial Estate. North of the industrial estate, the Tudor Drive site incorporates a small public park containing grassed areas, ornamental planting, trees and furniture.

Townscape character

National Character Areas

- 9.6.11 At a national scale, Natural England has divided England into 159 National Character Areas (NCA). The following NCAs are relevant to the study area, and these are illustrated on Figure 9.2:
- NCA 111 Northern Thames Basin (Natural England, 2024), which covers the western part of Mogden STW site
 - NCA 115 Thames Valley (Natural England, 2024), which covers most of the study area

Local character areas

- 9.6.12 The following published documents characterise the local townscape within the study area:
- Hounslow Character, Sustainability and Design Codes SPD (LBH, 2024b) and Hounslow Characterisation and Growth Study (LBH, 2024c). These adopted publications supersede the LBH Urban Context and Character Study (LBH, 2014)
 - LBR Urban Design Study (Arup, 2023)
 - Kingston, Towards a Sense of Place: A Borough Character Study to Support the Kingston Local Development Framework (RBK, 2011)
- 9.6.13 Figure 9.2 illustrates published local TCAs. Table 9.4 sets out the key TCAs from these publications that could potentially be directly and indirectly affected by the Project. Appendix 9.1 presents a description and/or key characteristics of each of the TCAs identified within Table 9.4.
- 9.6.14 The assessment of townscape effects within this assessment and within the TVIA of the ES will be based on the TCAs or their subdivisions where applicable identified within Table 9.4.

Table 9.4 Key townscape character areas potentially directly or indirectly affected by the Project

Published assessment	Townscape character area type or study area	Townscape character area for assessment
Hounslow Character, Sustainability and Design Codes SPD (LBH, 2024b) and Hounslow Characterisation and Growth Study (LBH, 2024c)	Isleworth	South Isleworth/ Twickenham Road
Hounslow Character, Sustainability and Design Codes SPD (LBH, 2024b) and Hounslow Characterisation and Growth Study (LBH, 2024c)	Central Hounslow	South Hounslow/ West Isleworth
LBR Urban Design Study (Arup, 2023)	B Teddington and Hampton Wick	B3 Hampton Wick Residential

Published assessment	Townscape character area type or study area	Townscape character area for assessment
LBR Urban Design Study (Arup, 2023)	C Twickenham, Strawberry Hill and St Margarets	C3 Twickenham Riverside
LBR Urban Design Study (Arup, 2023)	E Ham, Petersham and Richmond Park	E1 Ham and Petersham Residential
LBR Urban Design Study (Arup, 2023)	E Ham, Petersham and Richmond Park	E2 Ham Common and Riverside
Kingston, Towards a Sense of Place: A Borough Character Study to Support the Kingston Local Development Framework (RBK, 2011)	Outer Suburban	Tudor: 1 Dysart Avenue
Kingston, Towards a Sense of Place: A Borough Character Study to Support the Kingston Local Development Framework (RBK, 2011)	Outer Suburban	Tudor: 9 St George's Industrial Estate
Kingston, Towards a Sense of Place: A Borough Character Study to Support the Kingston Local Development Framework (RBK, 2011)	Outer Suburban	Tudor: 11 The Tudor Estate
Kingston, Towards a Sense of Place: A Borough Character Study to Support the Kingston Local Development Framework (RBK, 2011)	Rural/Open	Tudor: 3 YMCA Riverside Lands

Designations relevant to townscape

- 9.6.15 Table 9.5 sets out designations and recreational routes relevant to townscape and the Project within the study area, determined by desk study, and illustrated (where data has been obtained and where it is permitted to illustrate it) across Figures 9.1 and 9.3.

Table 9.5 Designations relevant to townscape

Designation	Description
National Trails, NCN routes, promoted walking routes	<p>The Thames Path National Trail – follows the River Thames, running through the Support Work Area at the Ham Playing Fields site and the Burnell Avenue site.</p> <p>NCN Route 4, which forms part of the EuroVelo 2 – Capitals Coast Route – follows the eastern bank of the River Thames before heading east through Ham, running through the Burnell Avenue site.</p> <p>Duke’s River Walk – part of the Duke’s River Walk which forms a section of the wider Three Rivers Walk, a published walking route, runs through the centre of the existing STW at the Mogden STW site.</p> <p>Capital Ring Walk – sections of this circular London walk pass through Richmond Park, Petersham Meadows and along the River Thames east of Mogden STW.</p>
Open Access Land, Metropolitan Open Land, Registered Common Land and Local Open Space	<p>Open Access Land (Countryside and Rights of Way Act 2000) – incorporates several areas within the study area, including Ham and Petersham Common, east of the River Thames.</p> <p>Metropolitan Open Land – incorporates numerous areas within the study area. Applies to Ham Playing Fields site and Burnell Avenue site.</p> <p>Registered Common Land – numerous within the study area, including Ham and Petersham Common, east of the River Thames.</p> <p>Local Open Space – LBH and LBK define Local Open Space within local policy. This includes space within Mogden STW site, at the adjacent Redlees Park and land south of Northweald Lane. LBR defines Public Open Space, Local Green Space and Other Open Land of Townscape Importance within local policy. Relevant to the Project, Ham Lands is defined as Public Open Space.</p>
Ancient woodlands, ancient and veteran trees, and TPOs	<p>Chapter 7: Terrestrial Ecology also considers ancient woodland and ancient and veteran trees.</p> <p>Ancient Woodland – none within 15m of the draft Order limits.</p> <p>Ancient and veteran trees – none recorded on the Ancient Tree Inventory within 15m of the draft Order limits. No potential ancient or veteran trees have been identified during arboricultural surveys within 15m of the draft Order limits.</p> <p>TPOs – Numerous within the study area, including within the draft Order limits at the Burnell Avenue site.</p>

Designation	Description
Cultural Heritage Designations	<p>Heritage features help inform the sensitivity of the townscape and are relevant to the assessment of townscape and visual effects. Cultural heritage designations are set out in more detail within Chapter 8: Historic Environment.</p> <p>World Heritage Site – Royal Botanic Gardens Kew, situated approximately 850m east of Mogden STW.</p> <p>Scheduled Monuments – several within the study area, including King Henry VIII's Mound, Richmond Park.</p> <p>Conservation Areas – large parts of the study area are designated Conservation Areas. The Ham Playing Fields site sits partly within the Ham House Conservation Area. Burnell Avenue site coincides partly with the Riverside North Conservation Area and the fringe of the Teddington Lock Conservation Area and is located immediately north of the Broom Water Conservation Area. The draft Order limits coincide with part of the Parkleys Estate Conservation Area north of the Tudor Road site.</p> <p>Conservation Area legislation includes the protection of trees.</p> <p>Listed Buildings – numerous within the study area and often associated with the conservation areas, such as Ham House (grade I listed) and associated listed buildings east of the Ham Playing Fields site.</p> <p>Registered Parks and Gardens (RPG) – several RPGs within the study area. Of particular relevance to the Project, Ham House grade II* RPG and National Trust property is situated south of the River Thames, south-east of Eel Pie Island, and the proposed access along Ham Street to the Ham Playing Fields site overlaps with the designated area.</p>

Visual context

- 9.6.16 In the vicinity of the Mogden STW site, residential settlement and industrial and commercial units are fairly dense, and views are characterised by a mixture of land uses and architectural styles. Due to the dense built form combined with the generally flat topography, views are typically short range and framed by buildings, including views looking towards the slightly elevated vegetated bunds surrounding the STW. Where there are local parks or recreation grounds, such as at Redlees Park, north-east of Mogden STW, a more open aspect is available locally. However, the STW itself is generally well screened by the surrounding bunding which restrict views, particularly to the south, east and north where the vegetation on the bund includes mature trees. Although close-range filtered views are available from surrounding residential properties in the winter, looking through the upper part of the tree canopies, the infrastructure within the STW generally remains screened, as the ground level of the STW is lower than that of the surrounding area.
- 9.6.17 Ham Lands Open Space contains minimal built form, and landscape features such as trees, the River Thames and Ham House, are the focus of views. The playing fields at the Ham Playing Fields site are surrounded by vegetation, including mature trees which restrict views towards the fields, both from the adjacent open space, Thames Path National Trail and Ham House RPG. By contrast, there are close-range views to Burnell Avenue Open Space from adjacent residential properties to the east and the NCN Route 4/EuroVelo 2 Capitals Coast Route which passes along the top of the riverbank. Views from the Thames Path National Trail to the east are by contrast somewhat restricted by the path's location on the lower part of the riverbank.
- 9.6.18 Immediately north of the River Thames, along the northern riverbanks, there are occasional smaller-scale parks and open spaces, where there are opportunities to experience views across the river to the south towards Ham Lands, for instance from Radnor Gardens, Orleans Gardens and Marble Hill. The grade II listed Teddington Footbridge (comprising a suspension bridge and a girder bridge) near Teddington Lock and Weir, also allow slightly elevated views along the river corridor. However, tree belts along the River Thames often restrict the distance of views beyond the river corridor. In addition, the Thames Path National Trail along the northern banks often diverts away from the riverbank into surrounding residential neighbourhoods.
- 9.6.19 Away from the River Thames, such as at the Tudor Drive site, built development is generally dense and views are close range and framed by buildings.
- 9.6.20 The land rises to Richmond Hill and Richmond Park east of Ham and Petersham. In contrast to the flat and low-lying Thames floodplain, the landform is prominent and allows for longer range and expansive views across the surrounding urban area.

- 9.6.21 Views within the study area are formally recognised as set out within the following paragraphs.
- 9.6.22 The Consultation Draft Local View SPD (LBR, 2022) identifies the following protected views within LBR:
- a. B1.2 – Teddington Lock Footbridge
 - b. C3.1 – (South) Radnor Gardens
 - c. C3.3 – Twickenham Riverside (East)
 - d. C3.5 – Great River Avenue, Star and Garter
 - e. E1.1 – Ham House (River Thames)
 - f. E3.2 – Petersham Park
 - g. F1.1 – Richmond Terrace, Richmond Hill
- 9.6.23 The Royal Borough of Kingston Views Study Report (RBK, Bradley Murphy Design Ltd, Wagstaffs. VU.City, 2018) identifies the following important view within RBK:
- a. 108 View across the River Thames outside the Hawker Centre YMCA near Lower Ham Road
- 9.6.24 Richmond, Petersham and Ham Open Spaces Act 1902 protects the foreground views experienced from Richmond Hill, to the south and west.

Viewpoints and visual receptors

- 9.6.25 Specific and representative VPs have been selected to focus on sensitive receptors and likely significant effects. One illustrative VP (2b) has been selected to demonstrate comparatively restricted visibility compared with VP 2a from protected view B1.2 – Teddington Footbridge. Specific, representative and illustrative VPs are defined by GLVIA3 as follows:
- a. *‘Representative viewpoints, selected to represent the experience of different types of visual receptor, where large numbers of viewpoints cannot all be included individually and where the significant effects are unlikely to differ...’*
 - b. *‘Specific viewpoints, chosen because they are key and sometimes promoted viewpoints within the landscape...’*
 - c. *‘Illustrative viewpoints, chosen specifically to demonstrate a particular effect or specific issues, which might, for example, be the restricted visibility in certain locations.’*
- 9.6.26 The location of the VPs considered within this assessment, and to be assessed within the TVIA of the ES, is illustrated in Figure 9.3. Table 9.6 lists the VPs and associated visual receptors. The type of visual representation that will be prepared as part of the TVIA is indicated, based on Technical Guidance Note 06/19 Visual Representation of Development Proposals (LI TGN 06/19) (Landscape Institute, 2019) that sets out the definition and methodology for technical visualisations:

- a. Type 1 visualisation – Annotated viewpoint photographs
- b. Type 4 visualisation – Photomontage (survey/scale verifiable)

9.6.27 Type 4 visualisations will be prepared for the VPs indicated during operation in winter year 1 and summer year 15.

Table 9.6 Viewpoints and visual receptors

Viewpoint reference	Viewpoint location description	Visual receptors	Change to the view that will be captured	Type of visual representation (either Type 1 or Type 4, as defined by LI TGN 06/19)
VP1	Representative view from Redlees Park	Visitors to Redlees Park	Tertiary Treatment Plant (TTP), associated infrastructure and interception shaft at Mogden STW site	Type 4
VP2a	Specific and representative view from Teddington Footbridge	Recreational users of Thames Path National Trail, grade II listed Teddington Footbridge, River Thames and the nearby Ham Lands Open Space and LNR	Outfall, intake and connection shaft at Burnell Avenue site	Type 4
VP2b	Specific and illustrative view from LBR protected view B1.2 – Teddington Footbridge	Recreational users of grade II listed Teddington Footbridge and River Thames	Outfall, intake and connection shaft at Burnell Avenue site	Type 1
VP3	Specific and representative view from LBR protected view C3.1 – South Radnor Gardens and Thames Landscape Strategy identified vistas	Visitors to Radnor Gardens	Intermediate shaft at Ham Playing Fields site	Type 1
VP4	Specific and representative view from LBR protected view C3.3 – Twickenham Riverside East	Recreational users of Thames Path National Trail, the River Thames, residents on Riverside and Eel Pie Island, visitors to	Intermediate shaft at Ham Playing Fields site	Type 1

Viewpoint reference	Viewpoint location description	Visual receptors	Change to the view that will be captured	Type of visual representation (either Type 1 or Type 4, as defined by LI TGN 06/19)
		the White Swan riverside pub garden and residents on Riverside (road)		
VP5	Specific and representative view from LBR protected view C3.5 – Great River Avenue, Star and Garter, and Thames Landscape Strategy identified vistas	Residents at the Royal Star and Garter Home and users of adjacent PRow	Intermediate shaft at Ham Playing Fields site	Type 1
VP6	Specific and representative view from LBR protected view E1.1 – Ham House, River Thames	Recreational users of the Thames Path National Trail and the River Thames, and users of Ham House Car Park Open Space	Intermediate shaft at Ham Playing Fields site	Type 1
VP7	Specific and representative view from LBR protected view E3.2 – Petersham Park	Visitors to King Henry VIII's Mound in Richmond Park, including users of PRow (protected view towards Windsor Castle) and Capital Ring Walk	Intermediate shaft at Ham Playing Fields site	Type 1
VP8	Specific and representative view from RBK important view 108 – Views across the River Thames outside the Hawker Centre YMCA near Lower Ham	Recreational users of the Thames Path National Trail and NCN Route 4/EuroVelo 2 Capitals Coast Route, Burnell Avenue Open Space and the River Thames	Outfall, intake and shaft sites at Burnell Avenue site	Type 4
VP9	Representative view from public footpath (promoted Duke's River Walk) through Mogden STW	Users of public footpath	TTP, associated infrastructure and interception shaft	Type 1

Viewpoint reference	Viewpoint location description	Visual receptors	Change to the view that will be captured	Type of visual representation (either Type 1 or Type 4, as defined by LI TGN 06/19)
			at Mogden STW site	
VP10	Representative view from residential properties to the east and south of Mogden STW	Residents including Lynton Close, Hillary Drive and Bankside Close to the east and Beaumont Place and Trevor Close to the south. Also includes residents at Mogden House (grade II listed)	TTP, associated infrastructure and interception shaft at Mogden STW site	Type 1
VP11	Specific and representative view from LBR protected view F1.1 – Richmond Terrace, Richmond Hill	Residents on Richmond Terrace, Richmond Hill, and users of Richmond Terrace Walk Park and Garden	Intermediate Shaft at Ham Playing Fields site	Type 1
VP12	Representative view from Ham House RPG	Visitors to National Trust Property	Intermediate Shaft at Ham Playing Fields site	Type 1
VP13	Representative view from Ham Lands Open Space and LNR	Recreational users of Ham Lands Open Space and LNR and Riverside Drive/Ham Playing Fields	Intermediate Shaft at Ham Playing Fields site	Type 1
VP14	Representative view from Burnell Avenue Open Space and nearby residential properties	Recreational users of Burnell Avenue Open Space and residents on Burnell Avenue, Beaufort Road, Dysart Avenue and Northweald Lane	Outfall, intake and shaft sites at Burnell Avenue site	Type 4
VP15	Representative view from the Lensbury Hotel and Watersports	Visitors to the Lensbury Hotel, recreational users of the Lensbury Watersports Centre and River Thames, residents on Broom	Outfall, intake and shaft sites at Burnell Avenue site	Type 4

Viewpoint reference	Viewpoint location description	Visual receptors	Change to the view that will be captured	Type of visual representation (either Type 1 or Type 4, as defined by LI TGN 06/19)
	Centre and nearby residential properties	Water, Broom Water West and Trowlock Island		
VP16	Representative view from residential properties at Tudor Drive	Residents on Tudor Drive	Shaft site at Tudor Drive site	Type 1
VP17	Representative view from residential properties to the west of Mogden STW	Residents including at Wainwright Grove, Bracken End and Harvesters Close	TTP, associated infrastructure and drive shaft at Mogden STW site	Type 1
VP18	Representative view from Thames Path National Trail	Recreational users of the Thames Path National Trail, Burnell Avenue Open Space and the River Thames	Outfall, intake and shaft sites at Burnell Avenue site	Type 1

Future baseline

- 9.6.28 In general, climate change is expected to lead to an increase in temperatures, with a greater frequency of hotter, drier summers and warmer, wetter winters. Climate change is also expected to lead to a rise in sea level, which will affect tide levels and associated flood risk within the tidal section of the River Thames as far west as Teddington Weir. Further information on projected changes in climate parameters is provided in Chapter 18: Climate Change. Projected future changes in climate (e.g., an increase in temperatures) have the potential to interact with effects identified within some environmental aspects and exacerbate or diminish their impact. Such combined impacts are termed in combination climate impacts (ICCI). Consideration of the potential ICCI associated with Townscape and Visual during the operation phase is provided in Section 9.7 of this chapter.
- 9.6.29 Major committed developments, for example, large scale developments with planning approval or major infrastructure schemes with development consent, will be considered as part of the future baseline within the TVIA of the ES. Where other developments are expected to be completed before construction of the Project, it will be assumed that the development would be in situ at all assessment timeframes. The TVIA will assess the impacts of the Project, whereas the cumulative effects assessment will consider the effects of the Project combined with the effects of proposed developments identified within the 'Short list' presented within Table 19.7 and 19.8 of Chapter 19: Cumulative Effects.

9.7 Preliminary assessment of likely significant effects

- 9.7.1 This section sets out the preliminary assessment of likely significant effects on townscape and visual amenity during construction and operation. The assessment assumes that embedded design (primary) mitigation and standard good practice (tertiary) measures, which have been defined through an iterative process of design and assessment, are in place to avoid, reduce and/or mitigate townscape and visual effects as far as practicable. The embedded mitigation and standard good practice (tertiary) measures are described in Section 9.4 and illustrated on Figure 2.5 Preliminary Townscape and Environmental Master Plan. Due to the iterative development of mitigation for this aspect, and the approach to TVIA, which is to assess effects with all mitigation relevant to this aspect in place as set out within GLVIA3, it is unlikely that the assessment will inform the need for any additional mitigation.
- 9.7.2 The preliminary assessment of likely significant effects is based on design information presented in Chapter 2: Project Description, including Figure 2.5 Preliminary Townscape and Environmental Master Plan. Professional judgement has been used to provide the preliminary assessment at this PEI Report stage. This is because refinements to design and mitigation could potentially affect the conclusions. Therefore, this section considers whether effects would likely be significant or not significant, using the methodology

presented in Appendix 9.2 as a guide to aid professional judgement. This is considered to be an appropriate level of assessment at PEI Report stage and reflects a reasonable worst case. The final conclusions of the assessment will be presented at the ES stage.

Receptor sensitivity

- 9.7.3 The sensitivity of townscape and visual receptors has been assessed in accordance with the criteria presented in Appendix 9.2, Tables A.2 and A.5.
- 9.7.4 The sensitivity of the TCAs ranges from low to high and is defined in Table 9.7.
- 9.7.5 South Isleworth/Twickenham Road, South Hounslow/West Isleworth, E1 Ham and Petersham Residential, Tudor: 1 Dysart Avenue and Tudor: 9 St George's Industrial Estate are of low sensitivity. Whilst there is value associated with some features, for example the River Crane and Duke's River Walk, public open spaces, listed buildings and TPOs, these townscapes have low susceptibility to the nature of the Project given the urban context and the presence of the existing Mogden STW, commercial and industrial estates.
- 9.7.6 B3 Hampton Wick Residential and Tudor: 3 YMCA Riverside Lands are of medium sensitivity. The Thames Policy Area, which is highly valued for its landscape, is relevant to these townscapes. Value is also associated with designated heritage assets, and recreational value is associated with the River Thames. Tudor: 3 YMCA Riverside Lands falls within the Thames-Side Strategic Area of Special Character and the Thames Path National Trail and NCN Route 4/EuroVelo 2 Capitals Coast Route run through this area. Tudor: 11 The Tudor Estate is also of medium sensitivity due to value associated with the Tudor Estate Local Area of Special Character. These areas are moderately susceptible to the nature of the Project, with limited ability to accommodate the Project without undue effects.
- 9.7.7 C3 Twickenham Riverside and E2 Ham Common and Riverside are of high sensitivity. The Thames Policy Area is relevant to C3 Twickenham Riverside, and the area contains Marble Hill House (English Heritage). Value is associated with conservation areas and listed buildings (including grade I listed landmark buildings Orleans House and Marble Hill House) and recreational value is associated with the River Thames, the Thames Path National Trail and Radnor Gardens. The Thames Policy Area is also relevant to E2 Ham Common and Riverside, and value is associated with heritage designations including Ham House (grade I listed) RPG (National Trust). Strong recreational value is associated with Ham House RPG, Ham Playing Fields, Ham Lands Open Space and LNR, the Thames Path National Trail and NCN Route 4/EuroVelo 2 Capitals Coast Route and the River Thames. These areas have limited ability to accommodate the Project without undue effects.

Table 9.7 Townscape receptor sensitivity

Townscape character area	Sensitivity
South Isleworth/Twickenham Road	Low
South Hounslow/West Isleworth	Low
B3 Hampton Wick Residential	Medium
C3 Twickenham Riverside	High
E1 Ham and Petersham Residential	Low
E2 Ham Common and Riverside	High
Tudor: 1 Dysart Avenue	Low
Tudor: 9 St George's Industrial Estate	Low
Tudor: 11 The Tudor Estate	Medium
Tudor: 3 YMCA Riverside Lands	Medium

9.7.8 The sensitivity of visual receptors at all 18 VPs has been assessed as high. The VPs incorporate visual receptors most susceptible to change, such as people at their places of residence, people engaged in outdoor recreation whose attention is likely to be focused on the townscape and the view, users of public open space and visitors to heritage assets. Value is attached to the views, for example through formal recognition of important and protected views, planning designations such as the Thames Policy Area, heritage assets and visitor attractions and promoted public rights of way including the Thames Path National Trail, NCN Route 4 and EuroVelo 2 Capitals Coast Route and the Duke's River Walk.

Construction phase

- 9.7.9 During construction, potential townscape and visual effects would largely be associated with:
- Vegetation removal to facilitate construction, including removal of trees with TPO status and within conservation areas
 - Presence and movement of plant, machinery and construction traffic
 - Earthworks and stockpiles
 - Presence of tall plant and machinery, including cranes
 - Presence of construction compounds and welfare facilities

- f. Presence of hoarding/safety fencing around the boundary of construction areas
- g. Presence of temporary lighting
- h. Construction of temporary access routes
- i. Temporary or remedial works to existing highways associated with vehicle movements
- j. Works to install or divert utilities
- k. Presence of cofferdams where required for works within the freshwater River Thames

- 9.7.10 There would potentially be likely significant effects on TCAs E2 Ham Common and Tudor 3: YMCA Riverside Lands during construction, where the presence of construction activity and vegetation removal (including removal of trees with TPO status and within conservation areas) would be in sensitive locations along the River Thames.
- 9.7.11 It is anticipated that effects on the other TCAs included for assessment would potentially be not significant during construction. This is for various reasons and combinations of reasons, for example, where effects would be indirect, where the townscape is of low sensitivity, and/or where vegetation removal would likely be limited, the construction work would affect a localised area and/or would be set within an urban context including Mogden STW, commercial and industrial estates.
- 9.7.12 There would potentially be likely significant effects on visual receptors during construction at most of the VPs identified, because of the high sensitivity of the receptors and the close proximity and scale of the construction works. Visual effects on receptors at VPs 3, 5, 7 and 11, which are furthest from the Project, would potentially be not significant because of the distance of the view, intervening features including vegetation and/or because construction activity would form a small part of the overall view.

Operation phase

Winter year 1

- 9.7.13 During operation in winter year 1, mitigation planting would not yet be established or in leaf and would therefore have limited effect on the integration of the Project into the existing townscape character and mitigation of the effect on local visual amenity.
- 9.7.14 The loss of vegetation would potentially affect the character of the townscape and would potentially open up views of detracting features, such as the existing Mogden STW. Whilst the operational above-ground elements at the Mogden STW site would be set within the context of the existing STW, and operational features associated with the shaft sites would be low level, the intake and outfall would potentially present urbanising features along the River Thames.

- 9.7.15 There would potentially be likely significant effects on TCAs E2 Ham Common and Tudor 3: YMCA Riverside Lands during operation in winter year 1 in connection with the intake and outfall structures and where trees of status would be removed.
- 9.7.16 It is anticipated that effects on the other TCAs included for assessment would potentially be not significant during operation in winter year 1. This is for various reasons and combinations of reasons, for example, where effects would be indirect, where the townscape is of low sensitivity, and/or where vegetation loss would likely be limited, operational features would be small scale/would affect a localised area and/or would be set within an urban context including Mogden STW, commercial and industrial estates.
- 9.7.17 Likely significant visual effects during operation in winter year 1 would potentially be most relevant to receptors at VPs 1, 10 and 17 (relevant to Mogden STW above ground site), 2a, 8, 14, 15 and 18 (relevant to Burnell Avenue above ground site) and 16 (relevant to Tudor Drive above ground site), where the loss of vegetation would adversely affect the character of the view, and/or visual receptors would be in close proximity to the intake and outfall. Visual effects on receptors at the remaining VPs would potentially be not significant during operation in winter year 1 for various reasons and combinations of reasons, such as the distance of the view, intervening features including vegetation, or where vegetation loss would likely be limited and/or operational features would be small scale and would not change the overall character of the view.

Summer year 15

- 9.7.18 In summer year 15, mitigation planting would have established, to help integrate the Project into the townscape and mitigate effects on local visual amenity. It is anticipated that some likely significant effects assessed at winter year 1 would be not significant by summer year 15 due to the establishment of mitigation planting.
- 9.7.19 However, there would potentially be likely significant effects on townscape and visual receptors during summer year 15, largely in connection with the intake and outfall structures. Whilst mitigation planting and other vegetation in leaf would help to integrate the operational Project into the townscape, the new elements in the vicinity of Teddington Lock and Weir would continue to present urbanising features within sensitive albeit localised locations along the River Thames.
- 9.7.20 There would potentially be likely significant effects on TCAs E2 Ham Common and Tudor 3: YMCA Riverside Lands during operation in summer year 15 in connection with the intake and outfall structures. It is anticipated that effects on the other TCAs included for assessment would potentially be not significant during operation in summer year 15, for reasons consistent with those set out for operation in winter year 1.

- 9.7.21 There would potentially be likely significant visual effects on receptors at VPs 2a, 8, 14, 15 and 18 during operation in summer year 15 in connection with the intake and outfall structures. Visual effects on receptors at the remaining VPs would potentially be not significant for various reasons and combinations of reasons, such as the distance of the view, intervening features including vegetation, or where vegetation loss would likely be limited, mitigation planting would be established and/or operational features would be small scale and would not change the overall character of the view.

Cumulative effects

- 9.7.22 A preliminary assessment of intra-project and inter-project cumulative effects (excluding climate change) for townscape and visual is contained in Chapter 19: Cumulative Effects.

In combination effects with climate change

- 9.7.23 Future assessment of townscape and visual effects is based on years 1 and 15 during operation, and it is not anticipated that climate change would substantially affect the townscape and visual baseline, the establishment of mitigation planting within this timeframe, or townscape and visual effects. However, rising temperatures could potentially affect vegetation in the longer term both directly, for example through drought or flooding, and indirectly, for example through resilience and susceptibility to pests and disease. Consideration will be given at future design stages to the use of appropriate species in the event of extreme conditions caused by climate change, such as flooding or drought, within the mitigation design. Appendix 18.1 of the PEI Report provides further details of the identified ICCIs, which will be considered further within the ES.

9.8 Additional (secondary) mitigation and enhancement measures

Additional (secondary) mitigation

- 9.8.1 Mitigation measures are defined in Chapter 4: EIA Approach and Methodology of this PEI Report.
- 9.8.2 Townscape and visual mitigation is categorised as embedded or standard good practice (tertiary), as set out in Section 9.4. No additional (secondary) mitigation is proposed at this stage.

Enhancement measures

- 9.8.3 Opportunities for enhancements that would be beneficial for townscape and visual amenity will be considered and reported within the TVIA of the ES.

9.9 Summary of Residual Likely Significant Effects

- 9.9.1 For townscape and visual, residual effects are considered as those assessed during operation in year 15 when the mitigation planting illustrated on Figure 2.5 Preliminary Townscape and Environmental Master Plan would be established

and therefore fully effective. These effects are reported in Section 9.7 of this chapter.

9.10 Next Steps

- 9.10.1 The next steps for the townscape and visual aspect are outlined as follows:
- Continued engagement with representatives from LBH, LBR and RBK regarding the scope of the TVIA for the ES including the townscape and visual receptors for assessment and the assessment methodology
 - Summer townscape and visual surveys during 2025 to inform the design and the TVIA
 - Townscape design and mitigation will continue to be developed on an iterative basis, informed by the findings of further surveys and assessment and consultation with relevant stakeholders

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