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Network Rail

Oxford Corridor Phase 2 Capacity Improvement Scheme

Environmental Impact Assessment – Environmental Statement: Chapter 9 – Landscape and Visual

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9. LANDSCAPE AND VISUAL

9.1 Introduction

9.1.1 This chapter of the Environmental Statement reviews and describes the existing landscape, views and visual amenity, followed by an assessment of the potential effects which the construction and operation of the Scheme may cause upon the site and surrounding environment. The assessment has taken the following approach:

- identification of relevant baseline conditions;
- details of relevant mitigation embedded within the Scheme and construction management measures;
- assessment of potential landscape and visual effects from the Scheme;
- proposals for appropriate additional mitigation measures if possible; and
- conclusions on the likely significant residual effects of the Scheme upon the landscape and visual resource.

9.1.2 The European Landscape Convention (ELC), a Convention of the Council of Europe signed by the UK government in March 2007, provides a common definition for landscape and sets out objectives for the protection, management and planning of all landscapes in Europe. The ELC definition of landscape is inclusive and covers natural, rural, urban and peri-urban areas. It includes land, inland water and marine areas.

9.1.3 The words landscape and townscape are used interchangeably throughout this assessment. The definition of townscape used for this assessment is as per the Guidelines for Landscape and Visual Impact Assessment (GLVIA3), Paragraph 2.7, which explains: '*Townscape means the landscape within the built-up area, including the buildings, the relationship between them, the different types of urban open spaces, including green spaces and the relationship between buildings and open spaces.*'

9.1.4 A full description of the Scheme is given in Chapter 2 – Description of the Scheme.

9.1.5 This landscape and visual impact assessment (LVIA) considers the following;

- direct and indirect (secondary) effects during construction;
- direct and indirect (secondary) effects during operation in Year 1 of opening and 15 years after opening;

9.1.6 This chapter is supported by the following figures in Volume 3 of the Environmental Statement:

- Figure 9.1 – Topography Plan;
- Figure 9.2 – Landscape Planning Designations;
- Figure 9.3 – Zone of Theoretical Visibility, DTM;
- Figure 9.4 – ZTV and Visual Receptors Plan 5Km Study Area;
- Figure 9.5 – ZTV and Visual Receptors Plan 1Km Study Area;
- Figure 9.6 – Indicative Planting Mitigation;
- Figure 9.7 – Visual Receptor 7: Winter Baseline Existing View and Year 15 Type 3 Photomontage;
- Figure 9.8 – Visual Receptor 12: Winter Baseline Existing View; and
- Figure 9.9 – Visual Receptor 12: Winter Year 15 Type 3 Photomontage;

9.1.7 This chapter is also supported by the following appendices in Volume 4 of the Environmental Statement:

- Appendix 9.1 – LVIA Methodology;
- Appendix 9.2 – Arboricultural Impact Assessment;
- Appendix 9.3 – Extracts from Local Landscape Character Assessments;
- Appendix 9.4 – Landscape Effects Table Full Assessment; and
- Appendix 9.5 – Visual Effects Full Assessment.

9.2 Legislation, Policy and Guidance

9.2.1 This section outlines the relevant national legislation, regional and local planning policies and guidance relevant to this assessment.

9.2.2 Table 9.1 sets out the relevant legislation for this LVIA, Table 9.2 sets out the relevant planning policy, and Table 9.3 provides a summary of relevant guidance for this LVIA.

9.2.3 The legislation, policies and guidance listed have been taken into account in the assessment of the likely significant effects on the landscape and visual resource as a result of the Scheme. They have also been referenced during the development of appropriate mitigation measures.

Table 9.1: Legislation relevant to this LVIA

Legislation	Description in relation to LVIA	Relevance to the Scheme
Town and Country Planning (Environmental Impact Assessment) Regulations 2017.	This assessment is carried out in accordance with the principles contained within the Regulation.	The Scheme is assessed in accordance with these regulations.
The European Landscape Convention (ELC)	This is the first international treaty to be exclusively concerned with all dimensions of European landscape. Signed by the UK Government in March 2007, it provides a common definition for landscape and sets out objectives for the protection, management and planning of all landscapes in Europe. Articles 5 and 6 commit signatory states to actions designed to help ensure compliance with the overarching aims of the Convention, including the need to recognise landscapes in law.	The ELC is reflected in the Oxford Character Assessment which includes guidelines for the protection, management and planning of each landscape character area.

Table 9.2: Planning policy relevant to this LVIA

Policy Document	Description in relation to LVIA and Relevance to the Scheme	Relevance to the Scheme
The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2019) Updated 19 June 2019	The NPPF sets out national planning policies including a presumption in favour of sustainable development and protection of the environment. Ensures conservation and enhancement of the natural, built and historic environment, including landscapes and green infrastructure. Landscape character assessments and assessment of landscape sensitivity should be prepared and integrated with the assessment of any detrimental effect of a new development on the landscape. a) will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;	This LVIA has been undertaken to assess the effects of the Scheme upon the landscape and visual resource.
Local Policies		
Oxford Local Plan 2016-2036 – Adopted 8th June 2020		

Policy Document	Description in relation to LVIA and Relevance to the Scheme	Relevance to the Scheme
Policy G1: Protection of Green and Blue Infrastructure Network)	Green and open spaces and waterways of the Green and Blue Infrastructure Network are protected for their social, environmental and economic functions and are defined on the Policies Map. Planning permission would not be granted for development that would result in harm to the Green and Blue Infrastructure network, except where it is in accordance with policies G2- G8.	. Consideration of the potential effects the Scheme would cause on Oxfords green and blue infrastructure network have been assessed within this LVIA.
Policy G7: Protection of existing green infrastructure features	Planning permission would not be granted for development that results in the loss of green infrastructure features such as hedgerows, trees or woodland where this would have a significant adverse impact upon public amenity or ecological interest. It must be demonstrated that their retention is not feasible and that their loss would be mitigated. Planning permission would not be granted for development resulting in the loss or deterioration of ancient woodland or ancient or veteran trees except in wholly exceptional circumstances. Planning permission would not be granted for development resulting in the loss of other trees, except in the following circumstances: a) it can be demonstrated that retention of the trees is not feasible; and b) where tree retention is not feasible, any loss of tree canopy cover should be mitigated by the planting of new trees or introduction of additional tree cover (with consideration to the predicted future tree canopy on the site following development); and c) where loss of trees cannot be mitigated by tree planting onsite then it should be demonstrated that alternative proposals for new Green Infrastructure would mitigate the loss of trees, such as green roofs or walls.	Indicative tree planting has been proposed following this assessment to mitigate tree losses with the aim of repairing any fragmentation of the city's tree canopy cover. Indicative mitigation planting also includes green walls and low maintenance green roofs.
Policy G8: New and enhanced Green and Blue Infrastructure Network Features	Development proposals affecting existing Green Infrastructure features should demonstrate how these have been incorporated within the design of the new development where appropriate. This applies to protected and unprotected Green Infrastructure features, such as hedgerows, trees and small public green spaces.	Green and blue infrastructure has been incorporated within the design of the Scheme. This includes retaining or replacing trees and vegetation and using sensitive construction methods at the Sheepwash Bridge.

Policy Document	Description in relation to LVIA and Relevance to the Scheme	Relevance to the Scheme
	All proposals requiring a Design and Access Statement should demonstrate how new or improved green or blue infrastructure features would be incorporated	
Policy DH1: High quality design and placemaking	Planning permission would only be granted for development of high-quality design that creates or enhances local distinctiveness. All developments other than changes of use without external alterations and householder applications would be expected to be supported by a constraints and opportunities plan and supporting text and/or visuals to explain their design rationale in a design statement proportionate to the proposal (which could be part of a Design and Access Statement or a Planning Statement). Planning permission would only be granted where proposals are designed to meet the key design objectives and principles for delivering high quality development as set out in Appendix 6.1. of the Local Plan summarised checklist below: 1) Responding to site character and context 2) Natural Features and Resources 3) Movement 4) Designing development blocks, density and uses 5) Design of external areas 6) Plots and buildings 7) Ensuring quality 8) Design and alteration of buildings	The Scheme has been assessed within this LVIA with regards to how it responds to its character and context.
Policy DH2 Views and building Heights	The City Council would seek to retain significant views both within Oxford and from outside, in particular to and from the historic skyline. Planning permission would not be granted for any building or structure that would harm the special significance of Oxford's historic skyline. Planning permission would be granted for developments of appropriate height or massing, as demonstrated by the criteria given within the policy.	Consideration of the Scheme proposals with regards to views, view cones and proposed building heights have been assessed within the visual assessment of this LVIA.

Policy Document	Description in relation to LVIA and Relevance to the Scheme	Relevance to the Scheme
	Planning permission would not be granted for development proposed within a view cone or the setting of a view cone if it would harm the special significance of the view. The view cones and the Historic Core Area (1,200m radius of Carfax tower) are defined on the Policies Map.	
Policy SP1: Sites in the West End:	Planning permission would only be granted for new developments that follow the framework set out in the West End Design Code. Planning permission would only be granted for redevelopment of the station and Becket Street station car park if it improves the station for passengers and creates a strong sense of arrival to Oxford, and is in accordance with the Oxford Station Supplementary Planning Document (SPD.	The Scheme has been designed to improve the western approach to Oxford Station. Consideration has been given within the LVIA to the public realm improvements particularly along Botley Road.
Other Related Planning Documents		
Oxford City Council; Technical Advice Note (TAN 07) Oxford High Buildings. Supported by The Oxford High Buildings Evidence Based Report (EBR)	The purpose of the TAN, in combination with Local Plan policies and other guidance documents, is to set out a framework to assess a site's or area's potential for change and its ability to accommodate high buildings. The TAN seeks to: i. Allow the city to grow whilst protecting its key character and heritage, including listed heritage assets and conservation areas. ii. Secure opportunity for positive change including the establishment of development parameters to enable new placemaking policies. iii. Understand and define how the city as a historic asset is appreciated, including its wider landscape setting. iv. Support exploration of the development capacity of the city to inform growth scenarios, including those in development as part of the Local Plan.	Document reviewed in relation to Scheme proposals. Both the TAN and EBR provide relevant information regarding the typical building heights within the townscape character area in which the Schemes building and structures are proposed.
Assessment of the Oxford View Cones 2015	Observations made by Oxford City council Planners in 1962 led to the establishment of high buildings and view cone policies, which have served the city for fifty years in successive development plans.	The initial desktop visual study indicated the Scheme maybe visible within the Cities western view cones. Review of this document informed the visual

Policy Document	Description in relation to LVIA and Relevance to the Scheme	Relevance to the Scheme
	In light of the continuing challenges of building within the city this study was prepared to provide a basis of evidence and analysis that examines the significance of each of the views as a part of Oxford's heritage. This would be used to assess the impact of new development proposals and inform decisions to sustain the value of the contribution of the views to the city.	assessment with regards to the composition, value and susceptibility of views in the view cones.
Oxford City Council; West End Area Action Plan (2008)	The AAP recognises that Oxford Station performs a vital role and that development of the station should improve the capacity of the station as long as it is well designed, welcoming, easy to use and well connected to the existing station. It is essential that any development of the station improves it for passengers and creates a strong sense of arrival to Oxford. It is further suggested that car parking is maintained on Becket Street station car park and achieved by decking part of the site, without harming the setting of St Thomas' Church. Furthermore, creating an attractive environment for pedestrians and cyclists would encourage bus provision to and from the station.	Policy document considered in assessment of the Scheme. Providing greater understanding of the baseline conditions and opportunities available.
Oxford Station Supplementary Planning Guidance (2017)	Provides a guide for development proposals as part of an overarching vision to create a new transport interchange and a distinctive gateway to Oxford. The SPD provides a comprehensive and coherent policy framework to maximise the development potential of the station site and generate a positive dynamic with surrounding opportunity sites. The SPD provides a series of design principles for the station and its immediate surroundings which must be considered and responded to in order to achieve the overarching vision for the station area. The SPD includes an illustrative masterplan which represents one way in which the design principles could be interpreted.	Policy document considered in assessment of the Scheme. Providing greater understanding of the baseline conditions and opportunities available.

Table 9.3: Guidance relevant to this LVIA

Guidance Document	Description in relation to LVIA
Guidelines for Landscape and Visual Impact Assessment" (GLVIA3) - Landscape Institute/Institute of Environmental Management and Assessment, Third Edition, 2013; and GLVIA 3 Statement of Clarifications, published by the Landscape institute.	GLVIA3 provides the industry standard work on LVIA presenting an authoritative statement of the principles of assessment. Offering detailed advice on the process of assessing the landscape and visual effects of developments and their significance. OCC requested that the methodology for this LVIA followed these guidelines.
Landscape Institute Technical Information Note: Townscape Character Assessment 05/2017 (Revised April 2018)	Prepared by the Landscape Institute to explain how the principles and general approach of landscape character assessment can be applied to townscape character assessment.
Landscape Institute Technical Guidance Note: Visual Representation of Development Proposals 06/19	This guidance aims to help landscape professionals, planning officers and other stakeholders to select types of visualisations which are appropriate to the circumstances in which they would be used. It provides guidance as to appropriate techniques to capture site photography and produce appropriate visualisations. The new Guidance Note is also supported by a series of Technical Information Notes:
An Approach to Landscape Character Assessment, published by Natural England 2014.	This approach to Landscape Character Assessment follows a well-established process developed over many years. By setting down a robust, auditable and transparent baseline Landscape Character Assessments not only helps us to understand our landscapes, it also assists in informing judgements and decisions concerning management of change.

9.3 Methodology

Introduction

9.3.1 This section reports the consultation undertaken, defines the study area, temporal scope, the sources of baseline data, and the methodology and significance criteria. The limitations and assumptions of the study are also described.

Consultation

9.3.2 The scope and method of assessment for this LVIA was presented in the Environmental Impact Assessment Scoping Report (Network Rail, 2020). Oxford City Council issued a Scoping Opinion in response to the Scoping Report in January 2021. The Scoping Opinion included a requirement for an LVIA to be included in the Environmental Impact Assessment (EIA) and gave further direction on the content of the assessment. Table

9.3.3 An overview of consultation undertaken on the Scheme is summarised in Chapter 4 – Approach to Environmental Assessment.

9.3.4 In relation to the LVIA there has been engagement with the following stakeholders:

- Urban Design and Heritage Officer; Oxford City Council to initially select and agree representative viewpoints to inform the assessment.
- Principal Planning Officer; Oxford City Council to agree the methodology set out in Appendix 9.1 within Volume 4.

9.3.5 Table 9.4 summarises the consultation responses that were received regarding the scope and methodology to be applied in the EIA. The methodology for this assessment has considered the feedback received and where appropriate the scope and method have been revised.

Table 9.4: Summary of EIA Scoping Report consultation responses for LVIA scope and methodology

Consultee	Issues raised in response to the Scoping Report	Summary of the response to issues raised
Oxford City Council (OCC)	Officers agree with the Scoping Report that the list of potential visual receptors should be reviewed and identified through the Zone of Theoretical Visibility (ZTV). The map and viewpoints detailed in the letter submitted on the 15th October are considered acceptable. It is important the impact of the proposed station building on distant views is adequately assessed.	The list of visual receptors agreed with OCC was established following the production of the ZTV. This was modelled and based on the parameters of the proposed western entrance building with a height of 7.92m. This indicated that the theoretical extent of visibility lay predominantly to the western side of Oxford. Which in turn led to our identification of 19 visual receptors to be checked and reviewed in this LVIA.
Oxford City Council	The Scoping Study should give consideration to Oxfordshire Wildlife and Landscape Study (OWLS) even if it might not require to be scoped in.	The OWLS assessment has been considered in this LVIA.
Oxford City Council	A methodology has not been submitted at this stage, but the report suggests using the Design Manual for Roads and Bridges, LA107 Landscape and visual effects, Revision 0. Whilst being similar to the Guidelines for Landscape and Visual Impact Assessment Third Edition (GLVIA3) by the Landscape Institute, it is recommended that the Landscape Institute guidance is used for developing the assessment methodology. It is also recommended that the methodology is agreed prior to the assessment being carried out. The use of Type 3 visualisations in line with the Landscape Institute's guidance 'Visual Representation of Development Proposals' LI TGN 06/19 seems appropriate.	A methodology based on GLVIA3 was submitted and agreed with OCC. The use of both Type 1 and Type 3 visualisations have been produced as agreed.
The Gardens Trust	The Gardens Trust has provided a comment and has asked that the Environmental Statement needs to consider the impact of the proposals on Worcester College garden. Views of the building from this location will therefore be required unless subsequently proven and agreed with the City Council that the existing Youth	Written confirmation from the Gardens Trust to OCC dated 29th January 2021, stated that the existing YHA building at the Oxford Station is not visible from the College garden, nor from the principal first floor buildings. Also, there is no view of the YHA from the new Sultan

Consultee	Issues raised in response to the Scoping Report	Summary of the response to issues raised
	Hostel Association (YHA) building is not visible and therefore the baseline building would not be visible from the College.	Nazrin Shah Centre, Sainsbury Library in the centre of the College. Therefore, views from The Grade II* listed garden at Worcester College were scoped out of this assessment.
Oxford City Council	The impact on archaeological remains, historic buildings and historic landscapes needs to be considered as part of the Environmental Statement. For clarity, this must include a robust LVIA for listed buildings, important identified views (both in and out of the City) and consideration for the impact on designated and non-designated heritage assets.	This LVIA considers the presence of Listed Buildings with regards to the value they contribute to the overall landscape character and not as individual receptors. The effects on all heritage assets and their settings are assessed in Chapter 8 - Historic Environment. Important views which clearly fall within the ZTV are considered within the visual assessment.

Study Area

9.3.6 The study area for the landscape assessment includes the site and surrounding landscape up to a 1km offset from the red line boundary. This was considered the geographical area in which the Scheme may influence the landscape in a significant manner. Beyond this distance, it is not considered likely that there would be any significant landscape effects given the relatively small scale of the Scheme in the context of the existing townscape.

9.3.7 General landscape baseline information has, however, initially been investigated up to 2km from the Scheme to provide a comprehensive geographical context, as shown in Figure 9.2.

9.3.8 The study area for the visual assessment is two-tier. A wider study area is shown on Figure 9.4 which considers distant viewpoints within 5km of the site. This enables understanding of the visual influence of the proposals within the identified and protected Oxford view cones. A closer study area up to 1km from the red line boundary is shown on Figure 9.5. This reflects the more local views from the Scheme's surrounding townscape.

Temporal Scope

9.3.9 Baseline conditions are described using available data sources, including consideration of how this baseline may change from present day to the year of construction (i.e. the future baseline in the absence of the Scheme).

9.3.10 The temporal scope of this assessment was:

- baseline year: 2020/21;
- future baseline year (first year construction): 2022; and
- future baseline year (first year operation): 2025.

Baseline Data

9.3.11 The LVIA baseline has been established using the following sources of information:

- 1:25,000 scale Ordnance Survey Explorer Map.
- Aerial photography (Google Earth/Google Maps).
- MAGIC GIS data sets:
  - Special Area of Conservation (SAC);

  - Sites of Special Scientific Interest (SSSI);
  - Ancient and Semi-Natural Woodland;
  - Scheduled Monuments;
  - Listed buildings;
  - Registered Parks and Gardens; and
  - Open Access Land.
- Other GIS Data Sets:
  - Ancient/Veteran Trees: Woodland Trust;
  - Tree Preservation Orders (TPOs): Oxford City Council (OCC); Local View Maps (maps.oxford.gov.uk);
  - Local Wildlife Sites: OCC;
  - Oxford City Wildlife Sites: OCC;
  - Oxford Green Blue Infrastructure Network: OCC;
  - Oxford Historic Core Area: OCC;
  - Oxford View Cones: OCC;
  - Conservation Areas: OCC;
  - Public Rights of Way (PRoWs) and Long Distance Paths: OCC;
  - Landscape/Townscape Character Areas: OCC; and
  - Topography: Environment Agency LIDAR Composite DSM and DTM 2017 and Ordnance Survey OS Terrain® 50 Open Data.
- Appendix 9.2 – Tree Survey and Arboricultural Impact Assessment.
- Appendix 4.1 – Ecological Assessment and Preliminary Ecological Appraisal.
- Chapter 8 – Historic Environment.

9.3.12 The following field surveys were carried out to inform the assessment:

- Preliminary landscape and winter visual survey, February 2020.
- Photography of representative visual receptor summer visit, July 2020.
- Photography field work for photomontages, February 2021.

<u>Assessment Methodologies</u>

9.3.13 The methodology for the LVIA is set out in in Appendix 9.1 within Volume 4. It is in accordance with the Landscape Institute guidance, GLVIA3.

9.3.14 The criteria used to determine the sensitivity of landscape and visual receptors within the study area, the magnitude of effect and significance of effect, is based on the typical descriptors set out in Appendix 9.1 - LVIA Methodology. This Appendix also contains the methodology for preparation of 'Type 1' and 'Type 3' visualisations of the Scheme, which were used to help inform the LVIA.

9.3.15 For this LVIA, effects of moderate significance or greater have been considered to be significant.

Matters Scoped out of the Assessment

9.3.16 The matters that have been scoped out of this topic assessment, in accordance with the Scoping Opinion (contained in Appendix 1.1 within Volume 4), are:

- effects on Green Belt;
- effect on National Landscape Character Area; and
- effects on National Cycle Route.

9.3.17 These matters have been scoped out on the basis that they would not be likely to result in a significant effect on the landscape and visual resource.

9.3.18 Since the Scoping Opinion was received, the following matters have been scoped out as a result of the iterative EIA process:

- effects of views from the Grade II* listed gardens at Worcester College (see Table 9.4).

Limitations and Assumptions

9.3.19 Limitations and assumptions for LVIA comprise the following matters:

- Every effort has been made to ensure that the photographs and their locations are "representative" of the Scheme and its surroundings. However, weather conditions and seasonal factors may influence the visual assessment and photographic record of the site.
- Access to assess the predicted visual effects from the front of private individual properties has not been possible for all the residential dwellings surrounding the Scheme. In such locations, the assessment of likely visual effects has been made from vantage points and representative views taken from the nearest available public viewpoint.
- The establishment and growth rates for the landscape design proposals are based upon established Forestry Commission methods. It is assumed

that new planting of native trees and shrubs would achieve a height of 10-12m after 10-15 years unless planted as semi-mature specimens. Semi-mature trees are assumed to achieve a height of 12m after 10 years.

- The implementation of the landscape design and mitigation measures would be carried out at the end of construction works.
- During the construction period, existing trees and their roots, vegetation and other landscape elements to be retained would be protected with the implementation of a Construction Environment Management Plan (CEMP) and a suitable arboricultural method statement.
- When operational, the existing and new landscape features would be maintained and managed in the long term by way of a Landscape Management Strategy. Any such strategy should be a flexible document which can be updated if conditions or proposals for the site change.

9.4 The Existing Landscape

9.4.1 The landscape baseline comprises:

- the landscape character of the site and surroundings;
- the components i.e. topography, land use, urban grain, vegetation, settlement patterns and the individual elements and aesthetic and perceptual aspects of the landscape that contribute to its character;
- the value placed upon the landscape - factors that help in the understanding of this include: existing landscape designations (international, national or local); presence of conservation, historical and / or cultural interest (international, national or local); scenic quality; recreational value and; memories / associations i.e. some landscapes are associated with particular painters or writers or events in history; and
- the condition or the physical state of the landscape - including the condition of elements or features such as buildings, hedgerows or woodland and any evidence of current pressures causing change.

9.4.2 Oxford is a world-renowned historic city and one of England's great university cities. The historic university buildings are a major attraction for visitors to Oxford. The rich and diverse architecture and the quality of craftmanship are characteristic of central Oxford. It is these buildings that form the unique and distinctive skyline of Oxford, the `dreaming spires' that are renowned across the world. As one moves away from the historic core the suburbs of Oxford progressively become more recent in age.

County Level Landscape Character

9.4.3 The Oxfordshire Wildlife & Landscape Study (OWLS) is the current landscape character assessment for Oxfordshire. This county-wide study is described by Oxfordshire County Council as not a 'pure' landscape character assessment but an assessment which explores the interrelation between landscape character and biodiversity. The study covers only rural districts and parishes and not Oxford City.

9.4.4 There are twenty-four separate landscape types within the county, made up of smaller individual landscape description units with a similar pattern of geology, topography, land use and settlements. The GIS data set for the OWLS study was downloaded and overlaid onto OS mapping, see Plate 9.1. The OWLS does not cover the application site itself, the boundary of one of the landscape types (10. River Meadowlands) and local character area (N. Upper Thames - UT/4) runs on the western side of the River Thames opposite the Sheepwash Channel, (shown in blue on Plate 9.1).

Plate 9.1: Oxfordshire Wildlife & Landscape Study (OWLS)

© Oxfordshire County Council 2004

9.4.5 As the site lies outside of this character area it is considered that the Scheme would not have any significant effects on the county landscape character areas. They have therefore been scoped out from this assessment.

District Level Landscape Character

9.4.6 The current Oxford City landscape character assessment; entitled: A Character Assessment of Oxford in its Landscape Setting (Land Use Consultants, 2002) is structured into a two-tiered assessment:

- A 1:25,000 scale study undertaken for the city of Oxford and its setting to identify what makes the setting to the city distinctive and why. This identifies landscape types and landscape character areas. The purpose of which identifies:
  - the characteristics that distinguish the different landscapes underlying and surrounding Oxford;
  - what contribution the landscapes make to the setting of Oxford; and
  - opportunities to conserve or enhance the landscape setting.
- A 1:10,000 scale, detailed townscape assessment of the area within the administrative boundary of Oxford to identify what makes the landscapes within the city distinctive and why.

9.4.7 The landscape character assessment (at the broader 1:25,000 scale) of Oxford and its setting is characterised by eight distinct landscape types. These eight landscape types are each subdivided into discrete character areas. Landscape character areas are geographically specific areas within a landscape type, each with their own individual character or `sense of place'.

9.4.8 The landscape character assessment considers settled and open land but does not take into account the styles of built development within the built-up area of Oxford. In this way the landscape character areas can be seen to flow underneath the city where they may inform management of rural landscapes and open space within the city boundaries.

9.4.9 The site is identified as lying within the Landscape Character Type 2: Pastoral Floodplains and the Landscape Character Area (LCA) 2A: Thames (Isis). The characteristics of this character type are given within Table 9.5.

Table 9.5: Key Characteristics and Features of Landscape Character

Oxford City Landscape Character Assessment – Tier 1 at 1:25,000 Scale		
Landscape Character Area and Type	**Key Characteristics and Features**	**Identified Opportunities**
Landscape Character Type 2: Pastoral Floodplains Landscape Character Area (LCA) 2A: Thames (Isis)	The Thames floodplain is particularly notable for its historic commons and meadowlands, including Port Meadow, Pixey Mead and Wolvercote Green. The Thames National Trail runs along the length of the river and a number of historic sites such as Godstow Abbey and Binsey are found along its length. Historic wooded groves are also features of the Thames floodplain. The floodplain forms a setting for the historic core of Oxford, most famously at Christchurch Meadow. The industrial/retail estates of the Botley Road are built in the floodplain and obscure views across the floodplain on the western approach into Oxford. There is also encroachment by infrastructure, such as the electricity pylons south of Botley, and the A34.	The opportunities in relation to the setting of oxford are identified as: • Maintain historic continuity of land use of the water meadows and commons. • Promote traditional management of meadowlands (pasture and hay cropping) and trees (pollarding of willows). • Maintain open character and views across the floodplain. • Maintain opportunities for public access and enjoyment of this pastoral landscape. • Conserve and enhance wildlife resource and wetland habitats. • Unsuitable landscape for built development. • Opportunity to enhance western approach to Oxford.

9.4.10 The townscape character assessment (at 1:10,000 scale) identifies a two-stage characterisation; the classification of generic townscape types which are subdivided into geographically unique townscape character areas.

- Townscape Types:
  - These are generic areas of consistent character, predominantly defined by combinations of natural features and built features and their relationship. 11 generic townscape types have been identified across Oxford.
- Townscape Character Areas (TCAs):
  - These are geographically specific areas of a townscape type, which have their own individual character or `sense of place'. Within the City of Oxford and its setting there are 52 discrete townscape character areas.

9.4.11 The linear nature of the station and railway corridor creates severance within this urban landscape, which is reflected in the townscape character assessment. As such the Scheme crosses three character areas. These are:

- Townscape Type 2: Historic Fringe;
  - TCA: 2B Western Fringe. The Scheme is predominantly included within this character area located to its western edge.
- Townscape Type 4: Victorian Suburbs and Villages;
  - TCA: 4E New Osney. The western extents of the Scheme abut this character area. Botley Road crosses both 4E and 2B.
- Townscape Type 9: Pastoral Floodplains;
  - TCA: 9A Thames (Isis)-North. The northern extents of the Scheme beyond Sheepwash Bridge are included within this character area.

9.4.12 Development of the Scheme on this site would have influence over all three identified TCAs. Table 9.6 summarises a brief description of these..

9.4.13 Maps and detailed information about both the landscape and the townscape character types and areas are included within Appendix 9.3. – Extracts from Local Landscape Character Assessments. In addition to this The Oxford High Buildings Technical Advice Note (TAN) (Oxford City Council & LDA Design, 2018a), includes a map which illustrates these townscape character areas at a clear resolution. Extract shown in Plate 9.2 for ease of reference.

Plate 9.2: Oxford City Townscape Character Assessment – Map Extract from OCCs High Buildings Technical Advice Note

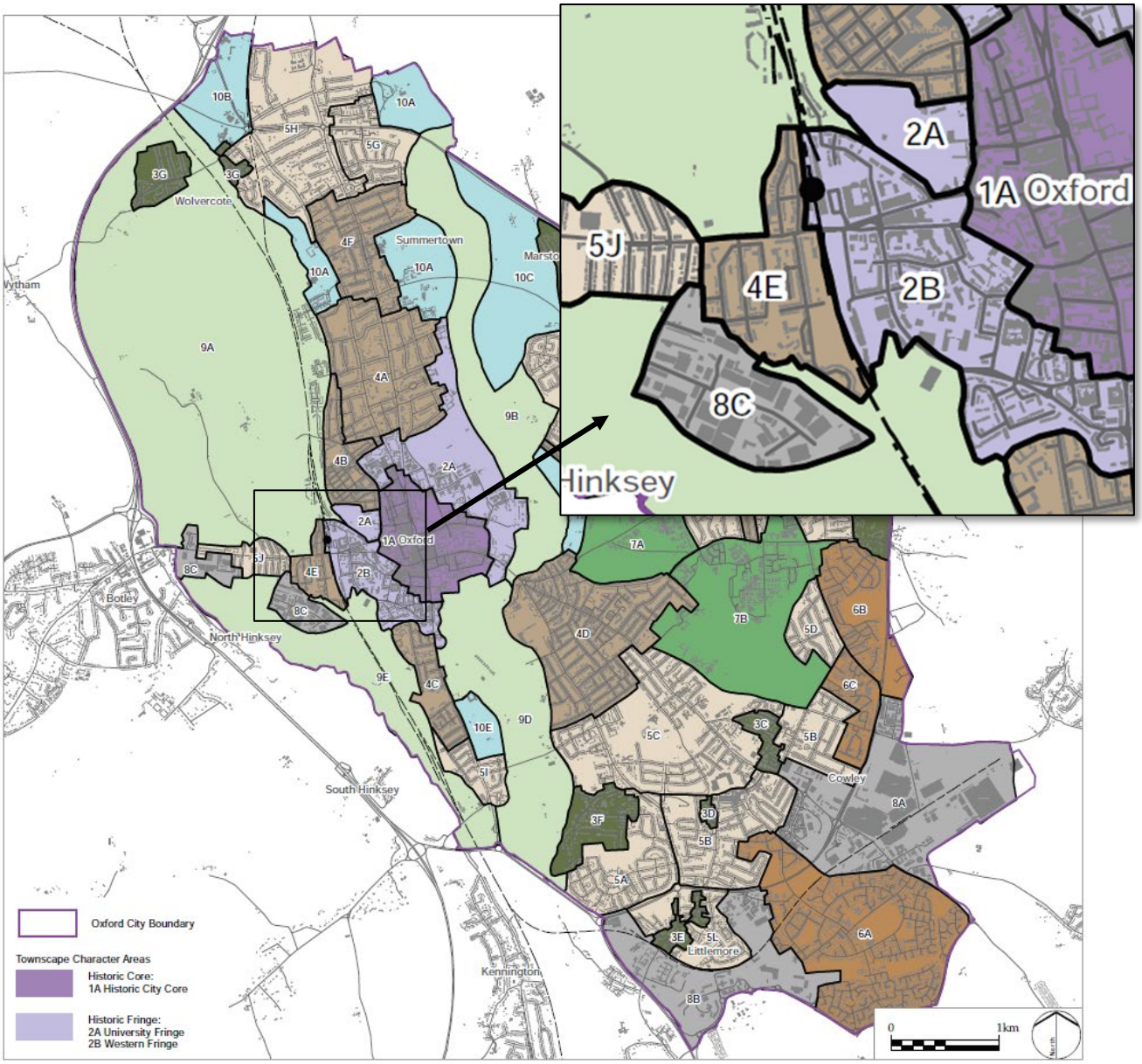

Figure 2: Townscape Character

Historic Village Cores:
3A Old Marston Core
3B Old Headington Core
3C Temple Cowley
3D Church Cowley Core
3E Littlemore Village
3F Iffley Village
3G Wolvercote
3H Headington Quarry

Victorian Suburbs and Villages:
4A North Oxford
4B Jericho
4C Grandpont
4D East Oxford
4E New Osney
4F Summertown
4G New Headington
4H New Marston Village

Inter-war / Post-war Suburbs:
5A Rose Hill
5B Cowley Residential Suburb
5C Florence Park and Cowley Marsh
5D The Slade
5E New Headington
5F New Marston
5G Cutteslowe / Sunnymead
5H North Oxford Fringes
5I New Hinksey
5J Botley Road
5K Barton
5L Littlemore
5M Sandhills and Risinghurst

Post 1960s Suburbs:
6A Blackbird Leys
6B Wood Farm
6C Horspath Road Area

Post 1960s Suburbs:
6A Blackbird Leys
6B Wood Farm
6C Horspath Road Area

Open Hills (with Institutions):
7A Headington Hill
7B Southfield Park and Hospitals Complex
7C John Radcliffe Hospital

20th Century Fringe Business, Industry and Retail:
8A Cowley Motor Works
8B Littlemore Business and Science Parks
8C Botley Industrial and Retail Parks

Pastoral Floodplains:
9A Thames (Isis) north
9B Cherwell Valley
9C Bayswater Brook
9D Thames (Isis) south
9E Hinksey / Bulstake Streams

Open River Terraces:
10A North Oxford Open River Terrace
10B Peartree Open River Terrace
10C Marston Open River Terrace
10D St Clements Open River Terrace
10E New Hinksey Open River Terrace

Garden Suburbs:
11A Headington Hill

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Table 9.6: Key Characteristics and Features of Townscape Character

Oxford City Townscape Character Assessment – Tier 2 at 1:10,000 Scale	
Townscape Character Area and Type	**Summary Description of Townscape Character Areas** **Refer to Appendix 9.3 for further detail.**
Townscape Type 2: Historic Fringe Townscape Character Area (TCA) 2B: Western Fringe	The Western Fringe wraps around the western edge of the historic core of Oxford. It is an area accommodating diverse land uses and ages of development. It is dominated in parts by the busy Oxpens Road and key roads into the centre such as Park End Street, as well as access to the Oxford Station and bus station. However, between these busy routes and nodes, lies a dense jumble of historic buildings, retail and service development, and residential and academic land uses. The area has evolved in a piecemeal way, with remnants of Victorian residential development, largely cleared in the post war period, making way for commercial development and later, in the 1960s, for the broad sweep of Oxpens Road. The area is characterised by large-scale post war commercial development with the remnants of older settlements and the canal. Today, it is an area dominated by busy roads, large modern buildings and piecemeal commercial and residential development, which strongly influence the perception of the western approach to the historic city. The canal provides the only public open space in this part of the city. • Despite its proximity to the historic core, this area has a confusing street/block pattern and poor legibility. • Poor visibility of the canal that flows through this part of the city. • Gateway location - the station is the first point of arrival for many visitors, but the streetscape and lack of clarity of routes creates a confusing introduction to Oxford, with few clues as to the character of the historic city the visitor is about to enter. • Historic time depth, indicated by the varying ages of buildings and presence of historic features such as the Norman castle. • Lies within the view cones of the key viewpoints identified from Raleigh Park and Boar's Hill which heightens its sensitivity to tall built elements. Changes to consider within the TCA since 2002: Redevelopment of Frideswide Square c.2015 has brought about improvements in the legibility and quality of the public realm near the Oxford Station. The core objective for this area would be to address the fragmentation of layout and development styles, through a programme of development and streetscape improvements.
Townscape Type 4: Victorian Suburbs and Villages	New Osney is an area dominated by dense residential town houses built between 1850 and 1900, on the alluvial floodplain of the Isis (River Thames), to the west of the railway. The whole area is threaded by branches of the Isis (River Thames) which give this area its unique character and sense of place, distinguishing it from other Victorian suburbs across the city. A quiet residential urban area that is disconnected from the city centre by the railway line.

Oxford City Townscape Character Assessment – Tier 2 at 1:10,000 Scale	
Townscape Character Area and Type	**Summary Description of Townscape Character Areas** **Refer to Appendix 9.3 for further detail.**
Townscape Character Area (TCA) 4E: New Osney	Terraced houses are simple domestic two storey cottages. They are red brick, or plaster rendered, with slate roofs and doors directly onto the street. The regularity of type and pattern of fenestration and doorways contributes an integrity to the streetscape. This is enhanced by the red brick garden walls, black street signs and consistent width of road and footway. Branches of the Thames with adjacent grassy banks lined with pollarded willows are characteristic features of this area and provide a range of aquatic and marginal terrestrial habitats, acting as wildlife corridors through the urban area. The peaceful Osney Cemetery is also an important wildlife haven, an area of ruderal grassland and trees hidden behind a boundary wall and railings. The large red brick industrial buildings associated with the canal stand out as landmarks, contrasting with the human scale of the domestic terraces. • The distinctive area known as Osney Island is cut off by waterways and accessed by a single road bridge. • Has a distinctive `backwater' character with characteristic dead-end streets to the river and railway. • Has a special relationship with the Thames and Thames National Trail. • Little redevelopment has taken place for a site so close to the city centre. However, some modern infill has begun to break down the regular street and block pattern on the edges of the area, particularly to the south • Little reference to the historic site of Osney Abbey. • Lies under the view cone of the key viewpoints identified from Raleigh Park and Boar's Hill and this heightens its sensitivity. • The core architecture of Osney Island is protected by its Conservation Area status. Changes to consider within TCA since 2002: Redevelopment of commercial - Avis car hire site into blocks of terrace housing on Abbey Road adjacent to River Thames. C.2015 Restoring the integrity of street block pattern in this area, materiality and design in keeping with rest of street. • Cherwell House student accommodation - built c.2013. Modern infill adjacent to railway corridor off Osney Lane, redevelopment of former brownfield site. Its built form mimics the linear terrace and dead-end street characteristic of the TCA. Ageing and subsequent loss of mature willows along the Thames; • continuing traditional management techniques such as pollarding of willows to maintain character of the open spaces;
Townscape Type 9: Pastoral Floodplains	This peaceful floodplain lies to the west of the historic core of Oxford, providing a contrast in scale and character to the busy centre, and is part of the iconography of Oxford celebrated in numerous landscape paintings.

Oxford City Townscape Character Assessment – Tier 2 at 1:10,000 Scale	
Townscape Character Area and Type	**Summary Description of Townscape Character Areas** **Refer to Appendix 9.3 for further detail.**
Townscape Character Area (TCA) 9A: Thames (Isis) North	The historic meadows, pastures and commons around Port Meadow, Godstow, Binsey and Medley are a strong influence on the character of the area today. Coppiced willows, growing alongside watercourses, are features of the floodplain. Some of the historic events that have defined the Thames (Isis) - North are the informal 17th century enclosure of fields west of the Thames, the arrival of the Oxford Canal in 1790 and the railway in the 19th century. More recently, the arrival of the northern ring road, gravel workings, industrial workshops, allotment gardens and residential housing have affected the tranquillity of the area. • This area is highly distinctive as a result of its flat topography, expansive open space, riverside and canalside walks and species rich, traditionally managed, grasslands. All of which are crucial to the character • Strongly influenced by the history of land management and the richness of wildlife. Port Meadow is a landscape that has changed little since prehistoric times • The long management history and survival of historic features result in a landscape of exceptional quality illustrating a high survival of floodplain features. • The area has a strong visual and cultural unity and a high functional integrity. The open character affords long views of the city plays an important role in the rural setting of Oxford • Particularly sensitive to change as a result of its impressive historic remains, international ecological importance and open character. It also lies within the view cone of the key viewpoints identified from Wolvercote Common and the A34 and this heightens its sensitivity tall built elements. No notable changes to TCA since 2002, likely due to conservation interest and sensitivity of TCA.

Other District Level Character Assessments

9.4.14 Postdating the Oxford City Landscape Character Assessment is Oxford City Council's; Central Oxford Historic Urban Character Assessment (2012) which provides a series of character area statements. Each character statement provides a description of the area and a short summary of its historic, evidential, aesthetic and communal values, based on the criteria set out by English Heritage in Conservation Principles, Policies and Guidance (2008).

9.4.15 The Historic Environment Chapter 8 in this Environmental Statement assesses effects upon the Oxford City Council Historic Landscape Character. However, the published urban character assessment identifies character areas which consider the modern urban morphology and the historic processes that shaped them. It provides further evidence and key characteristics that contribute to the townscape and sense of place within a given area of Oxford. The study sub divides the city to a greater level of detail, and this has been considered alongside the Oxford City Landscape Character in this LVIA.

9.4.16 Detailed information from the Central Oxford Historic Urban Character Assessment is included within Appendix 9.3 Extracts from Local Landscape Character Assessments. Any Information of relevance has been considered when undertaking the assessment of landscape effects.

9.4.17 For ease of refence extracts of the character zones maps from the historic urban character assessment are included in Plates 9.3 – 9.5: The site lies across the Historical Urban Character Areas (HUCA) 1 and 3 of the Osney Island Urban Character Zone.

Plate 9.3: Central Oxford Historic Urban Character Assessment Map

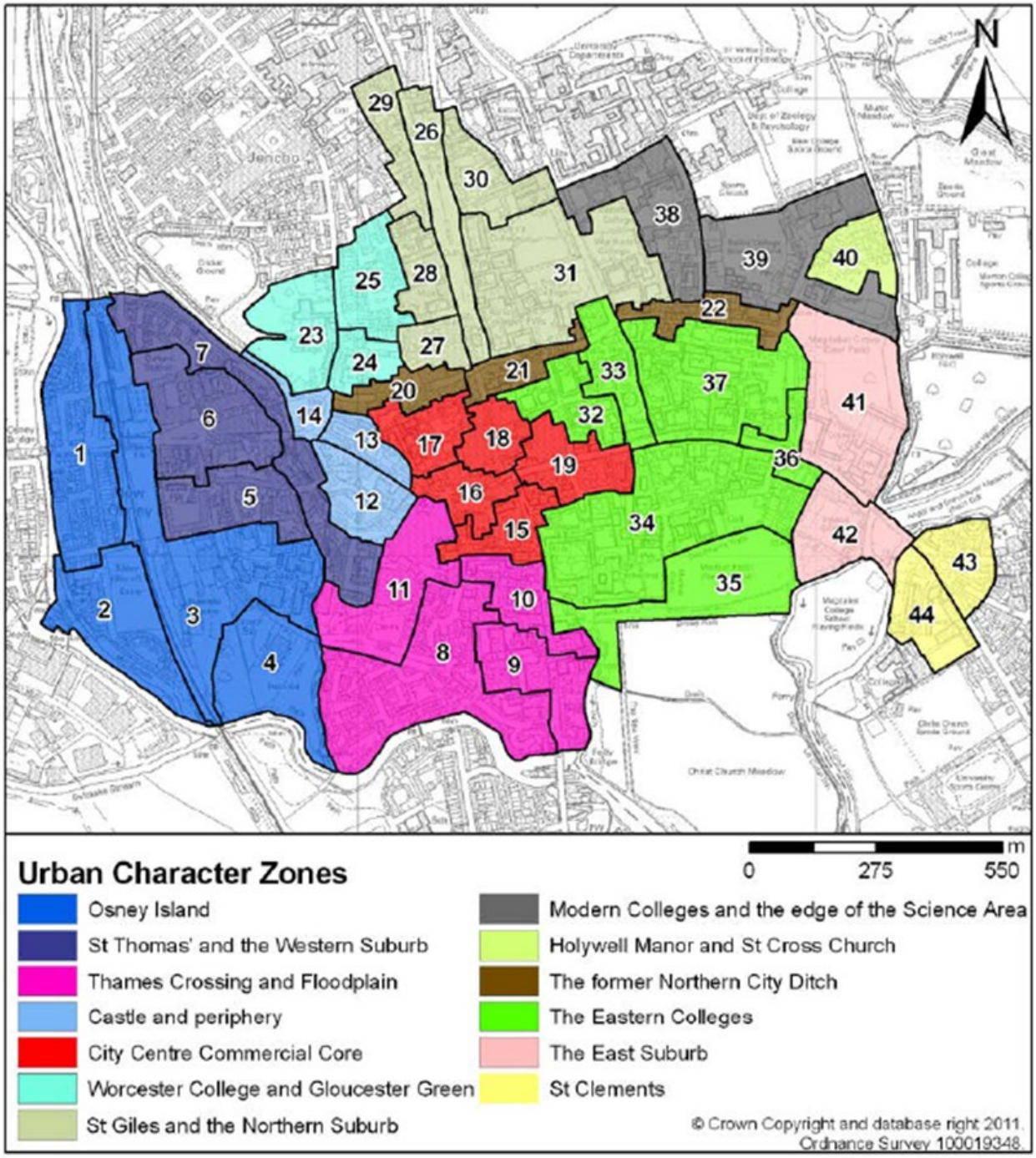
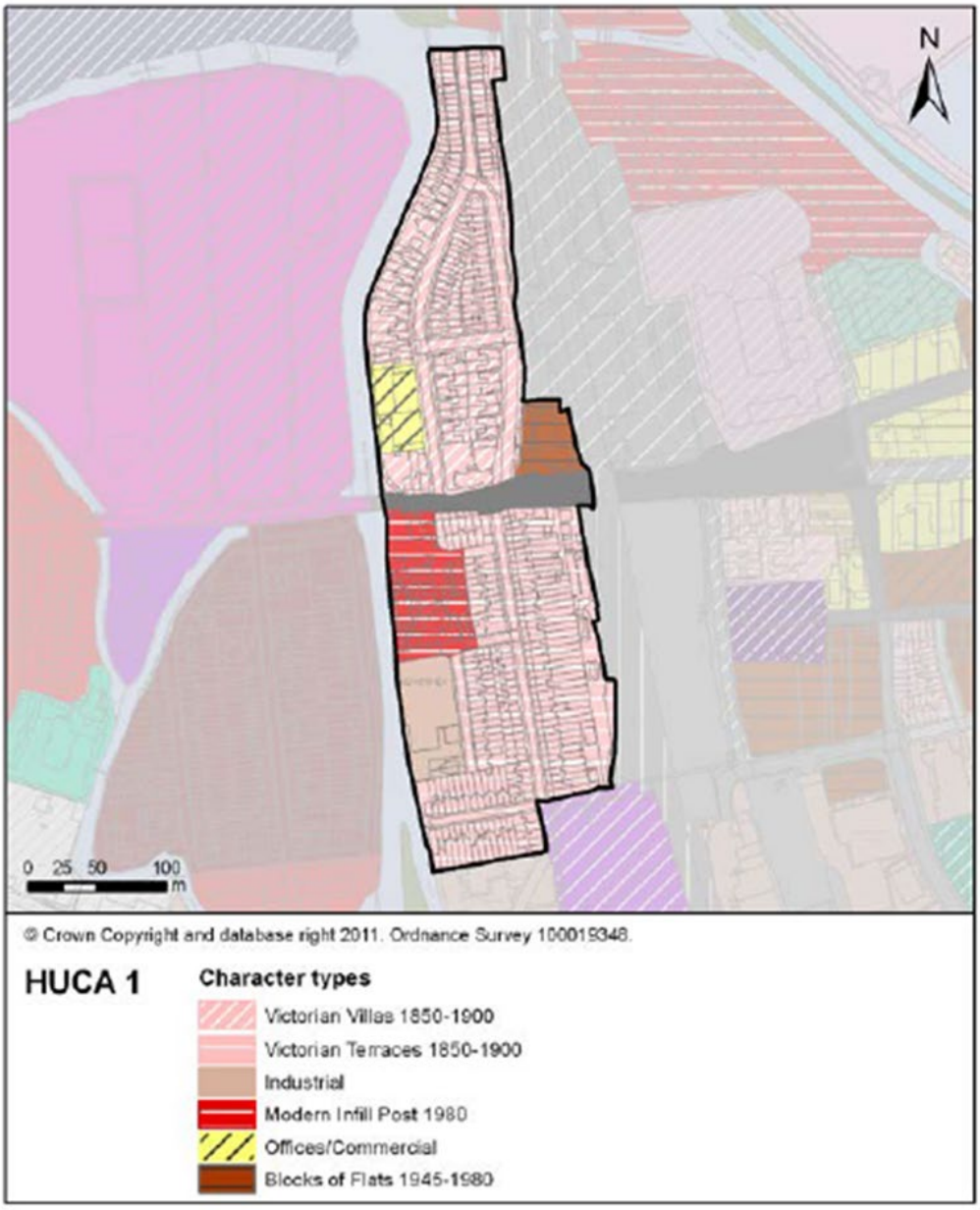


Plate 9.4: Osney Island: HUCA 1 (Mill Street and Botley Road)



9.4.18 Of relevance the Historic Urban Character Assessment notes HUCA 1 is:

- Comprised of largely coherent residential development providing a tranquil environment to the north and south of the busy arterial Botley Road. The built character comprises high density Victorian working-class housing to the south of the Botley Road and more decorative medium density Victorian housing to the north.

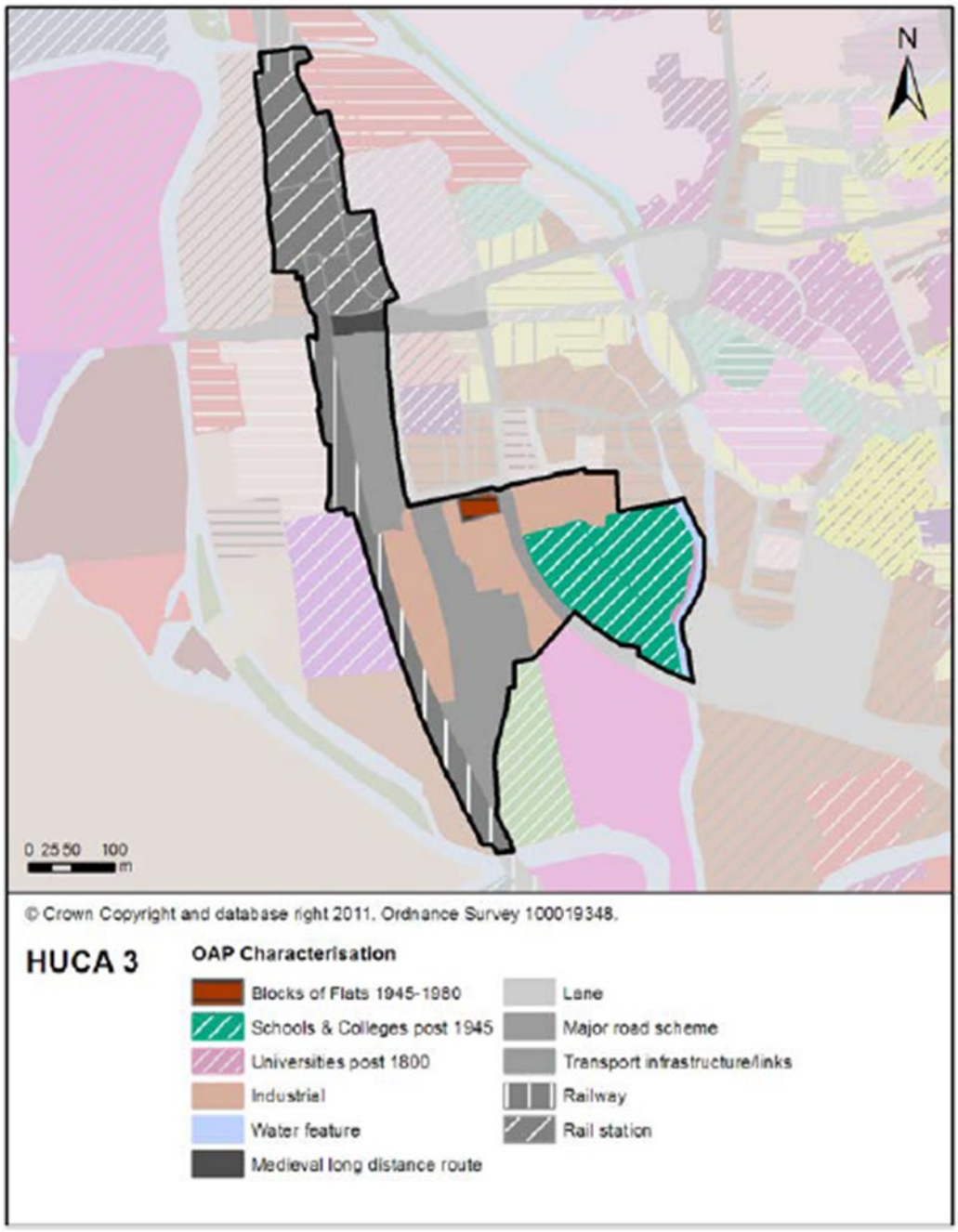
- The character area is illustrative of late 19th and early 20th century workers' housing and the late industrial development of Oxford's western suburb, including the influence of both rail and waterways.

- The Toll House on Botley Road is an attractive historic structure and has

recently been sensitively renovated (into The One, Restaurant and bar). The rundown condition of the town houses overlooking Botley Road somewhat diminishes the aesthetic value of the area.

- The area on which the current YHA is sited is defined as 'Blocks of Flats 1945-1980', a more recent addition to the area.

Plate 9.5: Osney Island: HUCA 3 (Transport and Business)



9.4.19 Of relevance the Historic Urban Character Assessment notes HUCA 3:

- The land broadly defined by the railway corridor and station has communal value as a transport hub containing the city railway station and long stay

car parks. It preserves a number of evocative remnants from the Railway Age; the Line of 19th century railway and 19th century scheduled railway Swing Bridge.

- The area includes part of the east-west route of the post medieval Botley Road Causeway which was re-cut under the 19th century railway and Oxpens Road completed in 1931.

Condition of the Site

9.4.20 The site consists primarily of:

- Railway line, bridges and track sidings; running north – south, with the existing station buildings situated centrally;
- Roads and car parks; The A420 Botley Road crosses the centre of the site underneath the railway line. Cripley Road and Roger Dudman Way run along the north western edge of the site. The large car park area of Becket Street station car park lies in the southeast corner of the site;
- Waterways; The Sheepwash Channel flows underneath the railway line in the north of the Scheme, connecting the River Thames to the west and the Castle Mill Stream next to the Oxford Canal to the east; and
- Commercial Properties; The four storey, Oxford YHA abuts both Roger Dudman Way and Botley Road in the central western area of the site.

9.4.21 The linear severance of the railway line forms a definitive break in land use with residential terraces to the west of the red line boundary and the retail, commercial, educational and historical city core which lies to the east.

9.4.22 The central areas of the site are degraded somewhat with low aesthetic appeal. There are graffitied dark brick walls and tall steel fencing along Botley Road. Botley Road passes underneath the industrial and utilitarian railway and pedestrian bridges that form a western gateway into the historic city of Oxford. The transient experience of passing through this gateway is poor and uninviting where pedestrians, cyclists and traffic are confined to a relatively small dark space. Pedestrians on the northern path are particularly exposed to traffic on the very narrow footpath immediately adjacent to the carriageway. Cyclist currently have to travel on the road.

9.4.23 The YHA is a three-storey building raised up from street level with a curved frontage and signage facing forward onto Botley Road. It stands approximately 11.6m above the street level. It is built from a buff coloured brick similar in colour to the adjacent Victorian properties along Cripley Road. It also has a dark roof which is again similar to the neighbouring properties. The two single storey buildings which lie to the west of the YHA adjoining

Cripley Road are degraded in quality. There is a confusing layout at the junction of Botley Road, Roger Dudman Way and Cripley Road with areas of parking which add to the poor quality of this space.

9.4.24 This collection of buildings lies on an area identified as 'Block of Flats 1945-1980' in the Oxford Historic Urban Character Area study. The rest of its associated character area is primarily Victorian residential terraces and villas.

9.4.25 The trees and vegetation surrounding this central area are of high and moderate quality with several TPOs. Trees within an urban environment are a valued resource for the benefits they bring, including filtering pollutants, removing carbon dioxide, providing oxygen, shading and cooling. Visually they soften the surrounding built form, they provide important screening, and enhance the public realm and setting of the residential properties.

9.4.26 The northern areas of the site comprise the railway, road and footbridge traversing the Sheepwash Channel. There is a joining of PRoWs which align with the canal and rivers and provide connectivity into the southern tip of the historically and ecologically important Port Meadow area. The Thames Path National Trail lies just to the west of this area with Victorian terraces adjoining the Thames and canal waterways. The bridges are utilitarian, degraded and are low, users of the footpaths have to stoop to walk underneath. The spaces are dark and uninviting.

9.4.27 The southern areas of the site contain the functional railway corridor itself with the associated Becket Street station car park. This is a large tarmacked surfaced car park with limited mixed quality tree shrub belts at the edges. To the south of the car park the Osney Lane Footbridge over the railway corridor connects to Osney Island Conservation Area. This is functional but degraded with poor aesthetic appeal.

<u>Landscape Designations</u>

9.4.28 Landscape and other relevant designations within the landscape study area are shown in Volume 3 – Figure 9.2.

Nature Conservation Designations

9.4.29 The effects on nature conservation designations are discussed in Appendix 4.1 – Preliminary Ecological Appraisal within Volume 4 The following designations are fully considered within this LVIA for the contribution they provide to the landscape character of the site and study area. These include:

- Internationally Designated Sites.

- Special Area of Conservation (SAC) Nationally Designated Sites:
  - Sites of Special Scientific Interest (SSSI);
  - Ancient and Semi-Natural Woodlands; and
  - Ancient, Veteran and Notable Trees.
- Locally Designated Sites:
  - Local Wildlife Sites –County level designation; and
  - Oxford City Wildlife Sites –District level designation.

9.4.30 There is one SAC within the 2km study area, Oxford Meadows SAC, approximately 700m north of the Scheme. There are also five Sites of Special Scientific Interest (SSSIs): The closest of these is Port Meadow. with Wolvercote Common and Green SSSI approximately 700m north of the works, which is a component of Oxford Meadows SAC.

9.4.31 There are ten Local Wildlife Sites (LWS) and two proposed LWS and also ten Oxford City Wildlife Sites and one proposed Oxford City Wildlife Site within 2km of the Scheme, More detail can be found in Appendix 4.1 – Preliminary Ecological Appraisal within Volume 4.

9.4.32 There is one area of Ancient and Semi-Natural Woodland within the landscape study area: The Grove (approximately 0.58ha) approximately 980m northwest of the Scheme. This is not located adjacent to the Scheme and landscape effects on Ancient Woodland have therefore been scoped out.

9.4.33 There are no Ancient, Veteran or Notable trees registered within the site. The closest is a Notable Wild Black Poplar approximately 300m west of the Scheme. Due to distance, landscape effects on Ancient, Veteran and Notable trees have therefore been scoped out.

Cultural Heritage Designations:

9.4.34 The effects on Registered Parks and Gardens, as well as Listed Buildings, Scheduled Monuments and Conservation Areas are discussed in Chapter 8 - Historic Environment. The following designations are fully considered within this LVIA for the contribution they provide to the landscape character of the site and study area. These include:

- Nationally Designated Sites:
  - Scheduled Monuments;
  - Listed buildings; and
  - Registered Park and Gardens.

- Locally Designated Sites:
  - Conservation Areas.

9.4.35 There are fourteen Registered Parks and Gardens of Special Historic Interest within the landscape study area all lying to the east of the site within the central city of Oxford. The closest is Worcester College which is a Grade II* Registered Park and Garden approximately 110m to the north east of the site.

9.4.36 There are nine Scheduled Monuments within the landscape study area. The closest of which are: Swing Bridge LNWR Station c.6m east of Sheepwash Bridge; Osney Abbey (remains of) c. 170m to the south west of the Scheme; and Rewley Abbey approximately 92m east of the existing station building.

9.4.37 There are eight Conservation Areas within the landscape study area, although the Scheme itself does not lie within any Conservation Area. Osney Island Conservation Area lies to the south-west of the Scheme adjoining the southernmost part of the red line boundary. The central Conservation Area lies to the east of the Scheme approximately 100m at its closet point.

9.4.38 Listed buildings are typically clustered within the Conservation Areas. There are a significant number of Grade 1 listed buildings in the Historic Core of Oxford which is situated to the east of the Scheme within the Central Conservation Area. However, there are also listed buildings scattered throughout the landscape study area. There are no listed buildings within the red line boundary, the closest is Cooper's Marmalade Factory Grade II Listed Building approximately 45m east of the Scheme within Frideswide Square.

Recreation and Access:

9.4.39 There are several Public Rights of Way PRoWs in the area surrounding the Scheme, see Figure 9.2 within Volume 3, including:

- Thames Path (National Trail - Long Distance Footpath) to the west of the Scheme;
- Oxford Canal Walk (National Trail - Long Distance Footpath) to the east of the Scheme;
- 320/10/10 (F1) a footpath which crosses beneath Sheepwash Bridge and connects the two national trail paths.

9.4.40 There is an area of Open Access Land consisting of Open Country and Registered Common Land covering Port Meadow approximately 760m north of the Scheme.

Planning Designations:

9.4.41 There are five trees protected by Tree Preservation Orders (TPOs) within the red line boundary and one area TPO, see Figure 9.2.

- Four TPO trees on the western boundary which lie between Cripley Road and Roger Dudman Way (identified as trees 12A, 12B, 12C and 12D on the Tree Survey – see Appendix 9.2) in a north/south row. An area TPO (identified as group 13 in the Tree Survey) runs north to south almost the entire length of Cripley Road. These are all part of a 2017 TPO (17/00005/ORDER). This order was made at the time of developing the Oxford Station Supplementary Planning Document, which states; "*A Tree Preservation Order has been made on the trees along Cripley Road and is currently out to public consultation with a view to it being confirmed shortly. The importance of these trees from their amenity value, ecology and as a visual screen has been fully considered as part of this SPD." (Oxford City Council and Aecom, 2017).*

- One TPO tree (identified as tree 4 in the Tree Survey) made in 1998 TPO (98/00013/WE) which is immediately adjacent, on the north east, of the existing Botley Road footbridge.

9.4.42 An additional area TPO made in 2010 (10/00007/ORDER) abuts the Scheme to the south. It covers the site of Cherwell House (University Halls) North of Osney Lane.

Oxford Planning Policy Designations:

9.4.43 The Oxford Green Blue Infrastructure Network is protected by Policy G1 of the Oxford Local Plan 2036. Its green and open spaces and waterways are multifunctional and protected for their social, environmental and economic functions. Oxford benefits from a wide range of green spaces such as parks, amenity space, natural and semi-natural spaces, historic sites, floodplains and sites of importance to biodiversity and nature conservation. The Blue Infrastructure Network is interwoven and interlinked with the Green Infrastructure Network and enhances the experience and function of it. The key waterways are the River Thames, River Cherwell and the Oxford Canal.

9.4.44 The closest areas of green blue infrastructure are (see Figure 9.2): a stand of deciduous woodland to the west of the Co-operative Childcare building; Worcester College Registered Park and Garden approximately 110m to the northeast of the site; and Osney cemetery immediately south of the Scheme. All three are outside the red line boundary for the Scheme.

9.4.45 Policy G7 sets out the protection of existing green infrastructure features; The Policy states that '*Green infrastructure features includes hedgerows and*

trees. Developments should incorporate established trees as well as the planting of new trees. In addition to protecting existing trees that are important for amenity in an area, consideration should be given to protection and enhancement of tree canopy cover'. Policy G7, sets out the approach to be taken if protection of trees is not feasible. see Table 9.2 for further detail of this policy. The existing trees across the Scheme are considered part of the city tree canopy cover, as such features of the green infrastructure.

9.4.46 The Oxford Historic Core Area and View Cones are protected by policy DH2 of the Oxford Local Plan 2036. Effects on views in relation to this policy are assessed within the visual assessment part of this LVIA within Appendix 9.5.

Existing Landscape Components

Topography:

9.4.47 The topography of the wider 5km study area is shown in Figure 9.1 within Volume 3. Oxford is located on the floodplain of the River Thames and River Cherwell, overlooked by valley sides creating an amphitheatre of surrounding hills and ridge lines. These form an important rural backdrop to the city and provide vantage points towards the city's historical core and skyline. The surrounding hills rise to heights of between 100 and 170m AOD surrounding the city. The site itself is located within the flat wide area between the Rivers Thames and Cherwell. It is predominantly level, lying at approximately 56m AOD, within the flat wide floodplains that extend through the urban core of the city.

Trees and Vegetation:

9.4.48 Bands of tree groups and shrubs are present within the red line boundary predominantly in peripheral areas and aligning roadsides. A line of mature lime trees (TPOs) and mixed ornamental shrubs lie between Cripley Road and Roger Dudman Way. Lines of trees and shrubs are also present along the south side of Botley Road and on the eastern boundary of Becket Street station car park. These provide a good screening function. Between Botley Road and Oxford Station is mainly amenity grassland with an avenue of London plane trees and one horse chestnut (TPO) immediately east of the Botley Road footbridge.

9.4.49 The vegetation has been subject to a number of surveys: A Preliminary Ecological Appraisal (Appendix 4.1); and an Arboricultural Survey to BS5837:2012 (Appendix 9.2)

9.4.50 As shown in the Arboricultural Survey in Appendix 9.2, a total of 35 trees and six tree groups were surveyed on and adjacent to the site. The following categorisation was identified:

- Grade A (Trees of High Quality) = 4 trees.
- Grade B (Trees of Moderate Quality) = 24 trees and 2 tree groups.
- Grade C (Trees of Low Quality) = 7 trees and 4 tree groups.
- Grade U (Unsuitable for Retention) = None.

9.4.51 The four grade A trees are the four TPO limes along the western edge of the red line boundary in between Cripley Road and Roger Dudman Way, categorised as A2; Trees of high quality with an estimated remaining life of at least 40 years of particular visual importance as arboricultural and or landscape features.

9.4.52 The only habitat of importance for nature conservation identified within the Preliminary Ecological Appraisal was a stand of wet woodland habitat of principal importance to the west of the Co-operative Childcare, outside the red line boundary.

Identification of Sensitive Landscape Receptors

9.4.53 Landscape receptors likely to be affected by the Scheme can be sub-divided into two categories:

- landscape character; and
- landscape components, including trees and hedgerows.

9.4.54 The criteria used to determine the sensitivity of landscape receptors is based on the typical descriptors set out in Appendix 9.1 – LVIA Methodology within Volume 4. Sensitivity has been determined by an evaluation of the value of a receptor in relation to the susceptibility of that receptor to the changes likely to arise from the Scheme. The rationale for the assessment of landscape sensitivity is summarised in Table 9.7, with the assessment findings provided in Appendix 9.4.

Table 9.7: Sensitivity of Landscape Receptors

Landscape Receptor	Value	Susceptibility to Change	Sensitivity
Landscape Character Assessment (1:25,000 Scale)			
Landscape Character Area (LCA) 2A: Thames (Isis)	Very highly valued with international, regional, and locally designated areas. Meadowlands and commons form rare and distinctive elements that contribute to the character, there is a high level of tranquillity and important wider significance as part of Oxford's Green Blue Infrastructure.	There is a medium level of susceptibility to change. Botley Road and the existing railway corridor/station lies within this LCA, there is a medium level of ability to accept the type of development proposed with good opportunities for mitigation. There are some irreplaceable elements such as the ecologically important habitats designated as SACs and SSSIs within the wider LCA.	High
Townscape Character Assessment (1:25,000 Scale)			
Townscape Character Area (TCA) 2B: Western Fringe	Highly valued – quality of landscape is perceived to be good with varying ages of buildings and presence of historic features such as the Norman Castle. Part of the Central Conservation Area extends into this TCA. There are some detracting features such as confusing layout and poor legibility in places. However, the redevelopment of Frideswide Square in 2015 has improved the western end. As noted within the Historical Urban Character Assessment: The surviving LNWR Swing Bridge (a Scheduled Monument) is one of only two Scheduled swing bridges in England and is the last significant hand-operated main-line rail swing bridge in existence in Britain. Its presence provides an excellent illustration of the competition between two competing 19th century railway companies.	It is considered there is a medium/low susceptibility to change. The TCA has a good ability to accommodate the Scheme. There are opportunities for enhancement to improve the area particularly around the station/Botley Road. The Scheme is in line with local planning policy for the station site which is allocated for this type of regeneration Scheme. There are areas within this TCA with higher susceptibility to change due to historic time depth, irreplaceable features, and proximity, to the historic core. The TCA also lies within the view cone of the key viewpoints identified from Raleigh Park and Boar's Hill. This heightens its susceptibility to tall built elements.	Medium

Landscape Receptor	Value	Susceptibility to Change	Sensitivity
Townscape Character Area (TCA) 4E: New Osney	Highly valued – intact good block pattern and architectural integrity in good condition, Osney Island has a distinctive townscape character and is protected by Conservation Area status. Very good perceptual qualities. Osney Island has a special relationship with the River Thames and the Thames National Trail. The presence of this and Osney cemetery with its mature trees/woodland heightens the quality.	It is considered there is a medium/low susceptibility to change. The TCA has a good ability to accommodate the Scheme. There are opportunities for enhancement to improve the area particularly around the station/Botley Road. The Scheme is in line with local planning policy for the station site which is allocated for this type of regeneration Scheme. There are areas within this TCA with a higher level of susceptibility to change due to distinctive and intact block pattern and conservation area status. This character area also lies within the view cone of the key viewpoints identified from Raleigh Park and Boar's Hill and this heightens its susceptibility to tall built elements.	Medium
Townscape Character Area (TCA) 9A: Thames (Isis) North	Very highly valued with international, regional and locally designated areas. Strongly influenced by historic land management Port Meadow has changed very little since prehistoric times. A landscape of exceptional quality. Exceptional aesthetic attributes with significant scenic quality and iconic views.	There is a high level of susceptibility to change as a result of its flat, open character allowing long views and due to the role it plays in the rural setting of Oxford. It is particularly susceptible to change due to its impressive historic remains, international ecological importance and open character. It also lies within the view cone of the key viewpoints identified from Wolvercote Common and the A34. This heightens its sensitivity to tall built elements.	High/Very High
Landscape Components			
Topography	High Value: The local topography creates the stage and setting for the city of Oxford. The level floodplains and gently domed river terraces aligning the rivers Thames and Cherwell support the historic core of Oxford.The prominent hills surrounding the city provide the backdrop amphitheatre and location for iconic views of the city and its skyline. Views which are highly celebrated through history and culture by notable artists such as J.M.W Turner and poets such as William Wordsworth.	There is a high level of susceptibility to change with considerable interaction between topography and built form.	High

Landscape Receptor	Value	Susceptibility to Change	Sensitivity
Trees and vegetation	Medium Value: Predominantly trees and tree groups of moderate to low quality, with vegetation across the site recorded as having low nature conservation value. Trees within an urban environment are a valued resource for the benefits they bring,. They are good green infrastructure features. Some of the screening provided by these existing trees and vegetation are notable components that contribute to the townscape character areas. Trees and vegetation included in this receptor are not protected by TPO.	High susceptibility, components that are not easily replaced.	Medium
Tree Preservation Orders (TPO)	High Value: A TPO is a statutory designation designed to protect trees and tree groups of distinctive character and quality which makes a valid contribution to the amenity of the area. Recently made TPOs indicate current recognition of their value. The TPO trees and vegetation make a valuable contribution to the townscape character areas. Visually they soften the surrounding built form and form skyline features in long distance views. They provide important screening between adjacent land uses and enhance the public realm and setting of the residential properties they lie near to.	High susceptibility. TPOs are not easily replaced.	High
Public Rights of Way (PRoWs) and Open Access Land	High value: Statutory designation. PRoW 320/10/10 running through the north of the Scheme forms a connection between the long-distance footpaths of the Thames Path and the Oxford Canal Walk. These provide a recreational resource and access from the urban area of Oxford to the countryside for residents and visitors. These footpaths provide connectivity with the designated open access land covering Port Meadow.	High susceptibility, components that are not easily replaced	High

Landscape Receptor	Value	Susceptibility to Change	Sensitivity
Oxford Green Blue Infrastructure Network	Medium Value: Locally designated, protected for different needs such as recreation, biodiversity and flood protection. Some open spaces have a specialist function that is protected, which might be biodiversity, Green Belt, allotments or open-air sports.	Medium susceptibility to change. Includes a range of sites from those which are internationally protected for their ecological value to those which have no protection but are still likely to provide flood resilience and have some biodiversity and recreational value. These could include sports pitches, domestic gardens and allotments. Some of these are more able to tolerate change than others.	Medium

9.5 Visual Baseline

9.5.1 The zone of theoretical visibility (ZTV) acts as a visual baseline. It was mapped using a digital terrain model to identify those areas of the landscape that theoretically are visually connected with the Scheme (see Figure 9.3.) The extent of the ZTV is a 5km radius from the centre of the Scheme. This is the likely maximum distance within which anticipated significant effects could arise.

9.5.2 The first model is based on topography only (known as a 'bare-earth topographical model'). It does not consider any above ground features that provide screening within the landscape such as buildings or vegetation. It is therefore a 'worst-case scenario'. The effects of earth curvature and light refraction were included. It therefore gives an exaggerated impression of the extent of visibility. The actual extent of visibility on the ground would be noticeably less than that suggested by this plan. It identifies clearly where the site cannot be seen.

Visual Envelope

9.5.3 The ZTV was refined by a desk-top study of OS maps, aerial photography and detailed on-site field survey work to determine the approximate visual envelope. Within ArcGIS, the digital terrain model was replaced with a digital surface model and the same viewshed analysis was undertaken. The difference between the two model data sets is that a digital surface model includes all building, trees, powerlines etc. on top of the surface. This models the existing screening elements into the 3D environment and then the theoretical visibility is mapped. See Figures 9.4 and 9.5.

9.5.4 The visual assessment process considers the screening elements in the landscape. This provides a more realistic indication of the approximate visual envelope indicating the areas from which the Scheme is likely to be visible.

Oxford View Cones Policy

9.5.5 The Oxford Historic Core Area and View Cones are protected by policy DH2 of the Oxford Local Plan 2036.

9.5.6 Oxfords unique skyline is often referred to as 'dreaming spires' with a high degree of cultural association throughout history including J.M.W Turner landscapes and William Wordsworth poetry. It is formed by a collection of nationally and internationally important buildings of historic and architectural significance. These sit in a compact area in the core of Oxford, which is raised slightly on a gravel terrace, giving more prominence to these historic buildings

and meaning that Oxford's unique skyline can be viewed as a single entity whose composition varies according to the direction of viewing.

9.5.7 The Historic Core Area is the area within a 1,200 metre radius of Carfax Tower which contains all the buildings that comprise the historic skyline. New buildings within the Historic Core Area have high potential to interfere with the character of the skyline, especially if their height is above that of Carfax Tower. These would be developments that exceed 18.2m (60ft) in height or ordnance datum (height above sea level) 79.3m (260ft) (whichever is the lower). The Scheme lies within this area but would not exceed 18.2m in height.

9.5.8 A view cone is "the corridor between the viewer and the subject which encompasses the view up to the focal feature" (Oxford City Council, 2015). There are ten identified view cones these are shown on Figure 9.3, within which proposed new buildings must not detract from the skyline and composition. Even where they would not intrude directly on to it, their effect as a frame to it must be considered.

9.5.9 A View Cones Assessment (Oxford Preservation Trust and Historic England, 2015) has been endorsed by the City Council. This study describes and evaluates the heritage significance of the ten Oxford view cones. It is designed to aid understanding of the impact of proposals on views.

9.5.10 The Oxford High Buildings Technical Advice Note (TAN) (Oxford City Council & LDA Design, 2018a) – supports and provides further information and guidance in relation to high buildings and supports place shaping policies within the Local Plan.

9.5.11 The TAN identifies the Scheme as lying within the 'West End and Osney Mead' Dynamic Area where there would be visual competition starting at a building height of 15m - 18m. The proposed western entrance building is approximately 7m high, which is well within these thresholds. This is also 4m lower than the existing YHA building.

9.5.12 As such the Scheme would not have any structure considered to be a tall building which would require consideration against the four identified tests within the TAN documentation. Assessment of visual receptors within view cones therefore only considers the effects the Scheme may have upon the foreground composition in reference to the skyline.

<u>Identification of Visual Receptors</u>

9.5.13 Visual receptors are individuals or groups of people who are likely to be affected by the Scheme at specific public viewpoints i.e. PRoW; scenic

viewpoints; roads; communal recreation areas and heritage assets where people visit.

9.5.14 It is well known that there is no 'right to a view' from private residential property, however, this chapter also provides a broad analysis of how residents' views are likely to be affected, where relevant. Residents at home are likely to experience views for longer than those briefly passing through an area. Views from private residencies can be tested and should be representative of the front of the house from rooms normally occupied in waking or daylight hours i.e. the ground.

9.5.15 A total of 19 visual receptors were identified and recorded. Some visual receptors initially considered, although located within the ZTV, have been scoped out from further visual assessment. This was where existing built form and intervening vegetation obscure views to the Scheme and it is unlikely that any change would be visible. These are illustrated on Figures 9.4 and 9.5 and summarised in Table 9.8.

Table 9.8: Summary of Visual Receptors

Number	Location	Receptor Type	Scoped In /Out
1	The Thames Path crossing Sheepwash Channel	Walkers/cyclists using local PRoW	In
2	PRoW adjacent and east of rail line at Sheepwash Channel	Walkers/cyclists using local PRoW	In
3	The Thames Path west of Cripley Place	Walkers/cyclists using local PRoW	In
4	Cripley Road	Residents facing the station	In
5	Oxford Station platform	Rail users on the platform/trains	In
6	The Thames Path where it crosses Botley Road	Walkers/cyclists using local PRoW, pedestrians and motorists on Botley Road	In
7	Botley Road houses and businesses	Local residents and users of Westgate Hotel	In
8	Becket Street	Local residents, motorists and pedestrians	In
9	Castle Mound	Visitors to local attraction	In
10	Botley Park	Users of public open space	In
11	Footbridge over railway at Osney Lane	Pedestrians	In
12	Frideswide Square	Pedestrians, cyclists and motorists	In

Number	Location	Receptor Type	Scoped In /Out
13	Oxford Greenbelt Way north west of Wytham	Walkers/cyclists using local PRoW	Out
14	View Cones – North west: Lower Wolvercote Across Portmeadow SAC	Walkers/cyclists using local PRoW	Out
15	View Cones – Western Hills: Raleigh Park,	Walkers/cyclists using local PRoW	In
16	View Cones – South Oxford: Hinksey Golf Course (PRoW to the south)	Walkers/cyclists using local PRoW	Out
17	View Cones – Western Hills: A34 Interchange at Hinksey Hill	Motorists	Out
18	View Cones – South East Oxford: Rose Hill	Local Residents	Out
19	View Cones – South East Oxford: Crescent Road	Local Residents	Out

9.5.16 Detailed descriptions of these existing views along with their corresponding photograph and reasons for scoping in or out are provided in Appendix 9.5 – Visual Effects Full Assessment.

9.5.17 The criteria used to determine the sensitivity of visual receptors is based on the typical descriptors set out in Appendix 9.1 LVIA Methodology. Sensitivity has been determined by an evaluation of the value of a receptor in relation to the susceptibility of that receptor to the changes likely to arise from the Scheme. The rationale for the assessment of visual sensitivity along with the assessment findings are provided in Appendix 9.5.

Future Baseline

9.5.18 Future prediction upon the baseline involves a degree of speculation and uncertainty. This Environmental Statement projects the future baseline to first year construction phase (2022) and first year operation (2025), 1-4 years on from the time of writing.

9.5.19 The townscape character areas in which the Scheme lies and adjoins are well established. The residential built form of the Victorian terraces/villas to the west of the site have been in existence over 120 years and have a tight intact block pattern. There may be small incremental changes to the private gardens and properties, e.g. new windows and other property maintenance, but this is difficult to predict. To the east of the Scheme the area of Frideswide Square has been upgraded and redeveloped c.2015 enhancing this townscape character area. This is likely to remain the same within the next 1-4 years –

the immature planting here would continue to grow, the avenue trees aligning the carriage way along Frideswide Square would increase in height and width further enhancing the area and softening the built form.

9.5.20 The Scheme itself proposes changes to the railway corridor, station area and Botley Road these components of the townscape are likely to remain the same with minor changes for maintenance reasons e.g. painting of bridges.

9.5.21 There are several designations running through the study area, Conservation Areas, TPOs etc which would protect and manage change carefully into the future. It is not considered in the timeframe 1-4 years from now that the baseline reported within this LVIA would be remarkably different from the current situation.

9.6 Design and Best Practice Measures

Design

9.6.1 The Scheme has been designed, as far as possible, to avoid and reduce landscape and visual impacts effects through the process of design-development, considering good design principles. Embedded mitigation is defined within the DMRB as '*Design measures which are integrated into a project for the purpose of minimising environmental effects.'*

9.6.2 The assessment of whether significant effects would be likely to occur has been based on the Scheme as described in Chapter 2 – Description of the Scheme. It takes account of measures embedded within the design.

9.6.3 The relevant measures embedded in the design of the Scheme for this LVIA are listed in Table 9.9.

Table 9.9: Summary of design measures for this LVIA

Part of the Scheme	Proposed Design Measure	Outcome / Benefit
Western Entrance Building	This building is to be designed to a high quality using a buff brick type and natural limestone typical of the local area, with timber components and clear station entrance signing. Roof material would be a dark colour which contrasts the stone/brick work and corresponds to built form within the context of the Scheme. There would be a section of green roof (sedum type) on the rear portion of the building. Walls would be downlit. The plaza space to the front and side of the building would be a combination of limestone/and granite. to provide a continuation of the quality of the plaza space on Frideswide Square to the east of the station -– to create a commonality of materiality in the public realm in and around the station area. Planters on the plaza would be faced in a dark stone like Frideswide Square. The low retaining wall around the plaza would be in buff brick/stone to tie in with the western entrance.	Improvement to the western approach into Oxford meeting the aims of both the existing landscape character assessments and the Oxford Station SPG.
Western Retaining Wall	Areas of this wall along the western side of the new track that are within public view are to be faced with a natural limestone/buff brick typical to the area and include tensioned wires for climbing ornamental planting.	As above – provide improvements on character and public realm.
Botley Road Retaining Walls	The walls aligning the widened road are to be red and blue brick	To tie in with existing retained Botley Road walls.
Botley Road Railway Bridge Sidings	Subway and bridge sides would be concrete. Steelwork balustrade powder coated/painted in a dark colour. For functional and maintenance reasons	To blend neutrally into the townscape fabric.
Botley Road Footbridge	Structural steel – powder coated/painted. Colour, mid/dark grey.	To blend neutrally into the townscape fabric.
Sheepwash Bridge Sidings	Exposed steel girders and parapet with balustrading powder coated/painted in a dark colour. Keep basic and functional. Dark finish to reduce staining	To blend neutrally into the townscape fabric.

9.6.4 The adoption of the embedded mitigation measures reported in Table 9.9 would reduce the potential environmental effects on the landscape and visual baseline. A planting plan has not been developed at this stage of the design. On this basis, indicative mitigation planting has been proposed following the assessment. This is discussed and included in Section 9.9.

Construction Management Measures

9.6.5 The Scheme would be constructed in accordance with a Code of Construction Practice (CoCP), which can be found in Appendix 2.1. The CoCP sets out the principles for environmental mitigation, which would then be used as the basis for the Construction Environmental Management Plan (CEMP).

9.6.6 The CEMP would outline measures to be put in place to ensure that the quality of the landscape and views do not deteriorate during the construction phase of the Scheme where practicable. In particular, the CEMP would detail correct separation and storage of soils, sensitive working around retained vegetation and planting and maintenance procedures.

9.6.7 This LVIA has identified management measures which would be required to control landscape and visual effects during the construction phase listed in Table 9.10. These are included in the CoCP.

Table 9.10: Summary of construction management measures relevant to this LVIA

Measure	Outcome / Benefit
Vegetation Clearance	During clearance operations the contractor would be required to comply with HSE / Arboriculture and Forestry Advisory Group Safety Guides. Shrubs and smaller trees would be cut down and grubbed up. Larger trees would be felled as close to the ground as possible and stumps removed. The site would be cleared of all rubbish and debris.
Topsoil	Where practicable topsoil would be stripped and stored in good condition, a maximum of 1.5m temporary high heaps kept weed free until it is required for use. Other material would not be placed on top of spoil heaps. This would reduce damage to soil and to facilitate re-use as a soil medium for new planting in accordance with best industry practice set out in BS3882:2015 Specification for Topsoil. No topsoil removal from below the spread of trees to be retained.
Tree Protection	Retention of existing vegetation wherever practicable, to help preserve local landscape character and mitigate visual impact. Tree felling to be reduced to that necessary to allow the safe construction and operation of the Scheme. Protection of existing vegetation to be retained, including trees and hedgerows in accordance with BS5837 Trees in relation to design, demolition and construction - Recommendations. The effectiveness of the tree protection measures would be monitored throughout the construction period by a qualified arboriculturist. In the event that working within Root Protection Areas is necessary, the arboriculturist shall provide guidance to avoid unnecessary damage to root systems and to keep the plants intact and healthy.
Planting	All planting would be carried out by an approved landscape contractor with British Associate of Landscape Industries (BALI) membership. All plant material would be procured well in advance of planting and reserved for planting by the contractor. Material would be undamaged, sturdy, healthy, and vigorous, of good shape and without elongated shoots. Grown in a suitable environment and hardened off, free from pests, diseases, discolouration, weeds and physiological disorders. All plants would have balanced root and branch systems, healthy fibrous root systems and be in a good condition. They would conform to the relevant part of the National Plant Specification. Plants would be handled with care in accordance with the Horticultural Trades Association 'Handling and establishing landscape plants.' Protect plants from frost and mechanical damage.
Reinstatement of Construction Areas	Re-instatement of ground used temporarily during construction to original condition, including existing vegetation, wherever practicable as a minimum and in some cases to an enhanced condition.

9.7 Assessment of Landscape Effects Prior to Additional Mitigation

9.7.1 The full assessment of effects upon the identified landscape receptors are set out in detail in Appendix 9.4. Summarised below are the identified significant effects.

9.7.2 For the purposes of this chapter, a level of significance of Moderate or above is considered to be significant in EIA terms.

Construction Phase

9.7.3 With adoption of the design measures and the construction management measures described in Section 9.6, the only potential for likely significant effects on the landscape baseline, during construction of the Scheme would be upon the following receptors:

- Townscape Character Area (TCA) 2B: Western Fringe;
- Townscape Character Area (TCA) 4E: New Osney;
- Trees and Vegetation;
- Tree Preservation Orders (TPOs; and
- Oxford Green Blue Infrastructure Network.

Townscape Character Area (TCA) 2B: Western Fringe

9.7.4 The medium sensitivity of this receptor and the medium magnitude of effect during construction would result in a short-term moderate adverse significance of effect. The effect would be significant due to the combining factors of extensive tree and vegetation removal along Botley Road and Cripley Road which would erode the sense of place and character.

Townscape Character Area (TCA) 4E: New Osney

9.7.5 The medium sensitivity of this receptor and the medium magnitude of effect during construction, results in a short-term moderate adverse significance of effect. The effect is significant due to the combining factors of the substantial tree and vegetation loss along Botley Road (to the front of the Westgate Hotel) and along Cripley Road. This includes the removal of important screening vegetation which provides privacy between adjacent residential and railway uses. This would be combined with the disruption and intrusion caused by the introduction of construction activity within the north eastern portion of this TCA.

Trees and Vegetation

9.7.6 The medium sensitivity of this receptor and the medium magnitude of effect during construction, would result in a short-term moderate adverse significance of effect. The effect is significant due to the notable loss of these landscape components. However, there is not a complete loss and trees of similar value would remain in the area.

Tree Preservation Orders (TPO)

9.7.7 The high sensitivity of this receptor and the high magnitude of effect during construction, would result in a short-term major adverse significance of effect. The effect is significant due to the total loss of all the individual TPO trees within the red line boundary and partial removal of the TPO tree group along Cripley Road.

Oxford Green Blue Infrastructure Network

9.7.8 The medium sensitivity of this receptor and the medium magnitude of effect during construction, would result in a short-term moderate adverse significance of effect. The effect is significant due to the impact the substantial tree loss would have by partially reducing the city's tree canopy cover, which in turn would undermine the integrity of this ecosystem as a whole. This could further fragment the biodiversity steppingstones linking the green blue infrastructure network together.

<u>Operational Phase Years 1 and 15</u>

9.7.9 The assessment of potential landscape effects taking account of the design measures and the best practice measures described in Section 9.6 has identified that there would be the potential for likely significant effects as a result of the operation of the Scheme on:

- Trees and vegetation;
- Tree Preservation Orders (TPO); and
- Oxford Green Blue Infrastructure.

Trees and Vegetation

9.7.10 At year 1 of operation, the magnitude of effect would remain at a medium level upon this medium sensitivity receptor. This would result in a medium-term moderate adverse significance of effect. The large amount of tree removal would be perceived as a notable loss of these landscape components. The large amount of tree removal would be perceived as a

notable loss of these landscape components. This moderate adverse effect would be sustained into year 15 of operation.

Tree Preservation Orders (TPO)

9.7.11 At year 1 of operation, the magnitude of effect would remain at a high level upon this high sensitivity receptor. This would result in a medium-term major adverse significance of effect. The removal of all the TPO trees within the red line boundary and partial removal of a TPO group would be perceived as a major loss of these valuable, protected and key landscape components. This major adverse effect would be sustained into year 15 of operation.

Oxford Green Blue Infrastructure Network

9.7.12 At year 1 of operation, the magnitude of effect would remain at a medium level upon this medium sensitivity receptor. This would result in a medium-term moderate adverse significance of effect. The Green Blue Infrastructure would continue to be fragmented and undermined by the partial reduction in the city's tree canopy cover. This moderate adverse effect would be sustained into year 15 of operation.

9.8 Assessment of Visual Effects Prior to Additional Mitigation

9.8.1 The approximate visual envelope shown on Figure 9.4 and 9.5 provides an immediate and easily understood indication of the area within which the Scheme would be visible and potential visual effects experienced. The approximate visual envelope shown on Figures 9.4 and 9.5 provides an immediate and easily understood indication of the area within which the Scheme would be visible and potential visual effects experienced.

9.8.2 Visually the Scheme would be extremely very well contained within the principal urban area of Oxford City and primarily to the western areas of the railway corridor. The railway acts as a visual screen to views from the east. The approximate visual envelope extends up to 500m from the red line boundary. The combination of the relatively level topography, with containment by the surrounding built form on all sides results in this localised visual influence.

9.8.3 The full assessment of effects upon the identified visual receptors is set out in detail in Appendix 9.5. Summarised below are the identified significant effects. For the purposes of this chapter, a level of significance of moderate or above is considered to be significant in EIA terms.

Construction Phase

9.8.4 With adoption of the design measures and the construction management measures described in Section 9.6, the potential for likely significant effects on the landscape baseline, during construction of the Scheme would be upon all visual receptors within 100m approx. of the red line boundary. Due to this proximity there would be immediately noticeable views and intrusion of construction activity upon the viewer. These are visual receptors 1 to 8, 11 and 12, and effects are summarised in Table 9.11.

Table 9.11: Summary of construction phase visual effects

Visual Receptor	Approximate Distance from Scheme	Viewpoint Location	Summary of Effect During Construction (Temporary)
1	47m	Representative viewpoint from Thames Path National Trail, west of Sheepwash Bridge and Roger Dudman Way. Also representative of resident's viewpoints from Abbey Road properties	The high sensitivity of this receptor and the medium magnitude of effect during construction, results in a short-term moderate/major adverse significance of effect.
2	56m	Representative viewpoint on PRoW 320/10/10 east of Sheepwash Bridge. Also representative of residents view from Rewley Road properties.	The high sensitivity of this receptor and the medium magnitude of effect during construction, results in a short-term moderate/major adverse significance of effect
3	80m	Representative viewpoint from Thames Path National Trail opposite Cripley Place.	The high sensitivity of this receptor and the medium magnitude of effect during construction, results in a short-term moderate/major adverse significance of effect.
4	9m	Representative viewpoint from residents of Cripley Road with a forward-facing aspect.	The high sensitivity of this receptor and the high magnitude of effect during construction, results in a short-term major adverse significance of effect.
5	Within red line boundary	Representative viewpoint from passengers and users of the railway.	The low sensitivity of this receptor and the high magnitude of effect during construction, results in a short-term moderate adverse significance of effect.
6	108m	Representative viewpoint from Thames Path National Trail where it crosses Botley Road. Also representative of pedestrians and motorists on Botley Road.	The medium/high sensitivity of this receptor and the high magnitude of effect during construction, results in a short-term major adverse significance of effect.
7	45m	Representative viewpoint of local residents and Westgate Hotel users.	The high sensitivity of this receptor and the high magnitude of effect during construction, results in a short-term major adverse significance of effect.
8	10	Representative viewpoint of local residents and users of St Thomas Matyr Church (Grade II listed.)	The high sensitivity of this receptor and the high magnitude of effect during construction, results in a short-term major adverse significance of effect.

Visual Receptor	Approximate Distance from Scheme	Viewpoint Location	Summary of Effect During Construction (Temporary)
11	Within red line boundary	Within red line boundary. Representative viewpoint of pedestrians on Osney Lane Footbridge.	The low sensitivity of this receptor and the high magnitude of effect during construction, results in a short-term moderate adverse significance of effect.
12	60m	Representative viewpoint of users of Frideswide Square.	The medium sensitivity of this receptor and the high magnitude of effect during construction, results in a short-term moderate/major adverse significance of effect.

Operational Phase Year 1 and 15

9.8.5 The assessment of potential landscape effects taking account of the design measures and the best practice measures described in Section 9.6 has identified that there would be the potential for likely significant effects as a result of the operation of the Scheme on visual receptors of medium – high sensitivity surrounding the Botley Road and Cripley Road areas, these are:

- Visual Receptor 3;
- Visual Receptor 4;
- Visual Receptor 6; and
- Visual Receptor 12

9.8.6 These are summarised within Table 9.12.

Table 9.12: Summary of operational phase Year 1 and 15 visual effects without additional planting mitigation

Visual Receptor	Approximate Distance from Scheme	Viewpoint Location	Summary of Effect Operational Phases Year 1 and 15 (Medium – Long Term)
3	80m	Representative viewpoint from Thames Path National Trail opposite Cripley Place.	At year 1 of operation, the magnitude of effect would remain at a medium level upon this high sensitivity receptor which results in a medium-term moderate/major adverse significance of effect. The existing screening provided by the trees and vegetation of Cripley Road would be lost, exposing the station and railway corridor in the view. This would result in a noticeable change to a focused proportion of the view. This moderate/major adverse effect would be sustained into year 15 of operation.
4	9m	Representative viewpoint from residents of Cripley Road with a forward-facing aspect.	At year 1 of operation, the magnitude of effect would reduce to a high/medium level upon this high sensitivity receptor which results in a medium-term moderate/major adverse significance of effect. The screening and privacy provided by the existing trees and vegetation along Cripley Road would be lost - resulting in a substantial change to the entire view. This moderate/major adverse effect would be sustained into year 15 of operation.
6	108m	Representative viewpoint from Thames Path National Trail where it crosses Botley Road. Also representative of pedestrians and motorists on Botley Road.	At year 1 of operation, the magnitude of effect would reduce to a medium level upon this medium/high sensitivity receptor which results in a medium-term moderate adverse significance of effect. The significant tree loss would cause a substantial adverse change to the focused central portion of the view. This moderate adverse effect would be sustained into year 15 of operation.
12	60m	Representative viewpoint of users of Frideswide Square.	At Year 1, the magnitude of effect would reduce to a medium level upon this medium sensitivity receptor which results in a medium-term moderate adverse significance of effect. There would be adverse effects from removing all of the vegetation between the car park and Botley Road and approximately half of the established avenue of London plane trees on the north side of Botley Road. There would be an obvious change to a large portion of the view with a noticeable deterioration in the central focused portion of the view. This moderate adverse effect would be sustained into year 15 of operation.

9.9 Additional Mitigation and Enhancement Measures

9.9.1 The following additional landscape/visual mitigation and enhancement measures have been identified as a result of this assessment in addition to the measures included in Table 9.9 within Section 9.6 Table:

- Planting of semi-mature specimen trees along Botley Road south side: To mitigate the loss of trees and vegetation to north of Becket Street station car park. There is an opportunity to create a strong avenue of trees to complement the north side of Botley Road and to also underplant with shrubs to screen Becket Street station car park from the road. Existing screening planting is beneficial and remarked upon within existing character assessments of the area. It would cause harm to remove and not replant, as assessed in the sections 9.7 and 9.8.

- Planting of semi-mature specimen trees to reinstate the existing avenue of London planes along the north side of Botley Road: To mitigate the loss of part of this avenue.

- Semi-mature tree planting between Cripley Road and Roger Dudman Way: To mitigate the loss of TPO trees. These are to be underplanted with dense shrub planting, where space allows, for screening and biodiversity purposes along the northern section of Cripley Road.

- Semi-mature tree planting to the immediate south and west of the new western entrance: Planted within paving and raised planters. To create a formalised and structured tree avenue enhancing the character of Botley Road and improving the public realm and western approach into Oxford.

- Green walls and green roof: The inclusion of tensioned wires and climbing plants to the front face of the western retaining wall, within the public realm facing onto the western entrance plaza. Part of the western entrance, west wall is to include a section of green wall. The rear, flat roofed section of the western entrance building would have a sedum-type low intensity green roof.

- Ornamental shrub planting within western entrance plaza: To provide colour and interest and further soften the new built form.

9.9.2 A planting plan has not been developed by at this stage of the design. As a result of the iterative process of this assessment, indicative mitigation planting has been proposed and is illustrated on Figure 9.6.

9.9.3 It is Network Rail's intention through detailed design development and further consideration of engineering solutions, to retain more of the existing trees than assessed. This assessment assumes the worst-case scenario where all trees currently identified for removal would be removed.

Visual Representation of Development Proposals

9.9.4 Visualisations have been produced from two representative viewpoints; visual receptors 7 and 12, See Figures 9.7, 9.8 and 9.9.

9.9.5 Following initial site visits and review of the proposals, it was anticipated at the scoping stage that there would likely be a confined visual envelope close to the Scheme. The locations chosen for the visualisations were thought to represent the proposals within its context and be able to demonstrate the likely landscape and visual change. The visualisation locations were considered acceptable by OCC in their scoping response dated 5th January 2021.

9.9.6 The visualisations were based on a winter photograph to demonstrate the most exposed view, with minimal leaf cover. These visualisations were produced to a type 3 category as explained within the LVIA methodology Appendix 9.1. The intention was to represent the Scheme, form and context to a reasonable degree of objectivity and accuracy. They would also illustrate the effectiveness of the indicative planting mitigation when fully established (in year 15 of operation). They have been used to accurately inform the judgments and assessments made for the corresponding visual receptors within the visual assessment (see Appendix 9.5).

9.10 Summary of Residual Landscape and Visual Effects

9.10.1 The additional mitigation measures outlined would further reduce the potential effects reported in Sections 9.7 and 9.8

9.10.2 Following best practice, significant residual effects are considered to be those remaining after 15 years, after allowing time for planting mitigation to become fully effective. Planting mitigation would not necessarily take a full 15 years to become visually effective, however.

9.10.3 Table 9.13 summarises the residual likely effects of the Scheme upon the landscape and visual resource.

Table 9.13: Residual effects for Landscape and Visual Receptors

Potential Effect	Receptor(s)	Likely effect without additional mitigation	Residual Effects with additional mitigation listed in Section 9.9
Operation Phase Year 15			
Landscape Receptors			
Notable loss of landscape components	Trees and vegetation	Moderate Adverse Effect – Significant	Minor Beneficial Effect – Not Significant
Major loss of valuable, protected, landscape components.	Tree Preservation Orders (TPO)	Major Adverse Effect - Significant	Moderate Adverse Effect - Significant
Fragmentation of the city's tree cover undermining the integrity and biodiversity links of the Green Blue Infrastructure Network.	Oxford Green Blue Infrastructure Network	Moderate Adverse Effect - Significant	Minor Adverse Effect – Not Significant
Visual Receptors			
The existing screening provided by the trees and vegetation of Cripley Road would be lost, exposing the station and railway corridor in the view	Visual Receptor 3	Moderate/Major Adverse Effect - Significant	Minor/Moderate Adverse Effect – Not Significant
Significant loss of privacy screening due to removal of trees and vegetation along Cripley Road causing a substantial change to the entire view.	Visual Receptor 4	Moderate/Major Adverse Effect - Significant	Minor/Moderate Adverse Effect – Not Significant
Significant tree loss on Botley Road would cause a substantial adverse change to the focused central portion of the view.	Visual Receptor 6	Moderate Adverse Effect - Significant	Minor Beneficial Effect – Not Significant

Potential Effect	Receptor(s)	Likely effect without additional mitigation	Residual Effects with additional mitigation listed in Section 9.9
Improvements to the built form and public realm would benefit the character of Botley Road and western approach into the city.	Visual Receptor 7	Minor Beneficial Effect – Not Significant	Moderate Beneficial Effect - Significant
Significant tree loss on both sides of Botley Road would cause an obvious change to a large portion of the view with a noticeable deterioration in the central focused portion of the view.	Visual Receptor 12	Moderate Adverse Effect - Significant	Minor Adverse Effect – Not Significant

9.11 Conclusions

9.11.1 This chapter reports the effects on the landscape and visual baseline resulting from the Scheme.

9.11.2 Through the implementation of design and construction management measures, as described in Section 9.6, a reduction or avoidance of significant impacts on both the landscape and visual baseline would be achieved. These measures would include development of a high-quality western entrance building using a buff brick type and natural limestone typical to the local area. There would also be a high-quality plaza space to the front which references the materials used within Frideswide Square to create a commonality of materiality in the public realm in and around the station area. There would also be realignment works to Botley Road and replacement of bridges over Sheepwash Channel and Botley Road to accommodate the track widening.

9.11.3 Following the assessment of landscape and visual effects likely caused by the Scheme, the additional mitigation measures described in Section 9.9 have also been incorporated to manage or reduce potential effects. As a result, there are two residual significant environmental effects, these are:

- loss of trees subject to Tree Preservation Orders (TPO); and
- beneficial effect on Visual Receptor 7.

<u>Tree Preservation Orders (TPO)</u>

9.11.4 There would be a moderate adverse effect to trees subject to TPOs, due to removal of all of the TPO trees and partial removal of a TPO group within the red line boundary. It is assessed that whilst mitigation planting would have matured by year 15, it would be unlikely to match the maturity, quality and integrity of the TPO trees and tree groups lost to the Scheme. Mitigation planting would not at this stage replace the skyline features of the existing TPO trees along Cripley Road. The permanent gap created by the introduction of the new junction between Roger Dudman Way and Cripley Road prevents the opportunity to replace the continuous screening vegetation to match what would be lost.

<u>Visual Receptor 7</u>

9.11.5 There would likely be a moderate beneficial effect upon Visual Receptor 7. This is a representative viewpoint of local residents, people working commercial premises on Botley Road and also Westgate Hotel users, all of whom would benefit from the change in view.

9.11.6 On balance the changes are generally positive. A lot of existing visual detractors are removed, such as the dominating presence of the YHA building and two single storey buildings, the large brightly coloured bins and other street clutter and parking.

9.11.7 The Scheme would provide a new western station entrance and entrance plaza along with the reconfiguration of the junction of Botley Road, Cripley Road and Roger Dudman Way. The visualisation shown on Figure 9.7 clearly demonstrates the change in view. The new building is lower than the YHA and set back from Botley Road. This opens up views of the existing station buildings and structures and visually brings them together. Views towards the Said Business Tower would be opened up and visual connectivity with the central area of Oxford is slightly improved. This view would however be negatively impacted by the exposure of the existing and intervening gantry structure. This existing gantry would become quite a prominent visual detractor although typical for a railway. It would draw the eye because of its comparative size and presence over Botley Road in combination with its location obscuring the newly opened up view toward the Said Business Tower.

9.11.8 The design of the new western entrance building is modern and uses materials typical of the local area. It would be recognisable as belonging to the railway station family of buildings. The Scheme would provide new public realm enhancements which benefit and improve this western approach into Oxford. The mitigation planting would have matured by year 15 to provide effective softening of the built form around the station area. The avenue tree planting to the front of the station plaza along Botley Road and along Cripley Road would create a boulevard effect. Overall, there would be a noticeable and locally important and significant improvement to this view.

References

Landscape Institute and Institute of Environmental Management and Assessment. (2013). *Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3)*

Landscape Institute and Institute of Environmental Management and Assessment. (2015). *GLVIA3 – Statements of clarifications*. URL https://www.landscapeinstitute.org/technical-resource/glvia3-clarifications/ Accessed March 2021

Land Use Consultants. (2002). *A Character Assessment of Oxford in its Landscape Setting*. URL https://www.oxford.gov.uk/downloads/download/972/landscape_character_assessment Accessed March 2021.

Oxford City Council. (2012). *Central Oxford Historic Urban Character Assessment*. URL https://www.oxford.gov.uk/downloads/download/580/historic_urban_character_assessments Accessed March 2021.

Oxfordshire County Council. (2021). *Interactive Map, Public Rights of Way*. URL https://publicrightsofway.oxfordshire.gov.uk/standardmap.aspx Accessed March 2021

Oxford City Council. (No date). *Interactive Map, Local View*. URL http://maps.oxford.gov.uk/LocalViewPub/Sites/Localview/# Accessed March 2021

Oxford City Council & LDA Design. (2018a). *Oxford High Buildings Technical Advice Note*

Oxford City Council & LDA Design. (2018b). *Oxford High Buildings Evidence Base Report*

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