

Appendix 5-1 Scoping Report

East Reading Mass Rapid Transit Scheme

EIA Scoping Report

On behalf of **Reading Borough Council**



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1 Introduction

1.1 Project Background

- 1.1.1 This Environmental Impact Assessment (EIA) Scoping Report has been prepared in respect of a planning application for a new mass rapid transit (MRT) scheme to the east of Reading, Berkshire (referred to as the 'proposed development'). An indicative area of works of the proposed development is included in **Appendix A**.
- 1.1.2 The proposed development straddles the two Local Planning Authority areas of Reading Borough Council (RBC) and Wokingham Borough Council (WBC). The planning application will therefore be submitted to both RBC and WBC for determination.
- 1.1.3 The proposed development would provide a new dedicated public transport link from central Reading to existing residential and employment areas to the east and south-east of Reading, including Thames Valley Park (TVP), Woodley, Winnersh and Wokingham.
- 1.1.4 The development proposals are being delivered in accordance with the following planning policies:
- RBC Core Strategy (adopted 2008 & updated 2015) Policy CS21;
 - RBC Central Area Action Plan (2009) Policy RC1 & RC3;
 - WBC Core Strategy (2010) Policy CC10; and
 - WBC Managing Development Delivery Local Plan (2014) Policy CC08.
- 1.1.5 A description of the proposed development site and its wider environmental setting is set out in **Section 2** of this report and an outline of the proposed development is set out in **Section 3**.

1.2 Purpose of this Report

- 1.2.1 Due to the nature of the proposed development, RBC intends to undertake an Environmental Impact Assessment (EIA) of the proposed development which will be documented in an Environmental Statement (ES).
- 1.2.2 The ES, which will be prepared in compliance with the requirements of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (as amended 2015) (the EIA Regulations), will be submitted with the planning application.
- 1.2.3 The EIA Regulations set out the requirements for undertaking an EIA and Schedule 4 details the required information for inclusion in an Environmental Statement (ES). For ease of reference, an extract from the EIA Regulations, which sets out the information required, is presented in **Appendix B**. The ES, which will be prepared in compliance with the requirements of the EIA Regulations and will be submitted with the planning application.
- 1.2.4 Understanding the potential effects that the proposed development may have on the environment is an integral part of the design process currently underway. The purpose of this report is to document the scoping exercise that has been undertaken in order to identify the nature and extent of any likely significant environmental effects of the proposed development. The environmental topics that are proposed to be included in the EIA scope and those that are not are presented in **Section 7** and **Section 8** respectively. Accordingly, this report details how the environmental issues, which have been included in the EIA scope, are proposed to be examined and progressed as part of the EIA of the proposed development. The aim of the EIA is that the development proposal has due regard for the environment, minimises adverse environmental effects and takes advantage of opportunities for environmental enhancement.
- 1.2.5 This report provides information to key consultees regarding the proposals pursuant to the EIA Regulations and sets out the intended scope of the EIA and content of the ES. On the basis of

this report and in accordance with Regulation 13 of the EIA Regulations, RBC therefore requests a coordinated EIA Scoping Opinion from RBC and WBC.

1.3 Environmental Impact Assessment Team

- 1.3.1 The Planning and EIA work will be undertaken by the professional teams provided in **Table 1.1**.

Table 1.1: Environmental Impact Assessment Team

Consultant	Technical Discipline
Peter Brett Associates LLP	Town and Country Planning
	EIA Co-ordination
	Transport & Access
	Air Quality
	Noise and Vibration
	Hydrology and flood risk
	Landscape and Visual
	Lighting
	Ecology
	Ground Conditions
Orion Heritage	Archaeology and Heritage

- 1.3.2 RBC is the applicant for the project and PBA is coordinating the design of development.

1.4 Report Structure

- 1.4.1 This report continues with the sections identified in **Table 1.2**.

Table 1.2: Scoping Report Structure

Section Nos.	Section Name
2	Environmental Setting
3	Proposed Development
4	Planning Policy Context
5	EIA Process
6	Proposed Scope of the EIA
7	Topics Included in EIA Scope
8	Topics Not Included in EIA Scope
9	Summary and Next Steps
Appendices	Indicative Proposals Extract from the EIA Regulations Content of the ES

2 Environmental Setting

2.1 Site Location

- 2.1.1 The linear Site is located to the south of the River Thames and to the north of the Great Western Main Line Railway that is raised on an embankment in the vicinity of the Site. The western end of the Site is located south of a retail superstore and its car park and the eastern end is immediately to the west of the Thames Valley Business Park.
- 2.1.2 An indicative Site location plan is provided at **Figure 1** and is located between the approximate Ordnance Survey (OS) National Grid References (NGR) of 472553(E) 173856(N) to the west and 473579(E) 173891(N) to the east.

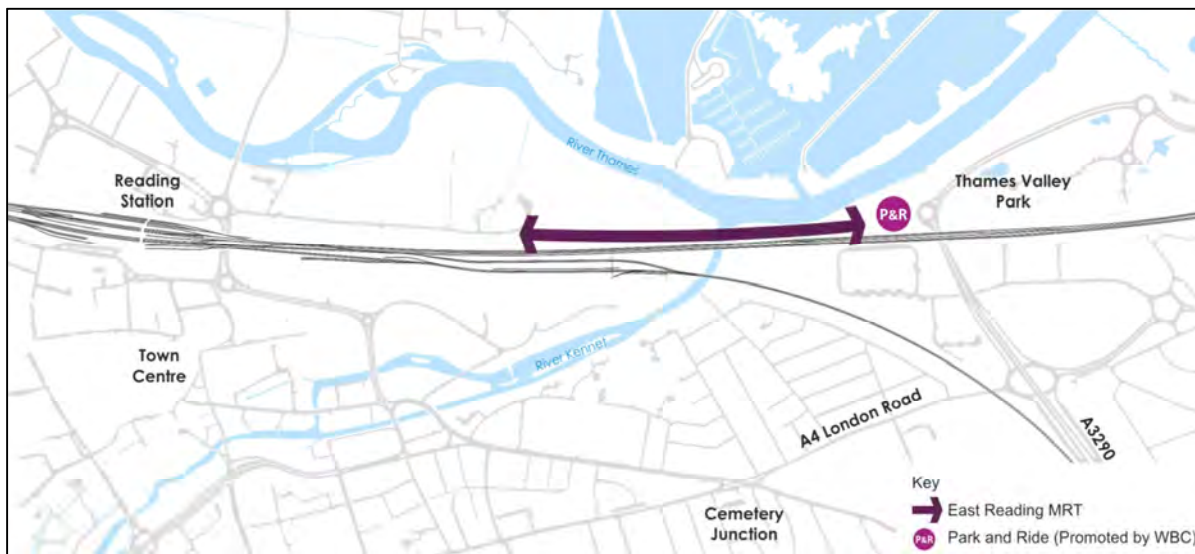


Figure 1: Site location plan (showing indicative route)

- 2.1.3 The proposed development straddles the administrative areas of Reading Borough Council (RBC) and Wokingham Borough Council (WBC), the boundary of which is defined by the River Kennet. An indicative area of works for the proposed development is included in **Appendix A**.

2.2 Site Description

- 2.2.1 The western area of the Site (within Reading Borough) where the proposed development would connect with Napier Road is characterised by a retail superstore with associated fuel filling station and parking. Further west is residential tower blocks at Luscinia View.
- 2.2.2 The central area of the Site where the proposed development crosses the River Kennet is characterised by the confluence of the River Thames and the River Kennet. There is an existing railway bridge over the River Kennet and a footbridge allowing access over the River Kennet for the Thames Path National Trail. To the south of the railway, there is a gas storage facility.
- 2.2.3 The eastern area of the Site (within Wokingham Borough) where the proposed development would connect with the proposed 'Thames Valley Park and Ride' to the west of Thames Valley Business Park would be on undeveloped flood plain adjacent to the River Thames. The Thames Valley Park Rowing Club and Wokingham Waterside Canoe & Kayak Centre are in close proximity to the north-east. There are also temporary moorings along the western bank of the River Thames. The Thames and Kennet Marina and Redgrave and Pinsent Rowing Lake are located approximately 100 m to the north on the opposite side of the River Thames.

The Suttons Business Park is located beyond the Great Western main line railway to the south.

- 2.2.4 The Site is partially within safeguarded land for a 'cross town route' (in accordance with Wokingham Borough Council (2014) Development Plan – Adopted Managing Development Delivery Local Plan Policy CC08) and is therefore for much of its the length the Site undeveloped and currently consists of grassland, scrub and trees.

2.3 Environmental Setting

- 2.3.1 The proposed route is located alongside the River Thames which flows west to east, north of the Site. The proposed route also passes over the River Kennet at its confluence with the River Thames at Kennetmouth. Both the rivers are sensitive controlled waters.
- 2.3.2 The Environment Agency (EA) 'Flood Map for Planning' shows that the western part of the proposed route lies within Flood Zone 2 'Medium Probability' (between 1 in 100 (1%) and 1 in 1000 (0.1%) annual probability of river flooding). The eastern part of the proposed route lies within Flood Zone 3 'High Probability' (greater than 1 in 100 (1%) annual probability river flooding).
- 2.3.3 The land to the west of the River Kennet is situated on a historical landfill that was used in the past for railway sidings. The land to the east of the River Kennet comprises undeveloped land with two historical gravel pits.
- 2.3.4 The closest designated heritage asset to the Site is the Grade II Listed Railway Bridge and attached Accommodation Bridge over the River Kennet. This lies immediately beyond the southern perimeter of the Site. These were built as part of the Isambard Kingdom Brunel for The Great Western Railway in the mid-19th century. The significance of the bridges lies in their architectural and historic interest. The setting of the bridges comprises woodland which runs along the River Kennet, this woodland screens all but glimpsed views into and from the Site.
- 2.3.5 The River Terrace Deposits and the White Chalk Subgroup geology at the Site are classified as Principal Aquifers. The Alluvium is classified as Secondary A Aquifer.
- 2.3.6 RBC has declared an Air Quality Management Area (AQMA) due to exceedances of the annual mean nitrogen dioxide objective. The AQMA comprises Reading city centre and extends out along the major arterial roads and part of the Site is located in one. However, the exceedance in this area is primarily as a result of the railway line emissions, electrification of the line is underway that should result in an improvement to local air quality.
- 2.3.7 The Thames Path National Trail and National Cycle Route 4 / Route 5 – Thames Valley pass through the Site alongside the River Thames.
- 2.3.8 Part of the Coal, Kennetmouth and Kings Meadow East Local Wildlife Site (LWS) is located within the Site, classed as 'open mosaic habitat on previously developed land'. Survey is ongoing on the ecological assets at the Site.

3 Proposed Development

3.1 Introduction

- 3.1.1 The purpose of the scheme is to improve access to and from Reading eastwards for buses, pedestrians and cyclists. This will help relieve the forecast increase in travel demand along the heavily congested A4 corridor, which provides access to existing residential employment and educational sites, as well as Reading town centre, Reading railway station and substantial planned development in Wokingham Borough and Reading town centre. An indicative area of works for the proposed development is included in **Appendix A**.

3.2 Development Description

- 3.2.1 RBC propose to submit a planning application for the proposed MRT route. The proposed development will include:
- creation of a new route for public transport only, including cycle path and footway between Napier Road and the proposed Thames Valley Park and Ride;
 - the erection of a new bridge over the River Kennet;
 - formation of a new T-junction with Napier Road;
 - connection to the proposed Thames Valley Park & Ride; and
 - associated infrastructure and landscaping.
- 3.2.2 The route will be graded up to the height of the river crossing over the Kennet, see the indicative plan in **Figure 2**.
- 3.2.3 A slender bridge design and colour palette is proposed to respect the context of the adjacent listed bridges.
- 3.2.4 The new route is approximately 0.9 km in length.
- 3.2.5 The MRT scheme is a segregated fast track public transport, pedestrian and cycle route that will support enhanced accessibility and continued sustainable growth in Reading, Wokingham Borough and the wider area.

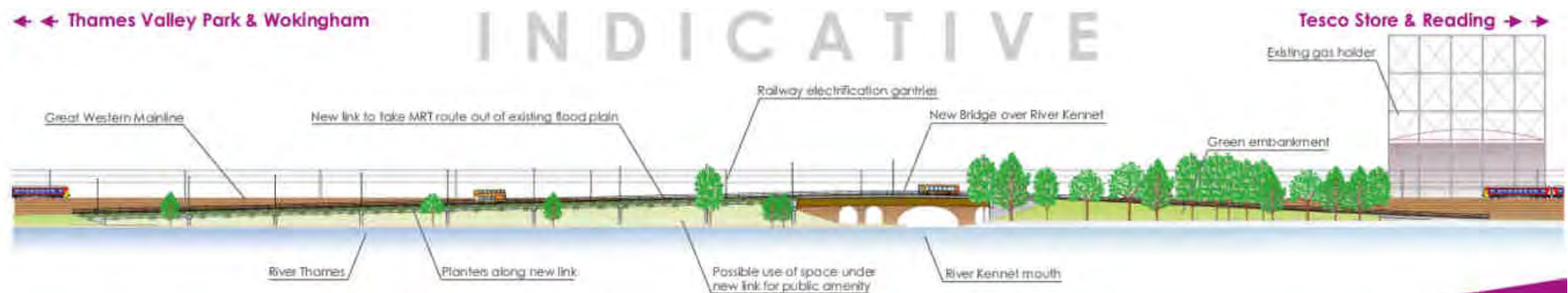


Figure 2: Indicative Cross Section

4 Planning Policy Context

4.1 National Planning Policy

National Planning Policy Framework

- 4.1.1 The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and outlines how these are expected to be applied to both plan-making and decision-making.
- 4.1.2 Paragraph 17 of the NPPF sets out 12 core planning principles which should underpin both plan-making and decision-taking. Most notably and of relevance to the current proposals, planning should:
- “proactively drive and support sustainable economic development to deliver the homes, business and industrial units, infrastructure and thriving local places that the country needs;”
 - “promote mixed use developments, and encourage multiple benefits from the use of land in urban and rural areas, recognising that some open land can perform many functions (such as for wildlife, recreation, flood risk mitigation, carbon storage, or food production);” and
 - “actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable”
- 4.1.3 Of further relevance, Paragraph 29 of the NPPF states that the transport system should be balanced in favour of sustainable transport modes, in order to give people a choice about how they travel. Paragraph 30 provides additional encouragement for solutions which support reductions in greenhouse gas emissions and reduce congestion.

National Planning Practice Guidance

- 4.1.4 On 6 March 2014, the Department for Communities and Local Government (DCLG) launched the national planning practice guidance (NPPG) web-based resource. This resource replaced a number of previous planning practice guidance documents and now provides practical planning advice to support the overarching principles set out in the NPPF and to inform development proposals. The current development proposals are being progressed in the context of relevant guidance set out in the NPPG.

4.2 Local Planning Policy

Development Plan

- 4.2.1 The Site is predominantly located within the jurisdiction of Reading Borough Council where the adopted development plan comprises:
- Core Strategy (adopted January 2008, altered January 2015);
 - Proposals Map (adopted October 2012);
 - Reading Central Area Action Plan (adopted January 2009); and
 - Sites and Detailed Policies Document (adopted October 2012, altered January 2015).
- 4.2.2 The Council is currently working on a new Local Plan, which when adopted will replace the current adopted Core Strategy and guide how Reading will develop up to 2036. The Council undertook consultation on Issues and Options between January and March 2016, and anticipate adoption in September 2018.

4.2.3 The Site is also partially located within Wokingham Borough Council where the adopted development plan comprises:

- Core Strategy (adopted January 2010); and
- Managing Development Delivery (MDD) Local Plan (adopted February 2014).

Supplementary Planning Guidance

4.2.4 Reading Borough Council has adopted a number of additional supplementary planning documents to provide additional specific guidance to supplement the provisions of the adopted development plan. Additional planning guidance adopted by RBC and of relevance to the current development proposals is contained within the Infrastructure Delivery Plan (adopted July 2011) and the Local Transport Plan 3: Strategy 2011-2026 (adopted April 2011).

4.2.5 Wokingham Borough Council has also adopted a number of additional supplementary planning documents to support the provisions of the development plan. Additional planning guidance adopted by WBC and of relevance to the current development proposals is contained within the Infrastructure Delivery Plan (June 2012, supporting the MDD Local Plan), Borough Design Guide SPD (adopted May 2012), Sustainable Design and Construction SPD (adopted May 2010), and Local Transport Plan 3: Strategy 2011-2026 (adopted 2011).

Key Planning Policies

Reading Borough Council

4.2.6 The principle of the proposed development within the jurisdiction of RBC has been established within adopted local planning policy. Policy CS20 of the Core Strategy requires development proposals to contribute appropriately to the provision of a balanced transport network as outlined in the Local Transport Plan, including the implementation of core transport infrastructure projects. The MRT scheme is identified as a priority transport project in Core Strategy Policy CS21 and the Local Transport Plan, where implementation will be prioritised. Policy CS21, together with Policies RC1 and RC3 of the Reading Central Area Action Plan and accompanying Figure 6.2, add that land needed for implementation of the MRT scheme (identified as running east from Napier Road) will be safeguarded from other forms of development.

4.2.7 The Proposals Map identifies a number of designations for land in or adjacent to the Site, where local planning policy provides relevant detailed guidance. The development proposals and environmental assessment work will be undertaken having regard to the specific requirements of relevant planning policies outlined below.

4.2.8 Land between Napier Road and the River Kennet, including the Site (in part), is designated as an 'Area safeguarded for Crossrail extension'. Paragraph 15.3.6 of the Sites and Detailed Policies Document notes that the Council will consult with Crossrail Limited on planning applications within this designated land. Land between Napier Road and the River Kennet includes a designated Green Link, where Policy DM17 of the Sites and Detailed Policies Document requires development to maximise enhancement opportunities and incorporate landscaping features.

4.2.9 Land between the River Thames/Kennet and Tesco, within (in part) and to the north of the Site, is identified as a Major Landscape Feature and an area of public open space, where Policies CS37 of the Core Strategy, SA17 of the Sites and Detailed Policies Document and RC14d of the Reading Central Area Action Plan are relevant. Policies CS37 and SA14 seek to preserve the character and appearance of the Major Landscape Feature, whilst Policy RC14 requires development to protect and make a positive contribution towards the quality of areas of public open space. This area of land also includes a designated Cycle Route, where Policy SA14 of the Sites and Detailed Policies Document seeks to ensure that development does not detrimentally affect the identified route but provides improvements where possible.

- 4.2.10 Land adjacent to the railway line, within (in part) and to the south of the Site, is identified as an Area of Archaeological Potential. Core Strategy Policy CS33 states that areas of historic importance will be protected and where appropriate enhanced.
- 4.2.11 A number of additional planning policies contained within the development plan provide further detailed guidance which will be taken into account in the preparation of the current development proposals. In particular, the development proposals will seek to adhere to the provisions of: Core Strategy Policies CS1 (Sustainable Construction and Design), CS3 (Social Inclusion and Diversity), CS7 (Design and the Public Realm), CS8 (Waterspaces), CS28 (Loss of Open Space), CS34 (Pollution and Water Resources), CS35 (Flooding), CS36 (Biodiversity and Geology); and Sites and Detailed Policies Document Policies SA16 (Public And Strategic Open Space), DM1 (Adaptation To Climate Change), DM4 (Safeguarding Amenity), DM12 (Access, Traffic And Highway-Related Matters), DM16 (Provision Of Open Space), and DM19 (Air Quality).

Wokingham Planning Policy

- 4.2.12 The principle of the proposed development within the jurisdiction of WBC is addressed within local planning policy and supporting documentation. Policy CP6 of the Core Strategy supports schemes that provide for sustainable forms of transport, and Policy CP10 of the Core Strategy, together with Policy CC08 and Appendix 3 of the MDD Local Plan, safeguard areas identified for improvements to the strategic transport network including mass rapid transit along the A4/A329 corridors, improvements to public transport services and improvements to footpath and cycle networks.
- 4.2.13 Appendix 3 of the MDD Local Plan refers to strategic transport projects indicated on Figure 24 of the Local Transport Plan, which includes a proposed highway scheme connecting west into Reading Borough from Thames Valley Park and the proposed Park & Ride facility. Supporting text to Policy SAL09 of the MDD Local Plan (Paragraphs 4.68-4.69) requires development proposals to have regard to the 'Cross Town Link' proposals from Thames Valley Park being pursued by RBC.
- 4.2.14 The Proposals Map identifies a number of designations for land in or adjacent to the Site, where local planning policy provides relevant detailed guidance. The development proposals and environmental assessment work will be undertaken having regard to the specific requirements of relevant planning policies outlined below.
- 4.2.15 Land adjacent to the west of the roundabout at Thames Valley Park, including the Site (in part), is located within a 'Major Development Location', where development proposals are acceptable in principle in accordance with Core Strategy Policy CP9. Core Strategy Policy CP09 requires that proposals outside of defined Development Limits (including part of the Site) contribute to enterprise and promote recreation, whilst not leading to excessive encroachment.
- 4.2.16 Land adjacent to the west of the roundabout at Thames Valley Park is also allocated for development under Policies SAL07 and SAL09 of the MDD Local Plan for either 2,700sqm commercial floorspace or a Park & Ride facility and associated development. A planning application has been submitted for a Park & Ride facility in this location.
- 4.2.17 Thames Valley Park and Sutton's Industrial Estate, located to the east and south of the Site, are identified as Core Employment Areas within the Borough, where development for business, industry or warehousing is acceptable in accordance with Policy CP15 of the Core Strategy.
- 4.2.18 A number of additional planning policies contained within the development plan provide further detailed guidance which will be considered in the current development proposals. In particular, the development proposals will seek to adhere to the provisions of: Core Strategy Policies CP3 (General Principles for Development), CP7 (Biodiversity), and MDD Local Plan Policies CC03 (Green Infrastructure, Trees and Landscaping), CC04 (Sustainable Design and Construction), CC06 (Noise), CC09 (Development and Flood Risk), CC10 (Sustainable Drainage), TB21 (Landscape Character) and TB23 (Biodiversity and Development).

5 EIA Process

5.1 EIA Regulations

- 5.1.1 The process of Environmental Impact Assessment is governed by the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (as amended 2015) (the EIA Regulations). The EIA regulations implement EC Directive 85/337/EEC, as amended, into domestic legislation. The initial Directive and its three amendments have been codified by Directive 2011/92/EU. This Directive has also been amended in 2014; however the implications will not be enacted in the UK until May 2017. However, following the referendum this is subject to timing and completion of Article 50 negotiations with the European Union, although it is anticipated that this will be post May 2017.
- 5.1.2 The EIA Regulations set out the requirements for undertaking an EIA and Schedule 4 details the required information for inclusion in an Environmental Statement (ES). For ease of reference, an extract from the EIA Regulations, which sets out the information required, is presented in **Appendix B**.

5.2 Screening and Scoping

- 5.2.1 The proposed development is considered to constitute Schedule 2 development under the EIA Regulations as an Infrastructure Project (Section 10) for which the area of development exceeds 1 ha (for Part (f) 'Construction of roads') and which could result in significant environmental effects. The proposed development site is shorter than the 'indicative criteria and threshold' in PPG to be used when considering if there are likely to be significant environmental effects, the sensitivity of the receiving environment and river crossing means that there remains the potential for likely significant effects.
- 5.2.2 As stated in Section 1, due to the potential significant environmental effects of the proposed development, RBC intends to undertake an EIA, which will be documented in an ES, in compliance with the requirements of the EIA Regulations. The submission of an ES shall constitute a determination that the proposed development is EIA development (EIA Regulations 4(2(a))).
- 5.2.3 The purpose of scoping is to identify the key policy, economic and social, and environmental issues relating to the proposed development early in the EIA process; it is also to allow identified issues to be subjective to an appropriate level of assessment, thereby providing a focus for the EIA. Scoping gives relevant stakeholders an opportunity to express their views on the proposed development and to comment on the scope of the EIA.

5.3 Consultation

- 5.3.1 The proposals are being developed as an iterative process of design, assessment and review. As a result, it is the intention that the proposals submitted for planning approval will incorporate measures designed to mitigate potentially adverse environmental effects and enhance benefits wherever possible.
- 5.3.2 Consultation with relevant statutory and non-statutory bodies has informed this scoping stage and will be used through the course of the EIA and design process.

5.4 Assessment

- 5.4.1 In general terms the main stages in the EIA are as follows:
- Data Review – draw together and review available data;
 - Baseline Surveys – undertake baseline surveys and monitoring;
 - Scoping – identify significant issues, determine scope of EIA;

- Assessment and iteration – assess likely significant effects of development, evaluate alternatives, provide feedback to design team on adverse effects, incorporate any necessary mitigation, assess effects of mitigated development; and
 - Preparation of the ES.
- 5.4.2 The proposed scope of the EIA and approach to the assessment of likely significant effects is set out in **Section 6**.

5.5 Mitigation

- 5.5.1 One of the most important functions of the EIA process is to identify ways to mitigate adverse environmental effects and identify opportunities that the proposed development may have for environmental improvements. The EIA Regulations require an ES to contain: “A *description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment*”.
- 5.5.2 A hierarchy of methods for mitigating significant adverse effects will be followed; these are, in order of preference:
- Enhancement - opportunities that the proposed development may provide to enhance the local and wider environment (e.g. enhanced leisure and recreational opportunities);
 - Avoidance – designing a proposed development in such a way that avoids effects on the environment (e.g. design to avoid construction on an area of sensitive ecology);
 - Reduction – design the development or employ construction methodologies such that significant effects identified are reduced (e.g. employment of sustainable drainage to mitigate effects of development in flood prone areas); and
 - Compensation – providing off-site enhancement in order to compensate for where onsite mitigation has not be possible (e.g. off-site ecological enhancement).
- 5.5.3 Environmental effects remaining after mitigation measures have been incorporated are termed residual effects and these will be fully described in the ES.
- 5.5.4 Where necessary, the ES will describe measures that will be taken to monitor the effectiveness of controls, compensation, mitigation, enhancement and remediation. Monitoring will enable any shortfall in expectations directly attributable to the development to be addressed.

Embedded Mitigation

- 5.5.5 There is a distinction between mitigation that is incorporated or ‘embedded’ into the design of the development (embedded mitigation) and mitigation that is subsequently identified in order to prevent, reduce or offset any remaining significant adverse effects. Embedded mitigation may include, for example, reducing the maximum height of infrastructure to mitigate visual effects, or retaining existing hedgerows to mitigate ecological effects.
- 5.5.6 Embedded mitigation evolves through the iterative design process and early consideration of the likely significant impacts is essential to incorporating suitable embedded mitigation measures. Design principles of the development have been established and the ES will document the embedded mitigation measures that have been employed within the design in response to the identification of potentially significant effects, as well as subsequent mitigation.

5.6 Environmental Statement

- 5.6.1 The EIA process will be documented in an ES which will describe the proposed development and set out the policy context; give detail of the EIA methodology and any technical methodologies and data used in support of the assessment; present the assessment of likely significant environmental effects; and detail any mitigation and enhancement measures that have been employed.

- 5.6.2 Under requirement 6 of Schedule 4, Part 1 of the EIA Regulations a Non-Technical Summary of the ES shall also be provided.
- 5.6.3 In order to provide further information, and invite comments from consultees, on the proposed content of the ES a draft contents list has been included in **Appendix C.**

6 Proposed Scope of the EIA

6.1 Technical Scope

6.1.1 The technical scope describes the environmental topics that should be addressed by an EIA, in line with the requirements of Schedule 4 of the EIA Regulations. Schedule 4 sets out that the ES must include a description of the aspects of the environment, which are likely to be significantly affected by the proposed development, including in particular (and where relevant i.e. those topics which have not been scoped out) the following:

- Population (included in Chapter **8 Socio-economics** of this Scoping Report)
- Fauna (included in Chapter **7 Ecology** of this Scoping Report)
- Flora (included in Chapter **7 Ecology** of this Scoping Report)
- Soil (included in Chapter **8 Agricultural Soils** of this Scoping Report)
- Water (included in Chapter **7 Hydrology and Flood Risk** of this Scoping Report)
- Air (included in Chapter **7 Air Quality** of this Scoping Report)
- Climatic factors (included in Chapter **7 Air Quality, Hydrology and Flood Risk** of this Scoping Report)
- Material assets including architectural heritage and the historic environment (included in Chapter **7 Archaeology and Heritage** of this Scoping Report)
- Landscape (included in Chapter **7 Landscape and Visual** of this Scoping Report); and
- The inter-relationship between the above factors (included in Chapter **6 Cumulative Effects and Impact Interactions** of this Scoping Report).

6.1.2 This requirement and the broad categories set out above have to be interpreted and applied in the context of the proposed development. Section references are therefore provided in the above to demonstrate where these categories have been included within the EIA Scope. **Section 7** of this report provides a detailed analysis of the resultant proposed technical scope of the EIA, while **Section 8** identifies those topics which it is proposed to scope out of the EIA as it has been shown that significant environmental effects are unlikely to occur.

6.1.3 The following therefore sets out the principles for the temporal and spatial scope, and the approach to the assessment of effects, that will be applied to the EIA of the topics identified in **Section 7**.

6.2 Temporal Scope

Environmental Baseline

6.2.1 As a general principle, potential environmental effects will be assessed by comparing the predicted state of the environment without the development, and the state of the environment with the development for a particular future year. This will necessitate predicting how current conditions at the Site may change without the proposed development occurring.

6.2.2 The EIA will take into account existing planning permissions and any committed developments that are likely to come forward during the construction of the project and, where appropriate, these will be factored in to the definition of the baseline or identified as receptors at a relevant point in time.

6.2.3 Committed schemes will also be included in the modelling of traffic impacts in the Transport Assessment, which will be based on the Reading Transport Model. Therefore, inherent in the assessment of transport effects is the consideration of cumulative impacts. The assessment of transport related effects in the EIA (expected to comprise transport and access, air quality and

noise) will be based on the traffic modelling undertaken as part of the Transport Assessment process and therefore including consideration cumulative effects with other committed development.

Duration of Effects

- 6.2.4 Environmental effects will be classified as either permanent or temporary, as appropriate. Permanent changes are those which are irreversible (e.g. permanent landtake) or will last for the foreseeable future (e.g. emissions from generated road traffic).
- 6.2.5 The duration of temporary environmental effects will be defined as short, medium or long term based on the likely durations of the construction and operational phases of the development. These definitions will be considered within the assessment of the likely significant effects and will be set out in the ES. Its anticipated effects will be as follows:
- Short-term - Less than two years;
 - Medium-term - Two to five years; or
 - Long-term - Greater five years.
- 6.2.6 Where environmental effects will be infrequent or intermittent (such as effects related to activities that will not be continuous during construction) this will be noted in the ES; and the frequency of these activities will be considered in the assessment.

Phases of the Scheme

- 6.2.7 There are two discrete phases of the proposed development which will be considered in relation to the likely significant effects: construction and operation.

Construction

- 6.2.8 Certain environmental effects will only occur during construction of the project and will cease once construction activities have ceased. These will typically be the temporary effects of the scheme and will be described as “*short-term*” or “*medium-term*”, as appropriate, using the definitions determined to be appropriate and set out in the ES. Examples include but are not limited to:
- Creation of dust;
 - Risk of pollution during construction; and
 - Noise from construction activities.

Operation

- 6.2.9 Environmental effects that occur during the operation of the project will typically be permanent or “*long-term*”. Examples of permanent effects which might occur during the operation of the scheme include but are not limited to:
- Changes to key viewpoints;
 - Changes to traffic patterns ; and
 - Changes to flood risk.
- 6.2.10 Consideration will be given to the phased nature of the construction works, the requirements for mitigation and resultant significant environmental effects.

Decommissioning

- 6.2.11 Decommissioning is not a foreseeable event and the environmental effects of decommissioning or abandonment of the development are not therefore part of the proposed EIA scope.

6.3 Spatial Scope

- 6.3.1 The spatial extent of each of the technical assessments will vary from one to another in accordance with the relevant policy and guidance for the assessment of that topic. In some instances the environmental effects will extend no further than the Site boundary and in other cases the assessment will extend to a buffer beyond the proposed Site boundary. The study area for each technical assessment will be identified and described in the relevant ES chapters.
- 6.3.2 Some topics where larger spatial scope may be necessary include:
- Transport and related effects – scope will include effects on the local road network not just changes at the Site.
 - Biodiversity impacts, which need to reflect the distance species may move to use the Site.
 - Visual amenity – determined by the visual envelope.

6.4 Assessment of Effects

Assessment Scenarios

- 6.4.1 In order to provide a robust and realistic assessment, the EIA will assess the environmental effects of the proposed development as set out in the detail application plans for the Site that will be submitted as part of the planning application.

Types of Effects

- 6.4.2 In assessing the significance of potential effects identified during the EIA, account will be taken as appropriate as to whether effects are:
- Beneficial Effects – effects that have a positive influence on the environment;
 - Adverse Effects – effects that have a negative influence on the environment;
 - Direct Effects – effects that are caused by activities which are an integral part of the scheme;
 - Indirect Effects – effects that are due to activities that are not part of the scheme, e.g. regeneration benefits attributable to the scheme;
 - Cumulative Effects – many effects that singly are not significant, but when assessed together may be significant and also the cumulative effects of the proposed development and other proposed or committed local developments; and
 - Residual Effects – effects that remain after mitigation measures are taken into account.
- 6.4.3 For clarity within the assessment, 'impact' will be used in relation to the outcome of the project (e.g. the removal of habitat or the generation of emissions to air), while the 'effect' will be the consequent implication in environmental terms (continuing the above example, e.g. the loss of a potential bird breeding site or the reduction in local air quality).

Residual Effects

- 6.4.4 The incorporation of mitigation measures, primarily as part of the scheme design and construction phase, will be reported where appropriate and likely significant residual effects that remain will be described and assessed according to the significance criteria set out below.

Cumulative Effects and Impact Interactions

- 6.4.5 The EIA Regulations require consideration of the potential impact of inter-relationships and cumulative effects of the development.

6.4.6 The EIA will consider as appropriate:

- The likely significant cumulative effects of the proposed development and other local committed developments; and
- The potential for impact interactions leading to an aggregated environmental effect on a receptor being greater than each of the individual effects that have been identified (e.g. local people being affected by noise, dust and increased traffic levels during the construction of the development, where those impacts are greater combined than individually).

6.4.7 In accordance with the national Planning Practice Guidance (2014), the EIA will also take into account of major developments where there is reasonable certainty of development coming forward during the lifetime of the project, this would normally not include allocated sites where there has been no planning application. These would reasonably include:

- Sites that have extant planning permission – including those partially built out but not yet occupied/operational;
- Planning applications that have been submitted but not yet determined;
- A suitable size threshold;
- Within a reasonable distance of the Site;
- Sites with some other relationship or interdependency with the proposed development – e.g. other transport capacity improvement schemes; or where there is a particular rationale for doing so.

6.4.8 We will seek to work with RBC to identify relevant committed developments for agreement with both local planning authorities.

6.4.9 It should be noted that a separate list will also be agreed with the highways officers at RBC and WBC for the purposes of Traffic Assessment (TA). These will also be included as part of the assessment of all traffic impacts in the EIA and will therefore form part of the traffic data in the transport, air quality chapters of the ES. The ES will be explicit in detailing committed schemes that will be part of general cumulative impact assessment.

6.4.10 Potential impact interactions will be assessed within a separate chapter of the ES in order to identify the overall effect of the proposed development, as it will need to draw together the outcomes of individual discipline assessments.

Consideration of Alternatives

6.4.11 The EIA Regulations require an ES to include an outline of the main alternatives considered by the applicant, indicating the main reasons for the choice made, taking into account the environmental effects.

6.4.12 This legal requirement is expressed in very general and high-level terms, requiring only the inclusion of an "outline" of "main" alternatives and an "indication" of "main" reasons. Although a full description of alternatives and assessment of their likely environmental effects are not required, sufficient detail should be provided to allow for a meaningful comparison between the alternatives and the proposed development.

6.4.13 It is a matter for the applicant to decide which alternatives it intends to consider. The EIA Regulations do not expressly require that an applicant considers alternatives, although it is widely encouraged at the policy level, both European and domestic, and is a feature of EIA best practice.

6.4.14 Alternatives should only be considered where they are feasible, realistic and genuine. This may depend on various factors, including planning policy, land ownership, financial viability, technical feasibility and design quality. Options which are unlikely to be acceptable or deliverable are not realistic alternatives and so do not need to be considered.

- 6.4.15 The ES will fulfil the requirements of the EIA Regulations through identifying the main alternatives considered by the applicant and explain the main reasons for the choices made. It is anticipated that such reasons for choosing between main alternatives may include: planning policy, viability, design quality, site constraints and opportunities and environmental effects.

Assessing Significance

- 6.4.16 As noted above, the EIA Regulations require that the ES describes likely significant effects of the proposed development. However, there is no applicable definition of significance and interpretations differ. In accordance with the European Commission's Guidance on Scoping, the EIA will study those effects that will influence decision-making or those where there is uncertainty about their magnitude. This approach is consistent with best practice for EIA in the UK.
- 6.4.17 The significance of an effect is typically the product of two factors, the value of the environmental resource affected and the magnitude of the impact, while consideration may also need to be given to the likelihood of an effect occurring. A significant effect may arise as a result of a slight impact on a resource of national value or a severe impact on a resource of local value. In addition, the accumulation of many non-significant effects on similar local resources geographically spread throughout the scheme may give rise to an overall significant effect. An example of this might be the loss of ecological habitat of low value at many locations.
- 6.4.18 This approach to assessing and assigning significance to an environmental effect will rely upon such factors as legislative requirements, guidelines, standards and codes of practice, consideration of the EIA Regulations, the advice and views of statutory consultees and other interested parties and expert judgement. The following questions are relevant in evaluating the significance of likely environmental effects:
- Which risk groups are affected and in what way?
 - Is the effect reversible or irreversible?
 - Does the effect occur over the short, medium or long term?
 - Is the effect permanent or temporary? Does the effect increase or decrease with time?
 - Is the effect of local, regional, national or international importance?
 - Is it a positive, neutral or adverse effect?
 - Are health standards or environmental objectives threatened?
- 6.4.19 Specific significance criteria will be prepared for each specialist topic, based on the above and the generic criteria set out in **Table 6.2**.
- 6.4.20 Effects that are described as 'severe', 'major' or 'moderate' are determined to be *significant*; and effects that are described as 'minor' or 'negligible' are determined to be *not significant* in the context of the EIA Regulations.

Uncertainty and Difficulties Undertaking the Assessment

- 6.4.21 The prediction of future effects inevitably involves a degree of uncertainty. Where necessary, the ES will describe the principal factors giving rise to uncertainty in the prediction of environmental effects and the degree of the uncertainty.
- 6.4.22 Confidence in predictions will be engendered by employing accepted assessment methodologies, e.g. Guidance for Ecological Impact Assessment by the Institute of Ecology and Environmental Management. Uncertainty inherent within the prediction will be described. As a general principle the ES will describe credible, reasonable worst case foreseeable events and their effects.

- 6.4.23 Uncertainty also applies to the success or otherwise of measures to mitigate negative environmental effects. Where the success of a mitigation measure is uncertain, the extent of the uncertainty will be identified in the ES.
- 6.4.24 The ES will identify, in accordance with Schedule 4 of the EIA Regulations, any difficulties that have been encountered in undertaking the assessment. This may include the collection of baseline data, the prediction of future conditions, data not being available, etc. It remains the intention of the project team however to ensure that the ES provides a robust assessment of the likely significant environmental effects of the proposed development and that sufficient information is provided to inform decision makers of the likely significant environmental effects and the requirements for mitigation.

Table 6.2: Significance criteria

	Significance Level	Criteria
<i>Significant</i>	Severe	Only adverse effects are assigned this level of significance as they represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites and features of national or regional importance. A change at a district scale site or feature may also enter this category.
	Major	These effects are likely to be important considerations at a local or district scale but, if adverse, are potential concerns to the project and may become key factors in the decision-making process.
	Moderate	These effects, if adverse, while important at a local scale, are not likely to be key decision-making issues. Nevertheless, the cumulative effect of such issues may lead to an increase in the overall effects on a particular area or on a particular resource.
<i>Not significant</i>	Minor	These effects may be raised as local issues but are unlikely to be of importance in the decision-making process. Nevertheless they are of relevance in enhancing the subsequent design of the project and consideration of mitigation or compensation measures.
	Negligible	Either no effect or effect which is beneath the level of perception, within normal bounds of variation or within the margin of forecasting error. Such effects should not be considered by the decision-maker.

7 Topics Included in the EIA Scope

7.1 Introduction

- 7.1.1 This chapter identifies the environmental topics that it is proposed should be scoped into the EIA, the potential effects and the methodologies proposed to undertake the assessments. This is based on environmental information that has already been collected at the Site (including the collection of desk study data, site walkovers and ecology surveys) that has informed the emerging design of the proposed development.
- 7.1.2 Where consultation with key consultees has also informed the identification of potential effects and the proposed assessment methodologies this is noted in the sections below.
- 7.1.3 As outlined in section 5, the embedded mitigation which will be developed through the iterative design process of the proposed development will be detailed within the ES and has influence the identification of likely significant effects. For the purposes of the EIA, embedded mitigation will inform the assessments and be documented throughout the ES accordingly, rather than solely within a standalone chapter.
- 7.1.4 The ES will include a chapter dealing with the details of construction of the project, including construction management, as set out in **Appendix C**.

7.2 Transport and Access

Introduction

- 7.2.1 A transport and access chapter will be prepared for the ES, drawing upon the findings of a separate Transport Statement, which will also be submitted with the planning application. The chapter will assess the impact changes in traffic as a result of the proposed development on the local highway, public transport networks and pedestrians and cyclists.
- 7.2.2 The section sets out the principles of the methods to be used to assess the transport impacts of the proposed development.

Baseline

- 7.2.3 The scheme is designed to attract to walk, cycle and bus use to/from central Reading, providing people with an alternative to driving along the congested A4 corridor. The intention of the proposed development is to improve forecast journey times and reliability for travel by these means.
- 7.2.4 A review of the baseline conditions observed in the surrounding public highway and public transport networks, walking and cycling routes will be set out within the transport and access chapter. The baseline studies will include a review of the existing permeability of the Site and will also consider all relevant committed developments within the surrounding area.

Scope of the Assessment

- 7.2.5 The anticipated impacts that should be included within the EIA scope are summarised below, where there is the potential for effects. These will need to be confirmed and examined in further detail through the transport assessment work that is to be completed.
 - **Increased traffic flows during construction** – there will be an increase in traffic flows on local roads during construction, including a temporary increase in HGV movements, much of which is likely to access the Site via the A3290 and Napier Road. Given that one route will be via the town centre roads there is the potential for likely significant effects.

- **Increased use of public transport** – there is the potential for increased use of existing public transport services and it is considered that this has the potential to have a likely significant beneficial effect.
 - **Increased walk and cycling** – there is the potential for increased walking and cycling and it is considered that this has the potential to have a likely significant beneficial effect.
 - **Increased car use on the A3290** – the proposal may attract an increase in Park & Ride users, therefore this has the potential to have a likely significant effect on users and receptors on the A3290.
 - **Reduced car use on A4 corridor** – any shift to the enhanced bus services has the potential to have a beneficial likely significant effect.
 - **Introducing bus traffic** adjacent to the River and railway line and along Napier Road. Therefore, the proposed development has the potential to have a significant effect as buses do not currently operate in this location.
- 7.2.6 The transport chapter will be informed by the findings of the modelling work supporting the preparation of the Business Case, and the significance of potential traffic and transport effects will be determined using criteria developed from best practice techniques.
- 7.2.7 The extent of the local road network to be assessed for the traffic impact analysis will be agreed with the authorities; and at this stage includes the following roads:
- Napier Road
 - Vastern Road
 - A3290
 - Thames Valley Park Drive
 - London Road
 - Kings Road.

Methodology

- 7.2.8 The assessment will identify the likely significant environmental impacts arising from the proposed development in respect of all modes of transport. The assessment of individual environmental elements will be carried out drawing upon the '*Guidelines for the Environmental Assessment of Road Traffic*' (1993) published by what is now known as the Institute of Environmental Management and Assessment (IEMA) (the 'IEMA Guidelines'). Also, where appropriate, *Volume 11 of the Design Manual for Roads and Bridges* (DMRB) '*Environmental Assessment*' (2008) published by the former Department of Environment, Transport and the Regions (DETR), now Department for Transport will be used in assessment.
- 7.2.9 Assessment will also reflect guidance contained within the Department for Transport's (DfT's and the Departments for Communities and Local Government (DCLG)) '*Guidance on Transport Assessment*' (March 2007) (GTA). DfT's Circular 02/2013 The Strategic Road Network and the Delivery of Sustainable Development will be utilised to address the wider traffic impact issues.
- 7.2.10 The environmental impacts to be assessed will be informed by the Institute of Environmental Management and Assessment (IEMA) guidance document '*Guidelines for the Environmental Assessment of Road Traffic*'.
- 7.2.11 Determining the significance of effects will be derived from measures of the magnitude (or scale) of the change and the sensitivity (or importance) of the receptors affected. Categories of sensitivity and magnitude will be defined and assessed to determine the significance of the effect following the principles set out by the IEMA Guidelines and summarised below.
- 7.2.12 The assessment proposes to include assessment of effects related to:

- **Driver Delay** – normally at vehicle junctions, higher magnitude impacts are likely where there the proposed development changes delays by over 60 seconds, IEMA guidance suggests significant effects are most likely where the surrounding road network is already at, or close to, capacity;
- **Severance** – a division of a community by a major traffic artery, for instance creating difficulties in crossing roads due to traffic or a physical barrier. Higher magnitude impacts are most likely where there is an increase of 60% traffic flow over 18 hours, although significance of effects will depend on several factors including the characteristics of affected communities and the existing baseflows;
- **Pedestrian and Cyclist Amenity and Delay** – relating to the changes in volume, speed or composition of traffic on road that may have an effect on pedestrians or cyclists choice on making a particular journey. The severity of the impact will depend on the general level of pedestrian activity and the condition of the pedestrian/cyclist routes and significance is determined by professional judgement;
- **Fear and intimidation** – this is broadly defined as the relative pleasantness of a journey, affected by traffic flow, composition and segregation of pedestrians/cycle routes from traffic. The IEMA guidance will be useful to help define thresholds for fear and intimidation but consideration of significance must also take into account local circumstances ; and
- **Accidents and Safety** – Is normally dependent on issues such as traffic speed, flow and composition as well as vehicle conflict and pedestrian activity. IEMA guidelines suggest professional judgement is used regarding the significance of the effect.

7.2.13 Mitigation measures will be identified as and where appropriate. They may include highway safety/capacity enhancements, new/ improved pedestrian, cycling and public transport connections to influence travel behaviour.

7.2.14 The residual impacts, with the mitigation measures in place, will be documented in the transport chapter of the EIA.

Risk and Limitations

7.2.15 The assessment methodology to be used for each environmental impact will be informed by the IEMA Guidance, which recognises:

“For many, effects there are no simple rules or formulae which define thresholds of significance and there is, therefore, a need for interpretation and judgement on the part of the assessor, backed-up by data or quantified information wherever possible.” (4.4)

7.3 Air Quality

Introduction

7.3.1 The air quality assessment will assess the impact of the proposed scheme on the surrounding area, during both the construction and operational phases. Whilst the proposed development will not generate any car movements, with the only motor vehicles allowed being buses, it will alter the traffic distribution within the town and will therefore have an impact on air quality.

7.3.2 Existing local air quality, the likely future air quality in the absence of the new scheme, and the likely future air quality if the scheme goes ahead, will all be defined. The assessment of construction impacts will focus on the anticipated duration of works. The assessment of operational impacts will focus on the earliest year that the development is likely to be operational to provide a worst case assessment.

Baseline

- 7.3.3 RBC has declared an Air Quality Management Area (AQMA) due to exceedances of the annual mean nitrogen dioxide objective. The AQMA comprises Reading town centre and extends out along the major arterial roads.
- 7.3.4 WBC has declared an AQMA relating to the annual mean nitrogen dioxide levels in the vicinity of the M4 motorway. The Borough also declared two additional AQMAs in 2015 for exceedances of the annual mean nitrogen dioxide in Wokingham and Twyford.

Scope of Assessment

- 7.3.5 The principal air pollutants of concern with respect to the development will be:
- nitrogen dioxide (NO₂);
 - fine airborne particles (PM₁₀ and PM_{2.5}); and
 - dust.
- 7.3.6 The main local sources of these pollutants are likely to be road vehicles (nitrogen dioxide, PM₁₀ and PM_{2.5}); and construction activities (dust and PM₁₀). Professional experience indicates that any impacts associated with other air pollutants will be negligible.
- 7.3.7 It is recognised that the proposed development may result in a change in traffic patterns on local roads with some reduction in car use possible. However, this is not likely to have a likely significant effect on CO₂ emissions related to climate change.

Methodology

- 7.3.8 Existing local air quality will be defined within the study area drawing upon monitoring carried out by the Local Authority with the information provided within the Council's Air Quality Review and Assessment reports.
- 7.3.9 Air quality will be assessed at a range of worst-case receptors. For construction activities, these will be existing properties closest to the proposed development. For traffic-related impacts, these will be the existing residential properties that are closest to roads, in particular those close to junctions, where traffic emissions are greatest. Consideration will be given potential adverse impacts as well as beneficial where any reductions in traffic are identified.
- 7.3.10 Where necessary this will include consideration of the impact of buses travelling along the proposed route, which was previously vehicle free.
- 7.3.11 The potential impacts of dust during construction will be assessed with reference to the Institute of Air Quality Management's *Guidance on the Assessment of Dust from Demolition and Construction* (February 2014), which is accepted as industry standard guidance on this subject. There are no statutory objectives for dust; it is therefore common practice to provide a qualitative assessment based on the size of the Site, regional meteorological conditions and experience of the distances over which impacts may occur.
- 7.3.12 The assessment of operational road traffic impacts will be undertaken using the ADMS Roads detailed dispersion model. The model will be used to predict concentrations at receptors along routes where there is expected to be a significant change in traffic. Model outputs will be verified against local air quality monitoring data. The modelling will make use of mapped background concentration data provided by Defra and of traffic flow projections. Air quality will be assessed in relation to the national air quality objectives, established by the Government to protect human health. Air quality impacts arising from road traffic will be assessed with reference to guidance issued by the IAQM and Environment Protection UK (EPUK) in their document: *Land-use Planning & Development Control: Planning for Air Quality*.
- 7.3.13 The Environmental Health Officer at Reading Borough Council has agreed in principle the approach set out above (response received 22 June 2016).

Risk and Limitations

- 7.3.14 There are limitations that contribute to the uncertainty in predicted concentrations. The model used is dependent upon the traffic data that will be input which will have inherent uncertainties associated with them. There is also uncertainty as the model is required to simplify real-world conditions into a series of algorithms.
- 7.3.15 There are also limitations associated with the emission factors used in the model. A disparity between the national road transport emission projections and measured annual mean concentrations of nitrogen oxides (NO_x) and NO₂ has been identified in recent years. Whilst projections suggest that both annual mean NO_x and NO₂ concentrations from road traffic emissions should have fallen significantly over the past 6 to 8 years, at many monitoring sites in the UK levels have remained relatively stable, or have even shown a slight increase. In order to take the variation into account in the modelling a sensitivity test will be undertaken.
- 7.3.16 There are no significant air quality risks anticipated. All practical and reasonable measures which can be implemented to mitigate any detrimental impacts associated with construction and operation of the proposed scheme will be considered, and highlighted within the Air Quality chapter.

7.4 Hydrology and Drainage

Introduction

- 7.4.1 This section provides the scoping assessment in relation to hydrology and flood risk. This provides an overview of the baseline conditions, the potential impacts of the development and proposed mitigation to address this.
- 7.4.2 The NPPF seeks to ensure that flood risk is taken into account at all stages of the planning process, to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas at highest risk.
- 7.4.3 A site-specific Flood Risk Assessment (FRA) is required for development within Flood Zones 3 'High Probability' or Zone 2 'Medium Probability' of river/sea flooding, and for all proposals that are of an area of 1 hectare or greater in Flood Zone 1 'Low Probability'. Accordingly, a FRA incorporating a surface water drainage strategy, will be prepared to accompany the future planning application, in accordance with relevant national and local planning policy.

Baseline

- 7.4.4 The proposed route is located alongside the River Thames which flows west to east, north of the Site. The proposed route also passes over the River Kennet at its confluence with the River Thames at Kennetmouth. In this location, the River Thames flows south of the Redgrave Pinsent Rowing Lake, and Caversham Lakes and Marina. The River Thames passes through Caversham Lock approximately 1.2 km upstream of the proposed route, and Sonning Lock approximately 3.5 km downstream.
- 7.4.5 The Environment Agency (EA) 'Flood Map for Planning' shows that the western part of the proposed route lies within Flood Zone 2 'Medium Probability' (between 1 in 100 (1%) and 1 in 1000 (0.1%) annual probability of river flooding). The eastern part of the proposed route lies within Flood Zone 3 'High Probability' (greater than 1 in 100 (1%) annual probability river flooding).
- 7.4.6 The EA 'Risk of Flooding from Reservoirs' map shows that the Kennetmouth area is located within the floodplain in the event of a breach of Whiteknights Lake, located 1.7 km south-east of the Site. However, the risk of flooding from reservoir breach is very small in any case as all large raised reservoirs are inspected and supervised by reservoir panel engineers.
- 7.4.7 The EA Surface Water Flood Map indicates that the majority of the Site is at 'Very Low' (less than 1 in 1000 (0.1%) risk of flooding from surface water sources), with some isolated areas of

'Low' (between 1 in 1000 (0.1%) and 1 in 100 (1%)) risk of flooding from surface water sources.

- 7.4.8 More detail on the geology of the Site is contained in section 7.6 'Ground Conditions'.
- 7.4.9 The EA Catchment Data Explorer application provides details of the ecological and chemical water body classifications for the River Thames and Kennet in the vicinity of the Site, in line with the River Basin Management Plan (RBMP) for the Thames River Basin District (2009).
- 7.4.10 The RBMP sets out a Programme of Measures (POM) which needs to be undertaken in order for each water body to maintain or reach 'good' status by 2015 in accordance with the European Water Framework Directive (WFD). The plan also sets out the various standards that each water body has to meet in order to be classified as having 'good' status. The RBMPs are currently being updated in line with the start of the second river basin management plan cycle which will extend from 2016 to 2021.
- 7.4.11 The water quality designations of the River Thames through Reading lies within the 'South Chilterns' operational area and is split between the 'Wallingford to Caversham' and 'Reading to Cookham' sub-catchments (with the River Kennet confluence the boundary point between the two. The River Kennet, to its confluence with the Thames, lies within the 'Kennet and Holy Brook' sub-catchment of the 'Kennet and Tributaries' management catchment. Both watercourses are noted as being 'heavily modified' hydromorphology.
- 7.4.12 The data identifies both reaches of the River Thames as having a water body classification of 'moderate' in 2009, remaining at 'moderate' in 2015 to meet the specified objective. The River Kennet is of the same status, but with a target of 'good by 2027'.
- 7.4.13 This is further broken down into 'ecological status' and 'chemical status'. Both the Thames and Kennet are identified as 'moderate' ecological status in 2009, remaining at 'moderate' in 2015 to meet the specified objective. The River Kennet is of the same ecological status, but with a target of 'good by 2027'.
- 7.4.14 Both the Thames and Kennet are identified as 'good' chemical status in 2009, remaining at 'good' in 2015 to meet the specified objective. The River Kennet is of the same chemical status and has the same target as the Thames.

Scope of Assessment

- 7.4.15 The Site lies within Flood Zone 2 'Medium Probability' on the west side of the River Kennet crossing, and Flood Zone 3 'High Probability' on the east side. Therefore the potential impacts on fluvial flood risk – primarily in relation to floodplain storage capacity and flow routes – will be a key consideration. The currently available information indicates the potential flood risk from other sources is low.
- 7.4.16 It is possible that the construction phase would cause localised changes to the Site permeability and potentially alter the characteristics of surface water runoff discharging into the surrounding watercourses, without appropriate mitigation. During earthworks and construction operations, there is potential for the on-site generation of surface water runoff contaminated with residual agricultural chemicals and hydrocarbons from machinery, fuel storage or heavy vehicles parked on site. In addition, fine particles may also originate from stockpiles of construction materials, plant and wheel washing. Surface water runoff could potentially become silty during construction.
- 7.4.17 Although there will be an increase in water demand during construction, the potential effects on water availability to the surrounding area are not considered to be significant.
- 7.4.18 The proposed development will increase the impermeable surfacing over parts of the Site and could potentially increase the peak runoff rates emanating from the Site. This will be fully addressed through the surface water drainage strategy developed alongside the Flood Risk Assessment (FRA).

- 7.4.19 Appropriate mitigation measures will be incorporated into the development design, according to the potential impacts on fluvial flood risk, surface water drainage and any related flood risk on or off site.
- 7.4.20 Flood compensation measures and/or designated fluvial flow routes will be incorporated to mitigate for losses in floodplain storage capacity within the 1 in 100 annual probability plus climate change fluvial floodplain. Due consideration will be given to the required climate change impacts based on the allowances set out in the 'Flood risk assessments: climate change allowances' EA guidance (February 2016), which vary according to flood zoning of discreet elements of the Site (as referred to in [Section 7.4.5](#)), the western part of the Site is located within Flood Zone 2 and the eastern part of the Site is located within Flood Zone 3.
- 7.4.21 A drainage strategy will be prepared that will be designed to a 1 in 100 year plus climate change rainfall event and incorporate measures to preserve and enhance water quality.
- 7.4.22 Development within close proximity of the watercourses could potentially restrict access for maintenance. As the works will be within 8 metres of a main river (the River Thames), they are subject to Environmental Permitting Regulations and will require an 'Environmental Permit for Flood Risk Activities'.

Methodology

- 7.4.23 A FRA will be prepared for the Site that will identify and assess the risk of current and future flooding from all potential sources. The FRA's primary focus will be development of the proposed surface water drainage strategy principles in accordance with flood risk legislation and policy and guidance to ensure that the development is not a flood risk in itself and that it does not pose a risk to off-site flooding of others.
- 7.4.24 This will include the available information from the EA in relation to the hydraulic modelling of the local watercourses and review of the available information within the Reading Borough Council (RBC) Strategic Flood Risk Assessment (SFRA), the RBC Preliminary Flood Risk Assessment (PFRA) the WBC SFRA, and the WBC PFRA, and other available information.
- 7.4.25 The initial scoping stage will consider the requirements for surface water drainage and on-site attenuation.
- 7.4.26 It is necessary to consider how the development might impact on achieving the objectives of the WFD. We therefore propose to prepare a WFD Screening exercise, based on the EA's forms within their internal guidance, or a Compliance Statement. However it is considered that there will be a negligible impact due to the form of development (i.e. no alteration of the river channel or works within the channel - the Kennet crossing will be a clear span with abutments set back from the bank top), the 'heavily modified' hydro-morphology of the watercourses and the limited effects on drainage and water quality.

Risk and Limitations

- 7.4.27 The fluvial flood risk is based on the EA's River Thames hydraulic model. Such modelling has inherent limitations at a site specific level due to the geographic scale of the modelling and is subject to the baseline calibration data available at the time the model was produced. The primary flood risk to the proposed route of the MRT is from the River Thames, a well-maintained and slow responding watercourse with extensive calibration data available from previous flood events.

7.5 Ground Conditions

Introduction

- 7.5.1 The ground conditions impact assessment will consider the impact of ground contamination (if present) and ground instability (if present) could have upon the Site and surrounding area during the preconstruction, construction and operational phases of the proposed development.

Baseline Conditions

- 7.5.2 The Site is situated immediately to the south of the River Thames and comprises an approach road and a viaduct with a proposed bridge over the mouth of the River Kennet.

Land use

- 7.5.3 The land to the west of the River Kennet is situated on a historical landfill that was used in the past for railway sidings. There are large areas of the historical landfill within the footprint of the Site that are unlikely to have been assessed, and treated or remediated in the past. The land to the east of the River Kennet comprises undeveloped land with two historical gravel pits.

Geology

- 7.5.4 The natural ground conditions on the Site comprise Alluvium and River Terrace Deposits overlying the White Chalk Subgroup at depth.
- 7.5.5 A summary of the ground conditions based on the historical borehole records in the vicinity of the Site is presented in **Table 7.1**.

Table 7.1: Ground Conditions at the Site

Strata	Approximate Depth to base (m bgl)	Typical Description
Made Ground	0.3 to 3.0 typically 1.0 to 2.5	Variable composition, typically CLAY with fragments of brick, clinker, concrete, chalk and flint, locally with ash and organic matter
Alluvium	2.5 to 4.3 Typically about 3.5 to 4.0	CLAY and SILT locally peaty or organic with traces of decaying organic matter, flint gravel and shells. Locally with rare layers of peat (up to 2.1 m thick)
River Terrace Deposits	3.8 to >10.0 Typically 6.0	SAND and GRAVEL in variable proportion locally with a thin layer of clayey sandy silt
White Chalk Subgroup	> 25	White Chalk with flints. Recovered as remoulded chalk with fragments of weak chalk becoming rubbly and blocky with depth

- 7.5.6 Where recorded, groundwater strikes were recorded between 1.8 and 4.5 m below ground level and rose to between about 0.3 and 2.9 m below ground level.

Hydrogeology

- 7.5.7 The River Terrace Deposits and the White Chalk Subgroup are classified as Principal Aquifers. The Alluvium is classified as Secondary A Aquifer.
- 7.5.8 It is expected that the groundwater in the Alluvium, River Terrace Deposits and the White Chalk Subgroup are in hydraulic continuity with the water in the adjacent rivers.
- 7.5.9 The presence of Principal and a Secondary A Aquifers need to be considered in assessing the effects of the built development on the hydrogeological regime and the risk associated with persistent pollutants.

Hydrology

- 7.5.10 The adjacent River Thames and the River Kennet and the Chalk and River Terrace Deposits Aquifers are considered to be highly sensitive controlled water receptors.
- 7.5.11 Additional information with regards to the hydrology is presented in the Hydrology and Drainage Chapter.

Scope of Assessment

- 7.5.12 An assessment will be undertaken of the impacts of the proposed development in relation to ground conditions, with particular emphasis on the potential for contamination. The assessment will describe the potential and known sources of contamination within and around the Site, current conditions, those aspects of the proposed development that may impact, or be impacted by soil and water contamination or the physical ground conditions, associated potential impacts and effects, mitigation measures and residual impacts and effects following mitigation, or remediation.
- 7.5.13 We proposed to exclude the following elements from the Ground Conditions ES Chapter for the reasons stated below:
- 7.5.14 **Geo Conservation** The natural ground conditions on the Site comprise Alluvium and River Terrace Deposits overlying the Chalk at depth. The natural geomorphology in the vicinity of the Site comprises the Lower Valley Floor of the River Thames. There are no designated geological or geomorphological sites or features of conservation value in the area affected by the proposed scheme. Given that the proposed development will have no material change on the geology and geomorphology of the Site and its vicinity, there are no likely significant effects and assessment of the impact of the scheme on geo conservation we propose to **scope out** this topic from the ES.
- 7.5.15 **Mineral Resources** Although the River Terrace Deposits represent a potential mineral resource, the Site does not fall within any mineral consent or safeguard area. On this basis, there are no likely significant effects and we proposed to **scope out** assessment of the impact of the scheme on mineral resources from the ES.
- 7.5.16 **Unstable Ground** The Site is situated on slightly undulating ground with no noted features with the exception of two disused gravel pits recorded in the eastern part of the Site. The geology and geomorphological setting of the Site is such that the potential for unstable ground to be present is, in general, low. The presence of the historical gravel pits is not considered to have a significant effect on the ground conditions or the wider environment during either the construction phase or in the long term. On this basis, there are no likely significant effects and we propose to **scope out** assessment of ground stability from the ES unless the Phase 1 Ground Condition assessment will identify significant effects on the stability of the ground.
- 7.5.17 However, the desk based Phase 1 Ground Condition Assessment for the Site will include an initial stability assessment to identify the potential hazards and constraints to the proposed development of the Site with regards to the risk of subsidence arising from artificial cavities, natural cavities, and adverse ground conditions.
- 7.5.18 The assessment will be carried out under the definition of 'Site Investigation Information' given in the NPPF glossary page 56 (DCLG, 2012), where a Phase 1 Desk Study and ground stability risk assessment is the minimum requirement under the NPPF to support any planning application on a site that might be potentially affected by ground stability hazards.

Methodology

- 7.5.19 To assess contamination at the Site a Phase 1 Ground Condition Assessment including a Tier 1 contamination risk assessment will be carried out for the whole Site. This will be supplemented by an intrusive geoenvironmental ground investigation including a Tier 2 contamination risk assessment for the Western part of the Site that is identified to have potential significant environmental effects with regards to contamination.
- 7.5.20 The proposed methodology will include the following:

Site Wide

- A Site walk over survey;
- Review of historical maps, environmental data, published geological maps and other records available and identification of potential contaminant sources (or stability issues);
- Phase 1 Ground Condition Assessment including preparation of a preliminary site conceptual model (CSM) and Tier 1 Contamination Risk assessment.

Western Part of the Site

- Intrusive ground investigation including soil, groundwater and surface water testing; and
- Phase 2 Ground Condition Assessment including Tier 2 Contamination Risk Assessment based on a source-pathway- receptor model of potential pollutant linkages.

- 7.5.21 The Phase 1 and Phase 2 Ground Condition assessments will be carried out in general accordance with the current UK practice as set out in the Model Procedures for the Management of Contaminated Land (CLR 11), BS 5930, and BS 10175.
- 7.5.22 An assessment of the potential impacts that are related to the ground conditions and potential contamination in the soil and groundwater. These will be assessed for the construction and operational phases of the development. Given the Site location and the high sensitivity of the controlled waters receptors below and immediately adjacent to the Site, emphasis will be given to careful consideration of the potential effects of the development on controlled waters.
- 7.5.23 Mitigation measures will be proposed to limit potential negative impacts and effects to an acceptable level, where required, and included in the assessment along with any residual effects. This will be carried out for the construction and operational phases of the proposed development.

Potential Effects

- 7.5.24 Any potential contaminants resulting from these previous uses may have a negative impact on sensitive receptors including; site workers, site occupiers/neighbours, groundwater and surface water, ecology and wildlife, and the built environment.
- 7.5.25 The construction works could, without appropriate mitigation, cause pollution that could affect sensitive receptors at and in the vicinity of the Site.

Risk and Limitations

- 7.5.26 None identified.

7.6 Landscape and Visual

Introduction

- 7.6.1 This section sets out the proposed approach and methodology for undertaking a Landscape and Visual Impact Assessment (LVIA) in support of a planning application for the proposed development.
- 7.6.2 An overview of the LVIA baseline data that will be used within the assessment is provided. Landscape designations and published landscape character assessments, which are relevant to the Site, are identified. Proposed viewpoints for the visual assessment and reasoning for their selection are also given. Winter photographs taken at these viewpoints are included at **Appendix D** to illustrate the baseline condition.
- 7.6.3 The scope of the LVIA is outlined, and any potential likely significant effects identified.

Baseline

Landscape Designations

- 7.6.4 Landscapes may be valued at community, local, national or international levels. Existing landscape designations will be taken as the starting point for the assessment, and the value of undesignated landscapes will also be assessed.
- 7.6.5 Relevant landscape designations for the Site and surrounding area are set out in **Table 7.2**.

Table 7.2: Landscape Designations

Typical Designation	Description	Importance (Value)	Actual Designation Applicable to the Site and Surrounding Area
World Heritage Site	Unique sites, features or areas of international importance with settings of very high quality.	International (High)	None
National Park, AONB, Conservation Area, curtilage of Grade I, II* and II Listed Buildings, Registered Parks and Gardens of Special Historic Interest (RHPG), Scheduled Monuments, Ancient Woodland	Sites, features or areas of national importance with settings of high quality.	National (High)	None on the Site. Conservation Areas: Sonning Conservation Area, 2 km to the north-east of the Site; Eldon Square Conservation Area, 0.4 km to the south of the Site. Various Listed Buildings in the surrounding area. Including 'Railway bridge and attached accommodation bridge over River Kennet at SU 7306 7381', 40m to the south of the Site. RHPG: Reading Cemetery (Grade II) 0.6 km to the south-east of the Site. Scheduled Monuments: 'Reading Abbey: a Cluniac and Benedictine monastery and Civil War earthwork', 0.5 km to the south-west of the Site. Ancient Woodland: a small area on island within lake, 1 km to the north-east of the Site
Special Landscape Areas, Areas of Great Landscape Value, Long distance paths, National Cycle	Sites, features or areas of regional importance with intact character.	Regional (High/Medium)	Thames Path National Trail National Cycle Route 4 / Route 5 – Thames Valley

Typical Designation	Description	Importance (Value)	Actual Designation Applicable to the Site and Surrounding Area
Routes			
Areas of Local Landscape Importance, Designated Public Open Space, Tree Preservation Orders (TPO)	Sites, features or areas of district importance.	District (Medium or Low)	Important areas of open space (Reading Borough Local Development Framework: Policy RC14) Major landscape feature (Reading Borough Local Development Framework: Policy CS37, SA17) Existing and potential green links (Reading Borough Local Development Framework: Policy DM17) TPOs: TBC
No designation, local public right of way	General countryside area valued at the local level.	Local (Medium/ or Low)	None on the Site. Public rights of way to the east

Landscape Character

7.6.6 Relevant published landscape character descriptions for the Site include:

- a. National Character Area: 115: Thames Valley;
- b. Reading Townscape and Visual Assessment (Reading Borough Council, 2008, Reading Tall Building Strategy: Appendix 1); and
- c. Wokingham District Landscape Character Assessment (Land Use Consultants, 2004).

People's Views and Visual Amenity

7.6.7 Potential visual receptors include:

- Public Rights of Way and cycle route users, in particular the Thames Path National Trail and the Thames Valley National Cycle Route;
- people using open spaces and parks;
- people living in, working in, or visiting the east of Reading, in particular Lower Caversham, New Town and Thames Valley Business Park;
- pedestrians and people using local roads;
- passengers on trains travelling along the Great Western Main Line Railway.

7.6.8 The selection of viewpoints is made on the basis of the following types of publicly accessible viewpoints:

- representative viewpoints (for example, representing views of users of a particular footpath);
- specific viewpoints (for example, a key view from a specific visitor attraction);

- illustrative viewpoints (chosen to demonstrate a particular effect/specific issue); and
- any important sequential views (for example, along key transport routes).

Proposed Viewpoint Locations for Assessment

- 7.6.9 Representative viewpoints were selected following a review of the potential visual receptors, and the likely visibility of the Site from the surrounding area. **Table 7.3** lists those viewpoints that are considered to be likely to experience significant visual effects and are therefore proposed for the visual impact assessment.
- 7.6.10 The Townscape and Visual Assessment which forms part of the Reading Tall Building Strategy (Reading Borough Council, 2008, Appendix 1) was reviewed as part of the viewpoint selection process. The Reading Townscape and Visual Assessment identifies a number of locations from which there are key views within the town. Therefore, locations from where these views may potentially be affected by the proposed development were also selected to form part of the visual impact assessment, as noted in **Table 7.3**.
- 7.6.11 The proposed viewpoints are shown on the viewpoint location plan which accompanies this report at **Appendix D**. Panoramic baseline photographs were taken at these viewpoints during March 2016, these are included at **Appendix D**.

Table 7.3: Selection of Representative Viewpoints for Visual Impact Assessment

Viewpoint Reference	Location	Reason for Inclusion
1	Towpath south of Kennet and Avon Canal, at end of Cholmeley Road, looking north-east	▪ On National Cycle Route 4 - Thames Valley ▪ To north of Newton School (Grade II Listed Building) ▪ To south of listed railway bridge (Grade II).
2	Thames Path National Trail, looking east	▪ Thames Path National Trail ▪ National Cycle Route 5 –Thames Valley ▪ Area identified by Reading Borough Council as a 'Major Landscape Feature' (Policy CS37, SA17) and an 'Important Area of Open Space' (Policy RC14)
3	Thames Path National Trail, looking west	▪ Thames Path National Trail ▪ National Cycle Route 4 – Thames Valley ▪ Viewpoint 18 – from the Thames Path, east of Reading. Identified as a Long Range view into Central Reading (Reading Borough Council Townscape and Visual Assessment, 2008), which gives the view a high sensitivity.
4	Thames Path National Trail, looking east	▪ Area identified by Reading Borough Council as a 'Major Landscape Feature' (Policy CS37, SA17) and an 'Important Area of Open Space' (Policy RC14)
5	Open space between Thames Path and Thames Valley Park Drive, looking south-west	▪ Public open space ▪ Proximity to the Thames Path National Trail
6	Thames and Kennet Marina,	▪ Representative of view from the water and

	looking south	view from the north
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- 7.6.12 Viewpoints which have been considered and identified as unlikely to experience visual effects, or likely to experience visual effects which will not be significant, have been scoped out for the visual impact assessment, these are listed in **Table 7.4**.

Table 7.4 Scoped Out Viewpoints

Viewpoint Location	Reasoning
Reading Cemetery RHPG	Intervening built form prevents views.
Sonning Conservation Area	Intervening vegetation and buildings prevent views.
Eldon Square Conservation Area	Intervening built form prevents views.
Reading Abbey: a Cluniac and Benedictine monastery and Civil War earthwork – Scheduled Monument	Intervening built form prevents views.
Viewpoint N – view north westwards across Kings Meadow Identified as a Key View within Central Reading (Reading Borough Council Townscape and Visual Assessment, 2008)	Intervening vegetation and buildings prevent views.

Scope of Assessment

- 7.6.13 Potential landscape and visual effects arising from the proposed development will be those upon:

- landscape features;
- landscape character; and
- people's views and visual amenity.

Landscape Features

- 7.6.14 Landscape features of the Site, which will potentially be affected by the proposals, include:

- a. **trees and other vegetation** within the Site and on the Site boundaries;
- b. **landform** adjustments to landform for the construction of bridge foundations and embankments, new roads and paths; and
- c. **land use** change from public open space, with footpath and cycle route to a new public transport route, and creation of a recreational route with public open space and ecological habitats.

Landscape Character

- 7.6.15 It is likely that adverse changes will occur to the local landscape character, arising from the river crossing, roads and associated infrastructure. Retention of existing trees, where practicable, together with new planting, which will integrate landscape and ecological requirements, will contribute towards minimising adverse effects on landscape character.

People's Views and Visual Amenity

- 7.6.16 There are likely to be adverse changes to views as a result of the changes from the existing footbridge to a larger structure, moving buses, longer public towpath link and the loss of vegetation and amenity space.

Methodology

- 7.6.17 The LVIA will be carried out by chartered landscape architects at PBA, a registered practice with the Landscape Institute and a corporate member of the Institute of Environmental Management and Assessment (IEMA).
- 7.6.18 PBA's methodology for LVIA is based on professional experience and the Landscape Institute / Institute of Environmental Management and Assessment 'Guidelines for Landscape and Visual Impact Assessment' (3rd Edition, 2013) ('GLVIA 3').
- 7.6.19 The LVIA will consider the effects on landscape (including landscape character) and on people's views (visual amenity) as separate assessment components. This will consider likely significant landscape and visual effects using a proportionate approach relative to the project and nature of likely effects.
- 7.6.20 The assessment of landscape and visual effects will make comparison with the baseline year of 2016, and will include assessment during the construction period, on completion of the development (i.e. operation) and 15 years after completion of the development, when new planting is assumed to have successfully established and grown to provide effective mitigation.
- 7.6.21 A three-stage assessment process will be adopted for LVIA, in accordance with the GLVIA 3. Based on the nature of receptors (sensitivity), the nature of effects (magnitude) and then the significance of effects as required by the EIA Regulations.

Baseline Data for the Landscape and Visual Assessment

- 7.6.22 Baseline landscape and landscape character information will be collated and reviewed, including topography, landscape planning designations and published sources of landscape character.
- 7.6.23 The Site and surrounding area was visited during winter months in early 2016, and a photographic record to represent views of the selected assessment viewpoints was undertaken, in order to:
- determine the extent of visibility of existing built structures;
 - determine the visibility of the proposed development; and
 - gain further understanding of the components which create the landscape character.

Assessment of Landscape Effects

- 7.6.24 This will assess how the proposed development will affect the components of the landscape and the key characteristics which contribute to its distinctive character (the 'landscape character').
- 7.6.25 A methodical consideration of each effect upon each identified landscape receptor will be undertaken, in order to determine the significance of effects, as a combination of the:
- sensitivity of the landscape receptor; and
 - magnitude of the landscape effect.

Sensitivity of the landscape receptor

- 7.6.26 The assessment of landscape receptor sensitivity will combine judgements on the 'value' attributed to the landscape receptor e.g. designations etc. This is combined with the 'susceptibility to change' of the receptor based on the type of development proposed i.e. the ability for the proposed development to be accommodated without consequence or in keeping with policy/strategies.

Magnitude of Landscape Effects

- 7.6.27 The magnitude of a landscape effect will be assessed in terms of its size or scale, the geographical extent of the area influenced and its duration and degree of reversibility.

Assessment of Effects on Views and Visual Amenity

- 7.6.28 This will assess how the proposed development will affect the views available to people and their visual amenity. A methodical consideration of each visual effect upon each identified visual receptor will be undertaken, in order to determine the significance of effects, as a combination of:

- sensitivity of the visual receptor, or viewer e.g. public rights of way, public open spaces, public realm or other outdoor recreational facilities; and
- magnitude of the visual effect.

- 7.6.29 No private viewpoints will be assessed. However, where appropriate, representative viewpoints will be selected from publicly accessible locations within or on the edge of main settlements, property groupings or other buildings likely to be significantly affected by the proposed development.

Sensitivity of Visual Receptors

- 7.6.30 The assessment of visual receptor sensitivity will combine judgements on the value attributed to the visual receptor and the 'susceptibility to change' of the receptor to the specific type of development proposed.

- 7.6.31 The value assigned to views will have regard to a number of factors, including:

- recognition through planning or heritage assets; and
- the popularity of the viewpoint, its appearance in guidebooks, literature or art, on tourist maps, and the facilities provided to enable enjoyment of the view.

- 7.6.32 The susceptibility of people to changes in views is a function of:

- the occupation or activity of the viewer at a given location; and
- the extent to which a person's attention or interest may therefore be focussed on a particular view and the visual amenity experienced.

Magnitude of Visual Effects

- 7.6.33 The magnitude of a visual effect will be assessed in terms of its size or scale, the geographical extent of the area influenced and its duration and degree of reversibility.

Landscape and Visual Mitigation Measures

- 7.6.34 Measures proposed for preventing/avoiding, reducing or, where possible, offsetting or compensating for significant adverse landscape or visual effects will be described. Mitigation measures comprise:

- primary measures – developed through the iterative design process and therefore integrated in scheme design e.g. site layout, retention of existing trees, incorporation of key views and vistas etc.or;

- standard construction and operational management practices e.g. fencing/hoardings; and
- secondary measures – proposals to address potential adverse effects which remain the above e.g. new planting.

7.6.35 Primary mitigation measures and standard construction and operational management practices will be described in the project description and also the separate Design and Access Statement.

7.6.36 Secondary mitigation measures, if required, will be described in the LVIA.

Assessment of Significance of Landscape and Visual Effects

7.6.37 Significance of landscape and visual effects vary with the location, landscape context and type of proposed development.

7.6.38 The significance of landscape and visual effects will be determined from a combination of the receptor sensitivity and the magnitude of effects, as set out in the **Table 7.5**.

Table 7.5: Assessment of Significance of Landscape and Visual Effects

Sensitivity of Receptor	Major Effect	Moderate Effect	Slight Effect	Negligible Effect	Neutral Effect
High	Severe	Major	Moderate	Minor	Not Significant
Medium	Major	Moderate	Minor	Negligible	Not Significant
Low	Moderate	Minor	Minor	Negligible	Not Significant

Risk and Limitations

7.6.39 The assessment of landscape or visual effects aims to be as objective as possible, however professional judgements are required to be made, as the GLVIA 3 explains in paragraph 2.23 , page 21:

'Professional judgement is a very important part of LVIA. Whilst there is some scope for quantitative measurement of some relatively objective matters, for example the number of trees lost to construction... much of the assessment must rely on qualitative judgements, for example about what effect the introduction of a new development of land use change may have on visual amenity, or about the significance of change in the character in the landscape and whether it is positive or negative.' (GLVIA3).

7.7 Lighting

Introduction

7.7.1 Whilst not proposed to be an individual EIA topic, lighting will be assessed in parallel with the landscape and visual impact assessment (LVIA). The lighting assessment will form an appendix to the LVIA and therefore is integrated into Section 7.6 of the EIA Scoping Report.

Baseline

7.7.2 The western area of the Site (within Reading Borough) is an undeveloped mixture of woodland, scrub and grassland with no sources of artificial light and therefore expected to be of low brightness. It is adjacent to a retail superstore containing a car park illuminated with

high pressure sodium lanterns, mounted on a mixture of 6 to 8 metre columns that may result in obtrusive light (intrusion & sky glow) into the Site.

- 7.7.3 The central area of the Site where the proposed development crosses the River Kennet is mainly unlit with expected to be of low brightness. This is with the exception of the towpath adjacent to the railway bridge that is illuminated with two LED lanterns on 6 metre columns presumably to improve navigation and reduce the fear of crime in this secluded area.
- 7.7.4 The eastern area of the Site (within Wokingham Borough) is undeveloped flood plain and is unlit and therefore is expected to be of low brightness. The Site is adjacent to Thames Valley Park Rowing Club which is expected to contain some amenity and security lighting that may lead to obtrusive light (sky glow). The road junction into the Thames Valley Park is illuminated with high pressure sodium lanterns mounted on 10 m columns that may lead to obtrusive light (sky glow).
- 7.7.5 Potential sensitive receptors to artificial lighting include:
- Residents: Local residents at the lower levels of tower blocks at Luscinia View;
 - Road Users: Motorists and cyclists on Napier Road, Thames Valley Park Drive and the proposed new mass rapid transit scheme;
 - Railway: Train drivers using the Great Western Main Line;
 - Views of the Site: Views of the Site are limited and contained to the local area including users of the River Thames and the Thames Path National Trail;
 - Ecology – The Site is located in The Coal, Kennetmouth and Kings Meadow East Local Wildlife Site (LWS) and may contain light sensitive protected species such as bats.
 - Heritage: The Site is adjacent to a listed railway bridge and attached accommodation bridge over River Kennet.

Scope of Assessment

- 7.7.6 The construction and operational lighting requirements for the proposed development will follow relevant British standards, industry guidance and local authority requirements to meet the minimum required to safely and securely light the proposed development while considering the local amenity and wildlife within and surrounding the Site.
- 7.7.7 In general, construction lighting tends to lead to more obtrusive lighting than operational lighting because of its temporary nature, and the type of lighting equipment used. Effects to sensitive receptors potentially resulting from construction lighting include glare and light spill. However, these effects can be minimised and controlled through appropriate design measures.
- 7.7.8 During operation of the proposed development, sensitive receptors within close proximity of the proposed development could be subject to potential adverse effects resulting from light spill and glare of poorly designed or controlled luminaires. There is also a potential for adverse effects from sky glow to sensitive receptors located further from the Site. These effects can be mitigated through appropriate design and control measures.
- 7.7.9 Potential effects resulting from artificial lighting during construction can be mitigated through a range of design and control measures, including the use of shields and hoods on luminaires, appropriate timing of working hours and operation of security lighting, as well as consideration of the orientation of luminaires, and the avoidance of 'over-lighting'. The Construction and Environmental Management Plan will include control measures to be implemented in order to mitigate artificial light pollution.
- 7.7.10 Potential effects on sensitive receptors during operation of the completed scheme can be avoided through appropriate lighting design. Measures to mitigate potential effects such as sky glow, glare or light spill include the type of luminaire, the use of shields, hoods, planting and beneficial landscaping, as well as the design and positioning of lights (e.g. power, orientation, and height of the luminaire).

Methodology

7.7.11 The Lighting Assessment methodology will comprise the following:

- Establish the existing lighting conditions and any obtrusive light through a night-time survey.
- Identify and confirm existing light sensitive receptors;
- Establish the minimum construction and operational lighting required to safely and securely construct and operate the proposed development;
- Prepare an indicative lighting design to inform the operational assessment of lighting effects on sensitive receptors;
- Set out design recommendations to minimise obtrusive light both during construction and operation in accordance with the obtrusive light limitations set for relevant Environmental Zone (ILP, 2011).
- Describe potential and residual effects of obtrusive light on sensitive receptors.

7.8 Ecology

Introduction

- 7.8.1 This section of the ES Scoping Report provides an overview of the likely issues in relation to ecology as a result of the proposed development.
- 7.8.2 An Extended Phase 1 habitat survey has been completed for the Site (April 2016), with targeted habitat and species surveys on-going and due for completion in autumn 2016.
- 7.8.3 When fully explored as part of the ES, the ecology chapter will set out an assessment of the significant ecological effects associated with the proposed development and the mitigation and/or compensation required to ameliorate any effects to ensure that the proposed development will be in accordance with legislation and planning policy.

Baseline

Baseline Data Collection

- 7.8.4 Baseline data which relate to the Site and its immediate surrounds has been compiled from the following sources:
- The Multi Agency Geographic Information for the Countryside (MAGIC) website for the location and extent of Special Areas of Conservation (SAC), Special Protections Areas (SPA) and Ramsar Sites within 10 km of the Site and Sites of Special Scientific Interest (SSSI) within 2 km of the Site.
 - Thames Valley Environmental Records Centre (TVERC) for non-statutory designated wildlife sites and protected and notable species records within 2 km of the Site;
 - Ordnance Survey (OS) maps to locate ponds and wet ditches within 500 m of the Site; and
 - A review of existing ecology survey reports relating to the adjacent Thames Valley Park & Ride proposals (Wokingham Borough Council Planning App ref 161596).
- 7.8.5 Review of the information obtained from the data sources as described above helped inform the scope of targeted habitat and species surveys at the Site; these surveys are currently on-going and due for completion in Autumn 2016. Further details for each of the survey methodologies employed are provided in **Table 7.6**.

Table 7.6: Detail for the Methodologies of Ecological Surveys Undertaken and Proposed

Ecological Survey	Survey methodology	Survey area	Date of survey
<i>Botanical</i>			
Phase 1 habitat survey	JNCC (2010) – standard methodology to allow all habitats within Site to be characterised and mapped. Methodology extended to give particular consideration to the potential of the habitats present to support protected species or species of conservation importance	Habitats within Site boundary	April 2016
Detailed botanical survey	Detailed botanical survey and mapping exercise for habitats across the on-site Local Wildlife Site (LWS) and Habitat of Principal Importance (HPI); with botanical sampling of habitats across the wider Site.	All habitats within the on-site portion of the LWS, with sampling across the wider Site.	June 2016
<i>Bats</i>			
Roost assessment of mature trees.	Collins, J. (ed.), 2016 - Visual inspection from ground level of trees, to assess roost potential.	All potential roost features within trees to be affected by the proposals.	June – August 2016
Dusk emergence survey of railway bridge.	Collins, J. (ed.), 2016 – single dusk emergence survey for the railway bridge located off-site, but immediately adjacent to the Site.	Off-site, but adjacent railway bridge.	June 2016
Activity transects	Collins, J. (ed.), 2016 – 5 transect surveys covering land within the Site boundary. One visit per month.	All habitats within Site boundary.	May – September 2016
Static monitoring surveys.	Collins, J. (ed.), 2016 – static detectors deployed at 2 locations on the single transect. Data collected on 5 consecutive nights each month.	Habitats within Site boundary.	May – October 2016 (as recommended following consultation with WBC)
<i>Reptiles</i>			
Presence/absence survey	Froglife (1999) – the deployment of artificial refugia within areas of suitable habitat across the Site, checked on seven separate occasions during suitable weather	Suitable habitat where present within Site	June – September 2016

- 7.8.6 Although finalisation of the existing baseline conditions will only be possible following completion of the surveys outlined above, the current baseline conditions are outlined below.

Current Ecological Baseline

Statutory Designated Sites

- 7.8.7 No European designated sites are present within 10 km of the Site.
- 7.8.8 A single statutory designated site is present within 2 km of the Site: Highwood Local Nature Reserve (LNR) is located approximately 1,800 m south east of the Site and contains a number

of exotic trees species, with areas of mixed lowland woodland and heathland also present. The LNR also supports a variety of bird species.

- 7.8.9 In addition, a number of Site of Special Scientific Interest (SSSI) Risk Zones are present within 2 km of the Site. One of these falls within the Site; the Risk Zone for Lodge Wood and Sandford Mill SSSI (located just under 5 km east of the Site). However, the proposed development (i.e. infrastructure) is not one of the development types that Lodge Wood and Sandford Mill SSSI is considered to be of risk from (limited to airports, helipads and other aviation proposals, pig and poultry units and slurry lagoons).

Non Statutory Designated Sites

- 7.8.10 Seven non-statutory designated sites are present within 2 km of the Site. One of these – The Coal, Kennetmouth and Kings Meadow East Local Wildlife Site (LWS) – is located within the Site boundary.
- 7.8.11 The Coal, Kennetmouth and Kings Meadow East LWS comprises a combination of two sites that were previously notified separately (The Coal and Kennetmouth West); and an area of land in the east of Kings Meadows. Overall, they contain some areas that may be classed as ‘open mosaic habitat on previously developed land’. A summary of the citation for each land portion is provided below:
- The Coal is an old colliery spoil site comprising a central and riverside woodland area and an area of open wayleave at the foot of a steep railway embankment;
 - Kennetmouth is a short length of towpath at the confluence of the River Kennet and the River Thames. The Site is important for the presence of the nationally scarce vascular plant Loddon lily *Leucojum aestivum*. Several slender groundhoppers *Tetrix subulata* were previously identified; colonies of which are often isolated along the Thames Valley; and
 - Kings Meadow East is largely used for recreational purposes containing a mosaic of habitats including mixed broadleaved woodland, scrub and tall herb and rough grassland. At the time of the previous survey informing the citation, the elevated central grassland areas were identified as being the most interesting, being moderately rich in plant species at some locations. The surrounding low lying land was identified as being occupied by woodland and scrub elements and tended to be densely shaded and botanically impoverished. Some large canopy trees were identified, including a mature avenue of horse chestnuts along the riverside.
- 7.8.12 The Henley Road Pit LWS is located approximately 100 m north of the Site; immediately north of the River Thames. Henley Road Pit LWS is cited as comprising a large pit located next to the Thames which supports a range of overwintering wildfowl as well as nationally scarce insects.

Ancient Woodland

- 7.8.13 A single portion of Ancient Woodland is present within 2 km of the Site. This is located over 900 m north of the Site, on an island within the Henley Gravel Pits

Habitats On-Site, including Protected and Notable Flora (including Mature Trees)

- 7.8.14 The Site and its immediate surroundings contain a variety of habitat types, including those which have been listed as reasons for LWS designation (see above); or are recorded as other ‘Habitats of Principle Importance’ (HPI) for nature conservation (namely a portion of on-site ‘Lowland Mixed Deciduous Woodland’).
- 7.8.15 Further to this, the initial site walkover (extended Phase 1 habitat survey) identified that the Site contained floral species such as Loddon lily *Leucojum aestivum*, a British Red Book species (with other protected and notable plant species returned from within 2 km of the Site as part of the desk study); and also numerous mature trees.

- 7.8.16 The baseline conditions relating to habitats on-site, including those within the LWS and HPI, will be subject to confirmation following completion of the dedicated surveys identified within **Table 7.7**.

Species

Badger

- 7.8.17 Three records of badger *Meles meles* were returned from within 2 km of the Site within the last 10 years.
- 7.8.18 Although the Site and the immediate surroundings provided suitable habitat for use by badger, both for setts and foraging, no evidence of use was identified during the initial site walkover survey (extended Phase 1 habitat survey), or supplementary survey visits completed to date.
- 7.8.19 Based on the information currently available, badgers are considered likely absent from the Site; however the baseline condition relating to this species will be subject to confirmation following completion of all the further surveys identified within **Table 7.6**; during which, care will be taken to monitor conditions to ensure continued likely absence.

Bats

- 7.8.20 Numerous bat records were returned from within 2 km of the Site within the last 10 years. The initial site walkover survey (extended Phase 1 habitat survey) identified the following features on-site for which further consideration is required in relation to bats:
- **Trees:** several mature and semi-mature trees were present both within on-site woodland and as standalone specimens.
 - **Built Structures:** no buildings were identified within the Site; however the railway bridge over the Kennet and Avon Canal was noted to be present and assessed as having some potential to support roosting bats.
 - **Activity:** the Site, located immediately adjacent to the River Thames, and the Kennet and Avon Canal, contains a variety of habitats which may be used by foraging and commuting bats.
- 7.8.21 The baseline conditions relating to foraging, commuting and roosting bats will be subject to confirmation following completion of the dedicated surveys relating to bats, identified within **Table 7.6**.

Birds

- 7.8.22 Numerous records of protected and or notable bird species were returned from within 2 km of the Site; however the locations of these records largely comprised: Henley Road Gravel Pit (approximately 100m north of the Site), Whiteknights Park (approximately 1,540m south of the Site) and Thames Valley Park (approximately 1,500m north east of the Site).
- 7.8.23 Although the initial site walkover survey (extended Phase 1 habitat survey) identified that habitats on site provided breeding, foraging and roosting habitat suitable for use by common and widespread bird species (including some species listed on S41 of the NERC (2006) Act, national and local Biodiversity Action Plans (BAPs)); it was considered likely that such species would be typical of the semi-urban environment, with the Site unlikely to support a particularly diverse bird assemblage. As such, the requirement for further surveys was scoped out.

Dormice

- 7.8.24 No dormouse *Muscardinus avellanarius* records returned from within 2 km of the Site, and habitat on-site was considered suboptimal for this species; as such, dormice were considered highly likely absent from the Site, and the requirement for further surveys was scoped out.

Great Crested Newts

- 7.8.25 No records of great crested newts (GCN) *Triturus cristatus* were returned from within 2 km of the Site within the last 10 years.
- 7.8.26 Given the absence of GCN records from the desk study area, and taking into account the fact that no waterbodies were identified within the Site itself and a review of OS mapping (1:25,000) identified only two short ditch sections within 250 m of the Site (to the south of the railway line), GCN were considered unlikely to be present on-site, and the requirement for further surveys was scoped out.

Invertebrates

- 7.8.27 Several notable invertebrate records were returned from within 2 km of the Site. The Site provides a variety of terrestrial habitats which may support a broad diversity of invertebrates – protected and notable.
- 7.8.28 Although no dedicated invertebrate species are to be completed, the results of the targeted botanical work will be used to inform areas of interesting botanical species, or mosaics of habitats which may also be of particular value for invertebrates. As such; confirmation as to their baseline will be made following completion of the targeted botanical surveys identified within **Table 7.6**.

Otter and Water Voles

- 7.8.29 Records of otter *Lutra lutra* and water vole *Arvicola amphibius* were returned from within 2 km of the Site within the last 10 years.
- 7.8.30 The habitat on-site was considered to be unsuitable for use by water voles (due to the presence of reinforced banks and high levels of disturbance throughout)
- 7.8.31 Although the terrestrial habitat (including woodland edges and mature trees adjacent to the rivers) was considered to provide suitable habitat for occasional and transitional use by otter; due to the high levels of anthropogenic disturbance across the Site, this was considered largely sub-optimal. Further to this, as no evidence of this species was identified during the initial site walkover survey (extended Phase 1 habitat survey), or supplementary survey visits completed to date; otter are considered likely absent from the Site.
- 7.8.32 The baseline condition relating to otter will however be subject to confirmation following completion of all the further surveys identified within **Table 7.6**; during which, care will be taken to monitor conditions to ensure continued likely absence.

Reptiles

- 7.8.33 Records of grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and adder *Vipera berus* were identified from within 2 km of the Site within the last 10 years.
- 7.8.34 The initial site walkover (extended Phase 1 habitat survey) identified a limited amount of habitat suitable, although largely suboptimal, for use by common and widespread reptile species. The initial survey visits of the dedicated reptile presence/ likely absence surveys have identified the presence of low numbers of reptiles on the Site (slow worm and grass snake).
- 7.8.35 The baseline conditions relating to reptiles will be subject to confirmation following completion of the dedicated surveys identified within **Table 7.6**.

Other

- 7.8.36 The initial site walkover (extended Phase 1 habitat survey) identified habitat suitable for use by other notable species such as hedgehog *Erinaceus europaeus*, historic records of which were identified from within 2 km of the Site; as well as common and widespread amphibian species.

Scope of Assessment

- 7.8.37 Ecology will be included within the scope of the EIA due to the potential for effects on Important Ecological Features. The baseline ecological conditions have been/will be assessed (see above) from existing desk-based data and field surveys to be completed during 2016. Based on the current understanding of these conditions, the following Important Ecological Features will be scoped in/ out; subject to confirmation following completion of the surveys outlined within **Table 7.6**.

Table 7.7: Important Ecological Features and Anticipated Inclusion within Assessment

Ecological Features	Scoped In/ Scoped Out	Justification
Statutory Designated Sites	Out	Largely due to the intervening distances between them; it is considered unlikely that the proposed development will impact upon either the LNR or the SSSI's identified.
Non-Statutory Designated Sites (On-Site)	In	Due to their locations on, or in close proximity to the Site, it is considered likely that the proposed development will impact upon The Coal, Kennetmouth and Kings Meadow East LWS and Henley Road Pit LWS.
Non-Statutory Designated Sites (Off-Site)	Out	Largely due to the intervening distances between them; it is considered unlikely that the proposed development will impact upon the remaining LWS, which have been designated for a variety of reasons.
Ancient Woodland	Out	Largely due to the intervening distances, and the location of the Ancient Woodland (over 900 m north of the Site, on an island within the Henley Gravel Pits); it is considered unlikely that the proposed development will impact upon the Ancient Woodland identified.
Habitats On-Site, including Protected and Notable Flora (including Mature Trees)	In	Due to the nature of the proposed development, which will result in significant construction works throughout much of the Site extent, direct impacts on the habitats on-site, potentially including protected and notable species of flora, and mature trees, will be unavoidable.
Protected and Notable Species	TBC	As the baseline surveys for protected and notable species are on-going (as outlined within Table 7.6), the requirement for their inclusion within the Ecological Impact Assessment remains to be confirmed. Based on the current understanding of baseline conditions however, it is anticipated that the following species only will require consideration within the assessment: bats (roosting and activity) and reptiles.

Methodology

- 7.8.38 The ecological impact assessment (EIA) will be guided by recently updated best practice set out by the Chartered Institute of Ecology and Ecological Management (CIEEM, 2016).
- 7.8.39 As detailed above, the baseline conditions within the Site are being determined through the completion of survey work during 2016. This will allow a value to be attributed to each ecological receptor in accordance with CIEEM's geographic framework. In order to determine the likelihood of a significant ecological effect, it will be necessary to identify whether an ecological feature is sufficiently valuable for a significant effect upon it to be material in decision-making. Reference will be made to any technical assessments within supporting reports which will be appended to the ES.
- 7.8.40 Only those ecological features that it is considered could experience significant effects (i.e. impacts that could adversely affect the integrity of the habitat or the favourable conservation status of a species' local population), and which are identified as being of sufficient value to be material to decision-making (i.e. of 'District' level importance or above), will be classified as

being 'Key Ecological Features'. It is these ecological features that will be considered in the assessment in the ES, ensuring the assessment focuses only on those impacts which are potentially environmentally significant (see **Table 7.7**).

- 7.8.41 However, those ecological features which are not valued as being important within the context of the EIA will still warrant consideration during the design and mitigation of the proposed development on the basis of their legal protection and/ or their implications for environmental (and related) policies and plans. Therefore, consideration will separately be given to these (as well as Ecological Features of less than 'District' level importance); by cross-reference to the Ecological Appraisal Report to demonstrate that the development does not contravene legislation.
- 7.8.42 A logical and transparent assessment of impact of each Important Ecological Features will be presented for construction and operation of the proposed development. In each case the significance of impact will be expressed in accordance with CIEEM's geographic frame of reference. The wider ES will use generic significance criteria, based on an expression of severity, to describe the significance of environmental impacts. For ease of reference **Table 7.8** provides a means of relating these two approaches will be included within the Ecology chapter of the ES to allow the ecological impact assessment to be integrated into the wider EIA without compromising the CIEEM best practice approach.

Table 7.8 Ecological Significance Criteria

Significance level	Criteria	CIEEM geographical criteria
Severe	Only adverse effects are assigned this level of importance as they represent key factors in the decision-making process. These effects are generally, but not exclusively associated with sites and features of international, national or regional importance. A change at district scale, site or feature may enter this category.	Ecological impacts assessed as being significant at regional or higher geographical scales and that have triggered a response in development control terms are considered to represent impacts that overall within this assessment are of severe significance.
Major	These effects are likely to be important considerations at a local or district scale but, if adverse, are potential concerns to the development and may become key factors in the decision-making process.	Ecological impacts assessed as being significant at the borough (district) or county scales and that have triggered a response in development control terms are considered to represent impacts that overall within this assessment are of major significance.
Moderate	These effects, if adverse, while important at a local scale, are not likely to be key decision-making issues. Nevertheless, the cumulative effect of such issues may lead to an increase in the overall effects on a particular area or on a particular resource.	Ecological impacts assessed as being significant at the local scale and that have triggered a response in development control terms will be considered to represent impacts that overall within this assessment are of moderate significance.
Minor	These effects may be raised as local issues but are unlikely to be of importance in the decision-making process. Nevertheless they are of relevance in enhancing the subsequent design of the development and consideration of mitigation or compensation measures.	Ecological impacts that have been assessed as being significant within the immediate zone of influence and are unlikely to trigger a response in development control terms are considered to represent impacts that overall within this assessment are of minor significance.

Significance level	Criteria	CIEEM geographical criteria
None	No effect or effect which is beneath the level of perception, within normal bounds of variation or within the margin of forecasting error.	Ecological impacts that have been assessed as not being significant at any geographic level.

- 7.8.43 Potential impacts on Important Ecological Features will be identified along with the mitigation and/ or management measures required to prevent, reduce or off-set any significant adverse effects. The chapter will set out the significance of any residual ecological impacts and clarify whether these are negative or positive and as such represent an ecological enhancement.

Risk and Limitations

- 7.8.44 The risks associated with scoping the ecological assessment are largely due the incomplete baseline that is currently available. As many of the surveys are on-going, baseline conditions, and as such scoping requirements, may not be fully determined until such time as the surveys, as outlined within **Table 7.6** are completed.
- 7.8.45 Considering the current baseline conditions, the primary risk to the proposed route of the MRT is the presence of the on-site non-statutory designated site: The Coal, Kennetmouth and Kings Meadow East LWS. Targeted botanical surveys of the whole Site, including the area that falls within the designation, are to be completed in order to better understand their current ecological value. (Notably, the citation information for The Coal, Kennetmouth and Kings Meadow East LWS dates back to 2004).

7.9 Archaeology and Heritage

Introduction

- 7.9.1 The archaeological and heritage assessment will evaluate the known and potential archaeological and historic resource within the Site and its surroundings (i.e. the study area). It will present a consideration of designated and non-designated heritage assets on the S Site and in its vicinity, set out the significance of these assets, identify potential impacts upon them and present mitigation measures.
- 7.9.2 The archaeology and heritage assessment will be placed in the local, regional and national context, and assessed against national criteria.

Baseline

- 7.9.3 A heritage desk-based assessment has already been prepared for the Site and a 1 km radius from its centre (i.e. the study area).
- 7.9.4 No evidence has been identified which suggests that remains of national importance are likely to be present on the Site and thus that its development would be unacceptable or severely constrained.

Non-Designated Heritage Assets

- 7.9.5 Based on the available evidence, the heritage desk-based assessment identified that the Site has moderate/low potential for remains of prehistoric, Roman and Medieval date. This is primarily associated with the Site being located within the River Kennet floodplain, where archaeological evidence could be sealed within alluvial deposits at depth.
- 7.9.6 A low archaeological potential is identified for the Post-Medieval/Modern periods.
- 7.9.7 It is considered that due to the moderate/low archaeological potential of the Site, additional work may be requested by the archaeological advisor to the Local Planning Authority.

- 7.9.8 Any such work may be accommodated by an appropriately worded planning condition.

Designated Heritage Assets

- 7.9.9 The heritage desk-based assessment identified that there are no Scheduled Monuments, Conservation Areas, Registered Parks and Gardens, and Historic Battlefields which will be impacted upon by the proposed development.
- 7.9.10 Reading Cemetery (a Grade II Listed Park and Garden) and forty-seven Listed Buildings are located within the study area.
- 7.9.11 The heritage desk-based assessment identified that the only Listed Building which has the potential to be impacted up by the development proposals is the Grade II Listed Railway Bridge and attached Accommodation Bridge that lie immediately to the south of the Site. However, views to and from the bridges will be screened by woodland which runs along the River Kennet, although glimpsed views of the bridges from the Site may be possible, these are considered to be limited. The surrounding area of the listed bridge is also of an industrialised nature and the proposed new bridge will have an arch height at the height of the existing bridge to limit visual impacts. Therefore, it is considered that there will be no additional impact on the setting and significance of the bridge and Accommodation Bridge from the development proposals.
- 7.9.12 Reading Cemetery (a Grade II Listed Park and Garden) lies c. 500 m to the south of the Site. It is located in an area of modern development, with no intervisibility between it and the Site. Therefore, it is considered that the proposed development will not impact on its setting or significance
- 7.9.13 The impact of the development proposals on all the Listed Buildings and Reading Cemetery will be assessed in detail as part of the Archaeological and Heritage ES Chapter.

Scope of Assessment

- 7.9.14 The heritage desk-based assessment has identified, as far as is reasonably possible, the nature of the archaeological and heritage resource, its significance and has made appropriate recommendations for the future treatment of any remains which may be affected. This document will be included as an appendix to the Archaeological and Heritage ES Chapter.
- 7.9.15 Consultation with the following organisations and of the following documentation has been undertaken as part of the heritage desk-based assessment:
- Berkshire Historic Environment Record;
 - Oxfordshire Historic Environment Record;
 - British Library;
 - Reading Local Studies Library;
 - National Archives;
 - Berkshire Record Office;
 - Berkshire Development Control Archaeologist;
 - National Planning Policy Framework and Guidance;
 - Local Planning Policy;
 - Historic OS Mapping (including Enclosure, Tithe and Ordnance Survey where appropriate);
 - Various online resources (including Archaeological Data Service, Online Catalogue, MAGIC and the National Heritage List for England); and
 - Previous desk-based assessments, EIAs or fieldwork reports prepared for other sites within the vicinity.

Methodology

- 7.9.16 The Archaeology and Heritage ES Chapter will identify and evaluate the nature and likelihood of the impacts of the development, in both the long and short term, on archaeological and heritage features against clearly defined criteria.
- 7.9.17 Significance will be assigned to impacts relative to the sensitivity of the resource and the magnitude of impact in accordance with best practice.
- 7.9.18 Archaeological resources are susceptible to a range of impacts during development. These relate to works associated with site preparation as well as construction related activities, including:
- Demolition and site clearance activities that disturb archaeological remains;
 - Excavation that extends into archaeological sequences, for example deep foundations or basements resulting in the removal of the resource;
 - Piling activities resulting in disturbance and fragmentation of the archaeological resource; and
 - Dewatering activities resulting in desiccation of waterlogged remains and deposits.
- 7.9.19 The implications, if any, of these actions will be discussed and significance criteria allocated to any identified impact.
- 7.9.20 In terms of the effects on cultural heritage, the effects of the development can be direct, such as loss or damage to a heritage features, or indirect, including the effect on the setting of a Listed Building. Any such impacts will be discussed and significance criteria applied. The significance of impacts will be assessed using the significance criteria set out below.
- 7.9.21 Determination of the importance of heritage assets is based on existing statutory designations and, for non-designated archaeological assets, the Secretary of State's non-statutory criteria and professional judgement.
- 7.9.22 Using this approach, the criteria for establishing the importance of a heritage asset is described in **Table 7.9** below:

Table 7.9: Determining the Importance of a Heritage Asset.

Importance	Description
International	Archaeological sites or monuments of international importance, including World Heritage Sites. Structures and buildings inscribed as of universal importance as World Heritage Sites. Other buildings or structures of recognised international importance.
National	Ancient monuments scheduled under the Ancient Monuments and Archaeological Areas Act 1979, or archaeological sites and remains of comparable quality, assessed with reference to the Secretary of State's non-statutory criteria. Listed Buildings. Non-designated built assets of national importance, assessed with reference to the Secretary of State's published Principles of Selection for Listing Buildings.
Regional/ County	Archaeological sites and remains which, while not of national importance, score well against most of the Secretary of State's criteria

	Conservation Areas.
Local	Archaeological sites that score less well against the Secretary of State's criteria. Historic buildings on a 'local list'. Non-designated built assets of local significance.
None	Areas in which investigative techniques have produced negligible or only minimal evidence for archaeological remains, or where previous large-scale disturbance or removal of deposits can be demonstrated.

Magnitude of Impact

- 7.9.23 Determining the magnitude of impact is based on an understanding of how, and to what extent, the proposed development would impact heritage assets.
- 7.9.24 The magnitude of the effect is a product of the extent of development impact on an asset. Effects are rated as High, Medium, Low and Negligible/Neutral. Impacts can be direct or indirect, adverse or beneficial. The criteria for assessing the magnitude of impact are set out in **Table 7.10**.

Table 7.10: Magnitude of Impact.

Magnitude	Direct Impacts	Indirect Impacts
High Adverse	Demolition of built heritage assets or demolition within a Conservation Area. Complete removal of an archaeological site.	Radical transformation of the setting of an archaeological monument. Substantially harmful change in the setting of a built heritage asset or Conservation Area.
Medium Adverse	Harmful alteration (but not demolition) of a built heritage asset or alterations to a building in a Conservation Area. Removal of a major part of an archaeological site and loss of research potential.	Less than substantial harm to the setting of a built heritage asset or Conservation Area. Partial transformation of the setting of an archaeological site e.g. the introduction of significant noise or vibration levels to an archaeological monument leading to changes to amenity use, accessibility or appreciation of an archaeological site.
Low Adverse	Alterations to a built heritage asset or Conservation Area resulting in minor harm. Removal of an archaeological site where a minor part of its total area is removed but the Site retains a significant future research potential.	Minor harm to the setting of an archaeological monument or built heritage asset or Conservation Area.
Negligible/Neutral	Negligible impact from changes in use, amenity or access. Negligible direct impact to the built heritage asset or Conservation Area.	Negligible perceptible change to the setting of a building, archaeological site or Conservation Area.

Magnitude	Direct Impacts	Indirect Impacts
Low Beneficial	Alterations to a built heritage asset or Conservation Area resulting in minor beneficial impacts. Land use change resulting in improved conditions for the protection of archaeological remains.	Minor enhancement to the setting of a built heritage asset or Conservation Area. Decrease in visual or noise intrusion on the setting of a building, archaeological site or monument.
Medium Beneficial	Alterations to a built heritage asset or Conservation Area resulting in moderate beneficial impacts. Land use change resulting in improved conditions for the protection of archaeological remains plus interpretation measures (heritage trails, etc.)	Significant reduction or removal of visual or noise intrusion on the setting of a building, archaeological site or monument. Improvement of the wider landscape setting of a built heritage asset, Conservation Area, archaeological site or monument. Improvement of the cultural heritage amenity, access or use of a built heritage asset, archaeological site or monument. Moderate enhancement to the setting of the built heritage asset and Conservation Area.
High Beneficial	Arrest of physical damage or decay to a built heritage asset or structure. Alteration to a built heritage asset or Conservation Area resulting in significant beneficial impact.	Significant enhancement to the setting of a built heritage asset. Conservation Area or archaeological site, its cultural heritage amenity and access or use.

Significance of Impact

- 7.9.25 The significance of the impact of the proposed development on archaeological and heritage assets is determined by the importance of the asset and the magnitude of impact to the asset. **Table 7.11** below presents a matrix that demonstrates how the significance of impact will be established.

Table 7.11: Evaluation of Significance.

Magnitude of Impact	High	Medium	Low	Negligible / Neutral
International Importance	Severe/Major	Major	Major	Negligible
National Importance	Major	Major/Moderate	Moderate	Negligible
Regional/County Importance	Major/Moderate	Moderate/Minor	Minor	Negligible
Local Importance	Minor	Minor	Negligible	Negligible
Negligible Importance	Negligible	Negligible	Negligible	Negligible

- 7.9.26 Once impacts have been identified, the means by which they can be avoided through design will be explored as a priority. If impacts cannot be avoided through design, then alternative strategies, which may include site investigation and recording, will be proposed. The residual impacts following the implementation of these measures will then be defined and significance criteria applied.

Risk and Limitations

- 7.9.27 The assessment is reliant on available data; all reasonable measures have been taken in order to make sure that the data is accurate and up-to-date. The baseline data is, however, based on desk-based assessment and visual inspection. The primary sources of information list all known sites and finds; however, databases are limited in their ability to identify all sites or buildings of historic interest or predict new sites.

8 Topics Not Included in the EIA Scope

8.1 Introduction

- 8.1.1 The ES should be a focused document considering the assessment of likely significant environmental effects, both adverse and beneficial. Therefore those effects which are not likely to be significant should not be included in the ES, i.e. they should be scoped out of the EIA. The following section sets out those topics that have been determined not to be significant and therefore not included in the EIA as well as those that will be addressed independently in separate assessments. The rationale for this determination is also provided.

8.2 Noise & Vibration

- 8.2.1 The construction and operation of the proposed scheme, particularly access to public transport along the proposed MRT route is likely have some effect in noise levels for the surrounding area.
- 8.2.2 However, examining the route indicates that the majority of adjoining land uses are industrial which would not be considered noise sensitive. The only potential noise sensitive receptors are residential dwellings located on the west of the Site along Luscinia View off Napier Road.

Methodology

- 8.2.3 A desktop assessment has been undertaken to determine the potential increase in noise levels at the dwellings due to the development.
- 8.2.4 The impact of the operational traffic noise from the MRT route has been predicted using the guidance in Calculations of Road Traffic Noise (CRTN). The assessment is made by comparing the change in noise levels for the completed MRT scheme against the 'without development' baseline scenario. A best estimate of number of buses on Napier Road and the new MRT route have been utilised to inform the assessment.
- 8.2.5 We understand that in region of 300 buses per day will operate along the route. This assumption for the new link road has been used for the purposes of this assessment.
- 8.2.6 The increase in noise due to the operation of the MRT scheme has been assessed at properties along Luscinia View fronting Napier Road.

Guidance

- 8.2.7 The impact of the proposed development on the noise climate in the surrounding areas is based on the change in noise levels at noise sensitive receptors due to the increase in the volumes of road traffic generated by the proposed development.
- 8.2.8 The Design Manual for Roads and Bridges (DMRB) provides two magnitude scales of impact for the change in noise levels in the 'short-term' (opening year) and in the 'long-term' (future year). Assessment for the EIA uses long-term future year assessment criteria to assess the full and permanent effects of the proposed development. These are presented in Table 8.1 in terms of significant levels.

Table 8.1: Significant Levels for Existing Dwellings from Development Traffic

Change in $L_{A10,18h}$ Noise Levels in Long-term due to Road Traffic	Significance Level
10+	Major
5-9.9	Moderate
3 – 4.9	Minor
0.1-2.9	Negligible
0	No Change

Results and Analysis

- 8.2.9 **Table 8.2** below presents the predicted change in noise levels that are likely to occur due to the development at properties along Luscinia View.

Table 8.2: Road Traffic Impacts

Residential Premises	Changes in noise levels ($L_{A10,18HR}$) between with development and without development, in dB
Properties along Luscinia View	+1

- 8.2.10 The change in ambient noise levels at the existing receptors would be below 3 dB and would therefore be deemed a negligible impact in line with significance defined in **Table 8.1**.
- 8.2.11 Therefore, due to the limited number of receptors and negligible impact, we proposed to scope noise out of the EIA.

8.3 Agricultural Soils

- 8.3.1 The Site is not in an area suitable for agricultural use and therefore there are no likely significant effects and this topic will be scoped out of the EIA.

8.4 Socio Economics

- 8.4.1 The construction and operation of the scheme is likely to have some result in some social and economic benefits for people and businesses in Reading. However, there are not likely to be significant and therefore this topic has been scoped out of the EIA.

8.5 Waste

- 8.5.1 It is likely that waste materials will be generated by both the clearance of the Site and the construction of the proposed scheme. A framework Site Waste Management Plan will be prepared for the Site to be submitted with the planning application.
- 8.5.2 Consequently waste will need to be managed in accordance with this plan. This will include managing waste, wherever possible, according to the 'waste hierarchy' which is shown below in order of priority:
- Reduction;
 - Re-use;
 - Recovery (i.e. recycling); and
 - Disposal (i.e. landfill/incineration).

- 8.5.3 In line with good design, and effective cost management, materials generated on the Site by the demolition and construction works will be retained on-site and re-used wherever possible.

8.6 Sustainability

- 8.6.1 The proposed development is being delivered in order to encourage the use of more sustainable modes of transport, in particular bus use, walking and cycling. Therefore, considerations of sustainable development are inherent in the proposed development. Improvements to non-car travel, as well as any benefits of reduced congestion, will be covered in the assessment of effects in the Transport and Access chapter of the ES.

8.7 Utilities

- 8.7.1 It is not proposed that the ES will include a detailed assessment of utilities as an environmental topic, for instance details of the existing services and requirements for new or improved services. However, where there are any environmental effects related to utility works (reinforcements, diversions and abandonments etc.) the ES will consider these.

9 Summary and Next Steps

9.1 Summary

- 9.1.1 This document has been prepared to provide an overview of the likely significant environmental effects that have been considered in scoping the EIA for the proposed development.
- 9.1.2 This Scoping Report has provided information regarding the proposed development, set out the intended EIA scope and methodologies for the assessment of likely significant environmental effects, and outlined the content of the ES.
- 9.1.3 The aim is to ensure that the proposed development has due regard for the environment, mitigates adverse environmental effects where possible and takes advantage of opportunities for environmental enhancement.

9.2 The Environmental Statement

- 9.2.1 The outcome of the EIA process is the production of an Environmental Statement to accompany the planning application. An ES which will be prepared in compliance with the EIA regulations and that achieves the following:
- Describes the proposed development;
 - Outlines the main alternatives considered;
 - Describes the baseline environment;
 - Describes the likely significant effects;
 - Describes the measures to mitigate adverse effects; and
 - Includes a non-technical summary.

9.3 Next Steps

- 9.3.1 The next steps in the EIA process are as follows:
- Request EIA Scoping Opinion from Reading Borough Council and Wokingham Borough Council (11th August 2016);
 - Issue of formal EIA Scoping Opinion from Reading Borough Council and Wokingham Borough Council (no later than 15th September 2016); and
 - Submission of ES with the planning application (Autumn 2016).
- 9.3.2 Comments on this report should be provided to:

Richard Eatough
Planning
Reading Borough Council
Civic Offices
Bridge Street
Reading
RG1 2LU

Email: richard.eatough@reading.gov.uk

Appendix A Site location

Appendix B Extract from the EIA Regulations

Information for inclusion in environmental statements

PART 1

1. Description of the development, including in particular—

- (a) a description of the physical characteristics of the whole development and the land-use requirements during the construction and operational phases;
- (b) a description of the main characteristics of the production processes, for instance, nature and quantity of the materials used;
- (c) an estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc) resulting from the operation of the proposed development.

2. An outline of the main alternatives studied by the applicant or appellant and an indication of the main reasons for the choice made, taking into account the environmental effects.

3. A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors.

4. A description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development, resulting from—

- (a) the existence of the development;
- (b) the use of natural resources;
- (c) the emission of pollutants, the creation of nuisances and the elimination of waste,

and the description by the applicant or appellant of the forecasting methods used to assess the effects on the environment.

5. A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.

6. A non-technical summary of the information provided under paragraphs 1 to 5 of this Part.

7. An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant or appellant in compiling the required information.

PART 2

1. A description of the development comprising information on the site, design and size of the development.

2. A description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects.

3. The data required to identify and assess the main effects which the development is likely to have on the environment.

4. An outline of the main alternatives studied by the applicant or appellant and an indication of the main reasons for the choice made, taking into account the environmental effects.

5. A non-technical summary of the information provided under paragraphs 1 to 4 of this Part.

Appendix C Content of the ES

Draft Contents

List of Abbreviations

1 Introduction

- 1.1 Introduction
- 1.2 The Proposed Development
- 1.3 The Site
- 1.4 Terms and Definitions
- 1.5 The Environmental Statement and Other Documents
- 1.6 Consultation
- 1.7 Project Team
- 1.8 Structure of the Environmental Statement

2 Site and Surrounding Area

- 2.1 The Site and Surrounding Area
- 2.2 History of the Site
- 2.3 Environmental Setting

3 The Proposed Development

- 3.1 Description of the Proposed Development
- 3.2 Utilities
- 3.3 Sustainability
- 3.4 Embedded Mitigation
- 3.5 Consideration of Alternatives

4 Construction and Site Management

- 4.1 Introduction
- 4.2 Construction Works and Programme
- 4.3 Construction Management
- 4.4 Construction Traffic
- 4.5 Construction Waste

5 Assessment Method

- 5.1 Introduction
- 5.2 EIA Regulations
- 5.3 The EIA Process
- 5.4 Screening and Scoping
- 5.5 Consultation
- 5.6 Committed Developments and Allocations
- 5.7 Assessment Assumptions
- 5.8 Assessing Effects
- 5.9 Uncertainty
- 5.10 Mitigation and Adverse Effects
- 5.11 Residual Effects
- 5.12 Significance Criteria
- 5.13 Cumulative Effects
- 5.14 Impact Interactions

6 Planning Policy Context

- 6.1 Introduction
- 6.2 National Policy
- 6.3 Local Policy
- 6.4 Non Statutory Guidance
- 6.5 Summary

7 to 13 Technical Chapters *Transport and Access, Air Quality, Hydrology and Flood Risk, Land, Landscape and Visual (incl. Lighting), Ecology, Archaeology & Heritage [TBC Following Scoping]*

- 7.1 Introduction
- 7.2 Policy Context
- 7.3 Methodology
- 7.4 Baseline
- 7.5 Potential Effects
- 7.6 Mitigation & Enhancement
- 7.7 Residual Effects
- 7.8 Cumulative Effects
- 7.9 Summary
- 7.10 References

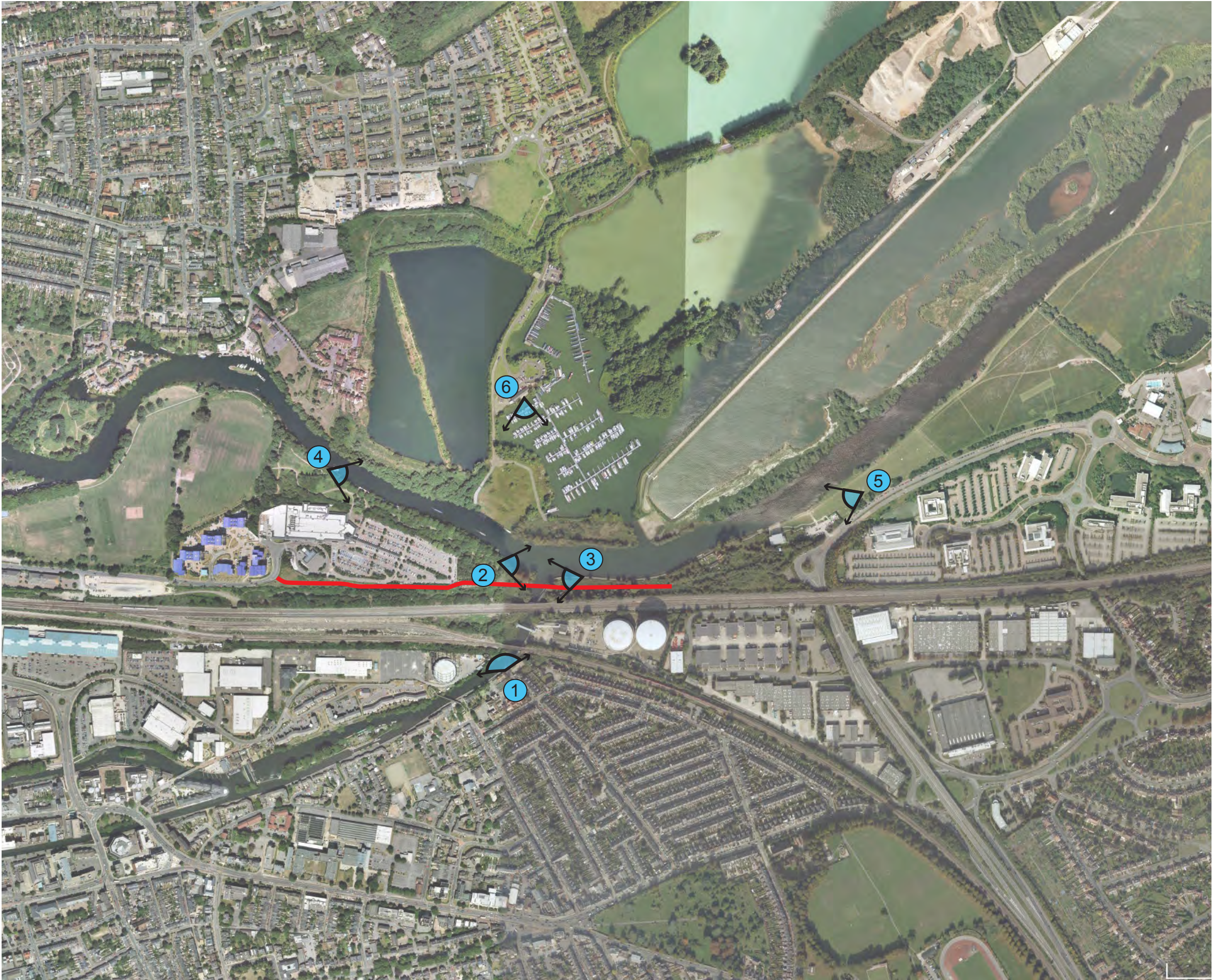
14 Summary and Impact Interactions

- 14.1 Introduction
- 14.2 Methodology
- 14.3 Construction Effects
- 14.4 Operation Effects

References

Glossary

Appendix D Viewpoints



LEGEND:

 MRT line

 Photograph locations

EAST READING MRT			
VIEWPOINT LOCATION PLAN			
 Offices throughout the UK and Europe www.peterbrett.com		READING BOROUGH COUNCIL	
		Mark	Revision
Drawing No. 28791-3009-01	REV	Date	01.04.2016
		Scale	AS SHOWN
		Drawn	RJ
		Checked	NJ

Aerial photo images reproduced from a licensed copy of Google Earth Pro: 2016 Infoterra Ltd & Bluesky



National Cycle Route 4:
Thames Valley

Kennet and
Avon Canal



Photograph continued on next sheet

Viewpoint 1: Taken from towpath south of Kennet and Avon Canal, at end of Cholmeley Road, looking north-east

All photographs have been taken with a full format DSLR 50mm fixed focal length lens and processed as the standard size of 6 by 4 inches. Panoramas may have been cropped but have not been manipulated beyond basic image processing.

Photographs taken on: 17.03.2016

 Offices throughout the UK and Europe www.peterbrett.com	
Job No.	Sheet No.
28791	01/07 Rev
East Reading MRT Landscape and Visual Impact Assessment - Winter Photos	
Viewpoint 1	
Reading Borough Council	
Date	22.03.2016
Drawn	RJ
Checked	NJ

Photograph continued from previous sheet

Kings Mead
Railway Bridge

Cholmeley Road



Viewpoint 1: Continued

All photographs have been taken with a full format DSLR 50mm fixed focal length lens and processed as the standard size of 6 by 4 inches. Panoramas may have been cropped but have not been manipulated beyond basic image processing.

Photographs taken on: 17.03.2016

 pba peterbrett Offices throughout the UK and Europe www.peterbrett.com	
Job No.	Sheet No.
28791	02/07 Rev
East Reading MRT	
Landscape and Visual Impact Assessment - Winter Photos	
Viewpoint 1	
Reading Borough Council	
Date	22.03.2016
Drawn	RJ
Checked	NJ

River Thames

Thames Path
National Trail



Viewpoint 2: Taken from Thames Path National Trail, looking east

 Offices throughout the UK and Europe www.peterbrett.com	
Job No.	Sheet No.
28791	03/07
Rev	
East Reading MRT	
Landscape and Visual Impact Assessment - Winter Photos	
Viewpoint 2	
Reading Borough Council	
Date	22.03.2016
Drawn	RJ
Checked	NJ



Viewpoint 3: Taken from Thames Path National Trail, looking west

pba peterbrett Offices throughout the UK and Europe www.peterbrett.com	
Job No.	Sheet No.
28791	04/07 Rev
East Reading MRT	
Landscape and Visual Impact Assessment - Winter Photos	
Viewpoint 3	
Reading Borough Council	
Date	22.03.2016
Drawn	RJ
Checked	NJ

River Thames

Thames Path
National Trail



Viewpoint 4: Taken from Thames Path National Trail, looking east

 Offices throughout the UK and Europe www.peterbrett.com		
Job No. 28791 Sheet No. 05/07 Rev		
East Reading MRT Landscape and Visual Impact Assessment - Winter Photos		
Viewpoint 4		
Reading Borough Council		Date 22.03.2016 Drawn RJ Checked NJ



Viewpoint 5: Taken from open space between Thames Path and Thames Valley Park Drive

 Offices throughout the UK and Europe www.peterbrett.com	Job No. Sheet No.	
	28791	06/07 Rev
	East Reading MRT	
	Landscape and Visual Impact Assessment - Winter Photos	
	Viewpoint 5	
Reading Borough Council		Date 22.03.2016
		Drawn RJ
		Checked NJ



Viewpoint 6: Taken from Thames and Kennet Marina

All photographs have been taken with a full format DSLR 50mm fixed focal length lens and processed as the standard size of 6 by 4 inches. Panoramas may have been cropped but have not been manipulated beyond basic image processing.

Photographs taken on: 17.03.2016

 Offices throughout the UK and Europe www.peterbrett.com				
Job No. 28791 Sheet No. 07/07 Rev				
East Reading MRT Landscape and Visual Impact Assessment - Winter Photos				
Viewpoint 6				
Reading Borough Council				
<table><tr><td>Date 22.03.2016</td></tr><tr><td>Drawn RJ</td></tr><tr><td>Checked NJ</td></tr></table>		Date 22.03.2016	Drawn RJ	Checked NJ
Date 22.03.2016				
Drawn RJ				
Checked NJ				

Appendix 5-2 RBC Scoping Opinion



Neil Young
Peter Brett Associates LLP
Caversham Bridge House
Waterman Place
Reading
RG1 8DN

Giorgio Framalicco
Director of Planning, Development and
Regulatory Services

Civic Offices, Bridge Street, Reading RG1 2LU
☎ 0118 937 3787

Our Ref: 161515/SCO
Your Ref:

Direct: ☎ 0118 937 4530
e-mail: Kiaran.Roughan@reading.gov.uk

25 November 2016

Your contact is: **Kiaran Roughan, Planning**

Dear Mr. Young,

Planning reference 161515/SCO
Request for a Scoping Opinion for East Reading Mass Rapid Transit
under Regulation 13 of the Town and Country Planning (Environmental
Impact Assessment) Regulations 2011 (as Amended 2015)

I refer to the above Request, which was received by the Local Planning Authority on 12 August 2016, and I apologise for the delay in providing this written response.

The proposal is for a Mass Rapid Transit (MRT) bus route, which would straddle the boundaries of Reading and Wokingham boroughs.

The Scoping Request letter states that the applicant (Reading Borough Council) intends to voluntarily undertake an EIA and supply an ES with the planning application.

You have submitted the following document in relation to this request: 'East Reading Mass Rapid Transit Scheme: EIA Scoping Report' ref. 28791/3007; Revision: final, dated August 2016.

The request has been considered in accordance with the above Regulations.

This is a very lengthy document. Please note that if a comment is made on one part of the document, then if pertinent to another part of the document, then those other parts of the document should be amended also.

Consultation responses

The following bodies have been consulted and responses have been received from:

- RBC Transport Strategy

- RBC Environmental Protection
- RBC Natural Environment Team (Tree Officer)
- RBC Conservation Consultant
- RBC Ecologist
- Berkshire Archaeology
- Environment Agency

At the time of issuing this Scoping Opinion, no response has been received from the following:

- RBC Emergency Planning Officer
- Natural England
- Network Rail
- Crossrail
- Scottish and Southern Electric (SSE)
- Highways England

The responses from consultees are attached at the end of the letter and any other responses subsequently received will be forwarded separately.

The LPA has also received some public representations in relation to the Scoping Opinion. Where considered relevant, these points have been incorporated into the officer comments contained within this Opinion letter.

It is the formal Opinion of the Local Planning Authority that in various respects, the issues and recommendations set out in the above mentioned Scoping Report are deficient and the scope/coverage of the document proposed is incomplete. The following matters should be comprehensively addressed in any subsequent ES submitted to accompany a future planning application:

Issue 1: the proposal is incomplete in that it fails to cover the scope of the entirety of the scheme, which should be the MRT scheme PLUS the park and ride (PNR) proposal within Wokingham Borough (since this Scoping Opinion request has been submitted, the PNR development now has planning permission, Wokingham BC planning ref. 161596). The PNR is an associated/allied scheme to the MRT and the environmental effects as a whole need to be assessed. It is incorrect to present the MRT as a stand-alone proposal. The MRT relies on the PNR in operational terms and many of the environmental effects will be as a result of MRT + PNR.

Issue 2: the dotted red line plan ('indicative area of works') needs to cover the park and ride land within Wokingham Borough as well.

Issue 3: consideration of alternatives is inadequate.

Issue 4: the magnitude of effects is often considered to be greater than described and will need to be examined more fully in the ES.

I can confirm that the Scoping Report is generally suitable in its coverage of the key issues, but see detailed comments below.

I now supply the following detailed commentary on the Scoping Report:

1.Introduction

Issue 1 refers.

2. Environmental Setting

2.3.8 does not discuss the area TPO on the triangle of land at the LWS.

3. Proposed Development

Update to cover Issue 1.

4. Planning Policy Context

Para. 4.2.6-4.2.11: these paragraphs concentrate on the transport-supporting policies of the Development Plan and do not cover all environmental policies.

Para 4.2.4 misses out the Council's S.106 Planning Obligations SPD and the Sustainable Design and Construction SPD.

Add fig 7.1 of the Reading Borough LDF: Core Strategy (2008, as amended 2015).

This response will not comment on the Wokingham Borough Planning Policy context.

5. EIA Process

5.2.3 The purpose of scoping: this is not correct. The purpose of EIA scoping is to identify all of the main potential environmental effects, not to make commentary on support for the project in policy, economic or other terms. These should be the interests of other supporting documents to the planning application. Issue 4 refers as the magnitude of environmental effects must not be underplayed, simply because there is policy support.

6. Proposed Scope of the EIA

6.1.1 Notable that this section mentions the need for 'Cumulative Effects and Impact Interactions'. This is also echoed in paras. 6.2.1-6.2.3

6.2.8 Construction impacts: nothing about contaminated land and mitigation.

6.3 Spatial Scope: site does not go to the A3290 roundabout. Issue 2 refers.

6.4.5 Cumulative Effects and Impact Interactions: please consult the LPA to discuss the list of sites with planning permission and those which are soon to be submitted.

6.4.11 Consideration of Alternatives: Issue 3 refers. The Scoping Report does not say which alternatives it might be looking at and should explicitly say so. 6.4.14 and 6.4.15

say that the consideration of alternatives will need to take into account a number of factors, most of which are not environmental.

Alternatives would appear to be: design alternatives; other MRT-only routes; other on-street bus routes; river ferries; train/tram solutions; or other solutions to subsidise the use of existing public transport services in order to reduce car journeys into central Reading.

7. Topics Included in the EIA Scope

Topic coverage is considered to be satisfactory.

7.6 Landscape and Visual, Table 7.2: appears to have missed the Local Wildlife Site designation.

7.7 Lighting: has not included vehicle lights.

7.9.11 Designated Heritage Assets: this section significantly pre-judges/downplays the impacts on the Listed bridge in terms of impacts on its setting. It will need to be assessed by a heritage consultant. Issue 4 refers.

8. Topics Not included in the EIA Scope

8.2.2. Noise and vibration is proposed to be scoped out, but these effects would appear to be relevant to impacts on wildlife. It should be a Topic of the ES.

8.4 Socio-Economics: there are a wide range of potential socio-economic effects and the NPPF identifies the social aspects of development of one of the core strands of sustainable development. For instance, what is the impact of the scheme on the communities affected by the development and can the aim (reduced car journeys) be achieved in a different way? The Newtown area is one of the more deprived parts of the borough with very little alternative natural green space. There is a wealth of evidence to show the positive effects that access to high quality and wildlife rich green infrastructure has on health and wellbeing, reduction in crime rates etc. Open Space will be lost or significantly reduced as a result of the scheme. The proposal may also reduce the usability of this stretch of river for walkers and cyclists. If it cannot be achieved in a different way, what mitigation can be put in place to reduce these effects? It is advised that these aspects require specific examination in the ES.

I trust that this information is of assistance but should you require any further clarification please do not hesitate to contact me on the above telephone number. This Opinion is without prejudice to any decision that may be made and is given in the context of the planning policies, regulations and guidance applicable today.

Please note that this Scoping Opinion is offered with the caveat that should the form of development deviate to a significant degree from that described and assessed within the Scoping submission, a further application for a Scoping Opinion may prove necessary.

Please note that Regulation 13(9) states that the authority which has adopted a scoping opinion is not precluded from requiring additional information in connection with any ES that may later be submitted in connection with an application for planning permission or a subsequent application for the same development.

Yours sincerely,

A handwritten signature in dark ink, appearing to read 'Kiaran Roughan', with a stylized, cursive script.

Kiaran Roughan
Planning Manager

cc. Justin Turvey, Planning, Wokingham Borough Council

Encs: consultation responses to the EIA Scoping Report

RBC Transport Strategy

Hi Richard,

Section 7.2 of the proposed Scoping Report is for the eastern MRT is deemed acceptable subject to the terms of the Transport Assessment being agreed.

However in terms of this scoping report I have no objections.

Kind regards,

Darren Cook

Transport Development Control Manager

Transport | Directorate of Environment and Neighbourhood Services (DENS)

RBC Environmental Protection

Noise

I note that noise (and therefore vibration) has been screened out of the EIA due to the predicted increase as a result of the bus movements being less than 1 dBA. I would like to query whether this includes the impact of idling buses at the bus stop which I believe is located close to Luscinia View?

A management plan will be required for control of construction noise, although it is agreed that this does not necessarily need to be assessed as part of the EIA.

Air Quality

The scoping report mentions that there will be no increase in car traffic as a result of the development except for possibly near the park and ride. The potential for increase in car traffic at the Napier Road end should be included in the assessment, depending on what the arrangements will be - will customers drive to Napier Road area in order to access the bus service?

RBC Natural Environment Team (Tree Officer)

With reference to submitted plans, pre-app meeting of 23 June 2016, our site visits of 21 July with Carolyn Jenkins and Kevin Lee and 29 July with Duncan Fisher of Wokingham Borough Council, we have the following comments:

The proposed MRT route (a two lane bus route, cycle lane and potential pedestrian lane) is approximately 900m in length, has a works area of approximately 5ha. and will have a significant and potentially adverse impact on the natural environment and the landscape and amenity value of the River Thames. The Environmental Statement should clearly convey:

- The loss /harm to approximately 0.9ha. of woodland. This is a “priority habitat” as per the NPPF and designated as a Local Wildlife Site (The Coal, Kennetmouth and Kings Meadow East
- The loss of trees - including protected trees. A tree survey should inform the Environmental Statement and seek to reduce the loss of trees, particularly protected trees, as far as possible.
- Impacts on protected species - a slow worm was seen under one of the mats during a walkover survey with Wokingham Borough Council’s ecologist and the site is very likely to be of importance to bats
- Adverse impacts on the River Thames riparian zone as a result of the loss of semi-natural habitat adjacent to it (replaced with predominantly hardstanding) and its function as green link through an urban area - rivers are a “priority habitat” as per the NPPF
- The fragmentation of the green network with a reduction in the usability and tranquillity of the footpath / cycleway that links Reading to Sonning and beyond.

RBC Conservation Consultant

Para. 7.9.11: Impacts on Listed Railway Bridge and Accommodation Bridge

The Scoping Report should not be going into this level of detailed assessment in the scoping report.

This section of the report appears to be pre-judging the assessment and should not be providing a subjective opinion on the merits/impacts of the proposal.

The purpose of the scoping report is to identify potential impacts and scope in or out topics within the ES chapters.

Given the likely height of the MRT bridge and its position/proximity to the listed bridge, there is a high potential for visual impacts in the setting of the LB from the Thames to be affected.

RBC Ecologist

The scoping document appears have scoped out numerous potential impacts at an early stage and is appears to be downplaying a number of impacts. In particular:

- Section 2.2.4 - refers to grassland, scrub and trees, it should more accurately be described as ‘woodland’.

- Section 2.3.8 - states that the LWS is Open Mosaic Habitat on Previously Developed Land - whilst some of the site LWS could be classified as this habitat much of it is also woodland.
- Section 4 - a key omission is any detailed discussion of RBC's adopted Development Plan policies which relate to environmental matters: DM1, DM17, CS36, CS8, CS28, CS37, DM18, CS38, RC14, which are clearly very relevant to this proposal
- 6.1 - Water and the effect on waterways needs to be included in the ecology chapter.
- 6.4.11 - section on alternatives very weak, there needs to be a clear list of alternatives.
- Section 7 - The scope of the ecology section needs to be much wider. It needs to include: Birds (no breeding bird survey has been carried out); Invertebrates (no invertebrate survey has been undertaken despite a number of rare invertebrates being recorded); The River Thames; The River Kennet; The Two River Corridors and their function as a green link; the loss of priority habitats; the cumulative effect of multiple local / minor impacts (i.e. I am concerned the scope of the ES as proposed is likely to significantly under-record the adverse effects of the scheme). The survey season for breeding birds and invertebrates has been missed for this year (2016).
- Noise is to be omitted from the EIA, which is clearly a major factor affecting wildlife and the usability and tranquility of the footpath/ cycleway that links Reading to Sonning and beyond. This needs to be included as a chapter.
- Socio-economic is not to be included- this is a significant omission. The socio economic impact as a result of the scheme is likely to be significant. There will be a significant and adverse impact on a key piece of the Reading's green infrastructure and this needs to be measured. A chapter on the socio economic effects of the proposals needs to be included.

Berkshire Archaeology

Looking through the Scoping Report I'm pleased to see that Archaeology and Heritage have been included and that there appears to be good consideration of both the archaeological potential and the significance of identified impacts. It states that the Desk-Based Assessment has already been completed, in view of my earlier comments regarding early consultation with Berkshire Archaeology it would be useful for us to see the DBA before the Archaeology and Heritage ES Chapter is completed in order to avoid any delays further down the line.

**Scoping opinion application to determine the content of an environmental impact assessment for the East Reading Mass Rapid Transit (MRT) Scheme.
Land between Napier Road (Reading) and Broken Brow Roundabout, Thames Valley Park, Reading, Berkshire**

Thank you for your Environmental Impact Assessment (EIA) Scoping consultation request.

Environment Agency position

We have reviewed the PBA East Reading Mass Rapid Transit Scheme EIA Scoping Report dated August 2016 and have further comments to make in respect of Contaminated Land, Flood Risk and Biodiversity to ensure that the EIA will appropriately address the significant environmental issues we consider are of most importance to this proposal.

Our technical comments detailing the information we consider should be provided in the environmental statement are provided below.

**Technical Comments and Advice
Contaminated Land**

Item 3.2 Development Description states that the development will include associated infrastructure. Since the Archaeological section paragraph 7.9.18 refers to deep foundations and piling activities causing disturbance we request clarification if these are general or specific comments about the foundation solutions for this development. In order for the risk to be assessed to the Principal Aquifer under this site it is important that the EIA should include the proposed use of this parcel of land. We, therefore, require clarification if the associated infrastructure includes buildings or underground car parks.

In addition to the historic landfill the wider area has been used as railway land; for household gas production and as a 'depot'. Therefore, the EIA should at least highlight the potential risk of mobilising contamination from these historic activities.

It is important that we are informed of a) the proposed location of the new bridge over the River Kennet b) the proposed use of the historic landfill site and if there is likely to be a need for piling and c) if part of the site coincides with a former depot where tanks (potentially storing fuel) are labelled on historic maps.

Flood Risk

The developer has included the following flood risk considerations:

- Flood plain compensation
- New Climate Change allowances
- That EPR will be required for works within 8 metres of either river – the Scoping Report only mentions access issues. The applicant should also consider stability of the banks affected.

We note paragraphs 7.4.24 and 7.4.27 on page 25 of the Scoping Report. These mention the available models and that they have the available data to be calibrated and updated to make them acceptable to be applied to a site specific Flood Risk Assessment. However, it does not state what level of assessment will be completed and

submitted with the application and a justification as to why this is appropriate. We recommend that a detailed assessment is completed, which will include updates to the base line model to make it fit to use for a site specific FRA. We also expect the new Climate Change allowances (released in February 2016) to be incorporated into the design of the development, with flood risk mitigation design standards built to at least the 35% allowance. However, if, when tested, the upper allowance of 70% shows model outputs with a significant change in risk, we would expect design standards to reflect these. It will be for the applicant to justify which allowance you have used, showing the results of the detailed assessment.

We recommend a topographical survey is completed, with details of where land raising will be occurring and where any required flood plain compensation will be provided. We will expect any flood plain compensation to level for level and a betterment in flood risk should be provided if possible.

On page 6, the indicative cross section, we note that some of the route will be taken out of the flood plain and that the area underneath has the potential to provide amenity space. This would suggest the applicant is considering providing voids as the flood plain compensation. In order for voids to be acceptable in these circumstances the applicant would need to justify why level for level and volume for volume compensation is not possible. The development area suggests level for level is a realistic option and should be seriously considered.

The soffit of the proposed bridge over the River Kennet will need to be built to a height appropriate to the outcome of the analysis completed with the new Climate Change allowances. We would expect the soffit level to be set at least to the 1 in 100 plus 35% allowance level, as stated above, if your analysis of the upper allowance shows significant impacts on the site, it will be for the applicant to justify which allowance they have applied to this development.

Biodiversity

With regard to the Scope of Assessment for ecology, potential impacts of the scheme on the River Kennet through the proposed bridge and the River Thames and its associated riparian corridor must be assessed. This appears to have been omitted at present and should be scoped in.

With regard to Table 7.6 (Detail for the Methodologies of Ecological Surveys Undertaken and Proposed), we are of the opinion that birds should be scoped in to the EIA. This is because sand martins are known to be nesting in the river walls on the River Kennet upstream of Kennetmouth and around the railway bridges. Potential impacts on this small population should be assessed and additional nesting opportunities proposed within any scheme.

In addition to assessing potential ecological impacts, mitigation and enhancement measures should be proposed.

We are pleased to note that the impacts of lighting on sensitive ecological receptors such as bats are to be assessed and mitigation measures proposed.

Final comments

Once again, thank you for contacting us. Our comments are based on our available records and the information submitted to us. Please use our reference number in any future correspondence. If you have any queries please contact us.

-ENDS-

Appendix 5-3 Committed Developments

NOTES

Job Name: East Reading MRT
Job No: 28791
Date: 31/05/17
Prepared By: Katherine Dowdall / Jonathan Sebbage
Subject: East Reading MRT

A search has been performed for recent planning applications within the last 3 years using a 1km radius of the proposed development. Major development has been investigated including residential and substantial commercial applications. The results of the search have been mapped below for reference.

Criteria used for search of planning applications submitted/determined:

- Major developments
- 10 units or more
- 1,000 sqm.+
- Within 3 years of current date

NOTES

Application Reference	Location	Proposal	Decision Date	Progress	Distance from site	Local Planning Authority
Reading Borough Council						
1. 161601	Building 1 New Century Place East Street Reading RG1 4QJ	Change of use from Class B1 (a) to C3 (dwelling houses) to comprise of 75 individual, self-contained studio and twodio apartments.	24/08/16 19/10/16	Approved	0.9km	Reading BC
2. 161602	Building 2 New Century Place East Street Reading RG1 4ET	Change of use from Class B1 (a) to C3 (dwelling houses) to comprise of 58 individual, self-contained studio and twodio apartments.	24/08/16 19/10/16	Approved	0.9km	Reading BC
3. 160849	Jacksons Corner1-9 Kings Road Reading RG1 3AS	Conversion of upper floors to 18 residential units. Demolition of commercial ancillary accommodation to rear and construction of new six-storey residential block of 16 units.	17/05/16 20/03/17	Approved	0.9km	Reading BC
4. 160775	173-175 Kings Road Reading	Change of use from office (Class B1a) to 16 (6x1 & 10x2-bed) residential units (Class C3) and associated works	13/06/16 22/12/16	Approved	0.6km	Reading BC

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5. 160158	194 Kings Road Reading RG1 4NH	Change of use from Class B1 (a) (offices) to C3 (dwelling houses) to comprise 14 residential units.	15/03/16	Approved	0.6km	Reading BC
6. 152222	Kings Reach 38-50 Kings Road Reading	Change of use from Class B1 (a) (Offices) to C3 (dwelling houses) to comprise 65-75 apartments.	05/02/16	Approved	0.8km	Reading BC
7. 150731	University of Reading London Road Reading RG1 5AQ	Proposed conversion and alteration of existing buildings to residential use (53 dwellings) together with car and cycle parking, landscaping and bin stores.	14/10/15	Approved	0.9km	Reading BC
8. 150685	Princes House 73A London Road Reading RG1 5UZ	Change of use of existing building from Class B1(a) (offices) to C3 (dwelling houses) to comprise 18 x 1 bed flats and 8 x 2 bedroom flats.	16/06/15	Approved	0.8km	Reading BC
9. 150229	Hanover House 202 Kings Road Reading	Change of use of fourth floor to residential use (Class C3) to provide 14 residential units and associated works.	23/06/15	Approved	0.6km	Reading BC
10. 141986	252 Kings Road Reading RG1 4JL	Change of use and extension of the existing office building Berkshire House (252 – 256 Kings Road, Reading) to create a	24/03/15	Approved	0.6km	Reading BC

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		six storey student residential building.				
11. 141834	60 Queens Road Reading RG1 4BS	Change of use of ground, first and second floors from Class B1 (a) (offices) to C3 (dwelling houses) to comprise 8 x 2-bed flats and 22 x 1-bed flats.	08/01/15	Approved	0.8km	Reading BC
12. 141784	1 Southern Court South Street Reading RG1 4QS	Change of use of building from Class B1 (a) (offices) to C3 (dwelling houses) to comprise 12 x self-contained studio units and 1 x 3 bed flat.	29/12/14	Approved	0.9km	Reading BC
13. 141280	42 Market Place Reading	Change of use of building from Class B1(a) (offices) to C3 (dwelling houses) to comprise 5 x two bed flats, 13 x one bed flats and 18 studio flats.	01/10/14	Approved	0.9km	Reading BC
14. 162353	191 Kings Road, Reading RG1 4EX	Erection of a single storey roof extension to provide 14 additional student units (sui generis)	10/02/17	Approved	0.5km	Reading BC
15. 170512	Aspen House, 300 Kings Road, Reading, RG1 4HP	Change of use of office building from Class B1(a) (offices) to C3 (dwelling houses) to comprise 78 flats.	25/05/17	Approved	0.7km	Reading BC
16. 162166	Former Cooper Reading Bmw Kings Meadow Road, Reading RG1 8BN	Erection of a part 12 storey, part 23 storey building comprising 315 apartments. Demolition of existing multi-storey car park.	17/11/17	Received	0.7km	Reading BC
17. 170509	Kenavon Drive, Reading	Demolition of the two existing retail (Homebase and Toys R Us) structures and the erection of new		Received	0.3km	Reading BC

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		buildings ranging between 2 and 11 storeys in height, providing 765 (18 x studio, 302x1, 409x2 and 36x3- bed) residential units (Class C3), 5 commercial units (3x flexible Class A1-5, B1 or D1-2 uses, 1x flexible Class A1-A5 use, 1x flexible Class A3 or A4 use), various works to the public realm, including a new riverside square, landscaping, accesses, parking and associated works.				
18. 160819	Units 27, 28, 68 And 69 Suttons Business Park Suttons Park Avenue RG6 1AZ	Full application for the demolition of existing Class B1 office buildings (Units 68 and 69) and the erection of three Class B2/B8 industrial units with ancillary office space and car parking/ landscaping, refurbishment of existing Class B8 storage and distribution building (Unit 27-28) and reconfiguration of car parking area; the erection of a new Class B2/B8 industrial unit with ancillary office space together with new car parking and landscaping; erection of a new security hut.	29/04/16	Received	0.1km	Reading BC
19. 160378	Former Gas Works Building Gas Works Road Reading	Change of use, conversion, extensions and various associated works to former Gas Works Buildings to create a part 4,5 and 6 storey building adjacent to the River Kennet and a 3 storey building fronting Gas Works Road, providing 20 (10x1, 9x2 and 1x3-bed) residential units (Class C3).	28/10/16	Approved	0.5km	Reading BC

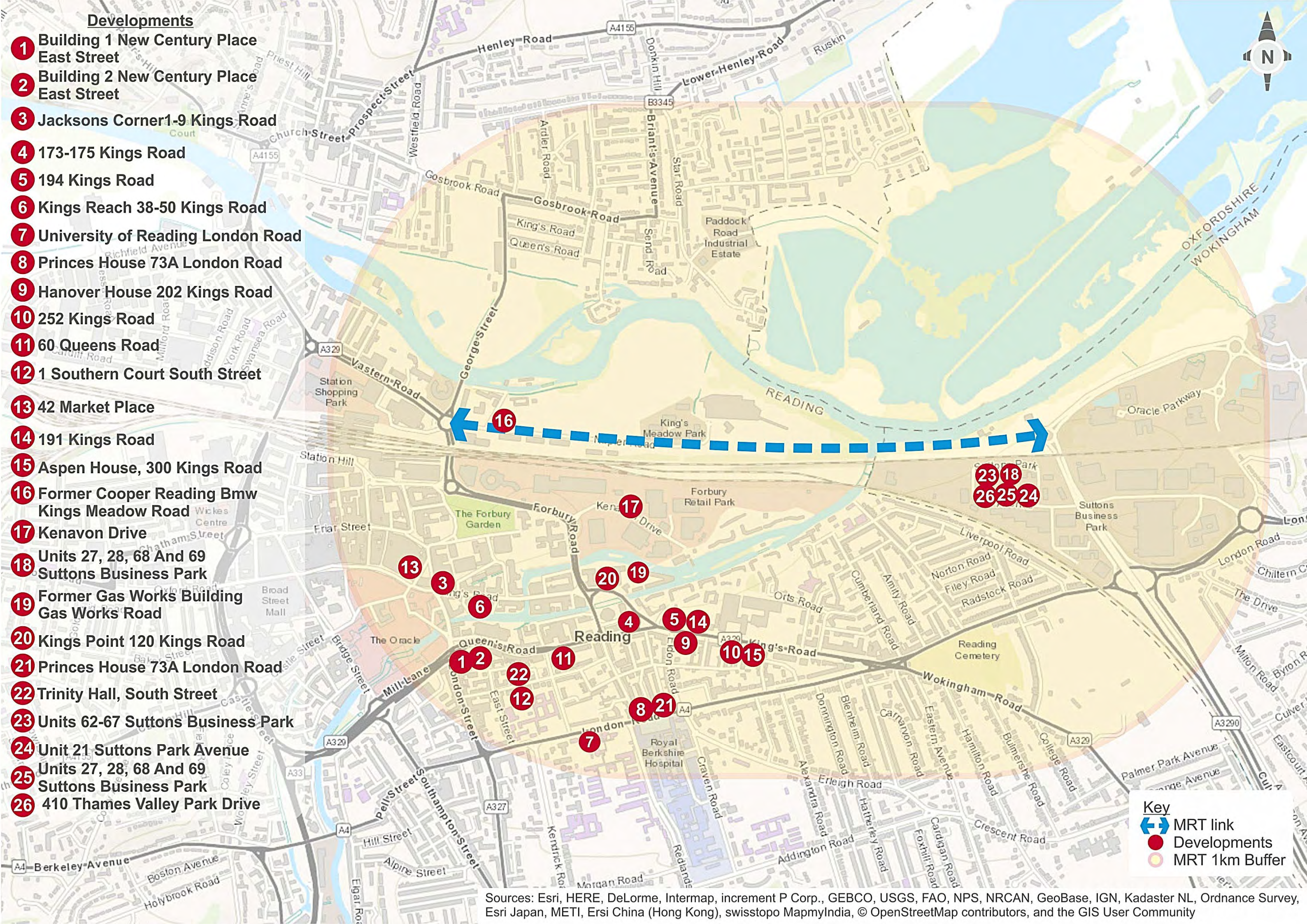
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20. 162087	Kings Point 120 Kings Road Reading RG1 3DA	Demolition of existing building and the erection of a part seven, part nine, part eleven, part twelve and part seventeen storey building comprising 103 residential units and 351.5 sqm GIA of commercial (A1/A3) floorspace at ground and mezzanine floor level together with parking and associated landscaping (without complying with conditions (2, 7, 8, 9, 18, 19, 28 of planning permission 150019) to allow the removal of sub-basement, enlargement of basement level and internal and external alterations at the basement, ground and mezzanine levels (amended description).	09/02/17	Approved	0.7km	Reading BC
21. 150685	Princes House 73A London Road Reading RG1 5UZ	Change of use of existing building from Class B1(a) (offices) to C3 (dwellinghouses) to comprise 18 x 1 bed flats and 8 x 2 bedroom flats.	22/04/15	Approved	0.9km	Reading BC
22. 151356	Trinity Hall, South Street, RG1 4QU	Erection of part 3, part 4 storey building to provide 25 student units (42 bedspaces) (Sui Generis) and associated works, following demolition of existing 3 storey building (Sui Generis).	03/12/15	Approved	1km	Reading BC

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Wokingham Borough Council						
23. 152354	Units 62-67 Suttons Business Park Reading RG6 1AZ	Full application for the proposed redevelopment of site and the erection of new building for B2 use including office space and storage areas, plus associated car parking and landscape works.	11/11/15	Approved	0.1km	Wokingham BC
24. 161666	Unit 21 Suttons Park Avenue Earley RG6 1LA	Full application for demolition of existing industrial unit (Unit 21) and the erection of a retail supermarket (use class A1) and a drive- through coffee shop/cafe (mixed use class A3/A5) with associated car parking and landscaping	15/09/16	Approved	0.2km	Wokingham BC
25. 161066	Units 27, 28, 68 And 69, Suttons Business Park Suttons Park Avenue Earley RG6 1AZ	Full application for the demolition of existing Class B1 office buildings (Units 68 and 69) and the erection of three industrial units with ancillary office space and car parking/ landscaping, refurbishment of existing storage and distribution building (Unit 27-28) and reconfiguration of car parking area; the erection of a new industrial unit with ancillary office space together with new car parking and landscaping; erection of a new security hut.	29/06/16	Approved	0.2km	Wokingham BC
26. 162736	Units 68 and 69, Suttons Business Park Suttons Park Avenue Earley RG6 1AZ	Full application for the proposed erection of 1no class B2/B8 industrial unit with ancillary office space and associated car parking, landscaping and recycling building, following demolition of existing buildings.	15/12/16	Approved	0.2km	Wokingham BC

Appendix 5-4 Development Map



Developments

- 1 Building 1 New Century Place East Street
- 2 Building 2 New Century Place East Street
- 3 Jacksons Corner 1-9 Kings Road
- 4 173-175 Kings Road
- 5 194 Kings Road
- 6 Kings Reach 38-50 Kings Road
- 7 University of Reading London Road
- 8 Princes House 73A London Road
- 9 Hanover House 202 Kings Road
- 10 252 Kings Road
- 11 60 Queens Road
- 12 1 Southern Court South Street
- 13 42 Market Place
- 14 191 Kings Road
- 15 Aspen House, 300 Kings Road
- 16 Former Cooper Reading Bmw Kings Meadow Road
- 17 Kenavon Drive
- 18 Units 27, 28, 68 And 69 Suttons Business Park
- 19 Former Gas Works Building Gas Works Road
- 20 Kings Point 120 Kings Road
- 21 Princes House 73A London Road
- 22 Trinity Hall, South Street
- 23 Units 62-67 Suttons Business Park
- 24 Unit 21 Suttons Park Avenue
- 25 Units 27, 28, 68 And 69 Suttons Business Park
- 26 410 Thames Valley Park Drive

Key

- MRT link
- Developments
- MRT 1km Buffer