

East Reading Mass Rapid Transit Scheme

Environmental Statement Non-Technical Summary

On behalf of **Reading Borough Council**



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1 Introduction

1.1 Introduction

- 1.1.1 This document is the Non-Technical Summary (NTS) of an Environmental Statement (ES) prepared in respect of a planning application for a bus, pedestrian and cycle scheme known as the East Reading Mass Rapid Transit (MRT) scheme (referred to as 'East MRT' or the 'Proposed Development') to the east of Reading, Berkshire.
- 1.1.2 The East MRT comprises the construction of a segregated fast track public transport, pedestrian and cycle route with associated junction improvements and landscaping. The purpose of the East MRT Scheme is to improve accessibility and support continued sustainable growth in Reading and Wokingham Boroughs and the wider area.
- 1.1.3 The project is being promoted by Reading Borough Council (RBC), working with Wokingham Borough Council (WBC), and the Thames Valley Berkshire Local Enterprise Partnership (TVB LEP).
- 1.1.4 A planning application was submitted in 2017 for an earlier iteration of the East MRT scheme. The application was refused by WBC in June 2018 on the grounds that the scheme would be '*harmful to the landscape character of the area*'. Following a design review a new planning application is therefore being submitted for the Proposed Development. The Proposed Development respond to the reasons for refusal and comments received from consultees.
- 1.1.5 The ES documents the Environmental Impact Assessment (EIA) of the East MRT scheme now proposed, in combination with the already permitted Thames Valley Park (TVP) Park & Ride Site (referred to as 'TVP P&R'). TVP P&R lies within WBCs administrative boundary and will provide 277 car parking spaces to the west of TVP Drive. The TVP P&R is discussed in further detail in **Section 3.5**.
- 1.1.6 This document summarises the ES in non-technical English. The aim of this NTS is to present the sometimes technical information included in the ES in an easily understood, concise format without the reader needing to refer to the main text of the ES.

1.2 Terms and Definitions

- 1.2.1 For ease of reference, the following terms have been used throughout the NTS:
- **The Application Site** - the area within the planning application boundary of the East Reading Mass Rapid Transit scheme;
 - **The Proposed Development** – the current scheme for which full planning permission is sought;
 - **East Reading Mass Rapid Transit scheme** (abbrev. East MRT scheme) – the name of the development;
 - **TVP P&R** – the boundary of the Thames Valley Park, Park and Ride Site;
 - **Combined Site** - refers to the collective area of both the application site and the TVP P&R; and
 - **The 2017 Planning Application** (Refs: RBC 171108 and WBC 172048) - the full planning application submitted for the proposed East MRT Scheme, supported by the 2017 ES.

1.3 The EIA, ES and Other Documents

- 1.3.1 The ES presents the findings of the EIA which has been undertaken in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) ('the EIA Regulations').
- 1.3.2 The EIA process has been used to inform the design of the Proposed Development and has identified appropriate design and construction measures to both mitigate likely significant adverse environmental effects and to maximise the environmental opportunities that might arise as a consequence of the construction and operation of the Proposed Development. Such measures have been incorporated into the final design and are shown in the plans submitted with this planning application.
- 1.3.3 The ES identifies the likely significant environmental effects of the Proposed Development at the construction and operation stages and identifies opportunities for environmental enhancement and measures to mitigate any potential significant adverse effects that may occur.
- 1.3.4 The ES is comprised of the following documents:
- **Volume 1:** Main Report;
 - **Volume 2:** Appendices; and
 - **Non-Technical Summary** (this document).
- 1.3.5 The other principal documents submitted with this Planning Application are:
- Planning Statement;
 - Design and Access Statement;
 - Consultation Statement; and
 - Transport Statement.

2 Application Site and Surrounding Area

2.1 Application Site Location

- 2.1.1 The linear Application 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 Application Site. The western end of the Application 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. An indicative Application Site location plan is provided at **Figure 2.1**.

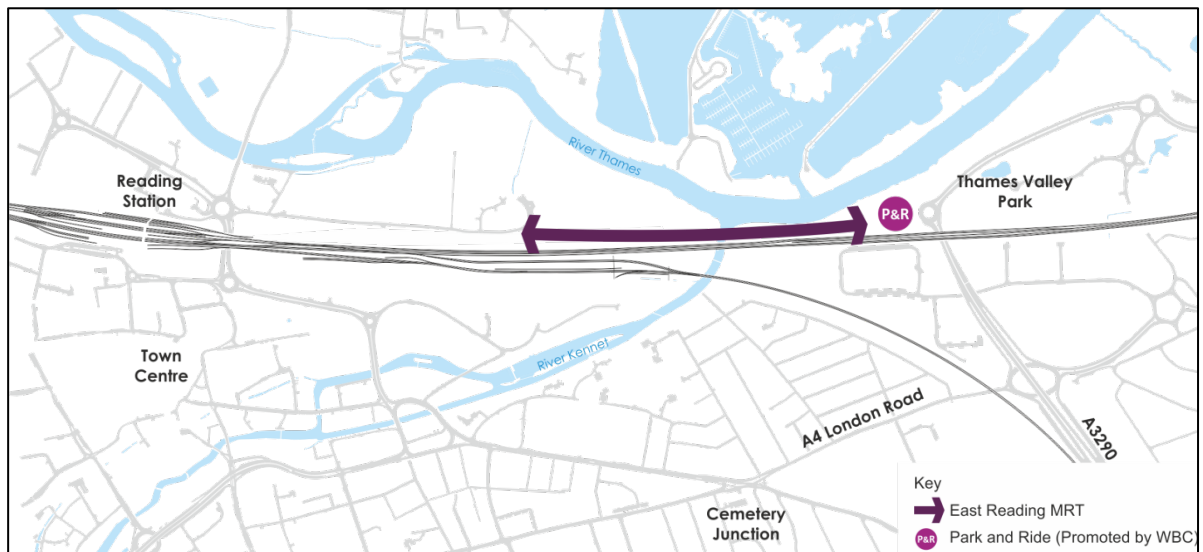


Figure 2.1: Site Location Plan (showing indicative route)

- 2.1.2 The Application Site straddles the administrative areas of RBC and WBC, the boundary of which is defined by the River Kennet. The Application Site Boundary is provided in **Appendix A**.

2.2 Site Description

- 2.2.1 As discussed in **Section 1.1**, the EIA includes an assessment of the East MRT scheme and the adjacent TVP P&R as part of the cumulative assessment. This section therefore includes a description of the Application Site, in addition to the TVP P&R.

East MRT

- 2.2.2 The western area of the Application 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.
- 2.2.3 The central area of the Application 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.
- 2.2.4 The eastern area of the Application Site (within Wokingham Borough) where the Proposed Development would connect with the proposed TVP P&R 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 and 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.

- 2.2.5 The Application Site within WBC is safeguarded land for strategic transport network including mass rapid transit along the A4/A329 corridors (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, undeveloped and currently consists of grassland, scrub and trees. This safeguarding is consistent with the infrastructure corridor nature of the Application Site, including the railway, footpath and overhead electricity lines. The Application Site is constrained by the River Thames to the north and the Great Western main line to the South, a Network Rail maintenance delivery unit to the west and Thames Valley Park to the east.

TVP P&R

- 2.2.6 The TVP P&R is located to the south of the River Thames and to the west of Thames Valley Business Park, adjacent to the north and east of the proposed East MRT scheme at its junction with the A3290 / Thames Valley Park Drive roundabout. The TVP P&R site comprises a triangular plot of land of approximately 1.35 ha, also known as Broken Bow. The TVP P&R site boundary plan is provided in **Appendix B**.
- 2.2.7 Vegetation removal and ground clearance works have been undertaken on site for the TVP P&R site in accordance with the TVP P&R full planning permission (application ref: 161596). A section 73 amendment, to vary the planning conditions of the approved scheme, was submitted for the TVP P&R site on 7th September 2018 and approved on the 10th October 2018 (see **Section 3.5.2**).

2.3 Environmental Setting

- 2.3.1 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).
- 2.3.2 The land to the west of the River Kennet is situated on an 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.
- 2.3.3 The closest designated heritage asset to the Application 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 Application Site. These were built by Isambard Kingdom Brunel as part of 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 and screens long distant views into and from the Application Site.
- 2.3.4 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 Application 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.

- 2.3.5 Part of the Coal, Kennetmouth and Kings Meadow East Local Wildlife Site (LWS) is located within the Application Site, classed as 'open mosaic habitat on previously developed land'.
- 2.3.6 RBC are able to protect trees of amenity value by way of a Tree Preservation Order (TPO). There is a woodland area within the site area which is designated as a woodland TPO. This covers a more or less triangular area bounded by the eastern end of the Tesco's car park to the west, woodland on the around the Thames Path, to the northeast, the Thames path adjacent to the River Kennet to the east and the northern edge of the railway embankment to the south.

3 The Proposed Development

3.1 Introduction

- 3.1.1 The purpose of the East MRT scheme is to improve access to and from Reading eastwards for buses, pedestrians and cyclists. This will help accommodate 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**.
- 3.1.2 The design of the East MRT Scheme has been amended to respond to the comments from WBC at the Planning Committee for the 2017 Planning Application (see **Section 1.3**). Planters have been identified as the preferred option to green the structure. These options are discussed further in the consideration of alternatives section below (**Section 3.4**).

3.2 Description of the Proposed Development

- 3.2.1 The development comprises the following:

“Construction of a segregated fast-track public transport, pedestrian and cycle bridge and viaduct, comprising concrete bridge structure supported by concrete columns, steel beams and reinforced soil embankment, together with new footway links and existing footway alterations, junction improvements and landscaping.”

- 3.2.2 Plans illustrating the Proposed Development are included in **Appendix C**.

Operation

- 3.2.3 The route will link the A3290 at Thames Valley Park, adjacent to the TVP P&R, to Napier Road, Reading town centre and the railway station. Once the proposed TVP P&R becomes operational, the Proposed Development will also facilitate travel directly to and from the TVP P&R facility itself.
- 3.2.4 It is proposed that buses will use the Proposed Development running at regular intervals throughout the day, with more frequent bus services running during the AM and PM peak periods. It is proposed that the existing fleet of buses, currently travelling to and from TVP via the A4, will instead use the Proposed Development.
- 3.2.5 Cyclists and pedestrians will be able to use the Proposed Development at all times via the segregated and lit cycleway and footway. The route will not be open to any other forms of traffic including taxis and motorcycles.

Bridge Design

- 3.2.6 The proposed bridge over the River Kennet will be aligned parallel to the adjacent listed bridge, at a slight angle across the mouth of the River Kennet. The bridge will comprise a concrete bridge deck with galvanised steel parapets, and supported by weathering steel bridge girders. The eastern bridge abutments comprise a row of columns, with the western abutments comprising a retaining concrete wall, supported by a soil embankment slope.

Lighting

- 3.2.7 The design of the Proposed Development is supported by a lighting strategy to facilitate the safe and secure functioning of the scheme. The lighting strategy is based on principles

focusing on crime reduction, promoting people's safety, and minimising the impact on the surrounding natural and built environment.

- 3.2.8 Lighting is proposed along the length of the Proposed Development to support operational requirements, with different types proposed dependant on the requirements of that area and the location of sensitive receptors. No lighting is proposed on the bus carriageway itself to minimise impacts on the surrounding area.

Landscaping

- 3.2.9 A landscape strategy for the Application Site has been developed in parallel with the design of the East MRT itself. Key features of the landscape strategy include:

- Retention of existing trees and vegetation where practicable, with additional planting of new native trees and shrubs to complement the retained trees;
- Selective management and re-planting of the woodland within the LWS to replace trees which require removal, increase diversity to the woodland, and provide additional screening of the East MRT embankment and route from locations within the LWS woodland and on the tow-path adjacent to the LWS. This will include selective removal of existing shrubs and groundcover, e.g. removal of non-native species to increase light levels and promote the growth of a more diverse ground flora;
- Retain and enhance / extend the existing area of Acid Grassland at the western end of the East MRT route, to provide biodiversity enhancement with scattered new tree planting to create a glade with dappled shade;
- Enhancements to the riparian corridor, for example removal of Himalayan Balsam, and retention of Loddon Lily;
- Creation of tussocky grassland between the River Thames and the East MRT, and wildflower hydro-seeded grassland on the East MRT embankment; and
- Ivy planting to be installed in a planting trough at the northern edge of the elevated viaduct, and trained to grow downwards in order to green the structure.

3.3 Construction Programme and Management

- 3.3.1 The key activities associated with the construction of the East MRT Scheme are:

- Removal or diversion of utilities;
- Removal of vegetation on site where applicable;
- Erection of site compounds (assumed to be on each side of the River Kennet), including temporary buildings;
- Commencing road construction;
- Installation of bridge beams;
- Construction of full height embankment;
- Completion of bridge and viaduct structures;
- Landscaping and drainage works; and
- Highway works to connect the MRT route into the wider network.

- 3.3.2 To accommodate the proposed 6.8 m bridge height, the East MRT will be raised on either side of the bridge. A retaining wall will be used to the west of Tesco Car Park while imported fill material will be used to the east of the River Kennet.

- 3.3.3 It is anticipated that site clearance will commence in November 2019 and construction of the East MRT will commence in March 2020 (including enabling works and utility diversions), with completion expected in Spring 2023.
- 3.3.4 A Construction Environmental Management Plan (CEMP) will be prepared for the Proposed Development and identify a range of measures in relation to aspects such as dust, air pollutions, ground conditions, ecology and water resources which will be utilised during the construction of the Proposed Development.

3.4 Consideration of Alternatives

- 3.4.1 The EIA Regulations require an ES to include a description of the reasonable alternatives considered by the applicant, indicating the main reasons for the choices made, including a comparison of the environmental effects. This legal requirement is expressed in very general and high-level terms, requiring only the inclusion of 'reasonable' alternatives and an indication of 'main' reasons. It is a matter for the applicants to decide whether to consider alternatives and which alternatives it intends to consider.
- 3.4.2 A two-stage options appraisal was undertaken to compare and refine options which led to the identification of a preferred scheme. The following provides an outline of the reasonable alternatives considered within this appraisal and any further alternatives considered in relation to the Proposed Development, and the main reasons for choosing the Proposed Development in preference to them including a comparison of environmental effects.

No Development

- 3.4.3 The following outcomes were identified within the options appraisal as a result of a 'do nothing' option:
- Increasing congestion and worsening transport conditions which will act as an inhibitor to growth, with private sector investment attracted to other areas with better accessibility;
 - Air Quality issues will be exacerbated without the mitigation afforded by the Proposed Development; and
 - The resident population of Reading and Wokingham will be disadvantaged by restricted accessibility to jobs services.
- 3.4.4 Based on the above, a 'do nothing' option no longer represents a reasonable alternative nor delivers the benefits of the Proposed Development.

Alternative Locations / Routes

- 3.4.5 A total of ten route options were initially considered within the options appraisal (**Appendix A.6**). Options 3 and 4 were found to result in the lowest impact on the environment compared to other options, particularly in relation to ecology, flood risk, visual impact, landscape impact. These two options are outlined below:
- **Option 3** - this route option passes through the edge of the superstore car park, land owned by Tesco. The route bridges the River Kennet mouth and connects to the proposed TVP P&R; and
 - **Option 4** - this route option runs adjacent to the railway line on Network Rail land and through a small parcel of land owned by Tesco. The route bridges the River Kennet mouth and connects to the proposed TVP P&R.

- 3.4.6 Option 3 requires less third party land than option 4, and was therefore considered more deliverable and potentially a lower cost.
- 3.4.7 A further two alternatives were considered for bus priority as follows:
- **Bus priority Option 1** – Nearside bus lane on approach to Vastern Road Roundabout along with a fully segregated cycle route and landscape enhancements.
 - **Bus priority Option 2** - Segregated MRT route between Napier Road and the A329(M) roundabout along with fully segregated cycle route and landscape enhancements. This option uses land owned by Tesco and Network Rail.
- 3.4.8 Bus Priority Option 2 was found to improve the journey times for bus services, other vehicles and cyclists (therefore supporting sustainable modes of travel and reducing air quality emissions), and improves the visual impacts and deliverability.

Design Evolution

- 3.4.9 The project team has considered a number of alternative designs to respond to the comments from WBC at the Planning Committee for the 2017 Planning Application. These alternatives are outlined below:
- **Planters at high level:** Planters beside the parapets containing ivy to spill over the deck of the viaduct. This would provide 'greening' of the structure;
 - **Gabion Cladding:** Additional gabion cladding with ivy across the lower areas of the structure. The type, shape, size, roughness and tone of stone could be carefully selected to help to blend the structure into the surroundings;
 - **Coloured pigment and/or textured concrete:** Pigmented concrete would help to blend the structure with ground level colours. Texture on the surface of the concrete would potentially have a positive impact on very close views where this can be seen and/or surfaces in direct sunlight; and
 - **Additional Landscaping:** Further low-level planting and/or public art sculptures could be provided to enhance the landscape around the structure. There is limited opportunity for taller trees and substantial planting due to the easements required for the underground electricity cables.
- 3.4.10 Planters have been selected as the preferred option as this would correspond with the proposed approach of a 'living green wall' at the TVP P&R development and would provide 'greening' of the upper level of the viaduct for local views from the Thames Path and river. Maintenance will be required, however automatic irrigation, a planting replacement programme and CCTV could keep this to a minimum. Provided the planting is successfully established and maintained, this option would have the greatest effect on softening and greening the appearance of the viaduct.

Summary

- 3.4.11 The main alternatives considered for the Proposed Development have been in relation to the route of the East MRT and the design of the bridge in response to the landscape character of the surrounding area.
- 3.4.12 The Proposed Development is considered to best respond to the constraints of the Application Site and maximises benefits of the East MRT Scheme, such as supporting sustainable modes of travel and reducing air quality emissions.

3.5 Description of TVP P&R Development

- 3.5.1 The assessment of effects from the combined development of both the East MRT scheme and the TVP P&R has been based on the development description and plans of the approved scheme. A plan of the TVP P&R layout is included in **Appendix D**. The development description of the TVP P&R as originally approved is as follows:

“Development of a Park & Ride facility providing approximately 277 vehicular spaces, motorcycle parking and associated vehicular access and landscaping.”

- 3.5.2 The TVP P&R development is proposed to be accessed via a new access road running west off the existing TVP roundabout junction, adjacent to the south of the TVP P&R parking area. The route of the East MRT scheme is proposed to connect with the permitted TVP P&R access road, running up to the TVP P&R roundabout junction.
- 3.5.3 It is understood that site clearance is complete.
- 3.5.4 A Section 73 Application was submitted for the TVP P&R on the 7th September 2018 to vary aspects of the planning permission. This was approved at planning committee on 10th October. The assessment of effects from the combined development of both the East MRT scheme and the TVP P&R has therefore been based on the Section 73 Application plans.

4 Planning and Policy Context

4.1 Introduction

- 4.1.1 In accordance with Section 38 (6) of the Planning and Compulsory Purchase Act (2004) and the Town and Country Planning Act 1990, development control decisions must be made in accordance with the adopted development plan, unless material considerations indicate otherwise. **Table 4.1** sets out the adopted development plans and material considerations relevant to the Application Site and Proposed Development.

Table 4:1 Development Plans and Material Considerations Relevant to this EIA

Development Plan Policy	Development Policy Material Consideration
RBC Core Strategy (adopted January 2008, altered January 2015)	National Planning Policy Framework 2018
RBC Proposals Map (adopted October 2012)	Planning Practice Guidance 2014
Reading Central Area Action Plan (adopted January 2009)	RBC Submission Draft Local Plan (2018)
RBC Sites and Detailed Policies Document (adopted October 2012, altered January 2015)	WBC Local Plan Update Issues and Options (2018)
WBC Core Strategy (adopted January 2010)	
WBC Managing Development Delivery (MDD) Local Plan (adopted February 2014)	

4.2 National Planning Policy

- 4.2.1 National planning policy is contained within the National Planning Policy Framework (NPPF) published in July 2018, replacing the first NPPF published in 2012. The NPPF sets out the Government's requirements for the planning system and how these should be applied. At the heart of the NPPF is a presumption in favour of sustainable development (paragraph 11).
- 4.2.2 For decision-making, this means approving development proposals that accord with the development plan without delay.
- 4.2.3 In March 2014, the Government published the national Planning Practice Guidance (PPG) which is a 'live' guidance document on the implementation of the NPPF, updated frequently by government. The PPG will be updated in due course to reflect the 2018 NPPF. The PPG replaces a number of previous circulars and guidance to provide a simplified, single source of guidance at the national level. The PPG provides guidance on the delivery of sustainable development, including new residential development, as well as the EIA process.

4.3 Local Planning Policy

- 4.3.1 The Proposed Development must also be considered in a Local Policy context. The East MRT Scheme is identified as a priority transport project in RBC 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, adds together the land needed for implementation of the East MRT Scheme (identified as running east from Napier Road) which will thus be safeguarded from other forms of development.

- 4.3.2 The Proposed Development is on land within WBC that is safeguarded for the strategic transport network including mass rapid transit along the A4/A329 corridors (Appendix 3 of the MDD Local Plan).

5 Methodology

5.1 Introduction

5.1.1 In general terms, the main stages in the EIA are as follows:

- **Screening** – determining the need for EIA;
- **Scoping** – identifying significant issues, determining the scope of the EIA;
- **Data review** – drawing together and review available data;
- **Baseline surveys** – undertaking baseline surveys and monitoring;
- **Assessment and iteration** – assessing likely significant effects of development, evaluate alternatives, provide feedback to design team on potential adverse impacts, modify development or impose parameters, incorporate mitigation (including monitoring and long-term management), assess effects of mitigated development; and
- **Preparation of the ES.**

5.1.2 No formal screening exercise has been undertaken. The applicant has voluntarily undertaken an EIA of the Proposed Development, which has been documented in an ES, in compliance with the requirements of the EIA Regulations.

5.1.3 The scope of the EIA was agreed with RBC and WBC through an EIA Scoping Opinion, based on an EIA Scoping Report. The EIA has been undertaken to fulfil the requirements of the EIA Scoping Opinion. In addition, further environmental information has been provided where it was considered to be required to ensure that the ES provides a comprehensive record of the likely significant effects of the Proposed Development.

5.2 Assessing Effects

5.2.1 The EIA has assessed the likely significant effects of the Proposed Development against baseline conditions which have been established based on technical surveys and assessments.

5.2.2 The EIA has assessed the significant environmental effects that are likely to occur during the construction phase. Given that a principal contractor has not yet been appointed, it is not possible to be definitive about the construction works and therefore the assessment has been based on available information and reasoned judgements to enable the likely significant environmental effects to be identified.

5.2.3 In determining the significance of construction effects, it has been assumed that the construction mitigation measures identified, and the proposed CEMP, are fully implemented (as the CEMP will be secured by a suitable planning condition).

5.2.4 To provide a robust assessment and one that is generally consistent between topic chapters, the EIA has focused on assessing the likely significant environmental effects of the completed development to identify the operational effects of the Proposed Development.

5.2.5 For the purposes of undertaking the assessment in accordance with the EIA Regulations, effects determined to be moderate or greater are considered significant in EIA terms. Specific significance criteria have been prepared for each specialist topic, based on the generic criteria, for adverse and beneficial effects, set out in **Table 5.1** below.

Table 5:1 Generic Significance Criteria

	Significance Level	Criteria
Significant	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.
Not significant	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 an 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.

- 5.2.6 The assessment has also considered the potential for cumulative effects to occur with other existing and approved developments within the vicinity of the Application Site as required by the EIA Regulations. Approved developments are considered to be planning permissions that are partially built out and planning permissions that have not yet been implemented. Planning applications that have been submitted but not yet determined have also been considered where there is potential that the application may be granted planning permission before this application is determined. The approved developments considered within the EIA have been agreed with RBC and WBC.
- 5.2.7 As agreed in the 2018 EIA Scoping Report (and subsequent EIA Scoping Opinion), the ES has considered the likely significant cumulative effects of the East MRT with the TVP P&R development. This has been undertaken on the basis of the assessment of the likely significant effects of the East MRT in isolation and in combination with the TVP P&R.
- 5.2.8 Impact interactions, i.e. receptors being affected by more than one environmental effect and therefore potentially being subject to a more significant combined effect than the individual effects reported in each of the topic chapters have been assessed. The assessment provides an overall summary of the effects of the Proposed Development during construction and operation. This is provided in **Chapter 7**.

6 Assessment of Effects

6.1 Introduction

6.1.1 This chapter summarises the main findings of the EIA.

6.2 Socio-economics

6.2.1 This section outlines the likely significant environmental effects of the Proposed Development on economic activity and employment. The socio-economic assessment included a review of available data and information from national and local databases to establish the baseline for a study area measured on a 60-minute drive time catchment.

Baseline

6.2.2 The assessment examined the existing socio-economic conditions of the area, which suggests a relatively highly skilled and qualified working population. The study area is characterised by above average population growth, and high levels of economic activity, skills and qualifications.

6.2.3 Future housing and employment growth for Reading and Wokingham are currently constrained by the lack of road network capacity on the A4 and A329.

Construction

6.2.4 The East MRT is likely to support an estimated:

- 78 net additional temporary construction local jobs in the study area;
- 6,794 net additional temporary construction local jobs in the study area from the scale of planned housing that can be directly linked to the capacity released through road network improvements;
- £5.6 million net additional Gross Value Added (GVA) (a measure of the value of goods and services) relating to the East MRT; and
- £490 million net additional GVA related to the housing element.

6.2.5 Construction impacts are considered to be of local level scale which is classified as minor beneficial.

Operation

6.2.6 The East MRT will support an estimated:

- 243 net additional operational local jobs in the study area that can be directly linked to the capacity released through road network improvement;
- £17.5 million net additional GVA impact on the local economy; and
- 7 training and apprenticeship places.

6.2.7 The East MRT will enable employment opportunities and new housing. Operational impacts are considered to be of local level scale which are classified as minor beneficial.

Combined Site (East MRT and TVP P&R)

- 6.2.8 The East MRT combined with the TVP P&R will provide 89 net additional temporary construction jobs and will provide 6.4 million net additional GVA during construction. This is 14% higher than the East MRT without the TVP P&R. The employment effects during operation are 40% higher than the East MRT in isolation.
- 6.2.9 The combined site of the East MRT and TVP P&R will deliver minor beneficial employment effects through the construction and operation phases.
- 6.2.10 The assessment finds that the East MRT and TVP P&R, along with other cumulative developments, can be accommodated by the existing labour market. No adverse cumulative impacts on the wider labour market area were identified.

6.3 Health

- 6.3.1 An assessment of the likely significant effects of the Proposed Development with respect to health and wellbeing has been undertaken. The assessment is based around factors that influence health in relation to the Proposed Development including 'active travel', a 'healthy environment' and 'vibrant neighbourhoods'.

Baseline

- 6.3.2 Both Reading and Wokingham boroughs are characterised by inequities in life expectancy, heart attacks, strokes and cancer between more and less deprived areas, with deprived areas having worse health outcomes. The areas around the route of the Proposed Development are some of the more deprived areas of the boroughs.
- 6.3.3 The East MRT scheme route protects the existing Thames Path, which is within the Application Site, and allows it to be retained. This route is part of the National Cycle Network and is currently used by walkers and cyclists. Cyclists and walkers share the space, making it more suited for slow leisure cycling.
- 6.3.4 Obesity levels are rising for children and adults in Reading and Wokingham and many people are not meeting recommended physical activity levels. Therefore, local health bodies have identified priorities for health and wellbeing including improving access to green spaces and increased walking and cycling.

Construction

- 6.3.5 Construction workers, existing residents and users of the Thames Path may experience minor adverse effects without mitigation during the construction phase. The Thames Path may be closed temporarily for health and safety reasons. Mitigation, including the implementation of a CEMP, means that no significant residual adverse effects were identified against any of the health determinants.

Operation

- 6.3.6 Health and wellbeing effects during the operational phase were identified for existing residents, existing and future users of the Application Site. Embedded mitigation as part of the East MRT scheme includes a segregated, well-lit, step-free, and direct cycleway, footway and bus route. This will provide an improved link between Reading town centre to the east. As a result, there are likely to be major beneficial effects related to 'active travel', with potential

benefits for health from increased physical activity including reductions in cardiovascular disease, type 2 diabetes, mental wellbeing as well as a reduction in obesity levels.

- 6.3.7 As a result of embedded mitigation as part of the Proposed Development no significant effects are identified in relation to 'vibrant neighbourhoods' or 'healthy environment'.

Combined Site (East MRT and TVP P&R)

- 6.3.8 No change in the assessed effects are identified when considering the combined effects of the East MRT scheme and the TVP P&R scheme.

6.4 Transport and Access

- 6.4.1 This section summarises the likely significant effects of the Proposed Development in terms of traffic and transport. A Transport Statement has also been produced and submitted with this planning application.

Baseline

- 6.4.2 The A4 London Road is the main strategic route for vehicles travelling to and from Reading town centre to the east and provides a link to the M4 junction 10. The A4 London Road is heavily congested and operating at, or over, capacity during the majority of the day.
- 6.4.3 There are currently three main pedestrian route options for pedestrians travelling from the A4 London Road east of the A3290 roundabout to Reading town centre and station, and three signed route options for cyclists. These routes are in close proximity to the Application Site and serve the surrounding area.

Construction

- 6.4.4 It has been identified that during the construction phase, the Proposed Development has no significant impact on traffic and transport. A CEMP will set out traffic arrangements and management practices to adopt in order to reduce the environmental effects of construction.

Operation

- 6.4.5 The assessment has identified that the Proposed Development will likely have a major beneficial effect on public transport delay, as it provides significant journey time savings. It has been demonstrated that the East MRT Scheme will have a major beneficial effect on connectivity and fear and intimidation. This would be as a result of reducing traffic flows on London Road and Kings Road, which have residential and commercial frontage, and rerouting buses onto the East MRT Scheme.
- 6.4.6 The East MRT Scheme has been shown to have a major benefit on pedestrian and cyclist delay and amenity through the provision of a new pedestrian and cycle route.
- 6.4.7 Overall, no significant adverse effects arising from the development have been identified in relation to traffic and transport.

Combined Site (East MRT and TVP P&R)

- 6.4.8 The assessment of the combined East MRT and TVP P&R developments concludes that the beneficial effects are of the same significance as those outlined in the above section. The combination of the East MRT and TVP P&R facilitates improved bus services in Reading and in particular, to the Thames Valley Park.

6.5 Air Quality

- 6.5.1 The air quality effects associated with the construction and operation of the proposed East MRT Scheme have been assessed. The assessment has been undertaken in line with guidance from the Institute of Air Quality Management (IAQM).

Baseline

- 6.5.2 The Application Site is located within an Air Quality Management Area (AQMA) which has been declared due to exceedances of the annual mean nitrogen dioxide (NO₂) objectives.

Construction

- 6.5.3 The main potential effects during construction are dust deposition and elevated particulate matter (dust) concentrations. Construction phase effects are judged to be negligible when appropriate mitigation measures are applied through a CEMP. Such measures may include the development and implementation of a dust management plan and to carry out regular site inspections to monitor compliance with dust objectives.

Operation

- 6.5.4 Concentrations of NO₂ and particulate matter (dust) have been predicted for a number of worst-case locations which represent existing properties adjacent to the road network which could be impacted by the Proposed Development. Predicted annual mean concentrations of the pollutants are below the relevant air quality strategy objectives, except for receptors located at Patriot Place. Receptors located at Patriot would exceed the relevant air quality strategy objectives whether the Proposed Development proceeds or not. The overall air quality effects of the Proposed Development are therefore judged to be not significant.

Combined Site (East MRT and TVP P&R)

- 6.5.5 The assessment of the combined site of the East MRT and TVP P&R identified negligible impacts for all pollutants at all receptor locations, except for Patriot Place where a moderate adverse effect was identified. The moderate adverse effect relates to the predicted concentrations, without or with the developments in place, are more than the air quality strategy objective for NO₂. Air quality effects of the East MRT combined with the TVP P&R are therefore considered to be not significant.

6.6 Hydrology and Flood Risk

- 6.6.1 This section outlines the likely significant environmental effects of the Proposed Development in relation to hydrology and the water environment. A site-specific Flood Risk Assessment (FRA) and Water Framework Directive (WFD) Compliance Statement have been completed for the Proposed Development.

Baseline

- 6.6.2 The Application Site, on the west side of Kennetmouth, lies within Flood Zone 2 'Medium Probability' of the River Thames, defined between a 1 in 100 and 1 in 1,000 annual probability of river flooding.
- 6.6.3 On the east side of Kennetmouth, the Application Site lies in Flood Zone 3b 'Functional Floodplain', until it reaches the TVP P&R site, where it is in Flood Zone 1 'Low Probability' (less than 1 in 1,000 annual probability of river or sea flooding). Flood Zone 3b 'Functional Floodplain' is defined as land where water has to flow or be stored in times of flood.

Construction

- 6.6.4 Construction works have the potential to affect flood storage and flood flow processes as a result of temporary measures to control/manage river flows, construction activities, and earthworks operations within the floodplain. Construction of the East MRT scheme therefore has the potential to increase flood risk locally and temporarily during the construction phase.
- 6.6.5 The FRA, Surface Water Drainage Strategy and WFD Compliance Statement conclude that the effects during the construction phase are not significant following the implementation of embedded mitigation measures. The embedded mitigation measures include making use of best practice techniques, timing of construction works, and the implementation of a robust CEMP.

Operation

- 6.6.6 The FRA, Surface Water Drainage Strategy and WFD Compliance Statement conclude that the effects during operation are not significant with regards to fluvial flood risk and reservoir flood risk, and minor beneficial with regards to surface water flood risk and WFD designated water bodies following the implementation of embedded mitigation measures.
- 6.6.7 Embedded mitigation measures include designing the east landing of the bridge structure to minimise the impact on flood storage, completion of a flood compensation exercise, and reducing surface water run-off compared to existing, resulting in localised improvements to surface water flood risk. The inclusion of native species planting will result in habitat creation which is beneficial to the WFD designated water bodies in the vicinity of the Application Site.

Combined Site (East MRT and TVP P&R)

- 6.6.8 With regards to surface water flood risk, TVP P&R is subject to its own CEMP (or similar) to determine how surface water flood risk will be managed on site during the construction phase so that effects of the construction phase are not significant. The potential effects of the combined site during the construction phase will therefore be not significant.
- 6.6.9 The combined proposed developments will give rise to an increase in the impermeable area within the combined site, thereby having the potential to increase surface water run-off rates to the receiving watercourses (River Thames and River Kennet). The TVP P&R incorporates a surface water drainage strategy resulting in improvement to localised surface water flood risk. The potential effects of the combined site operation phase on surface water flood risk is therefore minor beneficial.

6.7 Land

- 6.7.1 This section outlines the likely significant environmental effects of the Proposed Development on human and non-human receptors in relation to ground contamination and ground stability.

Baseline

6.7.2 The review of the baseline conditions identified the following receptors which were considered within the assessment:

- Human Health (Site Users)
- Human Health (Site Workers);
- Shallow Groundwater;
- Deep Groundwater;
- Surface Water;
- Property (Buildings);
- Property (Animal or Crop) – future landscaping is proposed and incorporated in the assessment of operation effects; and
- Ecological Systems –the flood compensation land west of Kennet Mouth is located within The Coal, Kennetmouth and Kings Meadow East Local Wildlife Site.

Construction

6.7.3 The Proposed Development could change (increase) the risk associated with ground conditions by increasing the probability of pollutants transferring from their source to sensitive receptors. The Proposed Development can also impact ground conditions through the introduction of potential sources of contamination such as mobile refuelling facilities.

6.7.4 With the implementation of a CEMP, construction effects on all human and non-human receptors are considered negligible and are therefore Not Significant.

Operation

6.7.5 During operation, the risk to receptors will be the same as the existing baseline. Operation effects on all human and non-human receptors are therefore Not Significant.

Combined Site (East MRT and TVP P&R)

6.7.6 There are no additional potential effects identified for the combined site scenario.

6.8 Landscape and Visual (including Lighting)

6.8.1 A landscape and visual impact assessment (LVIA) was conducted to identify the likely significant effects resulting from the Proposed Development. Effects upon the landscape as an environmental resource in its own right were considered, in addition to effects upon people's views and amenity.

Baseline

6.8.2 Overall, the Application Site has a sense of enclosure and a sense of being part of the River Thames corridor through the urban area, with few views out to adjacent areas. Its character is of urban open space and river-edge. This includes the urban character associated with Napier Road, a small managed woodland between Tesco's car park and the river, the bridges across the Kennet mouth and detracting influences of graffiti, as well as the linear narrow open space to the west of the Dreadnought building. There are strong influences from the railway infrastructure corridor to the south of the Application Site boundary, with views of the railway,

moving trains, gantries and overhead cables. These influences and views counteract the calmer and more attractive River Thames to the north of the Thames Path.

Construction

- 6.8.3 The Proposed Development will result in temporary adverse and significant landscape effects during the construction period. The Thames Path National Trail passes through the Application Site, and therefore will be subjected to these temporary adverse effects for a limited section of its much longer route. During construction, adverse, but temporary, changes to landscape features and landscape character within the Application Site are expected due to the nature and activity of the construction works required for the Proposed Developments.
- 6.8.4 The LVIA has identified a significant adverse visual effect during construction on views from Tesco carpark looking north east. This arises due to tree loss and construction of a new footway link joining the Thames Path as part of the Proposed Development. Significant adverse visual effects were also identified from the Thames Path National Trail.
- 6.8.5 Standard construction and operational management practices for avoiding and reducing environmental effects will be adopted through the implementation of a CEMP. These may include the use of hoardings or tree protection fencing where possible.

Operation

- 6.8.6 On completion, significant and long term adverse landscape effects occur upon the major landscape features, local landscape character, land use and vegetation and tree cover within the Application Site. At 15 years after planting, residual significant long term adverse landscape effects remain upon the major landscape features and land use within the Application Site.
- 6.8.7 A beneficial long term significant and local landscape effect arises 15 years after planting upon local landscape character of the Application Site due to maturing planting and ongoing management of existing woodland and riparian habitats.
- 6.8.8 At 15 years after planting, there are no significant landscape effects on landscape features or landscape character of regional or national importance as a result of the Proposed Development.
- 6.8.9 The LVIA has identified a significant adverse visual effect during operation on views from Tesco carpark looking north. However, at 15 years after planting, there is no significant residual visual effect upon receptor's views from these locations. Sequential views from the Thames Path National Trail will likely experience significant adverse effects. The visual impact will still be clearly noticeable after 15 years of planting, however the views the changes are not completely out of keeping with the area of the visible mainline railway and infrastructure corridor.
- 6.8.10 The visual effects of the Proposed Development upon visual receptors using the limited length of the Thames Path National Trail, although significant and adverse, are local visual effects which would not alter the integrity of Application Site or features of national or regional importance.

Combined Site (East MRT and TVP P&R)

- 6.8.11 The assessment of the combined East MRT and TVP P&R identified a residual adverse, long term significant landscape effect remaining on the local landscape character of the Combined Site at 15 years after planting. These local landscape effects arise from the partial change in use of the Application Site and Combined Site as a result of the proposed developments.
- 6.8.12 Additional adverse short term significant visual effects occur to visual receptor's views from the Thames Path National Trail and 15 years after planting. These additional visual effects arise from a greater area of new development; however, these are also local visual effects which would not alter the integrity of sites or features of national or regional importance.

Lighting Effects

- 6.8.13 Effects of lighting during construction should be minimal, as there will be limited night time working outside of agreed standard working hours. The lighting required is predictable for fixed elements of the construction works e.g. the site office, compound and welfare facility. Construction compounds are proposed within the Tesco car park and on the TVP P&R, whilst cranes are required temporarily to construct the bridge.
- 6.8.14 Task specific lighting would be used to maintain safety around excavation areas, water management areas, and other specific activities. This lighting will vary according to weather conditions, programme and the particular tasks being undertaken. Areas in proximity to the rivers near the site may require additional lighting to maintain safety.
- 6.8.15 The primary effect of lighting once the Application Site is operational is from the East MRT/ Napier Road junction. Light intrusion may occur into the residential properties at Luscinia View, although this can be limited by using front and back shields on the luminaires. Column mounted LED lighting will be provided along the length of the scheme. Benefits of using this as opposed to traditional high pressure sodium bulbs is that it is directional, reduces obtrusive light and uses less energy.
- 6.8.16 Minimal light intrusion is anticipated across the Application Site and surrounding areas due to this directional lighting. The effect on the nearby river systems is assessed to be minimal although in one instance light intrusion into the LWS was identified. This could be mitigated via the installation of shields.
- 6.8.17 Overall, the development's lighting effects are minimal and are in line with the relevant guidance documents.

6.9 Biodiversity

- 6.9.1 This section summarises the ecological impact assessment of the Proposed Development on the ecological features relevant to the Application Site and Combined Site. The assessment has been informed by a combination of a baseline ecological desk study and survey data.

Baseline

- 6.9.2 The habitats within the Application Site and Combined Site are generally of low intrinsic ecological value; with broadleaved semi-natural woodland, running water and marginal vegetation of importance in the Local context or greater. There are no international or national designated areas of nature conservation within 2 km of the Application Site.
- 6.9.3 Important ecological features that were considered within the assessment include:
- The Coal, Kennetmouth and Kings Meadow East LWS;

- Henley Road Gravel Pits LWS;
- Ancient Woodland;
- Habitat of Principal Importance;
- Bats; and
- Reptiles.

Construction

- 6.9.4 A temporary adverse effect was identified for bats and reptiles, and a permanent adverse effect on the Coal, Kennetmouth and Kings Meadow East LWS during construction. These effects are considered not significant with the implementation of mitigation measures, including a reptile and bat mitigation strategy, and off-site measures to permanently improve the quality of the habitat present within the remainder of The Coal, Kennetmouth and Kings Meadow East LWS.

Operation

- 6.9.5 A permanent adverse effect on the Coal, Kennetmouth and Kings Meadow East LWS was identified. This effect is considered to be not significant with the implementation of off-site mitigation measures for the Coal, Kennetmouth and Kings Meadow East LWS outlined above. These measures will be implemented by a Landscape and Ecology Management and Maintenance Plan (LEMMP).
- 6.9.6 On-site mitigation measures include installation of new species-rich biodiverse habitats across the Application Site, including different types of grassland, native tree, hedgerow and shrub planting, wetland marsh planting, and riverside marginal planting. The Proposed Development will provide overall net gain for biodiversity through on-site and off-site measures.

Combined Site (East MRT and TVP P&R)

- 6.9.7 A temporary adverse effect was identified for bats and reptiles during construction, and a permanent adverse effect on the Coal, Kennetmouth and Kings Meadow East LWS during construction and operation of the East MRT and TVP P&R combined. With the mitigation outlined above, these effects are considered Not Significant.

6.10 Other Topics Considered

Archaeology and Cultural Heritage

- 6.10.1 A heritage desk-based assessment was completed for the Application Site and a 1 km radius from its centre (i.e. the study area).

Baseline

- 6.10.2 No evidence suggesting that archaeological remains of national importance are likely to be present on the Application Site was identified.
- 6.10.3 It is considered that there is a moderate/low archaeological potential of the Application Site, therefore additional work may be requested by the archaeological advisor to the Local Planning Authority prior to construction. Any such work can be accommodated by an appropriately worded planning condition.

- 6.10.4 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. The only Listed Building which has the potential to be impacted by the Proposed Development is the Grade II Listed Railway Bridge and attached Accommodation Bridge that lie immediately to the south of the Application Site.
- 6.10.5 Reading Cemetery (a Grade II Listed Park and Garden) lies c. 500 m to the south of the Application Site. It is located in an area of modern development, with no intervisibility between it and the Application Site. Therefore, it is considered that the Proposed Development will not impact on its setting or significance.

Potential Effects

- 6.10.6 The following potential effects may occur without mitigation:
- **Designated Heritage Assets:** Construction and operation of the East MRT would change views from the Grade II Listed Railway and Accommodation Bridge over the River Kennet, resulting in a minor adverse effect; and
 - **Non-designated Heritage Assets:** The construction of the East MRT development would remove any buried archaeological remains which may be present within the Application Site where below ground works are proposed, resulting in a negligible to minor adverse effect.
- 6.10.7 Views to and from the Grade II Listed Railway and Accommodation Bridge will be screened by woodland which runs along the River Kennet, although glimpsed views of the bridges from the Application 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 Proposed Development.
- 6.10.8 The programme of archaeological works would provide benefits which would serve to mitigate much of the loss of any buried archaeological remains. The loss of any Prehistoric or Saxon remains would be offset by the increased knowledge of this period which would be gained for the wider area should such remains be encountered. As such in this instance the residual effect would be negligible, with potential to be slightly beneficial.
- 6.10.9 The cumulative effect of the proposed East MRT development was considered together with the permitted TVP P&R development (the Combined Site) and other developments in the wider area, and no significant cumulative effects would result from these.

7 Summary and Impact Interactions

7.1 Introduction

- 7.1.1 The direct and indirect effects of the Proposed Development have been summarised within this NTS. Environmental effects have been assessed relative to the topic under consideration. This approach can lead to the interaction of effects being reported in separate chapters but combined effects on the same environmental receptor(s) not being considered. This chapter therefore considers the principal findings of each topic chapter of the ES to enable assessment of the potential for impact interactions. In doing so, the chapter also provides a summary of the likely significant environmental effects identified throughout the ES.

7.2 Construction

- 7.2.1 Careful management of the construction works, including the use of a Construction Environmental Management Plan (CEMP), will minimise the adverse effects of construction. As a result, the majority of the demolition and construction effects identified in the ES are not significant.

Natural Resources

- 7.2.2 The main residual effects during construction on Natural Resources relate to the change in land use from open land to a construction site to facilitate the Proposed Development. The related construction activities will affect the local landscape character of the area, vegetation and tree cover, landform and watercourses and major landscape features. The effects were identified as temporary, direct, up to major or moderate adverse and considered significant.
- 7.2.3 Construction is expected to adversely affect King's Meadow and Coal Woodland, an important area of open space, Wokingham District Council Landscape Character Area, bats, reptiles and land contamination. These effects have been identified as minor and not significant. This includes impact interactions relevant to ecology, such as potential adverse lighting effects.
- 7.2.4 All other effects on Natural Resources during construction will be mitigated through the implementation of a CEMP and no likely significant impact interactions have been identified.

Human Beings and Society

- 7.2.5 The main effects during construction on Human Beings and Society relate to visual effects on users of the Thames Path and open space. The effects vary from up to major to moderate adverse, where construction activities and cranes are expected to be visible. Users of the Thames Path may also be affected by a minor adverse and not significant effect on promoting walking and cycling. Well managed construction activities and the application of good practice through the application of a CEMP will minimise these effects.
- 7.2.6 The construction phase will provide minor beneficial employment effects through the provision of 78 net additional temporary construction local jobs.
- 7.2.7 No significant adverse impact interactions have been identified during the construction phase.

7.3 Operation

- 7.3.1 Mitigation set out within the assessment of effects chapter (**Chapter 6**) will reduce adverse effects during operation. As a result, the majority of the operation effects identified in the ES are not significant.

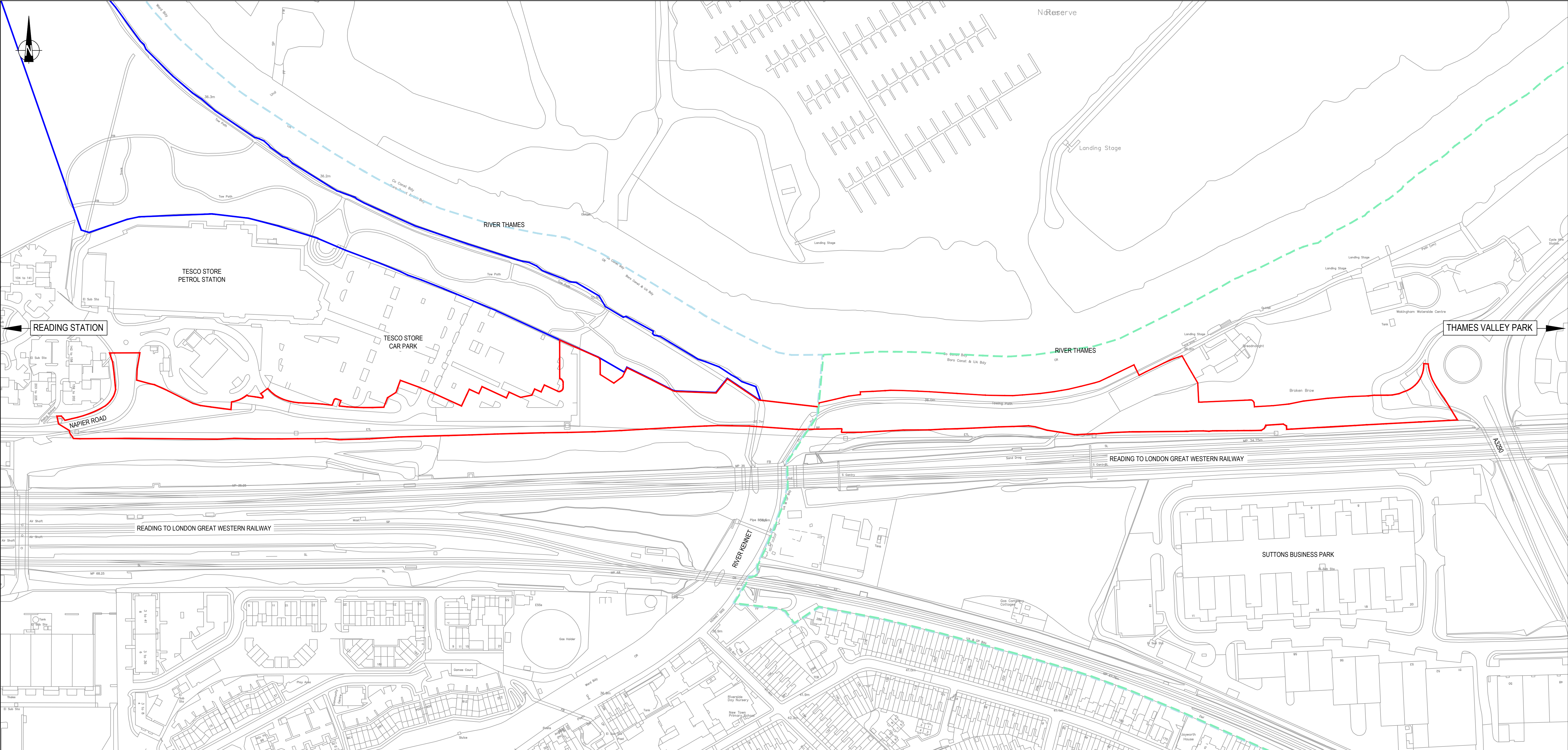
Natural Resources

- 7.3.2 During operation, significant adverse effects are expected to impact major landscape features, King's Meadow and Coal Woodland, the local landscape character of the Application Site, landuse, vegetation and tree cover. After 15 years of operation, the proposed planting will have matured and the effects are expected to lessen, however some local landscape effects are still expected to be significant.
- 7.3.3 Minor adverse effects have also been identified on the WBC Landscape Character area, landform and watercourses, bats and reptiles. Effects on ecology include interactions with effects such as lighting or pollution. These are all considered not significant.
- 7.3.4 A minor beneficial effect on surface water and WFD designated water bodies has been identified due to proposed flood compensation and a drainage strategy which will provide improvement in comparison to existing conditions.
- 7.3.5 Open space is expected to experience a minor adverse effect due to the changes to the character of the Application Site, however, high quality design, landscaping and lighting will provide minor beneficial effects.
- 7.3.6 No significant impact interactions have been identified during the operation on Natural Resources.

Human Beings and Society

- 7.3.7 During operation, significant visual effects are expected at certain points along the Thames Path, where there are direct or partial views of the Proposed Development. After 15 years of operation, the proposed planting will have matured and the effects are expected to lessen, however some are still expected to be significant and adverse. These are local visual effects which would not alter the integrity of the Application Site or features of national or regional importance. Users of the Thames Path are also expected to experience major beneficial effects in terms of pedestrian and cyclist delay, amenity and fear and intimidation due to the provision of a new footway as part of the East MRT Scheme.
- 7.3.8 The Proposed Development will provide major beneficial effects on public transport delay, severance. Further beneficial effects on Human Beings and Society relate to promoting walking and cycling, safety, connectivity, access to social infrastructure and labour are expected due to the nature of the scheme and the provision of operational jobs.
- 7.3.9 No significant impact interactions have been identified during the operation of the Proposed Development, however the Proposed Development is expected to deliver several benefits to human beings and society.

Appendix A Application Site Boundary



NOTES:

- DO NOT SCALE FROM THIS DRAWING, IF IN DOUBT PLEASE REQUEST FURTHER INFORMATION.
- ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SHOWN.

KEY:

- PLANNING APPLICATION RED LINE BOUNDARY
- OTHER LAND IN APPLICANTS CONTROL
- READING BOROUGH COUNCIL BOUNDARY
- WOKINGHAM BOROUGH COUNCIL BOUNDARY

C	RED LINE BOUNDARY AMENDED	04.10.18	LC	LC	SM
B	RED LINE BOUNDARY AMENDED	28.05.18	LC	LC	SM
A	COUNCIL BOUNDARIES ADDED	30.06.17	SF	SE	SE
Mark	Revision	Date	Drawn	Chkd	Appd

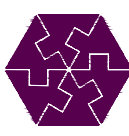
SCALING NOTE: Do not scale from this drawing. If in doubt, ask.
UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Drawing Issue Status
FOR PLANNING

EAST READING MASS RAPID TRANSIT

SITE LOCATION PLAN

Client

**Reading**
Borough Council
Working better with you

Date of 1st Issue
22.06.2017

Designed
LC

Drawn
SF

A1 Scale
1:1500

Checked
SE

Approved
SM

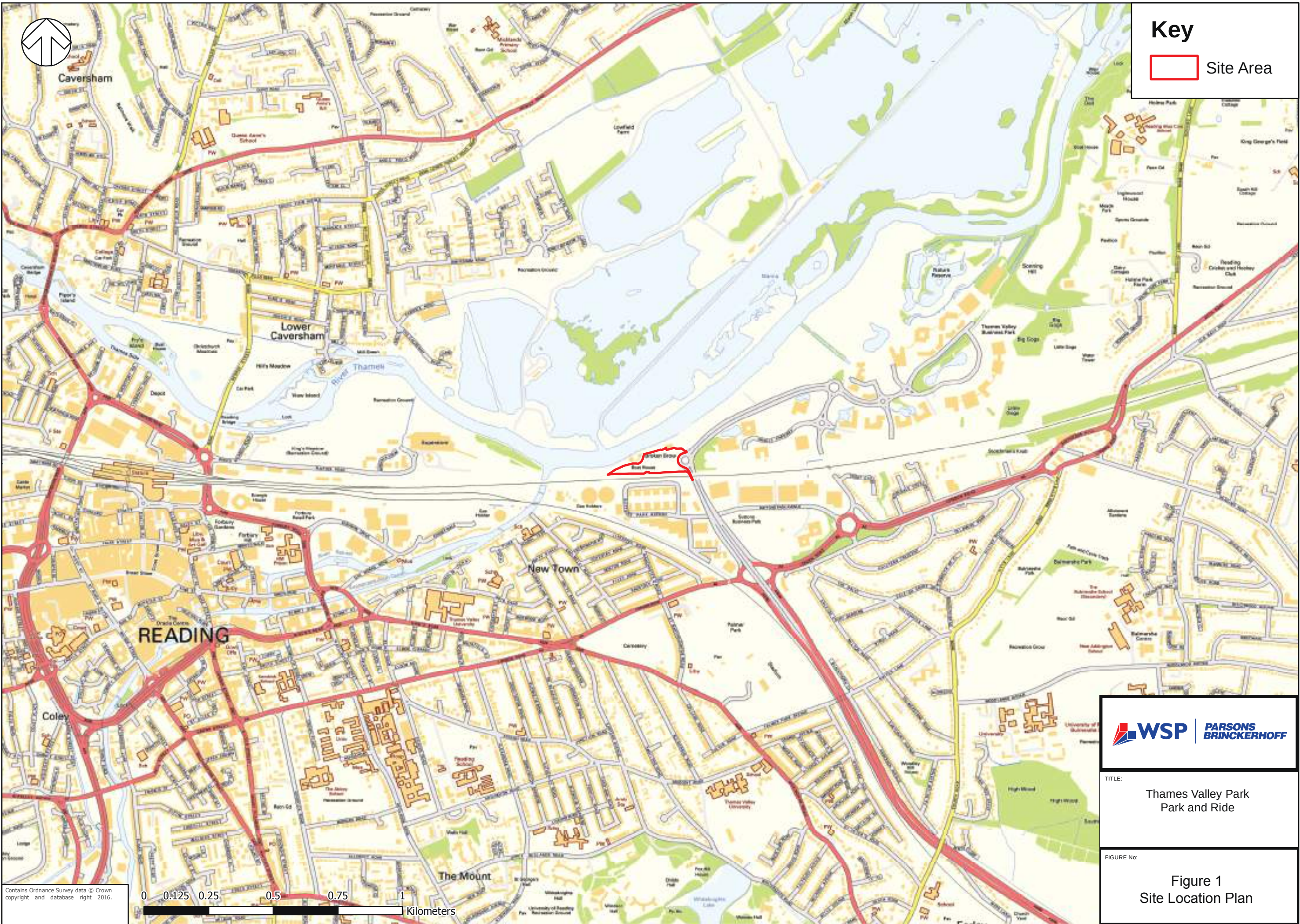
Drawing Number
28791/2009/CIV/002

Revision
C

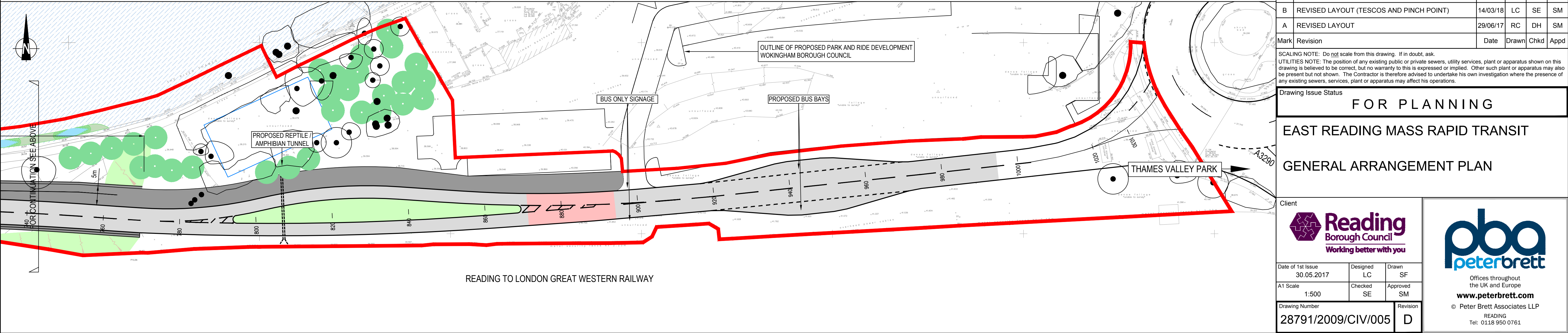
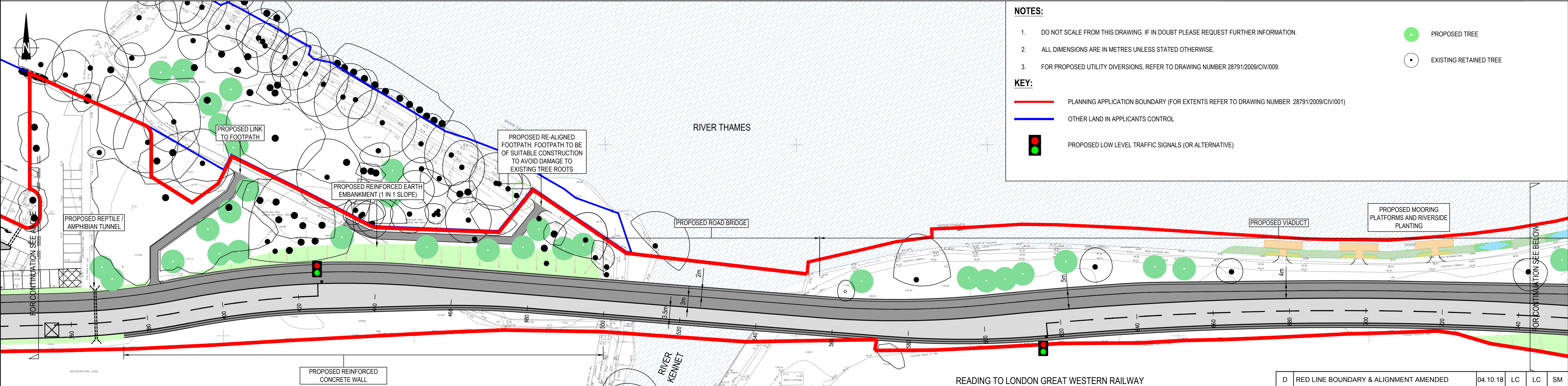
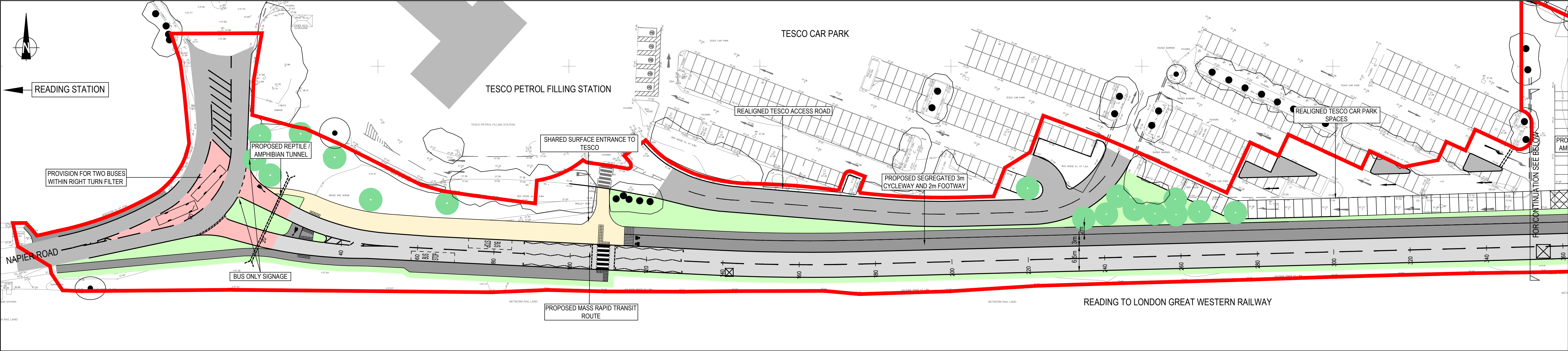


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Appendix B TVP Park and Ride Site Boundary



Appendix C East MRT Scheme Plans



NOTES:

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- ALL DIMENSIONS ARE IN METRES UNLESS STATED OTHERWISE.
- FOR PROPOSED UTILITY DIVERSIONS, REFER TO DRAWING NUMBER 28791/2009/CIV/009.

KEY:

- PLANNING APPLICATION BOUNDARY (FOR EXTENTS REFER TO DRAWING NUMBER 28791/2009/CIV/001)
- OTHER LAND IN APPLICANTS CONTROL
- PROPOSED LOW LEVEL TRAFFIC SIGNALS (OR ALTERNATIVE)
- PROPOSED TREE
- EXISTING RETAINED TREE

D	RED LINE BOUNDARY & ALIGNMENT AMENDED	04.10.18	LC	LC	SM
C	AMENDMENT TO RED LINE BOUNDARY	25/05/18	DH	SM	SM
B	REVISED LAYOUT (TESCOS AND PINCH POINT)	14/03/18	LC	SE	SM
A	REVISED LAYOUT	29/06/17	RC	DH	SM
Mark	Revision	Date	Drawn	Chkd	Appd

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Drawing Issue Status

FOR PLANNING

EAST READING MASS RAPID TRANSIT

GENERAL ARRANGEMENT PLAN

Client

Reading Borough Council
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READING
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Date of 1st Issue	Designed	Drawn
30.05.2017	LC	SF
A1 Scale	Checked	Approved
1:500	SE	SM
Drawing Number	Revision	
28791/2009/CIV/005	D	