

East Reading Mass Rapid Transit Scheme

Transport Statement

On behalf of [Reading Borough Council](#), Highways and Transport Department



Project Ref: 28791/5543 | Rev: 0 | Date: October 2018



Document Control Sheet

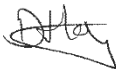
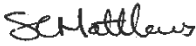
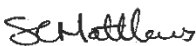
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	Name	Position	Signature	Date
Prepared by:	Dale Harvey	Principal Technician		Oct 2018
Reviewed by:	Sarah Matthews	Director		Oct 2018
Approved by:	Sarah Matthews	Director		Oct 2018
For and on behalf of Peter Brett Associates LLP				

Revision	Date	Description	Prepared	Reviewed	Approved

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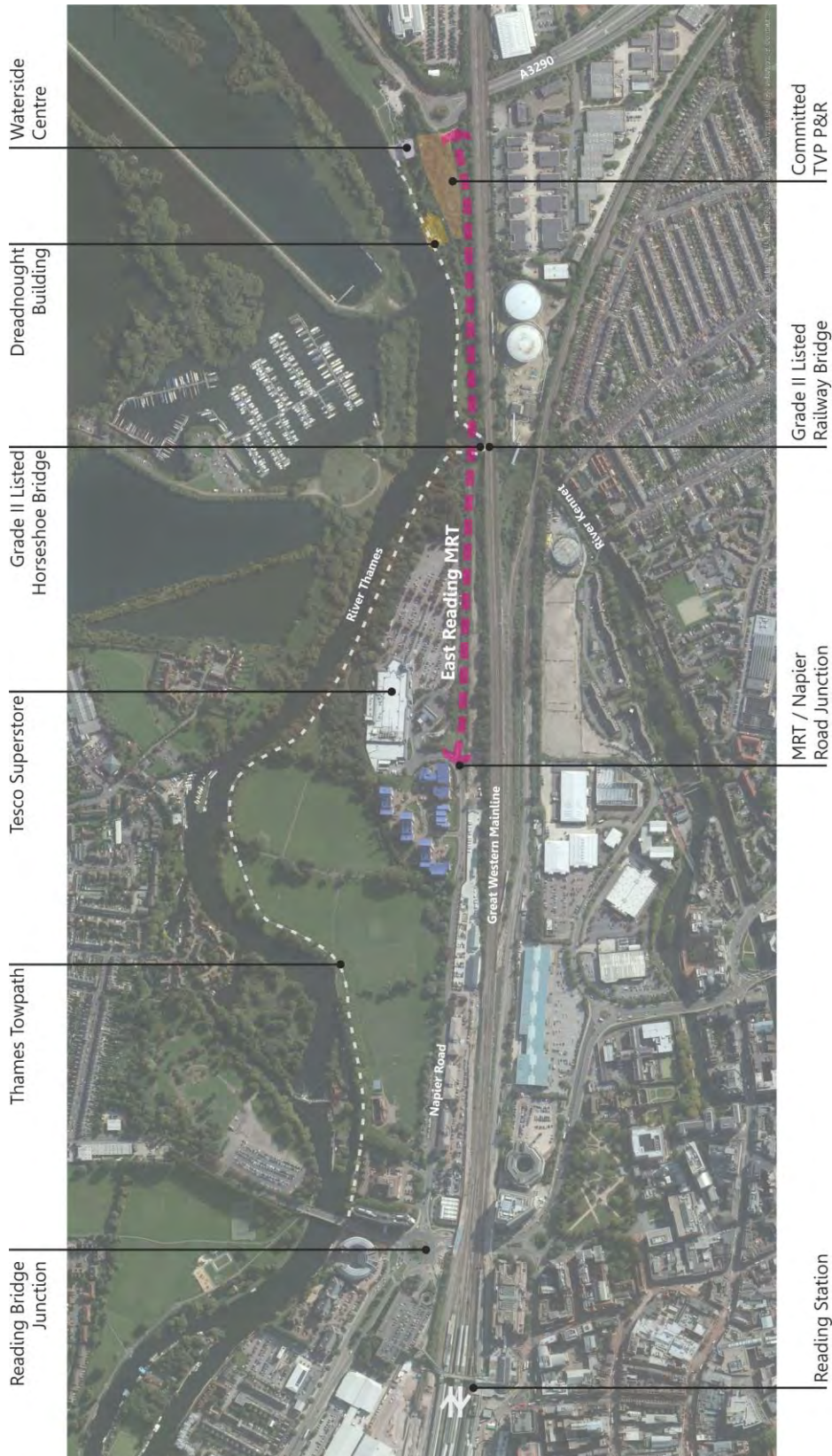
1 Introduction

1.1 Background

- 1.1.1 This Transport Statement (TS) has been prepared to support a full planning application for the East Reading Mass Rapid Transit (East MRT) scheme. The proposed scheme straddles the two Local Planning Authority areas of Reading Borough Council (RBC) and Wokingham Borough Council (WBC).
- 1.1.2 The East 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. It 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, Earley, Winnersh and Wokingham.
- 1.1.3 The purpose of the scheme is to improve access to and from Reading eastwards for buses, pedestrians and cyclists. This will help accommodate 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.
- 1.1.4 The East MRT Scheme is proposed to link into the A3290 at Thames Valley Park (TVP), adjacent to the proposed new Park and Ride facility (TVP P&R), to Napier Road, Reading town centre and the railway station, see **Figure 1.1**.
- 1.1.5 The TVP P&R development was granted full planning permission (application ref: 161596) by WBC in November 2016 for:

“Development of a Park & Ride facility providing approximately 277 vehicular spaces, motorcycle parking and associated vehicular access and landscaping.”
- 1.1.6 A Section 73 Application (application ref: 182496) has since been submitted for the TVP P&R on the 7th September 2018 to vary aspects of the planning permission.

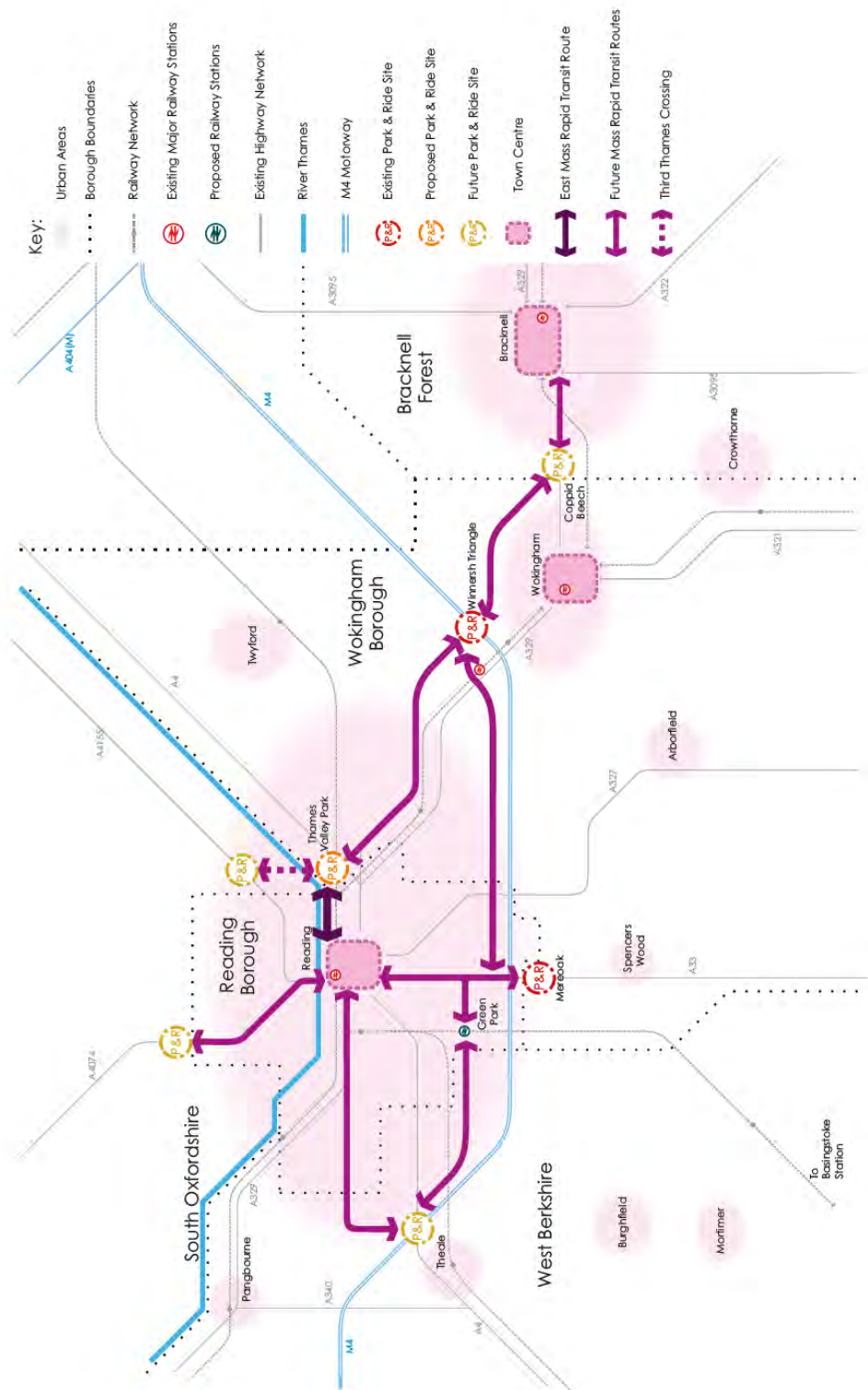
Figure 1.1: Site Location



1.2 Wider Transport Strategy

- 1.2.1 **Figure 1.2** shows Reading's public transport strategy to provide significantly improved radial and orbital MRT routes.

Figure 1.2: Reading Borough Council Public Transport Strategy



1.3 Future Connections to Strategic Transport Networks

- 1.3.1 This eastern section will form part of a longer term MRT network for the Thames Valley or operate as a standalone MRT route. The link also provides future opportunity to link to a Third Thames Crossing to provide MRT to a P&R north of the River Thames.
- 1.3.2 Reading is planned to benefit from significant investment in the following strategic networks (see **Figure 1.3**):
- Elizabeth Line (Crossrail) services are planned to operate from Reading Station in 2019 providing direct services into central London. This line is reported to be generating the most homes of all the new rail lines;
 - The Western Rail Link to Heathrow (WRLtH) will provide direct access to Heathrow Airport from Reading and is planned to be completed in 2021;
 - HS2, which should be completed in the next decade, will reduce journey times from London to Birmingham to 49 minutes, making it easier to commute from Britain's second city to the capital. London's rail commuter network will then encompass Brighton, in the south, Southend, in the east, Reading, in the west, and Birmingham, to the north; and
 - M4 Junctions 3-12: Smart Motorway scheme is currently under construction and due to be fully operational by 2022.
- 1.3.3 The East MRT scheme will improve accessibility to these strategic transport networks, allowing residents from existing and planned development living to the east of Reading to reach the rail services and Reading town centre, or visitors arriving from the motorway to use the P&R at TVP or Winnersh into Reading town centre.

[illegible]

1.4.1 Growth in Reading and the wider area is planned to continue over the coming years, with more housing and investment in employment opportunities.

1.4.3 Ernst and Young compiled a report which suggested that economic growth in Reading was predicted to be higher than anywhere else in the UK. However the average commuter in Reading spends 26 hours a year in congestion during peak hours, with a total estimated cost of £75 million (Source: Inrix 2017 Traffic Scorecard). A step-change is needed to provide connectivity, capacity upgrades and encourage sustainable travel to allow this potential economic growth to be achieved.

1.5 Business Case

- 1.5.1 A Business Case for the East MRT Scheme was prepared that considered five different cases, Strategic, Economic, Financial, Commercial and Management.
- 1.5.2 The methodology has been agreed with the Thames Valley Berkshire Local Enterprise Partnership's (TVBLEP) independent auditor. The Business Case does not consider the future potential of the route, in terms of:
- Further services using the route (beyond those assumed, as set out later in this report in section 5.2);
 - The ability to connect into a future MRT network and associated increase in demand;
 - Any increase in demand to access Crossrail services; and
 - Development sites being identified in the emerging Local Plans in RBC, WBC and South Oxfordshire District County (SODC).
- 1.5.3 Potential increases in cycle use and bus patronage due to the East MRT Scheme have been estimated to inform the Business Case. This work has shown that the East MRT could increase levels in cycling by 114 new trips per day based on timesaving and improved cycling facilities utilising DfT TAG UNIT A5.1. The demand modelling undertaken to inform the business case shows that the East MRT Scheme will lead to an increase in public transport patronage by up to 15%.
- 1.5.4 Even with the limitations bullet pointed above, the Business Case demonstrates a high value for money. The Business Case shows that the East MRT Scheme is supported by a robust case for change that fits with wider public policy objectives (strategic case), demonstrates value for money (economic case), is commercially viable (commercial case), is financially affordable (financial case) and is achievable (management case).

2 Policy Context

2.1 National Policy

National Planning Policy Framework

2.1.1 The National Planning Policy Framework states that: “planning policies should:

- a. support an appropriate mix of uses across an area, and within larger scale sites, to minimise the number and length of journeys needed for employment, shopping, leisure, education and other activities;*
- b. be prepared with the active involvement of local highways authorities, other transport infrastructure providers and operators and neighbouring councils, so that strategies and investments for supporting sustainable transport and development patterns are aligned;*
- c. identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice and realise opportunities for large scale development;*
- d. provide for high quality walking and cycling networks and supporting facilities such as cycle parking (drawing on Local Cycling and Walking Infrastructure Plans);*
- e. provide for any large scale transport facilities that need to be located in the area, and the infrastructure and wider development required to support their operation, expansion and contribution to the wider economy. In doing so they should take into account whether such development is likely to be a nationally significant infrastructure project and any relevant national policy statements; and*
- f. recognise the importance of maintaining a national network of general aviation airfields, and their need to adapt and change over time – taking into account their economic value in serving business, leisure, training and emergency service needs, and the Government’s General Aviation Strategy”*

2.1.2 The East MRT scheme has been identified by both RBC and WBC highway authorities, alongside transport operators such as: Reading Buses, Stewarts Travel and Rail Air to support the delivery of sustainable economic growth and housing for both boroughs and beyond in Bracknell Forest.

2.1.3 Land has been safeguarded in both boroughs for the scheme to be delivered, and included specifically within WBC’s Proposals Map and referenced in their Managing Development Delivery.

2.1.4 The scheme delivers significant upgrades to the walking and cycling networks between Reading and Wokingham boroughs.

2.1.5 The scheme is a fundamental element of the wider sustainable transport strategy for Reading and the Thames Valley, enabling the future provision of a dedicated public transport corridor between Reading – Wokingham – Bracknell and in north Reading linked to the proposed Third Thames crossing.

2.1.6 The East MRT scheme will improve accessibility to the strategic rail and highway networks, allowing residents from existing and planned development living to the east of Reading to reach the rail services and Reading town centre, or visitors arriving from the motorway to use the P&R at TVP or Winnersh into Reading town centre.

2.1.7 The scheme therefore strongly accords with the NPPF.

2.2 Regional Policy

Thames Valley Berkshire LEP Strategic Priorities

2.2.1 The LEP seek to “ensure we have transport infrastructure for the 21st century”

2.2.2 One of LEP’s objectives is “to secure investment for Thames Valley Berkshire Strategic infrastructure from public or private sources that will cause barriers to growth in the four areas”:

- Housing and Regeneration
- Transport
- Telecommunications
- Utilities

2.2.3 The delivery of the East MRT Scheme will help to achieve these aspirations and objectives.

Thames Valley Berkshire LEP Strategic Economic Plan and Implementation Plan

2.2.4 The East Reading Mass Rapid Transit has been identified for support from LGF from 2016/17 onwards. The scheme has been identified to respond to business concerns with regard to accessibility and journey time and reliability. It will improve access to Reading town centre and major employment sites, from the east and complement the Park and Ride facilities at Winnersh Triangle and Thames Valley Park. It will enable the delivery of south eastern section between Reading, Wokingham and Bracknell.

2.3 Local Policy

Reading Borough Council Core Strategy

2.3.1 The adopted Reading Borough Council (RBC) Core Strategy identifies four distinct, but well-connected areas that present themselves as sustainable locations for future development. Quality bus corridors / Mass Rapid Transit is identified as one of the eight core infrastructure projects.

2.3.2 Policy CS21 ‘Major Transport Projects’ states:

“As a regional transport hub, priority will be given to the implementation of the priority transport projects identified in the Local Transport Plan, particularly the upgrading of Reading Station Interchange, Park and Ride Sites, Mass Rapid Transit, road improvements, Quality Bus Routes and associated transport improvements. Land needed for the implementation of priority transport projects will be safeguarded from development, to enable their future provision.”

Figure 2.1: RBC Local Development Framework, Core Strategy (Page 64)

**Figure 7.1:
Transport
Connections
and Strategy**
(Source: Local
Transport Plan)

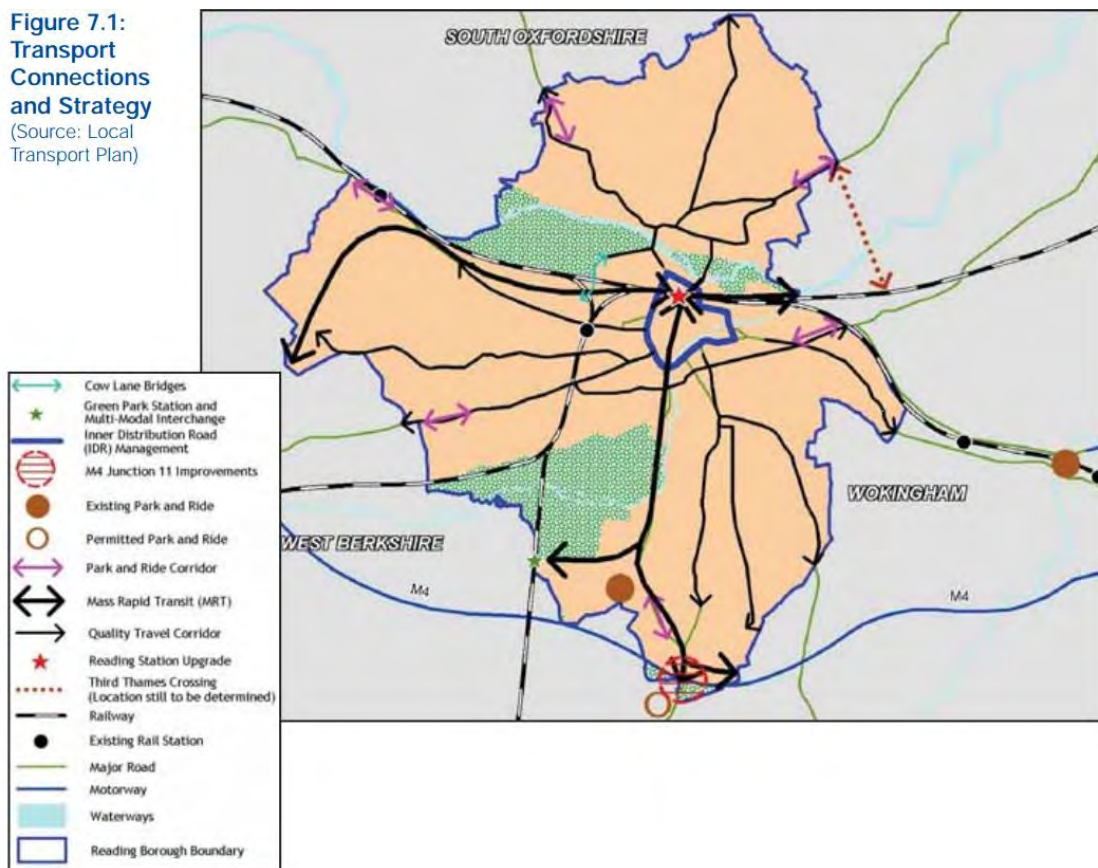


Figure 2.2: RBC Local Development Framework, Central Area Action Plan (Page 18)



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Reading Borough Council Local Transport Plan

- 2.3.3 Reading Borough Council's Local Transport Plan (2011 – 2026) provides the following detail with regards to their Transport Vision for Connecting Reading:

"Transport in Reading will better connect people to the places that they want to go: easily, swiftly, safely, sustainably and in comfort. We will meet the challenges of a dynamic, low-carbon future to promote prosperity for Reading. Whichever way you choose to travel, by foot or bicycle, motorcycle, bus, rail, car or boat whether to work or education, to leisure or the services you need, our transport system will help you get there."

- 2.3.4 The LTP provides a number of Area Action Plans (AAP's) for the different areas across the borough, with each of these supporting the implementation of MRT through 'Opportunities for Addressing Challenges'.

Eastern AAP includes:

- *“To continue to work with Wokingham Borough Council, South Oxfordshire District Council, Oxfordshire County Council and Bracknell Forest District Council to find cross-boundary solutions to transport challenges.*
- *To work with Wokingham Borough Council to progress the implementation of a long term Park and Ride strategy, considering alternative sites to Loddon Bridge, including the possible use of Broken Brow at the northern end of the A3290.*
- *To carry out targeted neighbourhood or area studies, working with Wokingham Borough Council to build on previous work to deliver multi-targeted benefits, including the improvement of public transport journey times and reliability and the management of development pressures. One focus would be on strategic radial routes into Reading and the potential provision of a mass rapid transit supporting a park and ride strategy.*
- *To work with the private sector and Wokingham Borough Council to innovate and secure delivery of integrated transport choices associated with new development proposed within Wokingham Borough.*
- *To work with Wokingham Borough Council to deliver an East Reading Transport Link and associated Park & Ride facilities”*

2.3.5 The LTP notes that: *“An MRT system must be designed to meet a set of standards above and beyond a quality local bus. The long-term vision incorporates a network that expands the public transport offer rather than replacing existing networks, and it will be branded as such. The MRT network extends beyond Reading to offer public transport and interchange options to the wider travel to work area. The Park and Ride objectives and policies support the MRT and interchange options, aiming to reduce private transport mileage and improve journey times and air quality on some of Reading’s busiest roads.”*

Figure 2.3: RBC Local Transport Plan (2006 - 2011) (Page 8) and RBC Local Transport Plan (2011 to 2026) Public Transport Strategy (Page 54)

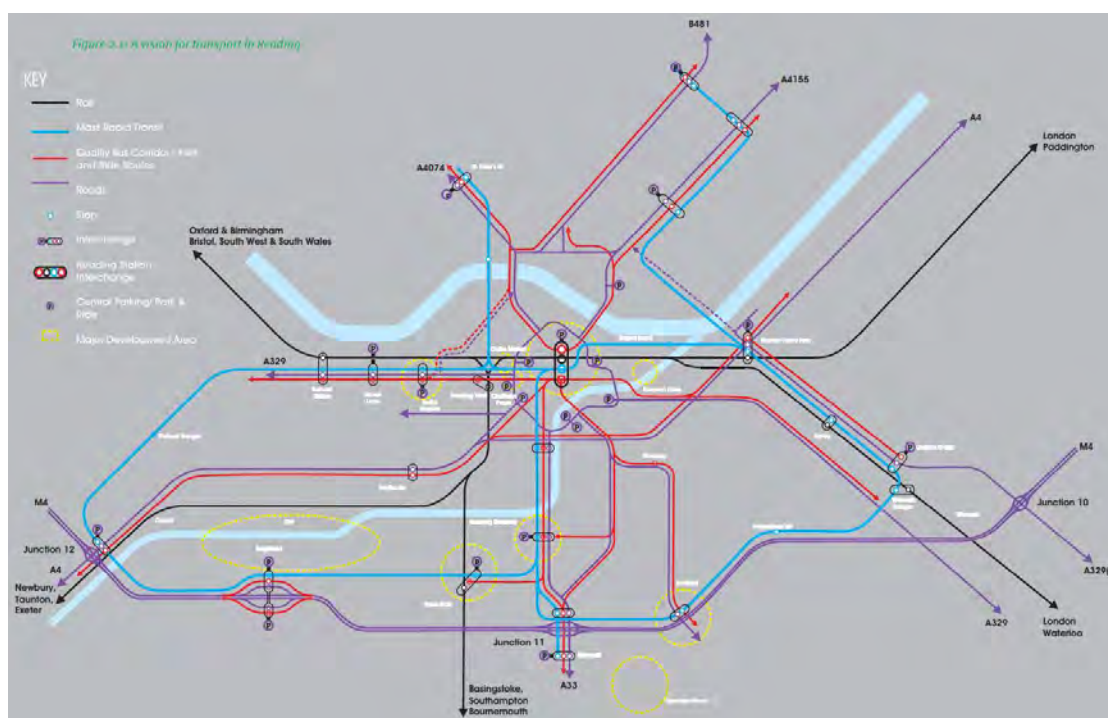


Figure 2.4: RBC Local Transport Plan (2006 - 2011) (Page 71)

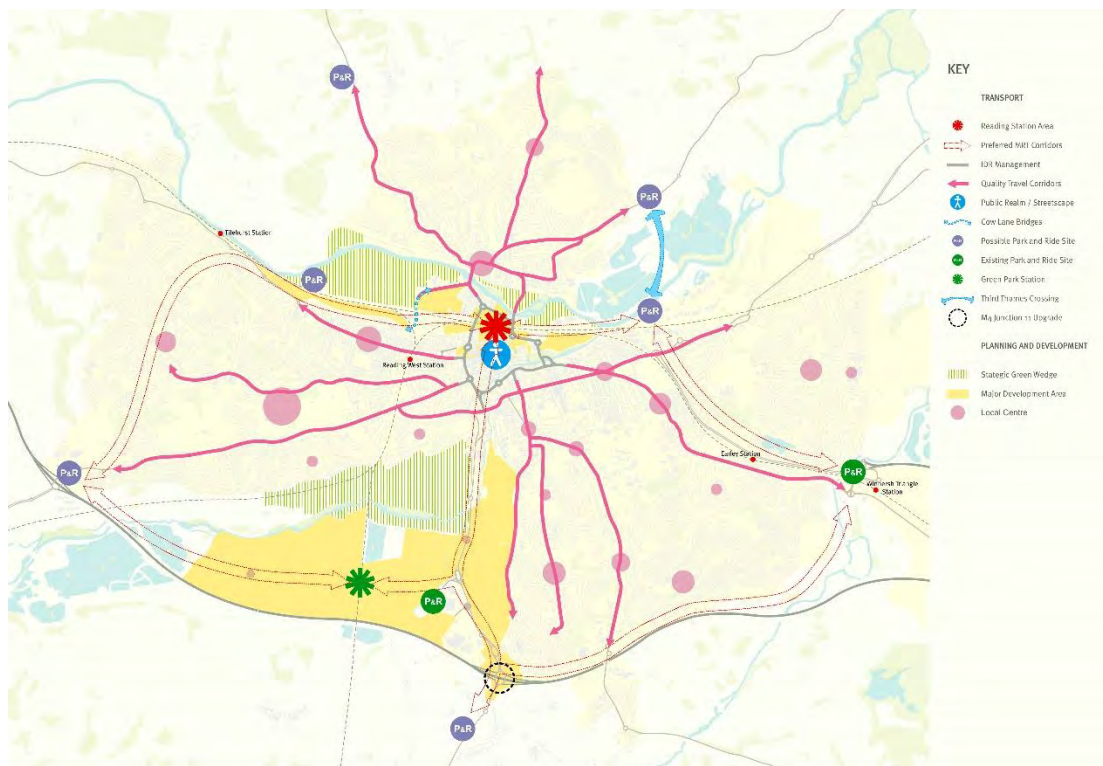


Figure 2.5: RBC Local Transport Plan (2006- 2011) (Page 79) and RBC Local Development Framework, Central Area Action Plan (Page 12)



Wokingham Borough Core Strategy

- 2.3.6 High Quality express bus services or mass rapid transit along the A4 and A329 corridors are identified as an integral part of Wokingham Borough Council's Core Strategy. 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.
- 2.3.7 The East MRT scheme will help assist the planning obligations related to South Wokingham (2500 homes) and North Wokingham (1500 homes):
- *"Improvements to the quality and frequency of public transport services along any part of the network" ...*
 - *"High quality express bus services or mass rapid transit along A329 corridor"*

Wokingham Local Transport Plan

- 2.3.8 Policy PT8 Park & Ride: *“The council will promote the use of Park & Ride services and will support the future introduction of new sites in the borough where feasible.*

Over the life of this plan and the development of the adopted core strategy we will work with Reading Borough council and Bracknell Forest Councils to deliver and retain Park & Ride at the following locations:

- *Near to Coppid Beech roundabout on the A329 in Wokingham*
- *Park and Ride in the vicinity of the M4 junction 11 (MereOak)*
- *Relocation or retention of the Park & Ride at Winnersh*
- *Park & Ride located in Thames Valley Park to complement the high quality express bus services or mass rapid transit along the A4 or A329 corridors into central Reading.”*

- 2.3.9 This confirms their aspirations to connect to a mass rapid transit system along the A4 or A329.

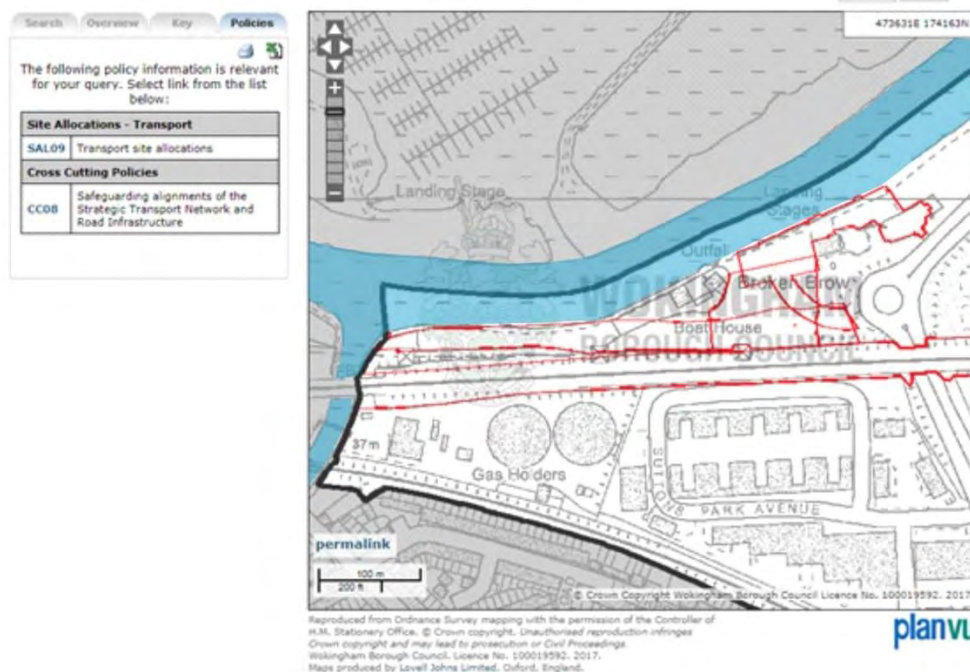
- 2.3.10 Policy SP1: Support for Major Infrastructure sets out that *“the Council will actively support development of suitable major transport projects that are necessary to support the future growth and success of the Borough. Major Strategic Public Transport, Walking and Cycling Infrastructure includes:*

- *“High quality express bus services or mass rapid transit along the A4 and A329 corridors*
- *High quality express bus services or mass rapid transit between Reading and Woodley town centres*
- *High quality express bus services between Green Park and Twyford stations via the Park & Rides in the vicinity of M4, J11 and Loddon Bridge and Winnersh Triangle Railway Station*
- *Measures to improve accessibility by non-car transport modes along routes to the stations at Green Park and Winnersh Triangle”*

Wokingham Borough Managing Development Delivery (MDD) Local Plan (adopted February 2014).

- 2.3.11 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 TVP P&R 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.

Figure 2.6: Extract from WBC Online Proposals Map – Safeguarded Land



Source: <http://www.planvu.co.uk/wbc>

2.3.12 The policy relating to the East MRT Scheme in **Figure 1.8** is:

- Policy CC08: Safeguarding alignments of the Strategic Transport Network & Road Infrastructure.
 - Routes required for the improvement of the Strategic Transport Network and for other transport related schemes indicated on the Policies Map or listed in Appendix 3 of the MDD will be protected and safeguarded. Proposals for development which would compromise the implementation of these routes would not be supported.
- MDD Appendix 3: Strategic Transport Network and Road Infrastructure - Safeguarded Land and Protected Road/Railway Lines
 - i. Measures to improve cross Thames travel (policy CP10 (1))
 - iv. High quality express bus services or mass rapid transit along the A4 and A329 corridors (CP10(10)). This project is dependent on Reading Borough Council's 'Cross-town Link6'.
 - v. Crossrail (CP10(16)).
 - c) Provide a Park & Ride near the Coppid Beech roundabout on the A329 in Wokingham (CP10(5))
 - j) Improvements to the quality and frequency of public transport services along any part of the network (CP10(19))
 - k) Improvements to increase the use of bicycles, including cycle paths (CP10(20))
 - l) Enhancements to footpath and cycle networks to improve access to services and facilities (CP10(21))

3 Existing Conditions

3.1 Walking

3.1.1 There are currently four main pedestrian route (PR) options for pedestrians travelling from the A4 London Road east of the A3290 roundabout to Reading town centre and station, these are:

- PR1) Via London Road and Kings Road,
- PR2) Via the River Kennet towpath,
- PR3) Via the River Thames towpath and Napier Road,
- PR4) Via the River Thames and Kennet towpaths and Napier Road

3.1.2 The routes are illustrated in **Figure 3.1, 3.2 3.3 and 3.4.**

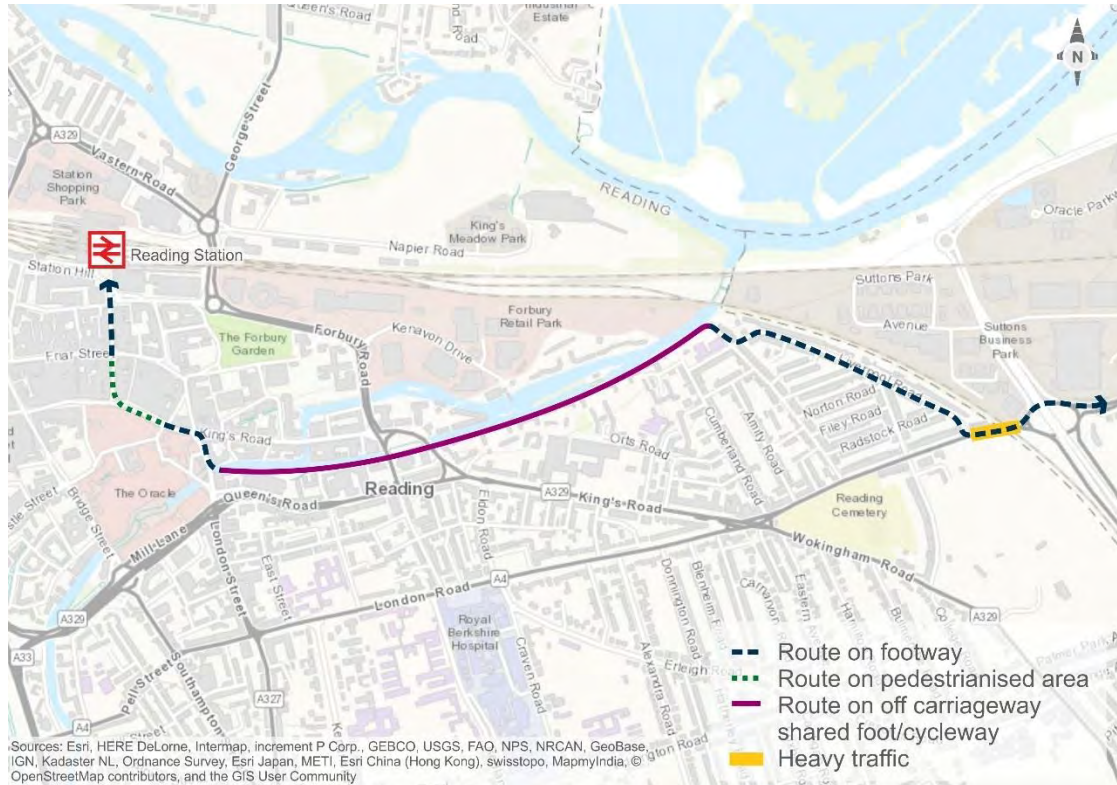
Figure 3.1: Pedestrian Route 1 – Via London Road and Kings Road



Pedestrian Route 1 (PR1)

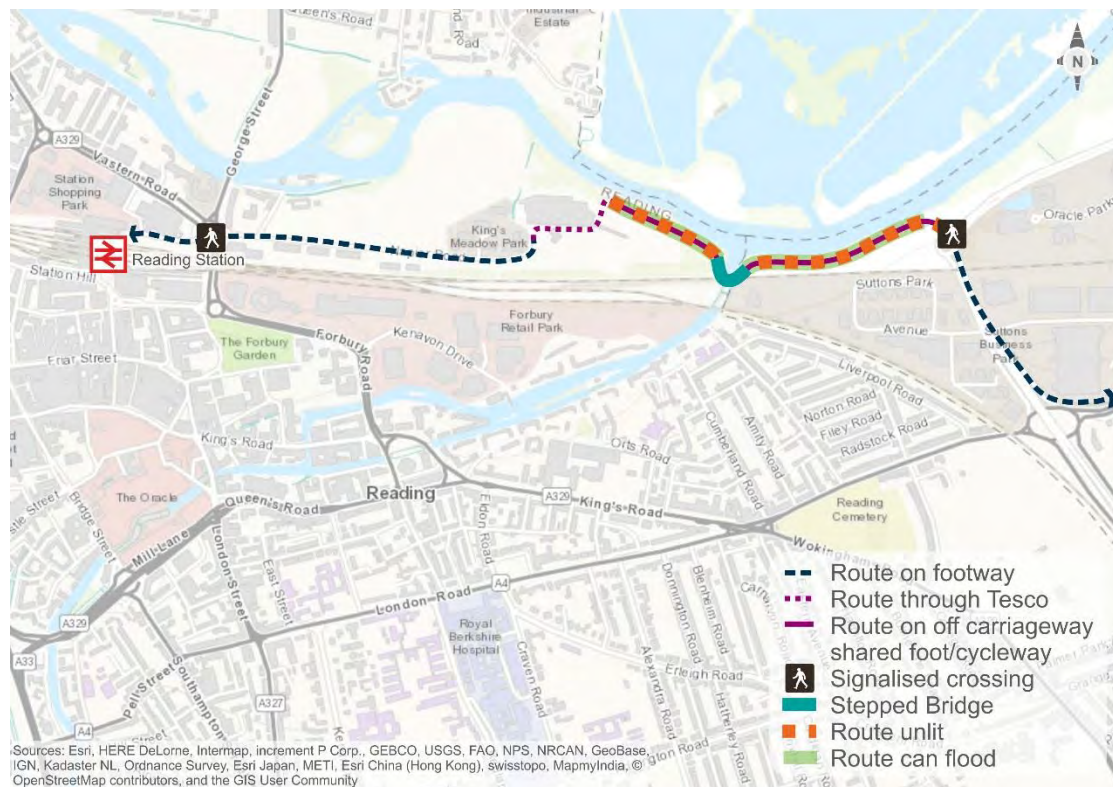
3.1.3 PR1 is approximately 1.75 miles in length and the whole route is lit and along footways or through pedestrianised zones. The first section of Route 1 is along the A4 London Road and Kings Road, which are both heavily trafficked main roads with footways and signalised crossings. The Kings Road crosses the Reading Inner Distribution Road (IDR) at a signalised junction with pedestrian crossing facilities. Kings Road then alters in character from a busy main road to a much lower trafficked town centre route. Kings Road ends at the pedestrianised section of Broad Street in the town centre. The route continues along Broad Street and Queen Victoria Street, both of which are pedestrianised, and onto Station Road, a

Figure 3.2: Pedestrian Route 2 – Via the River Kennet



3.1.4 PR2 is approximately 1.85 miles in length and the whole route is lit and along footways or through pedestrian zones. The first section of the route is along the A4 London Road for approximately 150m, the route then continues along Liverpool Road before reaching the River Kennet towpath. Liverpool Road is a quiet, traffic calmed residential street in a 20mph speed limit zone and the River Kennet towpath is a shared foot/cycle way. The route reaches the town centre at Duke Street, a low trafficked street that is primarily a bus route, which leads to the pedestrianised area of Broad Street. The route then continues along PR1 to Reading Station.

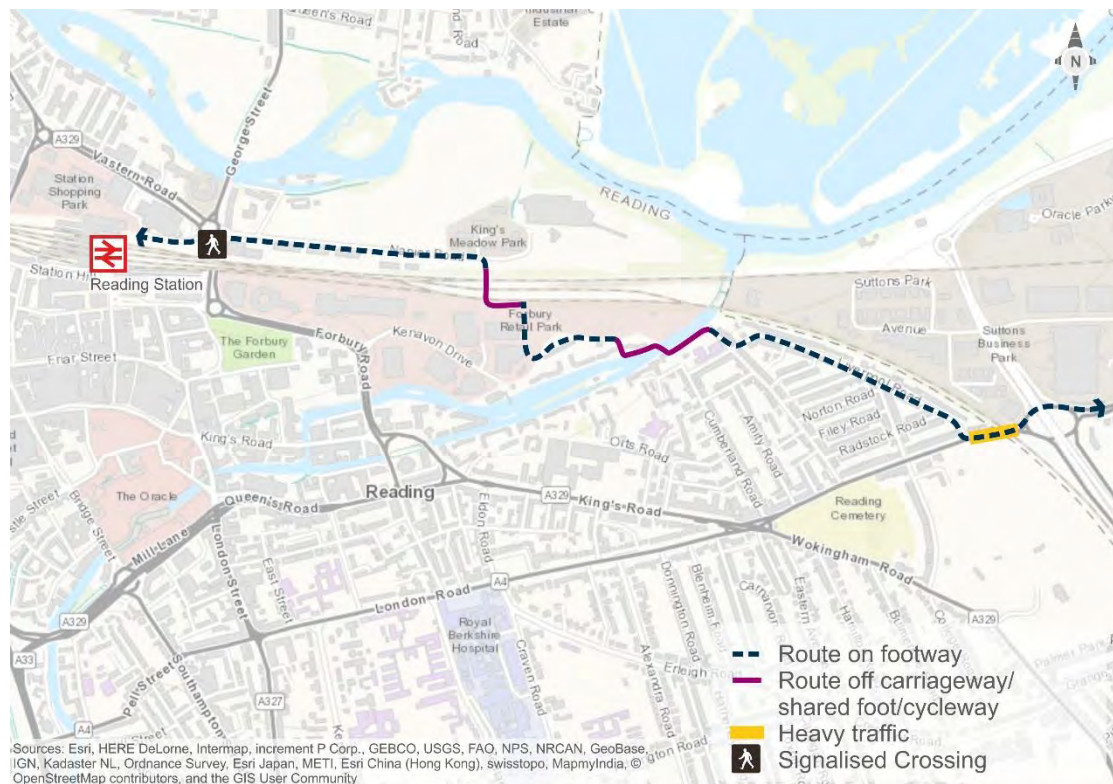
Figure 3.3: Pedestrian Route 3 – Via the River Thames



Pedestrian Route 3 (PR3)

- 3.1.5 PR3 is approximately 1.85 miles in length, the whole route is along footways but part of the route, along the Thames towpath, is unlit and at risk of flooding. The first section of the route is along a shared foot/cycleway alongside the A3290 for approximately 500m. This section of the A3290 provides access to the Waterside Centre and TVP and accommodates relatively high peak hour traffic flows due to people arriving and leaving the business park. The route then crosses the road via a signalised pedestrian crossing and onto the River Thames towpath. The Thames towpath is a shared foot/cycleway; however, it is unlit and narrow in places with the width ranging between approximately 1.5 to 3.0m. The route crosses the River Kennet at its confluence with the River Thames via a stepped (with small cycle ramp alongside) pedestrian footbridge known as the Horseshoe Bridge, see **Figure 3.5**. The route continues along the towpath up to a Tesco Superstore. Here the route travels around the superstore and onto Napier Road. Napier Road is a 30mph, relatively low trafficked route with a footway. Napier Road meets the IDR at Reading Bridge Roundabout; a signalised pedestrian crossing facility is available which crosses the IDR to the Reading Station car park and through to the northern station entrance.

Figure 3.4: Pedestrian Route 4 – Via the River Thames, Kennet and Napier Road



Pedestrian Route 4 (PR4)

- 3.1.6 PR4 is approximately 1.8 miles in length, the whole route is along footways. The first section of the route is along the A4 London Road for approximately 150m, the route then continues along Liverpool Road before reaching the River Kennet towpath. Liverpool Road is a quiet, traffic calmed residential street in a 20mph speed limit zone and the River Kennet towpath is a shared foot/cycle way. The route crosses the River Kennet via a pedestrian and cycle bridge to the residential development of Kenavon Drive. The route then follows a footpath with the river to the south and residential homes to the north before and joining Kenavon Drive. The route then goes along a quiet residential road and crosses the railway line via a 65m long underpass and joins Napier Road. Napier Road is a 30mph, relatively low trafficked route with a footway. Napier Road meets the IDR at Reading Bridge Roundabout; a signalised pedestrian crossing facility is available which crosses the IDR to the Reading Station car park and through to the northern station entrance.

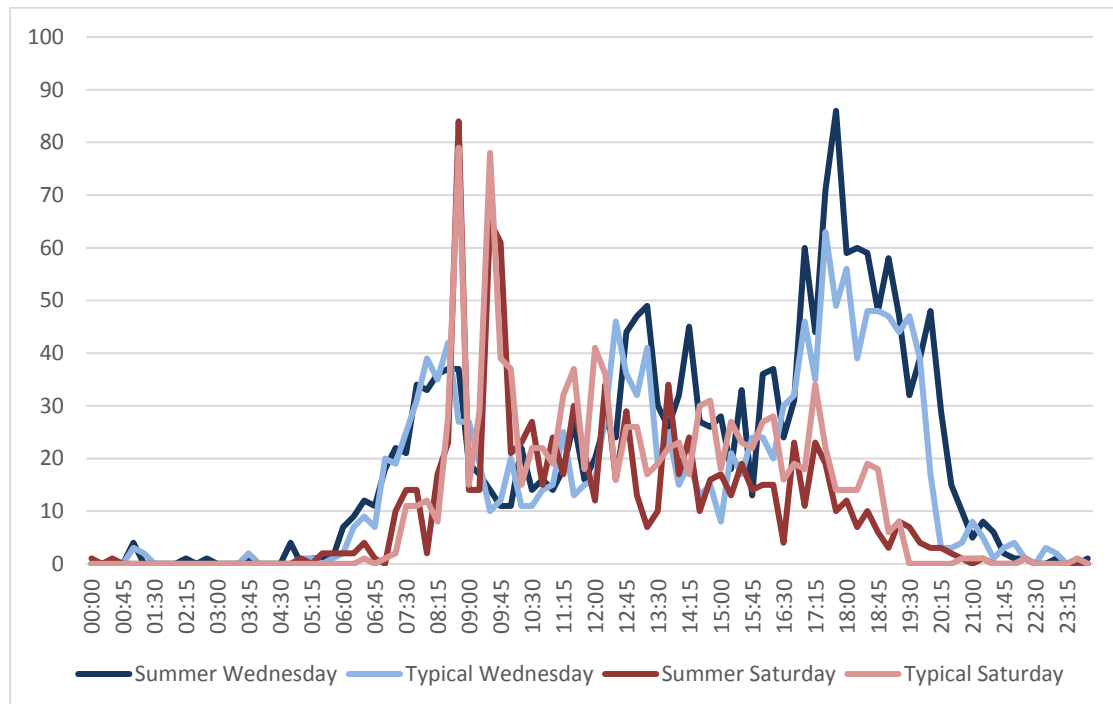
Figure 3.5: Stepped Horseshoe Bridge



Pedestrian Survey on Thames Towpath

- 3.1.7 A pedestrian survey has been undertaken along the Thames Towpath between the Waterside Centre and the Horseshoe Bridge. The purpose of this survey was to understand the number of pedestrians moving within the area, and to understand the use of the space.
- 3.1.8 A 24 hour pedestrian count surveys have been undertaken on a Wednesday and a Saturday in the summer period of August and during a typical week in September 2017. **Figure 3.6** summarises the results of the surveys and the survey is included in **Appendix A**.

Figure 3.6: Pedestrian Survey on Thames Towpath



- 3.1.9 **Figure 3.6** shows that on the surveyed weekday the peak number of movements were during the evening hours of 17:30 until 19:30, whereas on a Saturday the peak number of movements during the morning hours of 08:00 until 10:00

Open Space Video Observation Survey

- 3.1.10 An hourly video observation beat survey was carried out covering the area of open space between the Horseshoe Bridge and Dreadnought building, see **Figure 3.6**. The survey was undertaken between 09:00 and 18:00 on Thursday 1st June 2017, a sunny half term holiday week.
- 3.1.11 The results of the survey showed no use of the space with people only using the towpath. Two people were observed sitting on the edge of the towpath using their mobile phones which indicates a potential need for benches. The only activity seen in the open space was a tent laid out which appeared to belong to a narrow boat owner and a couple of erected tents. See screenshots in **Figure 3.8**.
- 3.1.12 It should be noted that the meadows further west and east opposite Tesco and Thames Valley Park Drive respectively were well used during the survey periods.

Figure 3.7: Open Space Survey Area

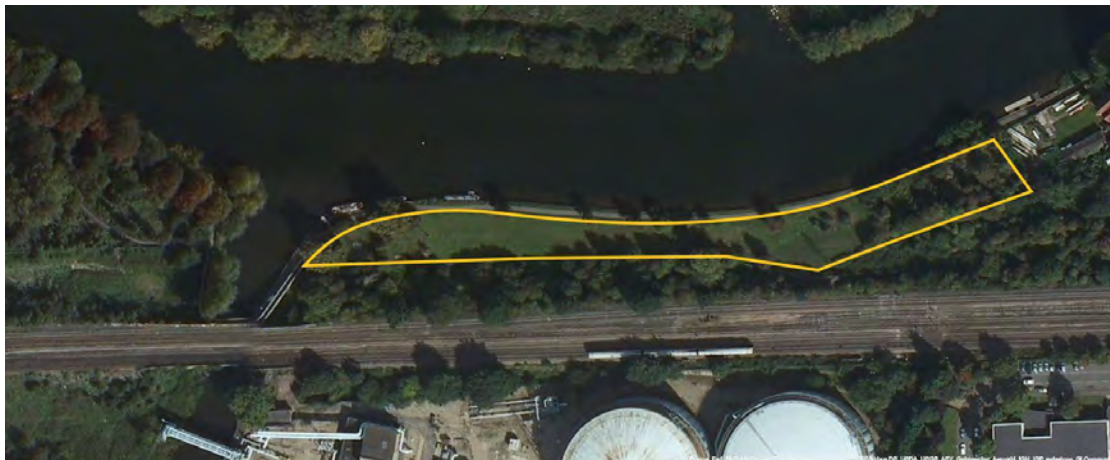


Figure 3.8: Survey Result Screenshots



- 3.1.13 A further spot survey was undertaken on May bank holiday Monday (07/05/18). The weather on this day was sunny with high temperatures close to 30 degrees Celsius. The area between the Horseshoe Bridge and the Waterside Centre was recently maintained, however no-one was observed using this space. People were walking and cycling along the towpath only. In stark contrast, the area of open space adjacent to Thames Valley Park Drive was full of people using the area for leisure. It was also noted that rubbish and belongings from moored

boats were laid beside the towpath between the Horseshoe Bridge and the Waterside Centre. See photos in **Figure 3.9**.

Figure 3.9: May Bank Holiday 2018 Spot Survey



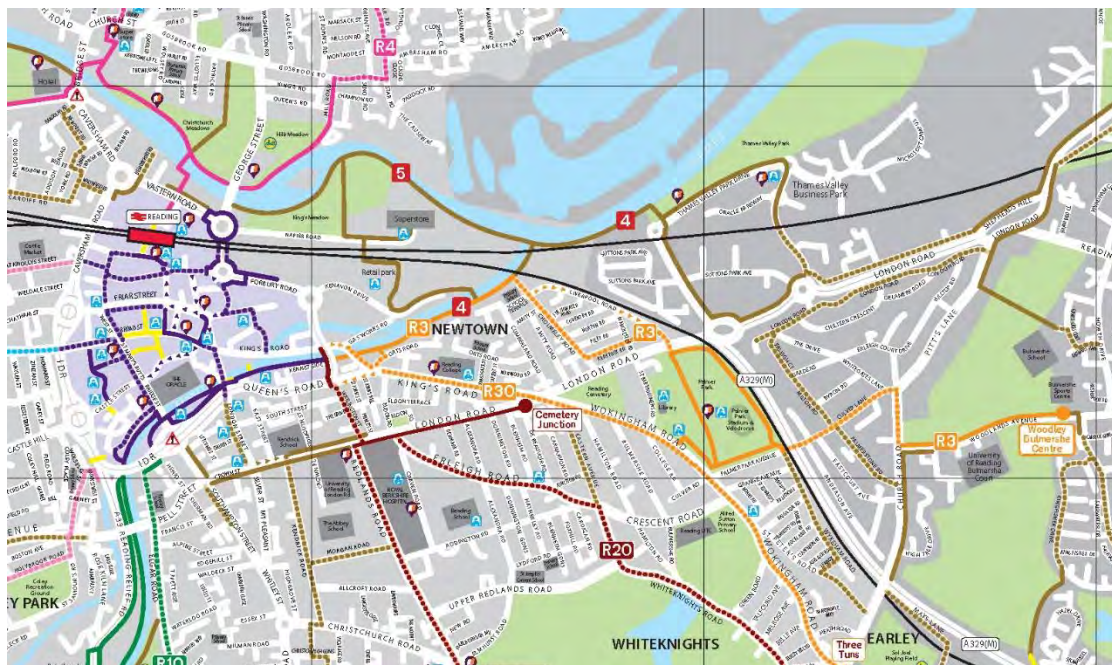
3.2 Cycling

3.2.1 There are currently three signed route options for cyclists travelling from the A4 London Road / A3290 roundabout to Reading town centre and station, these are:

- CR1) Via the River Thames towpath,
- CR2) Via the River Thames and Kennet towpaths,
- CR3) Via the River Kennet towpath
- CR4) Via the River Kennet and Napier Road

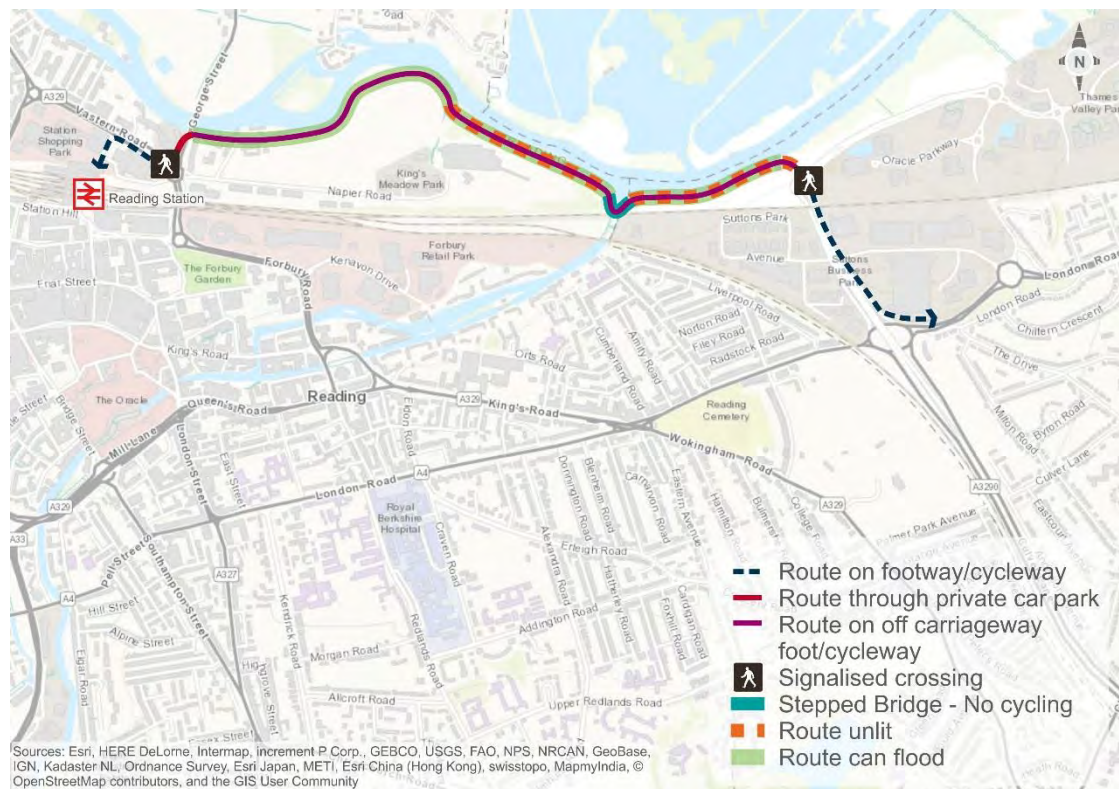
3.2.2 The routes are illustrated in **Figure 3.10, 3.11, 3.12, 3.13** and **3.14**.

Figure 3.10: Extract from Reading Borough Cycle Map



3.2.3 The only available continuous cycle route from the A4 east of the A3290 roundabout to Reading town centre and station is along the River Thames, as shown in **Figure 3.10**. The section on the A4 London Road between the A3290 junction and Kings Road is a heavily trafficked route with narrow traffic lanes therefore an undesirable route for cyclists. Cycling along this route, on carriageway, would be potentially dangerous with a high risk of collisions between vehicles and cyclists.

Figure 3.11: Cycle Route 1 – Via the River Thames



Cycle Route 1 (CR1)

- 3.2.4 CR1 is approximately 1.9 miles in length, the whole route is along shared foot/cycleways but the majority of the route, along the Thames towpath, is at risk of flooding, unlit and narrow in places. The Thames Path is not a legal cycle path; however, it is part of the National Cycle Network. Pedestrians also use the shared foot/cycleways therefore speed is limited for cyclists as they have to navigate slower pedestrians. The Horseshoe Bridge is a stepped (small cycle ramp alongside the steps) pedestrian bridge where cyclists must dismount, see **Figure 3.5**. The route follows PR3 up to Tesco superstore and then continues along the towpath to Reading Bridge. At Reading Bridge, the route travels through a private car park and onto the IDR, Vastern Road. Vastern Road has shared foot/cycleways on both sides of the carriageway. The route crosses the IDR via a signalised crossing and continues to Trooper Potts Way, the northern entrance to Reading Station.

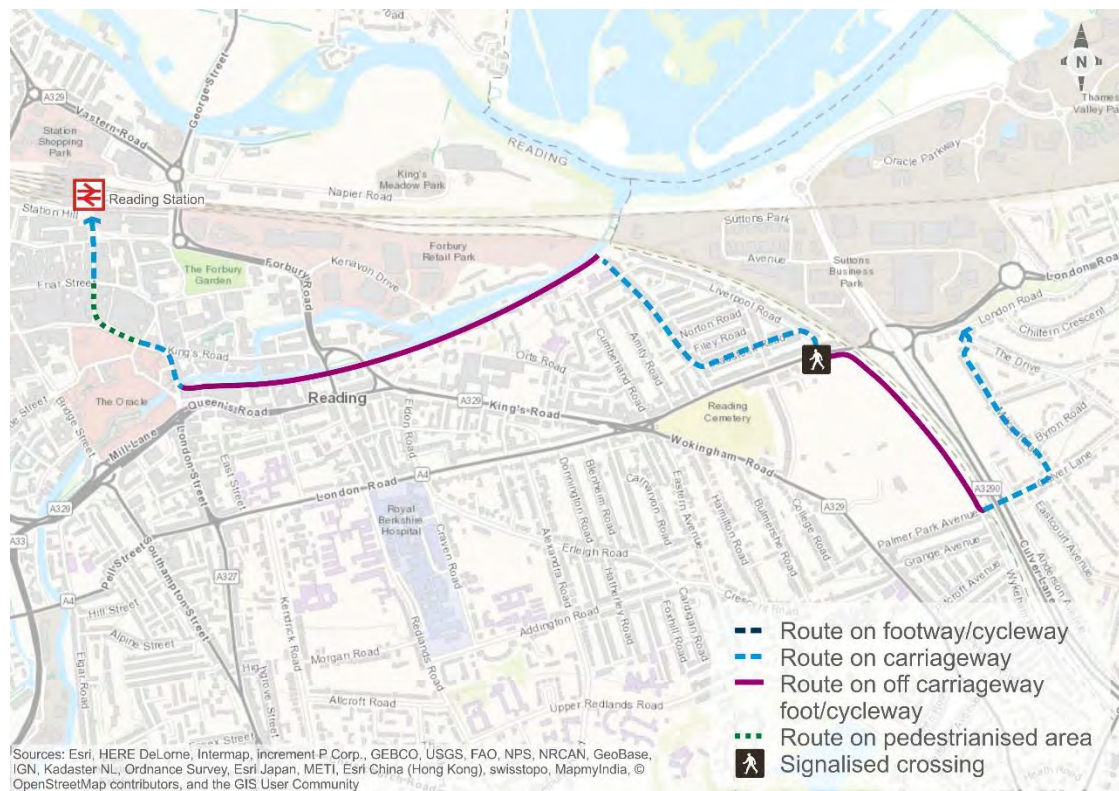
Figure 3.12: Cycle Route 2 – Via the River Thames and River Kennet



Cycle Route 2 (CR2)

- 3.2.5 C2 is approximately 2.1 miles in length, the route is along shared foot/cycleways and town centre streets, part of the route along the Thames towpath is unlit and at risk of flooding. Pedestrians also use the shared foot/cycleways therefore speed is limited for cyclists as they have to navigate slower pedestrians. The route follows CR1 up to the confluence of River Thames and Kennet. The route then follows PR2 along the River Kennet and through Reading town centre.

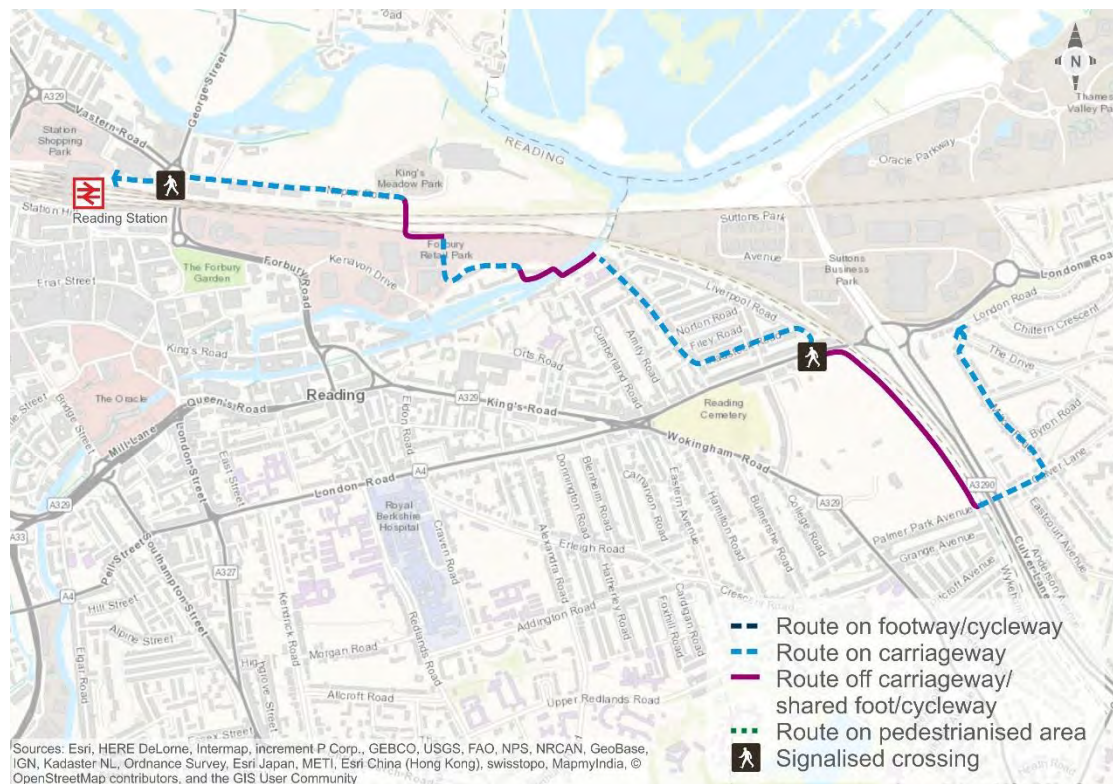
Figure 3.13: Cycle Route 3 – Via the River Kennet



Cycle Route 3 (CR3)

- 3.2.6 CR3 is approximately 2.7 miles in length, the route is along shared foot/cycleways, quiet streets and town centre streets. Pedestrians also use the shared foot/cycleways therefore speed is limited for cyclists as they have to navigate slower pedestrians. The route follows Milton Road, a quiet residential street up to Palmer Park Avenue which is also a residential street but with higher traffic flows than Milton Road. The route then continues through Palmer Park via a shared foot/cycleway up to the A4 London Road. Cyclists can cross London Road via a signalised crossing and onto Liverpool Road. The route then continues along Radstock Road and Cholmley Road, both 20mph quiet residential streets. The route then follows CR2 along the River Kennet and through Reading town centre.

Figure 3.14: Cycle Route 4 – Via the River Kennet and Napier Road



Cycle Route 4 (CR4)

- 3.2.7 CR3 is approximately 2.5 miles in length, the route is along shared foot/cycleways, quiet streets and town centre streets. Pedestrians also use the shared foot/cycleways therefore speed is limited for cyclists as they have to navigate slower pedestrians. The route follows Milton Road, a quiet residential street up to Palmer Park Avenue which is also a residential street but with higher traffic flows than Milton Road. The route then continues through Palmer Park via a shared foot/cycleway up to the A4 London Road. Cyclists can cross London Road via a signalised crossing and onto Liverpool Road. The route then continues along Radstock Road and Cholmley Road, both 20mph quiet residential streets. The route then follows the Kennet towpath for a short distance before crossing the river via a pedestrian and cycle bridge. The route then follows a footpath with the river to the south and residential homes to the north before and joining Kenavon Drive. The route then goes along a quiet residential road and crosses the railway line via a 65m long underpass and joins Napier Road. Napier Road is a 30mph, relatively low trafficked route with a footway. Napier Road meets the IDR at Reading Bridge Roundabout where a shared foot/cycleway begins and leads to a signalised pedestrian crossing facility which crosses the IDR to the Reading Station car park and through to the northern station entrance.

Cycle Hire

- 3.2.8 Ready Bike Cycle Hire bicycles are available for use at TVP. People travelling between TVP and Reading station and town centre can currently use hire bicycles on routes CR1 and CR2.

3.3 Public Transport

Bus Use in Reading

- 3.3.1 Reading Borough Council has supported investment in public transport for a number of years, which has been further reinforced with significant investment from Reading Buses in prioritised customer service, new technologies and environmentally friending vehicles. Buses offer free wifi, on board charging for mobile devices, smart ticketing, real time rail information for buses that link with the rail network, audio and visual displays and GOS tracking for real time information.
- 3.3.2 Bus use in Reading has increased since 2010 by 21% against a back drop of national decline (-9% across England and 1% in South East). Few places have similarly bucked the long term trend of decline in bus use (Source: DfT Transport Statistics, Table BUS00110A, December 2017).
- 3.3.3 Continued investment and improvement in bus services and infrastructure are essential to continue this trend and the East MRT scheme will further improve the situation for bus use in Reading and Wokingham Boroughs. If this investment is not made, then public transport will become less attractive, resulting in more car trips and subsequent congestion and air quality issues.

Existing Bus Services

- 3.3.4 There are seven public transport services that could benefit from the East MRT Scheme:
- TVP P&R from Winnersh Triangle
 - Thames Valley Park (TVP) Commuter bus
 - Heathrow Rail Air coach services
 - Service 13 and 14, between Woodley and Reading town centre; and
 - Reading – Twyford – Henley – High Wycombe (850)
 - Reading – Twyford – Wokingham (Nos. 127/128/129)
 - Reading – Wokingham – Bracknell (4/X4)
- 3.3.5 The frequency of these services shown in **Table 3.1**.

Table 3.1: Existing Public Transport Services Travelling Along A4 London Road

Bus Route and Service	Operator	Hours of Operation*			Two Way Number of Buses by Time Period Weekday		
		Weekday	Saturday	Sunday	AM Peak (07:00-10:00)	Inter Peak (10:00-16:00)	PM Peak (16:00-19:00)
Winnersh Park and Ride – Central Reading	Reading Buses	06:45 to 19:12	08:02 to 18:50	-	23	49	20
Reading Station - Thames Valley Park (TVP)	Stewarts	06:45 to 19:22	-	-	50	40	41
Reading Station - Heathrow Airport (RailAir)	First	04:00 to 00:05	04:00 to 00:05	04:00 to 00:05	17	37	17
Reading - Woodley (12, 13 & 14)	Reading Buses	05:00 to 00:19	05:00 to 03:19	07:30 to 23:19	14	24	13
Reading – Twyford – Henley – High Wycombe (850)	Arriva	05:25 to 23:43	06:40 to 23:43	07:45 to 23:33	15	19	7
Reading – Twyford – Wokingham (127/128/129)	Courtney Buses	06:38 to 18:35	07:13 to 17:35	-	9	10	8
Reading – Wokingham – Bracknell (4/x4)	Reading Buses	05:15 to 00:33	06:30 to 00:33	07:30 to 20:41	21	47	20

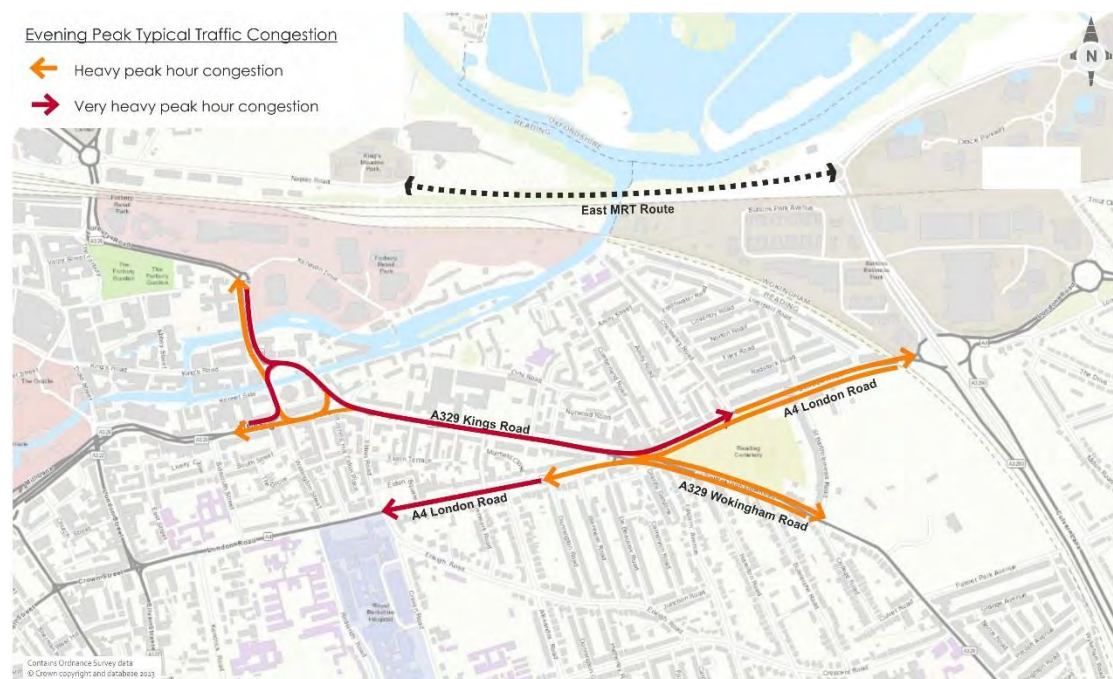
*Taken from timetables September 2018

- 3.3.6 Commuter shuttle buses operate from Reading town centre and railway station to Thames Valley Park between 06:45 and 19:30. These bus services are primarily used towards TVP in the AM peak period and towards Reading Station in the PM peak period. Commuter shuttle buses also run between Thames Valley Park and Winnersh Triangle during peak periods only.
- 3.3.7 Inbound buses use the A4 London Road as far as Cemetery Junction, where there is a contra-flow bus lane on the A329 Kings Road to the town centre. Outbound buses use Kings Road, where there is a bus lane to A4 London Road. There is limited scope to provide further bus priority on the section of A4 London Road between Cemetery Junction and the A3290 junction due to lack of space available.
- 3.3.8 The London Road suffers from peak period traffic congestion which leads to unreliable public transport journey times. Public transport journey times between the A3290 / A4 roundabout and Reading Station can take between 12 and 18 minutes during peak traffic periods.

3.4 High way

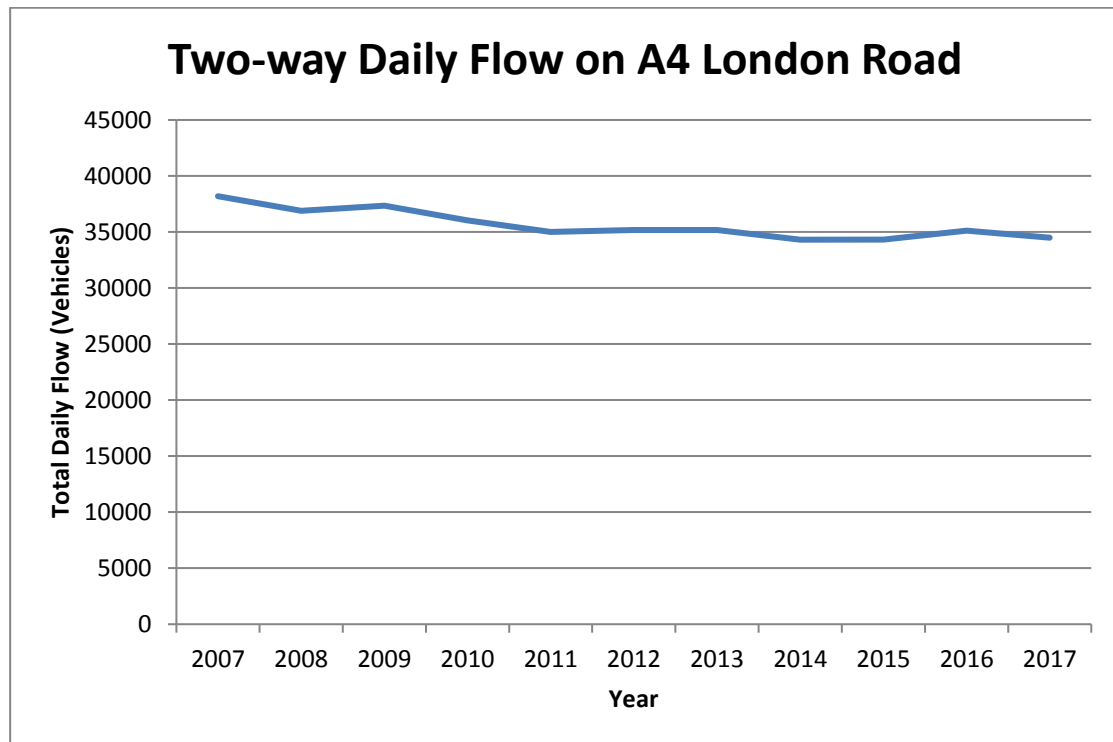
- 3.4.1 The A4 London Road is the main strategic route for vehicles travelling to and from Reading town centre to the east and the provides a link to the M4 junction 10. It is heavily constrained comprising two narrow lanes for traffic travelling towards central Reading and a single narrow lane exiting towards the A3290. The A4/A329 Cemetery Junction is a pinch point along the route.
- 3.4.2 **Figure 3.15** illustrates existing traffic conditions which have been informed by on site observations, online traffic data for typical weekday peak periods and traffic surveys.

Figure 3.15: Existing Highway Network



- 3.4.3 Peak period journey times between the A2390 and Reading Station range from 7 to 24 minutes east bound and 9 to 24 minutes westbound. This shows there is currently significant variations in journey time due to congestion which will severely limit the potential for future growth on the corridor and the attractiveness of using public transport as opposed to the private car.
- 3.4.4 RBC has installed a permanent automatic traffic counter on London Road to the west of the A4/A3290 junction. This shows that two-way daily traffic flows on the A4 London Road are in the region of 35,000 vehicles. **Figure 3.16** shows the average daily flow over the last eight years. The daily traffic flows show that traffic flows at this site appear to have fallen over the period, but stabilised between 2014 and 2017. This may be due to either inaccuracies of the automatic counter with the heavy congestion, or as a result of increasing traffic conflicts causing a reduction in capacity, rather than demand reducing.

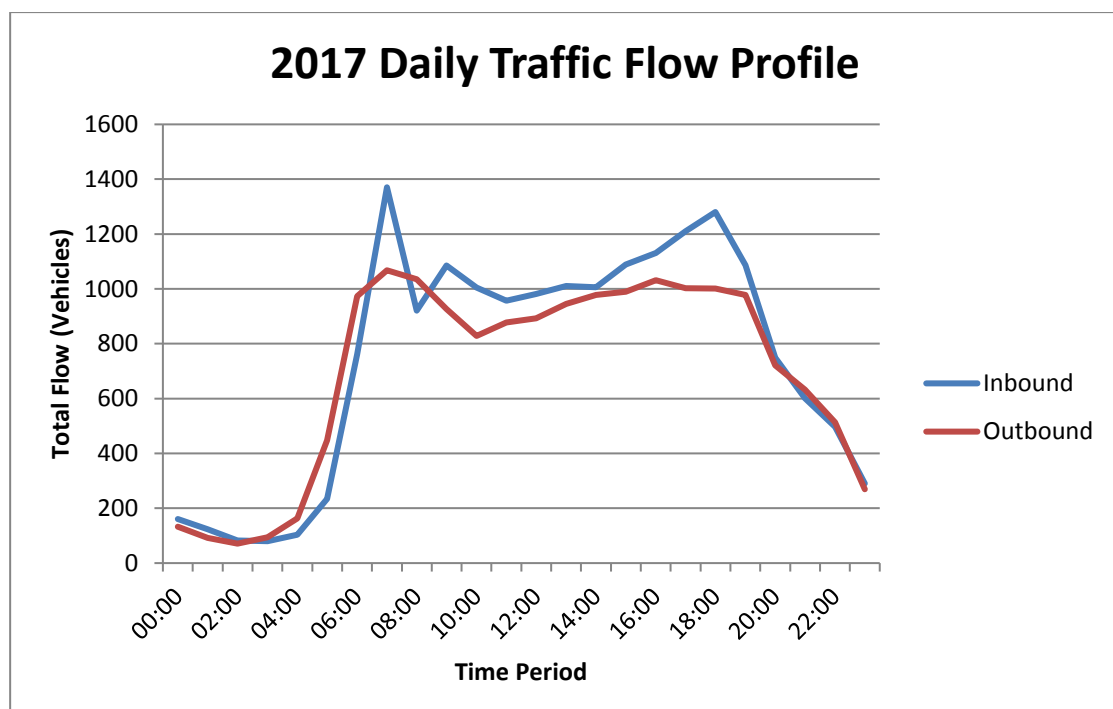
Figure 3.16: Two Way Flow on A4 London Road between Cemetery Junction and the A3290



(NB: No data available for 2013 – 2012 data used)

- 3.4.5 **Figure 3.17** shows the profile of the daily traffic flow in 2017. This shows that peak spreading has occurred with traffic only reducing between 10:00–12:00, then gradually increasing towards an extended evening peak period.

Figure 3.17: Daily Traffic Profile on A4 London Road



- 3.4.6 These daily profiles, alongside known congestion and observed queues, indicate that the corridor is operating at, or over capacity during the majority of the day. Traffic queues can reach 300–550 vehicles exiting Reading in the peak periods and between 60–200 vehicles entering Reading in the peak periods.
- 3.4.7 A queue survey of westbound traffic along Napier Road from Tesco to Reading Bridge Roundabout was undertaken on Thursday 21st, Saturday 23rd and Sunday 24th of September 2017. The purpose of the survey is to gain an understanding of the queueing on Napier Road to determine any potential delays to buses using this route in the future to travel from the East MRT to Reading Station.

3.5 Committed Development

- 3.5.1 The TVP P&R development was granted full planning permission (application ref: 161596) by WBC in November 2016 for:
- “Development of a Park & Ride facility providing approximately 277 vehicular spaces, motorcycle parking and associated vehicular access and landscaping.”*
- 3.5.2 A Section 73 Application (application ref: 182496) has since been submitted for the TVP P&R on the 7th September 2018 to vary aspects of the planning permission.
- 3.5.3 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.
- 3.5.4 It is understood that site clearance is complete.
- 3.5.5 The TVP P&R development and the proposed East MRT scheme are being progressed separately and have been designed to be capable of operating independently. However, it is anticipated that the proposed East MRT scheme and TVP P&R uses would complement each other once both developments become operational.
- 3.5.6 The planned TVP P&R will be served by the TVP commuter bus service only. The proposed hours of operation are expected to be between 7am and 7pm Monday to Friday only, no services will operate at the TVP P&R at the weekend. The TVP P&R will be served by ten buses per hour during peak periods and four buses per hour during off peak periods.

3.6 Business Survey

- 3.6.1 A questionnaire survey was undertaken in May 2018 across 58 employers in Reading. The purpose of the survey was to understand employer's views on traffic congestion and whether they believe it affects their businesses growth and productivity. The results of the survey showed that of these businesses:
- 93% believe their growth and productivity are affected by congestion and journey time unreliability;
 - 85% think better public transport provision and reliability would improve their businesses growth and productivity; and
 - 55% think enhanced walk and cycle links would their businesses growth and productivity.

4 Development Proposal

4.1 Proposed Development

4.1.1 The East MRT Scheme is proposed to link into the A3290 at TVP, adjacent to the committed TVP P&R scheme, to Napier Road, Reading town centre and railway station. The scheme is shown on Drawing **28791/2009/CIV/005D**. The proposed development includes:

- 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 TVP P&R; and
- associated infrastructure and landscaping.

4.1.2 It is RBC's aspiration to limit the use of the East MRT Scheme for cleaner, low emission public service vehicles in the future. Therefore, encouraging the use of cleaner bus fleets to improve air quality.

East MRT Scheme

4.1.3 The East MRT Scheme has been designed as an 11.5m wide corridor comprising a 6.5m two-way carriageway, 3m two-way cycle lane and 2m footway where possible.

4.1.4 There is a section on viaduct between the Horseshoe Bridge and the TVP P&R. The viaduct narrows by 1m where it travels closest to the River Thames to locate the viaduct away from the river edge and towpath, creating a more open aspect and increasing direct sunlight on the towpath. The width of the scheme through this section is 10.5m and comprises a 6.5m carriageway, 2.5m two-way cycleway, 1.2m footway and 0.3m edge treatment to incorporate planting on the deck edge which provides greening of the structure.

4.1.5 The link also narrows at the proposed bridge over the River Kennet at the Thames/Kennet confluence. The bridge has been designed at 8.5m wide comprising a 3.5m one way carriageway, 3m two-way cycle lane, 2.0m footway. Shuttle working will operate with a signal/indicator system to allow bus progress between the stop lines 190m apart.

4.1.6 Each stop line will be controlled by a primary and secondary signal/indicator. To reduce the possibility of the signal/indicators failing over the bridge, the primary and secondary signal/indicators, both located on the nearside of the carriageway, will be powered through different electrical feeds. Therefore, if one were to fail, the other should still be operational. In the very unlikely event that both electrical feeds fail, outbound buses will divert to use the A4 Kings Road and London Road until the signal/indicators are operational.

4.1.7 It is intended that replacement signal indicators would be stored by the RBC maintenance team, so in the event of signal failure the indicators can be replaced relatively swiftly.

4.1.8 **Drawing 28791/2009/CIV/006B** illustrates the proposed route gradients. From the proposed bridge over the River Kennet the route is at a gradient of 1:21 to the west and 1:42 to the east.

4.1.9 To the east, the link connects to the proposed TVP P&R and onto the A3290/Thames Valley Park Drive roundabout. The carriageway running adjacent to the committed TVP P&R scheme

is 7.3m with a shared foot/cycleway that is generally 3m and is included within the TVP P&R planning permission.

- 4.1.10 Bus stops are located either end of the East MRT Scheme, at the TVP P&R and adjacent to Tesco.
- 4.1.11 The scheme ties into existing transport infrastructure to provide high quality, seamless connections for pedestrians, cyclists and buses using the new link.
- 4.1.12 Buses access the scheme to the east via a new arm from the A3290/Thames Valley Park Drive roundabout. Access to the west is via a new junction with Napier Road, explained in a later subsection. The entrance to the route will be defined with a section of coloured surface and 'bus only' signs to raise awareness that entry is prohibited for all vehicles except public service vehicles.
- 4.1.13 Enforcement cameras will be installed to deter private vehicles using the route. It is believed that cameras will successfully control access once the scheme is operational. There are current examples of this technology being successful in Reading such as Friar Street and Kennet Island. However, if this approach fails to appropriately control access then physical barriers will be installed such as sump breaker and/or rising bollards. A maintenance strategy would be put in place in the unlikely event that rising bollards are required (these are successfully used in other places such as Crawley for regular Fastway services).
- 4.1.14 The enforcement cameras can also be used to enforce any low emissions zone in the future.
- 4.1.15 Pedestrians and cyclists both access the eastern side of the scheme via the proposed TVP P&R foot/cycleway that connects to the footway and foot/cycleway on Thames Valley Park Drive and National Cycle Route 4.
- 4.1.16 Cyclists accessing the western end of the scheme transition to/from Napier Road on to a shared foot/cycleway to the north of the route. The shared use section continues for approximately 80m before becoming segregated foot and cycle ways. Eastbound cyclists travel along Napier Road and use the right turn ghost island at the East MRT Scheme / Napier Road junction to wait and turn into the new link. As they enter the scheme from Napier Road, a dropped kerbed facility is proposed on the left-hand side of the carriageway into the shared foot/cycleway. Westbound cyclists travel along segregated cycle way and into the shared foot/cycleway up to the junction with Napier Road. At this point cyclists will cross the eastbound carriageway to a central island where they then exit onto the westbound carriageway and access Napier Road via the priority junction. Pedestrian and cycling facilities further link to the Napier Road underpass.
- 4.1.17 Pedestrians arriving from the western end of the East MRT route will use the footway on the southern side of Napier Road. Pedestrians then have two opportunities to cross from the southern side of the scheme to the footway on the northern side that continues the full length of the new East MRT route. These crossing facilities are a refuge island crossing located at the Napier Road junction and a zebra crossing adjacent to the pedestrian access to Tesco.
- 4.1.18 Pedestrians travelling west bound and exiting the East MRT footway on the northern side can cross to the southern side to reach Napier Road footway via the zebra crossing or refuge island crossing. Pedestrians can then access the Napier Road underpass through to Forbury Retail Park and Kenavon Drive residential area, or continue along Napier Road.
- 4.1.19 CCTV will be installed along the route to provide surveillance for pedestrians and cyclists and increase the perception of safety to encourage use.

Napier Road/East MRT Scheme Junction

- 4.1.20 The East MRT Scheme proposed junction with Napier Road has been designed to maintain the priority route to Tesco. Manual for Streets (MfS) visibility requirements have been met and the scheme accommodates necessary vehicle swept paths. A right turn filter lane accommodating two buses has been provided for the right turn from Napier Road into the East MRT Scheme following consultation with Tesco. Accommodating swept paths and visibility has resulted in a relatively wide bell mouth, therefore a central splitter island has been included in the design to allow pedestrians and cyclists to more safely cross the East MRT Scheme.
- 4.1.21 Visibility splays and vehicle swept paths are shown on **Drawing 28791/5523/003B** and **Drawing 28791/5523/004A** respectively.
- 4.1.22 The junction has been designed based on the following design principles:
- The eastbound carriageway is located to allow two buses to wait in the ghost island right turn lane on Napier Road. This was requested by Tesco to minimise the risk of right turning buses causing any delay to traffic accessing Tesco.
 - The westbound carriageway alignment provides a smooth transition for MRT/buses from the East MRT scheme to Napier Road. A priority junction without splitter island would result in a sharper turn for MRT/buses accessing Napier Road.
 - The design deters private vehicles from accessing the East MRT scheme instead of turning left to enter Tesco. It is considered that a more traditional two-way junction without separation may increase the risk of private vehicles wrongly accessing the East MRT scheme.
 - The splitter island provides a waiting space for cyclists travelling westbound. This leads to cyclists only having to cross one direction of traffic at a time to reach the give way line at the western end of the east MRT scheme and travel onto Napier Road. This provides a safer crossing option than having to navigate two directions of traffic simultaneously.
 - Provision of good quality landscaping areas.
- 4.1.23 Based on the above design principles, the proposed design is considered appropriate and not over engineered.

Pedestrian Crossing Option

- 4.1.24 A tiger crossing option has been reviewed and compared against the proposed scheme, illustrated on **Drawing 28791/5523/005A**.
- 4.1.25 Whilst both options provide the required movements for pedestrians and cyclists, the proposed scheme is considered the preferred option due to fewer potential conflict areas for pedestrians and cyclists.
- 4.1.26 The proposed scheme results in one potential conflict area whereas the tiger crossing option results in three areas, all of which are closer to the carriageway than the proposed option.

TVP P&R Hours of Operation

- 4.1.27 The East MRT Scheme provides the opportunity for the TVP P&R to operate at weekends and for extended hours during the week due to additional bus services serving the TVP P&R.

Impact to Tesco Car Park

- 4.1.28 **Drawing 28791/5523/007B** illustrates the existing and proposed car park layouts, with appropriate aisle width for manoeuvring in and out of the spaces. The proposed layout results in the loss of 30 spaces to the Tesco car park. This reduction in spaces is only approximately 4% of the overall provision of approximately 800 parking spaces. This slight reduction is considered insignificant and should not warrant a full parking accumulation survey of the car park. Tesco has confirmed that the 800 spaces are not fully utilised.

4.2 Off Site Improvements

Reading Bridge Roundabout / Napier Road Bus Priority

- 4.2.1 Bus priority and a signalised pedestrian crossing are proposed on the Napier Road approach to Reading Bridge roundabout as shown in **Appendix B**.
- 4.2.2 A planning application was submitted on 4th July 2017 for the Former Cooper Reading BMW site which was been permitted by RBC on 23rd November 2017. The application includes details on the bus lane and pedestrian crossing on the Napier Road approach to Reading Bridge Roundabout, adjacent to the site. This scheme was agreed between the developer, PBA and RBC, to inform the agreement to transfer the land for highway adoption to enable RBC to deliver the scheme.
- 4.2.3 The bus lane extends for approximately 100m from the roundabout give way lane and provides bus priority from Napier Road towards the Reading Station Northern Interchange. There is currently bus priority on both the access and egress to the Northern Interchange to/from Reading Bridge Roundabout.
- 4.2.4 There is a refuge island pedestrian crossing on Napier Road at the approach to the roundabout which utilises the roundabout splitter island currently separating two westbound traffic lanes and one eastbound lane. The introduction of the bus lane on the approach leads to three westbound traffic lanes, therefore a signalised pedestrian crossing is proposed to allow pedestrians to cross Napier Road more safely.
- 4.2.5 Cyclists travelling on carriageway along Napier Road towards Reading Bridge roundabout can leave the carriageway onto a cycle lane at the approach to the roundabout. The cycle lane continues under Vastern Road rail bridge towards the town centre and across Vastern Road via a signalised crossing, linking to cycle lanes and shared foot/cycleways to the Reading Station northern interchange. The link from Napier Road onto the cycle lane has been maintained within the proposed design.

5 Sustainable Transport Benefits

5.1 Walking and Cycling

Accessibility and Connections

- 5.1.1 The scheme will provide a fast track and dedicated cycle and pedestrian route directly into the centre of Reading from the A4 to the east of Reading. It will also connect Thames Valley Park with Reading town centre and railway station including the Ready Bike Cycle Hire scheme located either end of the route.
- 5.1.2 The scheme has the potential capacity to cater for 120 to 450 pedestrians per hour and 60 to 300 cyclists per hour, (based on guidance for partially separated routes contained in the Transport for London Cycling Design Standards)
- 5.1.3 The scheme connects into existing walking and cycling routes and local areas providing a high-quality alternative to current routes. These connections and routes are illustrated in **Figures 5.1 to 5.4**, showing a before and after the delivery of the East MRT Scheme.

Figure 5.1: Walking Network BEFORE East MRT Scheme

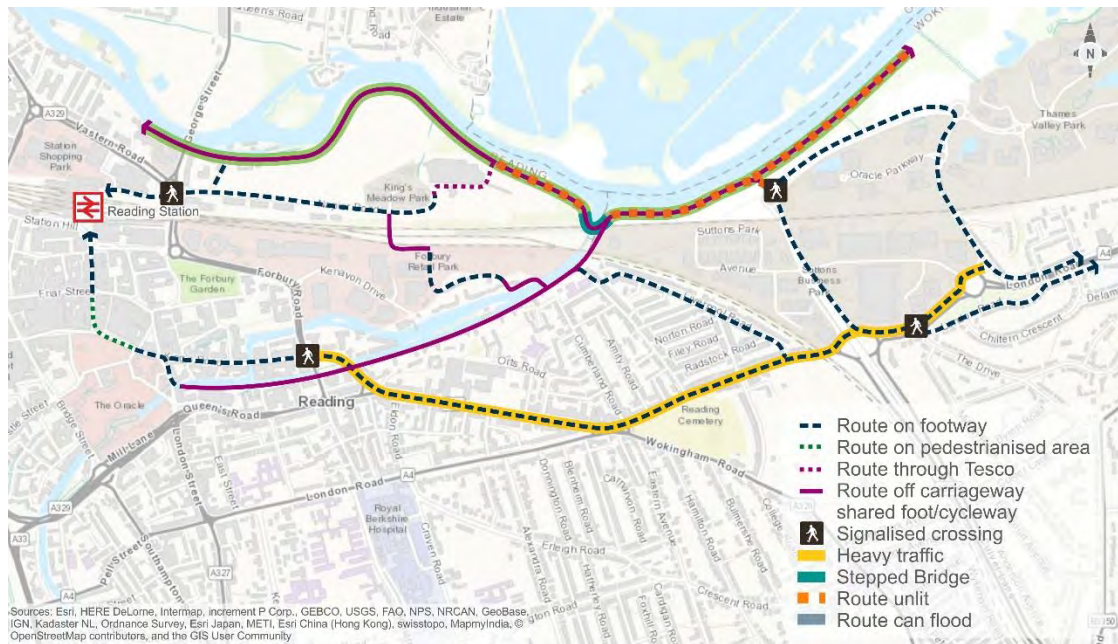


Figure 5.2: Walking Network AFTER East MRT Scheme

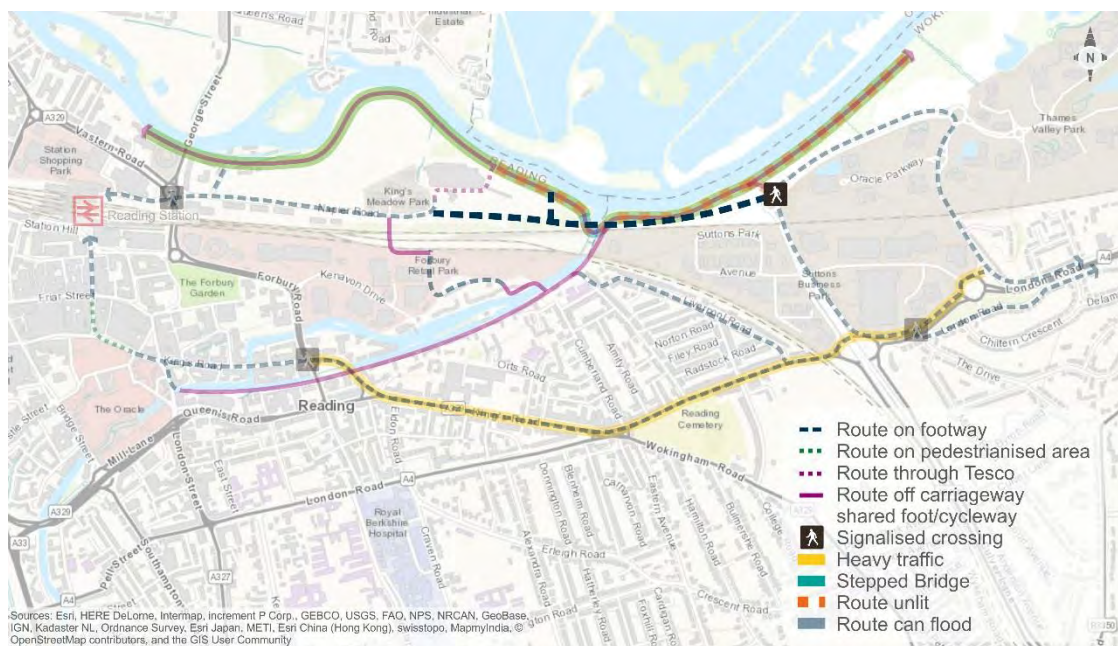


Figure 5.3: Cycling Network BEFORE East MRT Scheme

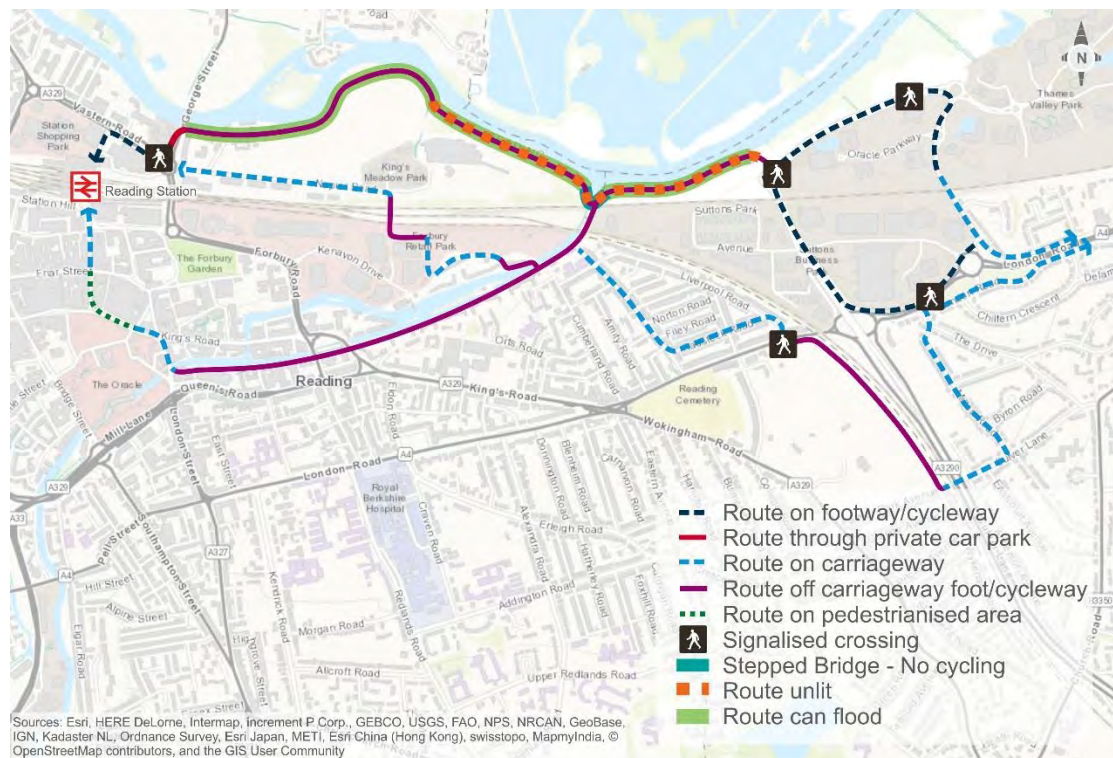
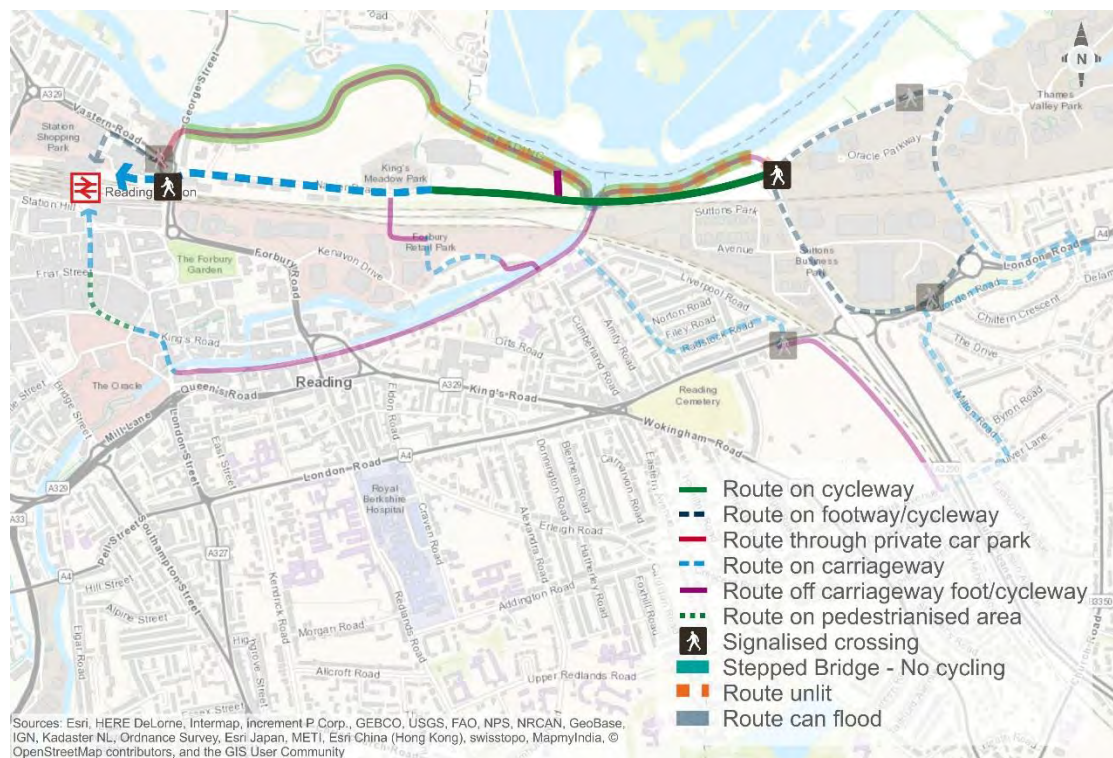


Figure 5.4: Cycling Network AFTER East MRT Scheme



5.1.4 The East MRT scheme provides an alternative crossing of the River Kennet for towpath users, avoiding the stepped Horseshoe bridge (see **Figure 3.5**).

- 5.1.5 The East MRT Scheme provides a direct route into Reading town centre and station, which is lit and avoids steps, areas of flood risk and benefits from natural surveillance of the regular bus services, but is adjacent to a relatively low trafficked carriageway.
- 5.1.6 **Figure 5.5** shows walk and cycle access to the East MRT Scheme. The transition between the existing and proposed routes are high quality and direct, as set out in **Section 4**. The connections at either end of the scheme provide a seamless link with existing walk and cycle infrastructure.

Figure 5.5: Walking and Cycling Access to East MRT Scheme

Route Comparison

- 5.1.7 The proposed route has been assessed against the existing pedestrian and cycle routes between the A4 London Road / A3290 roundabout to Reading town centre and station. The walking and cycle routes are illustrated in **Figure 5.6** and **5.7** respectively.

Figure 5.6: Walking Routes

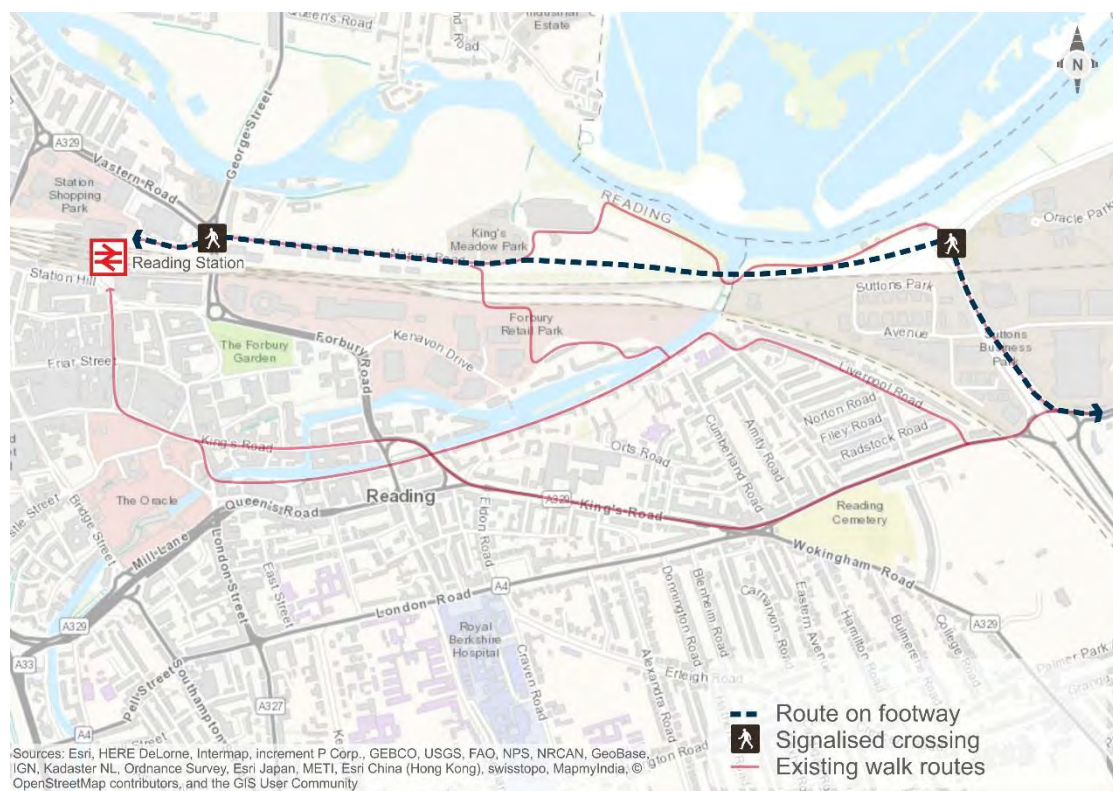


Table 5.1: Walking Route Assessment Comparison

Assessment Criteria	PR1	PR2	PR3	PR4	East MRT Scheme
Length	1.75 miles	1.85 miles	1.85 miles	1.8 miles	1.6 miles
Width	Average of approximately 3m on London Rd and Kings Rd	Average of approximately 2.5m on Liverpool Rd / 3m to 5m on Kennet path	Approximately 2.5m to 3.0m on A3290 / 1.5m to 3.0m on Thames path / 2m to 3m Napier Rd	Average of approximately 2.5m on Liverpool Rd / 3m to 5m on Kennet path / Approximately 2.0m on bridge and footpath/way through Kenavon Drive / 3.5m underpass / 2m to 3m Napier Rd	2m East MRT Scheme / 2m to 3m Napier Rd
Lighting	Full route is lit	Full route is lit	Partially unlit along Thames	Full route is lit	Full route is lit, low level lighting proposed
Surfacing	Maintained footways	Maintained footways	Maintained footways / Thames path poor in places	Maintained footways	Maintained footways
Traffic	High trafficked roads	Low trafficked roads	Low trafficked roads	Low trafficked roads	Low trafficked roads
Natural Surveillance	Traffic, Residential, Retail, Employment on Kings Rd and London Rd	Traffic, Residential on Liverpool Rd / Some Residential on Kennet path	Traffic A3290 / None Thames path / Residential, Retail, Employment on Napier Rd	Traffic, Residential on Liverpool Rd / Some Residential on Kennet path / Residential, Retail, Employment on Napier Rd	Traffic A3290 and East MRT Scheme / Residential, Retail, Employment on Napier Rd
Flood Risk	None	None	Thames path risk of flooding	None	None

- 5.1.8 The walking route assessment comparison has identified that the East MRT Scheme provides the best walking option from the A4 London Road to Reading Station and town centre based on the assessment criteria. PR1, PR2 and PR4 provide a similar level of comfort whilst PR3 provides the least attractive route.

Figure 5.7: Cycling Routes



Table 5.2: Cycling Route Assessment Comparison

Assessment Criteria	CR1	CR2	CR3	CR4	East MRT Scheme
Length	1.9 miles	2.1 miles	2.7 miles	2.5 miles	1.6 miles
Width	Approximately 2.5m to 3.0m on A3290 / 1.5m to 3.0m on Thames path	Approximately 2.5m to 3.0m on A3290 / 1.5m to 3.0m on Thames path / 3m to 5m on Kennet path	On carriageway on Milton Road, Palmer Park Avenue, Radstock Road and Cholmley Road / approx. 2.5m through Palmer Park, 3m to 5m on Kennet path	On carriageway on Milton Road, Palmer Park Avenue, Radstock Road, Cholmley Road, Kenavon Drive and Napier Road / approx. 2.5m through Palmer Park / 3m to 5m on Kennet path / 2.0m on bridge and footpath / 3.5m underpass	3m East MRT Scheme / On carriageway Napier Road
Lighting	Majority of the route is unlit	Route partially unlit along Thames path	Full route is lit	Full route is lit	Full route is lit, low level lighting proposed
Surfacing	Maintained foot/cycleway / Thames path poor in places	Maintained foot/cycleway / Thames path poor in places	Maintained foot/cycleway and carriageway	Maintained foot/cycleway and carriageway	Maintained foot/cycleway and carriageway
Traffic	No traffic adjacent on Thames path	No traffic adjacent on Thames and Kennet paths	Low trafficked on residential streets / No traffic through Palmer Park and Kennet path	Low trafficked on residential streets / No traffic through Palmer Park and Kennet path	Low trafficked bus route adjacent to dedicated cycle route
Natural Surveillance	None along Thames path	None along Thames path / Some Residential on Kennet path	Traffic and homes on residential streets / none though Palmer Park / Some Residential on Kennet path	Traffic and homes on residential streets / none though Palmer Park / Some Residential on Kennet path	Traffic A3290 and East MRT Scheme / Residential, Retail, Employment on Napier Rd
Usability	Shared foot/cycleway,	Shared foot/cycleway,	Shared foot/cycleway,	Shared foot/cycleway,	Dedicated cycle lane on

	cyclists have to navigate pedestrians, narrow in places, cyclists dismount on Horseshoe Bridge	cyclists have to navigate pedestrians	cyclists have to navigate pedestrians	cyclists have to navigate pedestrians	East MRT Scheme / on carriageway on Napier Road
Flood Risk	Thames path risk of flooding	Thames path risk of flooding	None	None	None

5.1.9 The cycle route assessment comparison has identified that the East MRT Scheme provides the best cycling option from the A4 London Road to Reading Station and town centre based on the assessment criteria. CR2, CR3 and CR4 provides the second most attractive routes whilst CR1 provides the least attractive route.

5.1.10 The results of the route assessment comparison show that the East MRT Scheme provides benefit to pedestrians and cyclists travelling from A4 London Road to the town centre and therefore promotes healthy living, well-being and active lifestyles by providing enhanced opportunities for walking and cycling. The scheme will also improve pedestrian and cyclist safety through the provision of a fast track, lit and dedicated cycle and pedestrian route directly to the centre of Reading.

5.2 Public Transport

5.2.1 The East MRT Scheme will provide significant benefits in the form of improved journey times and enhanced reliability to public transport services using the route to/from central Reading and existing residential and employment areas to the east and south-east of Reading, including TVP, Woodley, Winnersh and Wokingham.

5.2.2 Bus services between these areas currently route along London Road and Kings Road. The London Road is extremely unpredictable and heavily congested, particularly during peak periods, which leads to unreliable public transport journey times. The East MRT Scheme provides an alternative route to London Road and Kings Road with a section of dedicated bus corridor, the use of Napier Road which is a relatively low trafficked and uncongested route with proposed off-site improvements delivering bus priority at Reading Bridge roundabout. The East MRT Scheme would provide public transport services operating along the route a high level of reliability, and therefore a significant improvement on the current unpredictability of journey times caused by congestion on London Road.

5.2.3 The scheme has the potential capacity to cater for up to 2,000 two-way people trips per hour by the introduction of new bus services to accommodate future development in Reading and Wokingham Boroughs and the wider area.

5.2.4 The Reading Transport SATURN Model (RTM) has been used to understand any potential journey time savings the East MRT Scheme may provide. Journey times from the A3290/A4 roundabout to Reading Station have been extracted from the RTM for the following routes and scenarios.

- **Existing:** London Road, Kings Road, Forbury Road, South East Station Interchange – 2021 with TVP P&R AM and PM peak hours

- **Future:** A3290, East MRT Scheme, Napier Road, Northern Station Interchange, 2021 with TVP P&R AM and PM peak hours

A.1.1 The journey times are summarised in **Table 5.3** and journey time route plots from the RTM are included in **Appendix C**.

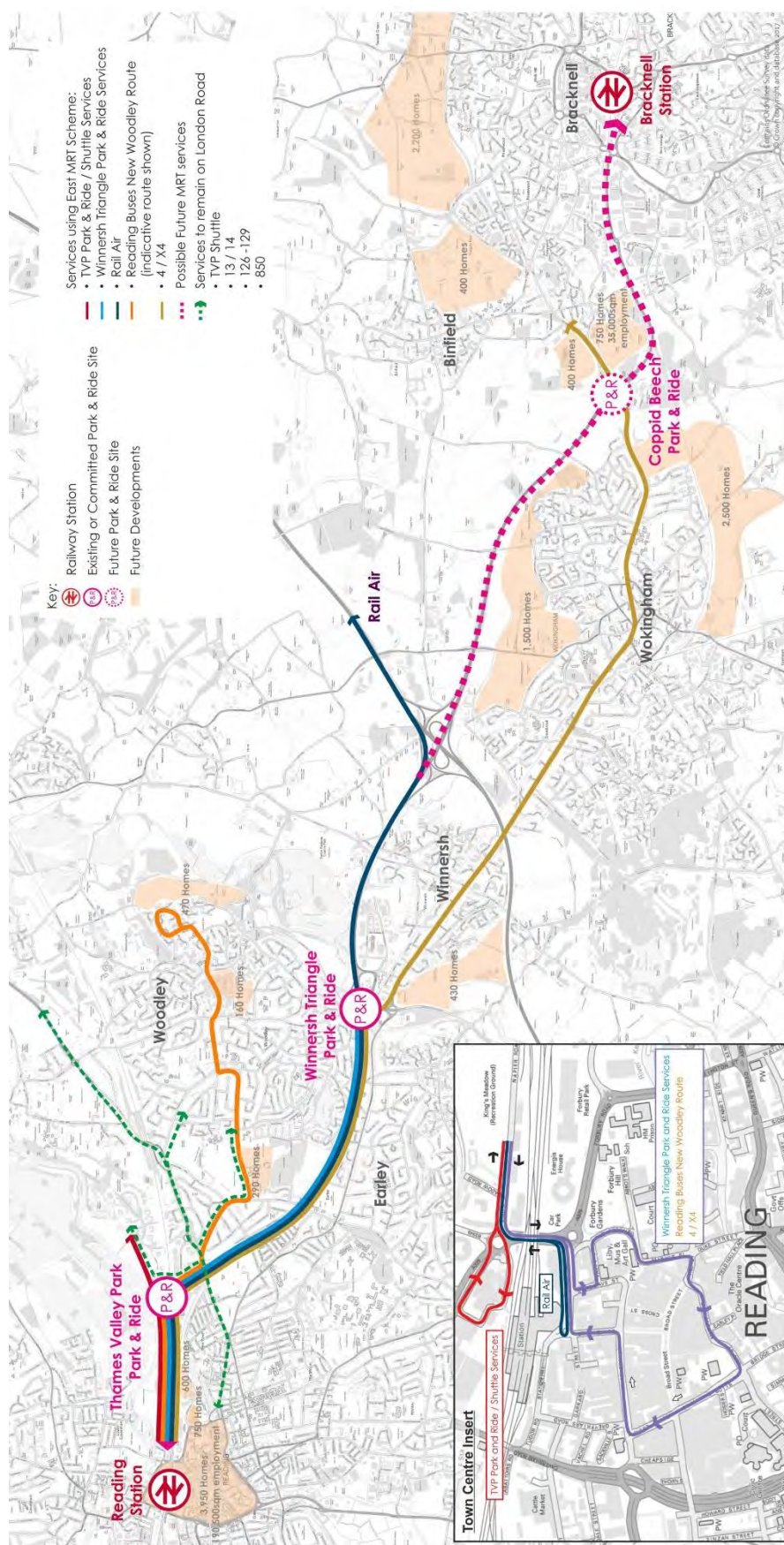
Table 5.3: Public Transport Journey Time Summary With and Without East MRT Scheme

Journey Time (Minutes)	Morning Peak Period		Evening Peak Period	
	Station Inbound	Station Outbound	Station Inbound	Station Outbound
Existing	12.5	17.8	15.0	16.7
Future	6.0	4.6	5.5	4.8
Journey Time Saving	6.5	13.2	9.5	11.9

- 5.2.5 Testing within the RTM shows that the East MRT Scheme will provide significant journey time savings.
- 5.2.6 A workshop on 4th August 2017 was facilitated with Reading Buses following submission of the planning application to review the original assumptions regarding the bus services which might use the East MRT Scheme. RailAir and TVP have also been consulted regarding the use of the route. It has been confirmed that the following assumptions regarding the bus services that might benefit from the East MRT Scheme are reasonable:
- Winnersh Park and Ride
 - TVP Shuttle
 - RailAir
 - TVP Park and Ride
 - New Service to Woodley
 - Service 4/X4 to Reading, Wokingham and Bracknell
- 5.2.7 The scheme will result in faster, more reliable public transport services with significantly increased levels of capacity. This means that extra services could be provided on the corridor.
- 5.2.8 In addition to supporting the provision of new services in the future, other services such as the 850 or 126-129 could also switch to use the East MRT Scheme but these have been assumed to remain on London Road.
- 5.2.9 Services 13 and 14 currently route along London Road and Kings Road between Reading and Woodley. A new Woodley service will be introduced which will route via the East MRT Scheme whilst maintaining the current routes of the 13 and 14 serving Kings Road. This would provide a peak period frequency of eight buses per hour between Reading and Woodley, with four routed via Kings Road and four routed via the East MRT Scheme.
- 5.2.10 It is expected that two TVP services an hour would stay on London Road.
- 5.2.11 The scheme also provides shorter journey times and increased journey reliability for potential future bus services at the TVP P&R and possible Coppid Beech P&R.

- 5.2.12 The East MRT Scheme also offers the potential to allow services to be routed via the TVP P&R to serve the stops there, to enable TVP P&R to operate longer hours during the week and on a Saturday and/or Sunday.
- 5.2.13 All services except the TVP shuttle and RailAir will continue to use the town centre loop and serve the railway station and town centre. The TVP shuttle will terminate at the Reading Station northern interchange and RailAir will continue to use the RailAir stop to the south of the railway station.
- 5.2.14 The routes are illustrated in **Figure 5.8**.

Figure 5.8: Public Transport Network



6 Highway Capacity Assessment

6.1 Off Site Capacity Assessment

6.1.1 The RTM has been used to understand the potential traffic impacts the East MRT Scheme may have on the local highway network surrounding the site. Traffic flows for the following scenarios have been used:

- Baseline – Existing highway network with traffic growth to 2021 and committed developments plus TVP P&R
- Proposed Scheme - Existing highway network with traffic growth to 2021 and committed developments plus TVP Park and Ride and East MRT Scheme

6.1.2 It should be noted that the modelling was undertaken to inform the Business Case and therefore provides a conservative assessment of the benefits for the preparation of a robust Business Case. It is expected that the East MRT will attract a greater level of patronage than tested, particularly in relation to providing access to the future Elizabeth Line services. Furthermore, the East MRT Scheme will provide a catalyst for the delivery of further Park & Ride schemes, attract bus operators to offer fast track bus services along the A329M and enable further phases of the wider planned MRT network and/or Third Thames Crossing.

6.1.3 The traffic flows along the eastern A4 corridor into and out of Reading are high throughout the day, with queues and delays building during the peak periods. This congestion is forecast to increase, as a result of committed and planned development both within Reading Borough and Wokingham Borough. It should be highlighted that the periods of congestion are likely to extend due to increased demand, but this is not assessed.

6.1.4 Drivers switching to use the bus services on the East MRT scheme will relieve the forecast congestion which will in turn allow 'rat running' vehicles to return to the main A4 corridor, benefiting some residential streets.

6.1.5 The following outputs from the tests undertaken using the Reading Transport Model (RTM) are included in **Appendix D**:

- Vehicle flow* on links in 2021 AM Peak hour 0800 to 0900;
- Vehicle flow* on links in 2021 with MRT AM Peak hour 0800 to 0900;
- Difference in vehicle flows* between 2021 AM and 2021 AM plus MRT;
- Vehicle flow* on links in 2021 PM Peak hour 1700 to 1800;
- Vehicle flow* on links in 2021 with MRT PM Peak hour 1700 to 1800; and
- Difference in vehicle flows* between 2021 PM and 2021 PM plus MRT.

*Actual flows output from the model

6.1.6 The difference flow plots for the AM peak hour show that traffic flows are forecast to reduce on the residential streets in the east side of Reading, such as Erleigh Road, Crescent Road and Culver Lane with an increase in traffic on London Road. These reductions are likely to be as a result of people switching to use the bus/MRT into Reading with the introduction of the East MRT scheme. The shift to bus/MRT will allow people currently "rat-running" along residential

streets, travelling from the east side of Reading to the town centre, to shift to back on the A4 (a main radial route into Reading).

- 6.1.7 Some reductions are shown in central Reading on Forbury Road and Kings Road in the AM peak hour. This is likely to be as a result of people switching their mode of travel into Reading from private car to bus as a result of the East MRT scheme.
- 6.1.8 The PM difference flow plots show a similar pattern to the AM peak hour with some reductions on residential streets, the A4 and the IDR due to the East MRT scheme.
- 6.1.9 Actual and demand flows on London Road have been compared in the RTM to understand how many vehicles are predicted to not be able to get to their destination within the AM and PM peak hours due to highway congestion. This comparison shows that approximately 1,000 two-way vehicles do not make their journey on highway network in both the AM and PM peak hours. This suppressed demand is vehicles only and does not account for people travelling by other modes of transport. This highlights the need to help to move people between east Reading and the town centre.

Reading Bridge Roundabout

- 6.1.10 A capacity assessment of Reading Bridge roundabout has been undertaken to understand if the proposed bus lane and pedestrian crossing will impact on the operation of the roundabout during the morning and evening peak hours.
- 6.1.11 There are two existing signalised pedestrian crossings, one on Vastern Road North West and one on Vastern Road South. These have been included in the assessment with a flow of 500 people per hour crossing. It should be noted that exact numbers are unknown however the crossings are well-used by people walking from north Reading to the station and town centre and this is considered to be a reasonable assumption.
- 6.1.12 The junction geometry in Junctions 9 of the proposed improvement does not include the width of the bus lane on Napier Road to provide a robust assessment. If this were included, Junctions 9 would show a capacity improvement as it does not allocate flows to lanes, therefore general traffic would utilise the bus lane.
- 6.1.13 Reading Bridge roundabout often suffers from peak hour congestion due to upstream junctions operating over capacity and blocking back through the roundabout. Due to this blocking back, the junction cannot be fully validated when modelling in isolation. However, the relative effects of the bus lane and pedestrian crossing improvement on traffic at the junction can still be tested.
- 6.1.14 The results of the assessment are summarised in **Table 6.1** and **6.2** with the Junctions 9 outputs and traffic flows included in **Appendix E**.

Table 6.1: Summary of Reading Bridge Roundabout Capacity Assessment – 2021 with TVP P&R Existing Junction Layout

Arm	AM Peak Hour (0800 – 0900)			PM Peak Hour (1700 to 1800)		
	RFC (%)	Delay (pcu/s)	Queue (pcu)	RFC (%)	Delay (pcu/s)	Queue (pcu)
George Street	112	200.53	60.8	62	8.93	1.8
Napier Road	20	12.19	0.3	13	6.02	0.2
Vastern Road (South)	60	7.53	1.6	89	20.40	8.2
Bagnall Way	0	2.13	0.0	19	4.14	0.3
Vastern Road (North West)	96	35.02	17.0	73	8.69	2.8

Table 6.2: Summary of Reading Bridge Roundabout Capacity Assessment – 2021 with TVP P&R & East MRT Scheme
Proposed Junction Layout

Arm	AM Peak Hour (0800 – 0900)			PM Peak Hour (1700 to 1800)		
	RFC (%)	Delay (pcu/s)	Queue (pcu)	RFC (%)	Delay (pcu/s)	Queue (pcu)
George Street	113	208.26	62.9	64	9.66	2.0
Napier Road	26	11.89	0.4	20	7.29	0.3
Vastern Road (South)	61	7.75	1.7	90	22.01	8.8
Bagnall Way	0	2.14	0.0	19	4.13	0.3
Vastern Road (North West)	96	37.23	18.2	75	9.21	3.1

- 6.1.15 The results show that the East MRT improvement scheme is predicted to have a minimal impact on the operation of the roundabout. The highest increase in delay is shown as 7.73 seconds in the AM peak hour on George Street. The largest increase in RFC is 6% on Napier Road in the AM peak hour and the largest increase in queue is 2.1 pcu in the AM peak hour on George Street. These small increases are considered insignificant, especially when taking into account the other benefits to sustainable travel predicted to be seen as a result of the East MRT Scheme.
- 6.1.16 The queue surveys undertaken along Napier Road from Tesco to Reading Bridge Roundabout survey have been analysed to understand if the bus lane proposed on the approach to the roundabout will be inaccessible to buses whilst queuing traffic clears.
- 6.1.17 The results show that the buses, on a relatively busy day, will be delayed for approximately 2 minutes on average for around 2% of a weekday (0700 to 1900), 5% of a Saturday (0700 to 1900) and 1.5% of a Sunday (0700 to 1900). Delays are minimal throughout the rest of the day.
- 6.1.18 Land is safeguarded in the Local Plan to extend the bus lane along Napier Road to the East MRT Scheme to enable MRT/buses to bypass queuing traffic in the future.

Proposed Napier Road / East MRT Scheme Junction

- 6.1.19 A capacity assessment of the proposed Napier Road/East MRT Scheme junction has been undertaken to understand any potential impacts caused by the proposed junction.
- 6.1.20 The results of the assessment are summarised in **Table 6.3** with the Junctions 9 outputs and traffic flows included in **Appendix F**.

Table 4.3: Summary of Napier Road / East MRT Scheme Capacity Assessment – 2021 with TVP P&R & East MRT Scheme
Proposed Junction Layout

Arm	AM Peak Hour (0800 – 0900)			PM Peak Hour (1700 to 1800)		
	RFC (%)	Delay (pcu/s)	Queue (pcu)	RFC (%)	Delay (pcu/s)	Queue (pcu)
EAST MRT Scheme	2	10.24	0	2	10.32	0
Napier Road Right	2	9.68	0	2	9.75	0

- 6.1.21 The results show that the proposed junction with right turn lane for two buses is not predicted to cause any significant queuing or delay to vehicles travelling to and from Tesco. The maximum RFC is only 2% with no queuing predicted.

TVP P&R / A3290 / Thames Valley Park Drive Roundabout

- 6.1.22 The operation of this junction has been assessed as part of the TVP P&R planning application. This shows that the junction is predicted to operate well within capacity with the TVP P&R open.
- 6.1.23 The traffic increase into the proposed TVP P&R access arm of the roundabout generated by the East MRT Scheme is approximately 15 buses per hour eastbound and 15 buses per hour westbound. This increase in traffic is considered insignificant and would have a negligible impact on the operation of the junction.

7 Construction Management Plan

7.1 Construction Phasing & Access

- 7.1.1 The purpose of this section is to provide an overview of the principles for construction activity associated with delivering the scheme. At this stage, it should be recognised that although there has been some initial early contractor engagement to provide reassurance that the scheme is deliverable in construction terms, the construction methods cannot be fixed until the contractor is selected.
- 7.1.2 The scheme will be developed within a 'Considerate Contractor Framework' which will include the production of an overarching construction method statement as well as detailed method statements for each primary activity. The statements will illustrate a construction routing strategy, areas of protection and management practices such as noise, dust and times of operation.
- 7.1.3 It is anticipated that construction of the East MRT Scheme will commence in Summer 2019 (although seasonal site clearance may need to be done earlier in 2019) with completion expected in Spring 2022.

7.2 Contractor's Amenities & Provisions

- 7.2.1 The Contractor will be requested to provide the following amenities and provisions during the construction of all phases.

Times & Duration

- 7.2.2 Construction vehicle movements could take place during a typical working hours between 0800 and 1800hrs Monday to Friday, and 0800 and 1300hrs on Saturdays. Construction vehicles would not access the Site outside these hours, unless agreed in advance with the Council. The site will be reached via the A3290 at the Thames Valley Park Drive Roundabout and via Napier Road. The majority of the works will likely be accessed from the A3290, but access will be needed via Napier Road. It would be the contractor's aim to manage the majority of lorry access between 0900 and 1600 to avoid peak traffic flows in the town centre to reach Napier Road.
- 7.2.3 There would be no construction vehicle movements at the site on Sundays or Bank Holidays, unless agreed with the Council.
- 7.2.4 Consideration regarding safety of the operational railway will be required, there may be a need for the main bridge beams over the River Kennet to be lifted during a night time closure of the railway.

Hoardings

- 7.2.5 Construction hoardings and security fencing will be placed around the construction site, but the exact location and layout is to be determined by the appointed Contractor. Hoarding / fencing will be a requirement under the construction contract to provide a secure working environment for office staff/visitors and members of the public.

Site Cranes and Plant

- 7.2.6 It is anticipated that site cranes and plant will be located within the site area. These could be provided by either using a mobile crane or a crawler crane. Other plant is expected to include excavators, telehandlers and dumpers.

Wheel Wash

- 7.2.7 The Contractor will be requested to provide suitable vehicle washing facilities to prevent material being deposited onto the public highways. Road sweeping would also take place to maintain clean road surfaces in the area.

Routing

- 7.2.8 The primary routes for construction vehicles will be from the M4. Construction vehicles accessing the eastern section of the site will be routed from the M4 to the south of Reading via the A3290 (M). Vehicles accessing the western section of the site will be routed from the M4 via the A33 and Vastern Road to Napier Road.

Statutory Requirements

- 7.2.9 During construction of the project, the Contractor shall be required to comply with all Statutory Requirements regarding the control of pollution (including noise pollution).
- 7.2.10 The Contractor will be required to obtain all necessary Local Authority, Police, and all other necessary approvals in respect of access to the sites and any necessary diversions and traffic control systems. It will be the responsibility of the Contractor to obtain any necessary consent for means of access, loading/unloading and diversions.

Highways, Footpaths & Crossovers

- 7.2.11 During the construction of each phase the Contractor will be required to make allowance for any restrictions that may be placed on his work in respect of maintaining traffic and pedestrian access.
- 7.2.12 The Contractor will not obstruct public thoroughfares without the approval of the appropriate Authority and will be responsible for the payment of any charges in connection with such closures.

Site Deliveries

- 7.2.13 The Contractor will be required to operate suitable booking systems and site management controls for controlling the delivery of construction materials.

Site Storage

- 7.2.14 The exact location of site storage will be the responsibility of the Contractor but this will need to be on site where possible.
- 7.2.15 The Contractor will be required to co-operate with the Local Authority and comply with any requirements relating to the delivery of materials to the sites.

Existing Services

- 7.2.16 The Contractor will be required to identify existing services and shall protect the service pipes, cables, ducts and the like and maintain these during the execution of the project.

Adjacent Occupiers

- 7.2.17 The Contractor will be required to take precautions to protect occupiers of adjacent land or buildings and the general public from any danger, discomfort, disturbance, trespass or

nuisance arising by reason of the project. Such precautions shall include the provision of temporary screens, notices and the like, as necessary.

- 7.2.18 Specifically, interface with the Network Rail Asset Protection team will be required. RBC will enter into a Basic Asset Protection Agreement with Network Rail's Asset Protection Team, allowing Network Rail to appoint a Project Manager and Project Engineer to comment on the development of the detailed design and fulfil the relevant assurance processes.

Site Offices, Toilets, Washing & Welfare Facilities

- 7.2.19 The Contractor will be required to provide all necessary temporary site accommodation and welfare facilities to properly undertaken the works.
- 7.2.20 The Contractor will determine the location of such accommodation and will clear away all accommodation on completion of the works before making good any damage. All huts shall be of a good standard. Caravans, mobile homes and the like will not be allowed on site

8 Summary

8.1 Current Situation for Travel into Reading from the East

- 8.1.1 The A4 London Road is the main corridor into Reading from the east, from the A4 and A3290. It is heavily constrained comprising two narrow lanes for traffic travelling towards central Reading and a single narrow lane exiting towards the A3290, and onto junction 10 of M4. The daily traffic flows have not fluctuated markedly over the last eight years and the daily profile of the traffic flows show peak spreading with traffic only reducing between 10:00–12:00 then gradually increasing towards an extended evening peak period. This, alongside the observed queues indicate that the corridor is operating at, or over capacity during the majority of the day. The queues can reach 300 – 550 vehicles exiting Reading in the peak periods and between 60 – 200 vehicles entering Reading in the peak periods. Furthermore, the commuter shuttle bus services are full in the peak periods.
- 8.1.2 Peak period journey times between the A3290 and Reading Station range from 7 to 24 minutes eastbound and 9 to 24 minutes westbound. This shows there is currently significant variations in journey time due to congestion which will severely limit the potential for future growth on the corridor and the attractiveness of using public transport as opposed to the private car.
- 8.1.3 Public transport services are well used in east Reading and the commuter shuttle bus services are full in the peak periods. There is existing bus priority between Watlington Street gyratory and Cemetery Junction, however services suffer delays in the town centre and between Cemetery Junction and the A3290.
- 8.1.4 The A4 London Road does not provide adequate pedestrian and cycle facilities between and on the boundary of Reading and Wokingham Boroughs as the carriageway and footway are too narrow. The towpath provides a pedestrian and cycle route, however natural surveillance is poor, surfacing is poor in some locations, it is narrow in places, it includes a stepped bridge where cyclists have to dismount and is shared by pedestrians. The route also follows the River Thames to northern destinations in the town centre, rather than into the centre.
- 8.1.5 In total, the corridor supports some 75,000 people movements per day to key areas of economic activity such as Thames Valley Park immediately to the east (8000 jobs) and central Reading (over 50,000 jobs). As well as supporting current employment, a further 190,500sqm of employment is planned in the Town Centre and 35,000sqm at IQ Winnersh and 5,300 homes at Kenavon Drive, Station Hill, former Cooper BMW site and Royal Mail sites plus a further 9,400 homes in Wokingham and on the west side of Bracknell. This does not account for the emerging local plan developments which will add further development growth in the area.
- 8.1.6 Continued issues with congestion on the network will restrict economic growth and there is a risk that existing businesses would consider relocating out of the Thames Valley Berkshire (TVB) area and possibly elsewhere in Europe.

8.2 Scheme Overview

- 8.2.1 This scheme is a long-established element of RBC's strategy to deliver sustainable economic growth and housing for Reading and Wokingham Boroughs. It is included in RBC's Corporate Plan, Core Strategy and Local Transport Plan.
- 8.2.2 The scheme is also identified in WBC's Core Strategy, Managing Development Delivery, Local Plan, and Local Transport Plan; and TVB LEP's Strategic Economic Plan. The land has been safeguarded for Strategic Transport Networks and Road Infrastructure, which includes Mass Rapid Transit.

- 8.2.3 RBC's LTP sets out that *"an MRT system must be designed to meet a set of standards above and beyond a quality local bus. The long-term vision incorporates a network that expands the public transport offer rather than replacing existing networks, and it will be branded as such."*
- 8.2.4 The East 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. It would provide a new dedicated walk, cycle and public transport link from central Reading to existing residential and employment areas to the east and south-east of Reading, including Thames Valley Park, Woodley, Winnersh and Wokingham.
- 8.2.5 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.
- 8.2.6 The scheme will provide urban connectivity and access to wider strategic transport networks. It will deliver significant capacity and reliability enhancements to support future growth, through modal shift and increasing capacity in the transport network. This improved capacity will assist in unlocking housing development already committed in Reading and Wokingham boroughs, improve accessibility and reliability of the network and will be a catalyst for improving the vibrancy of the town centre and encouraging employers to locate here.

8.3 Summary of Benefits

- 8.3.1 A summary of the benefits of the scheme is listed below:

Wider Benefits

- Delivers a fundamental element of the wider sustainable transport strategy for Reading and the Thames Valley, enabling a public transport corridor on the Reading – Wokingham – Bracknell corridor and in north Reading linked to the proposed Third Thames crossing;
- Meets the policy/infrastructure requirements in Reading and Wokingham's Local Plans to enable the planned levels of economic growth and housing delivery; and
- Increases public transport accessibility and affordability, resulting in improved social equality and decreased levels of isolation for the most vulnerable in society.

Walking and Cycling

- Potential capacity to cater for 120 to 450 pedestrians per hour and 60 to 300 cyclists per hour;
- Provides a faster route option and enhanced user experience for people walking and cycling from the A4 London Road/A3290 roundabout to Reading Railway Station and town centre offering:
 - lighting and low gradient,
 - adjacent to low trafficked carriageway offering regular natural surveillance from regular bus services,
 - alternative crossing of the River Kennet Mouth for towpath users to avoid the stepped Horseshoe Bridge,

- alternative route to avoid flood risk areas;
- Promotes healthy living, well-being and active lifestyles by providing enhanced opportunities for walking and cycling;
- Increases levels in cycling of 114 new trips/day, (based on work to inform the Business Case, specifically, cycling increases based on timesaving and improved facilities utilising DfT TAG UNIT A5.1).
- Improves pedestrian and cyclist safety through the provision of a fast track and dedicated cycle and pedestrian route directly into the centre of Reading; and
- Connects the cycle hire schemes at Thames Valley Park to the central areas of Reading.

Public Transport

- Offers the potential capacity to cater for up to 2,000 two-way people trips per hour by the introduction of new bus services, and therefore the ability to accommodate future forecast travel demands;
- Increases public transport patronage by up to 15% (based on the demand modelling undertaken to inform the Business Case);
- Significantly increases capacity for accessing (and leaving) Reading town centre and Reading Railway Station;
- Significantly improves public transport connectivity between Reading and Wokingham Boroughs;
- Provides opportunity to facilitate future bus services east of Reading towards Wokingham and Bracknell and the potential TVP P&R at Coppid Beech; and
- Reduces journey times and improves reliability for public transport services using the East MRT Scheme.

Highway

- Reduces rat-running in some eastern parts of Reading and provides alternative means to travel along the congested corridor to accommodate the highway trips that are forecast not to complete their journey in the modelled peaks in the future, as a result of building delays/congestion.
- Accommodates two right turning buses at the proposed East MRT Scheme and Napier Road junction which is predicted to operate well within capacity causing minimal to no delays to traffic accessing and egressing Tesco;
- Causes minimal delays to existing traffic at the Napier Road approach to Reading Bridge roundabout due to off-site improvements; and
- Accommodates bus movements at the Thames Valley Park Drive / A3290 roundabout.

Future Opportunities

- 8.3.2 This eastern section will form part of a longer term MRT network for the Thames Valley or operate as a standalone MRT route. The link also provides future opportunity to link to a Third Thames Crossing to provide MRT to a P&R north of the River Thames.

8.3.3 Reading is planned to benefit from significant investment in the following strategic networks:

- Elizabeth Line (Crossrail) services are planned to operate from Reading Station in 2019 providing direct services into central London. This line is reported to be generating the most homes of all the new rail lines;
- The Western Rail Link to Heathrow (WRLtH) will provide direct access to Heathrow Airport from Reading and is planned to be completed in 2021;
- HS2, which should be completed in the next decade, will reduce journey times from London to Birmingham to 49 minutes, making it easier to commute from Britain's second city to the capital. London's rail commuter network will then encompass Brighton, in the south, Southend, in the east, Reading, in the west, and Birmingham, to the north; and
- M4 Junctions 3-12: Smart Motorway scheme is currently under construction and due to be fully operational by 2022.

8.3.4 The East MRT scheme will improve accessibility to these strategic transport networks, allowing residents from existing and planned development living to the east of Reading to reach the rail services and Reading town centre, or visitors arriving from the motorway to use the P&R at TVP or Winnersh into Reading town centre.

Drawings