

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

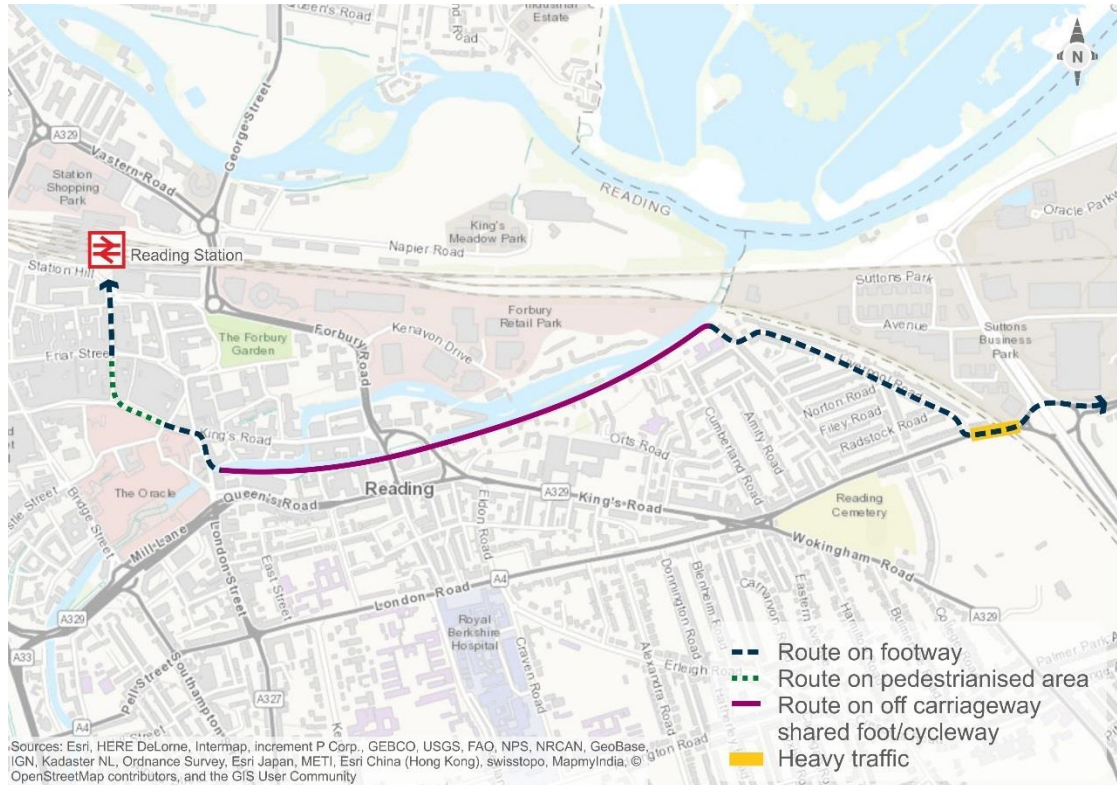


Pedestrian Route 1 (PR1)

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

low trafficked street that is primarily a bus route with wide footways either side, to Reading Station.

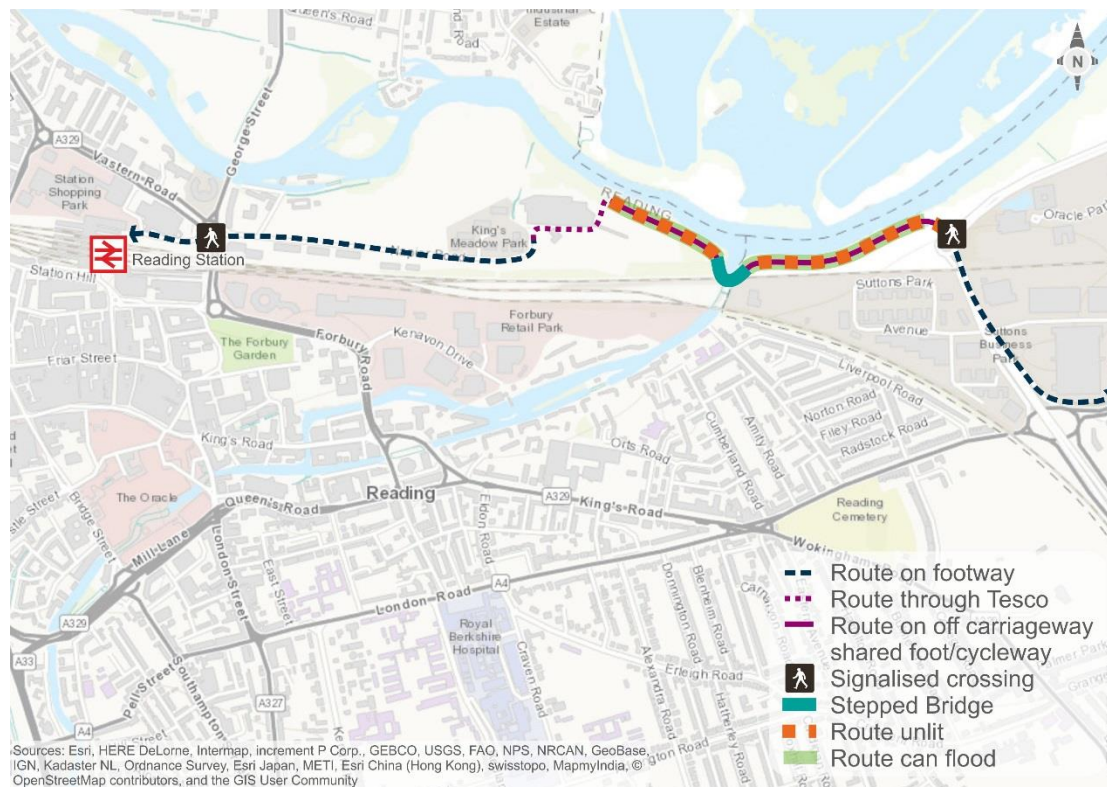
Figure 3.2: Pedestrian Route 2 – Via the River Kennet



Pedestrian Route 2 (PR2)

- 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.

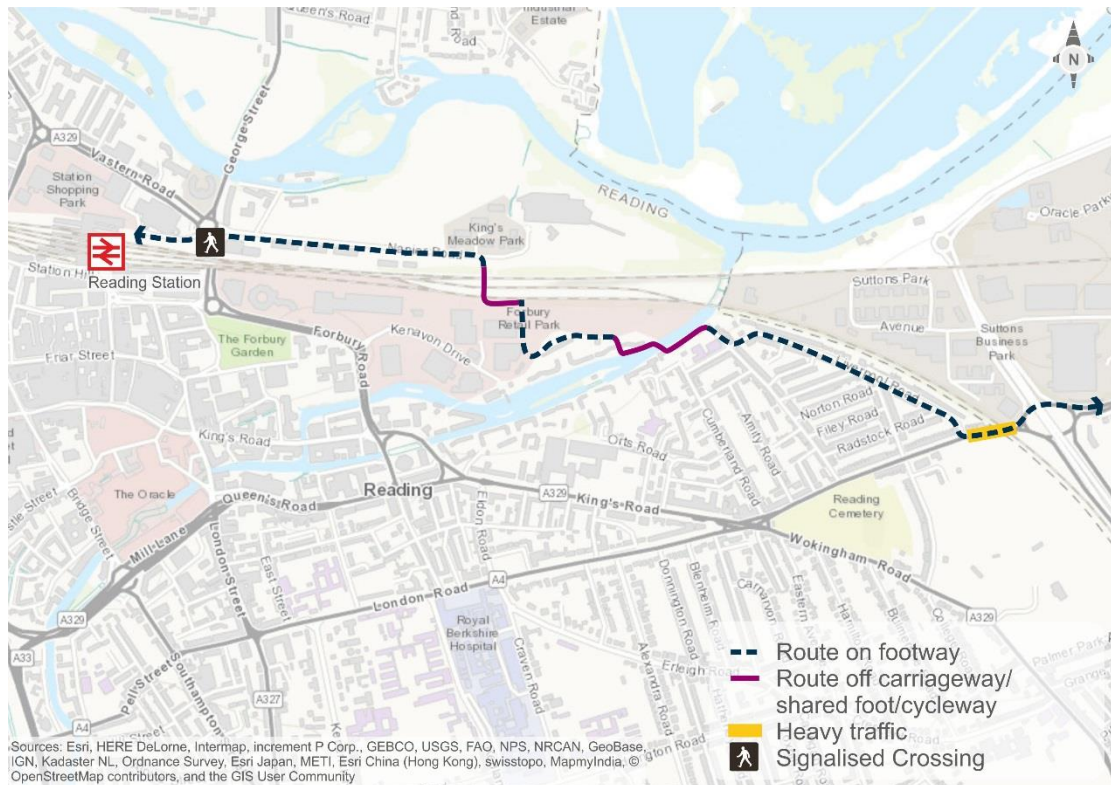
Figure 3.3: Pedestrian Route 3 – Via the River Thames



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.

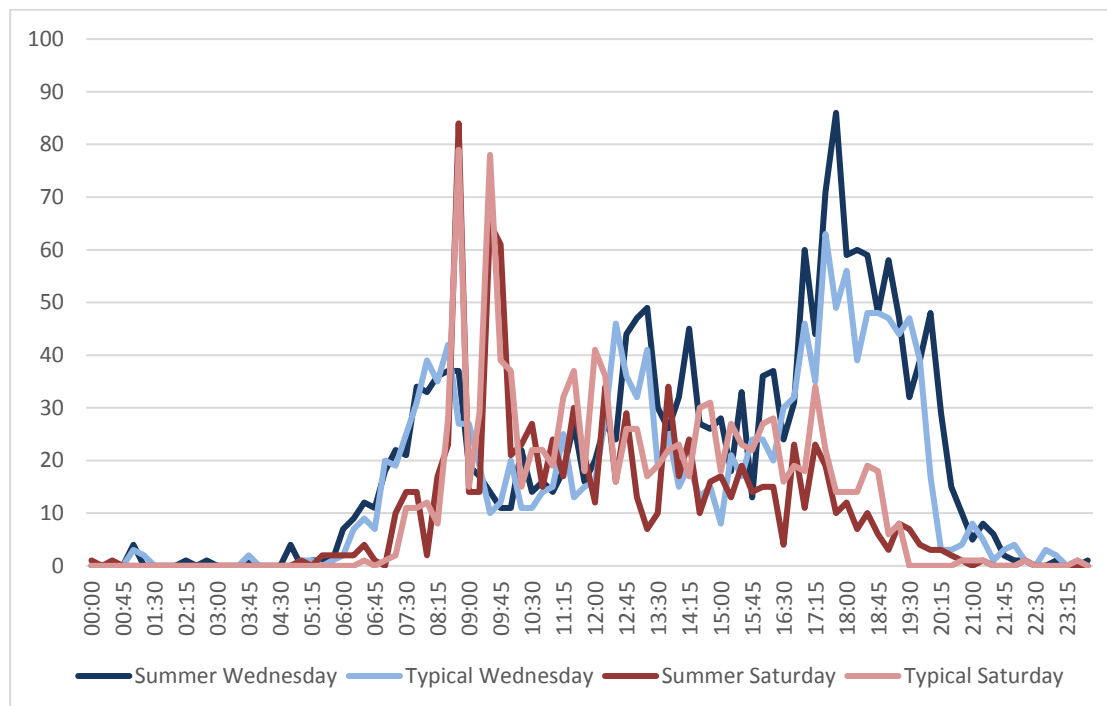
Figure 3.5: Stepped Horseshoe Bridge



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

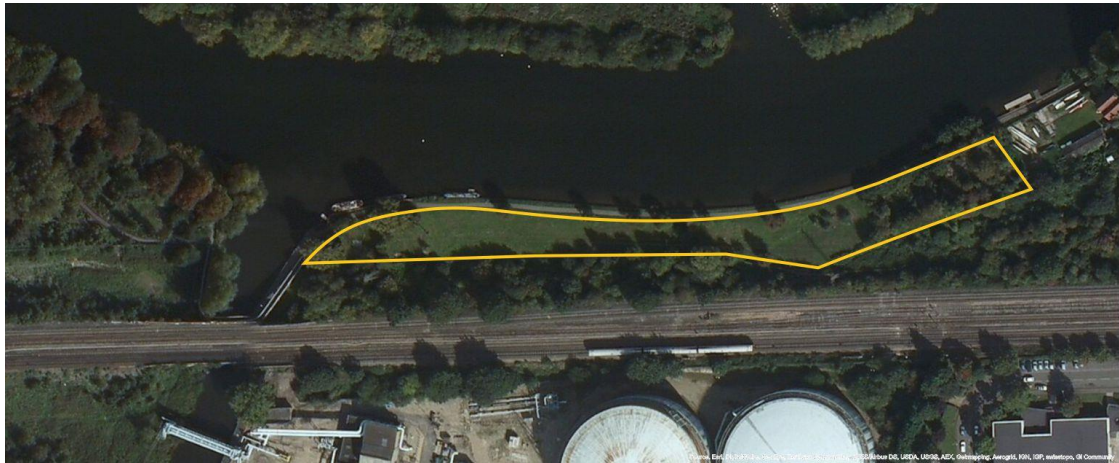


Figure 3.8: Survey Result Screenshots



- 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



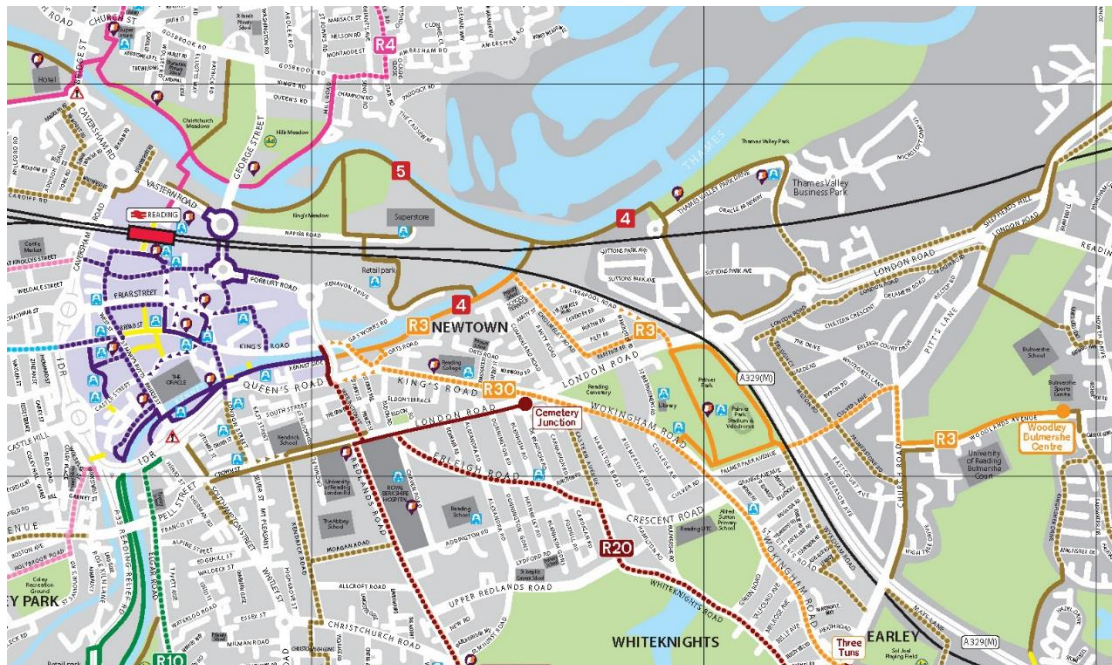
3.2 Cycling

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

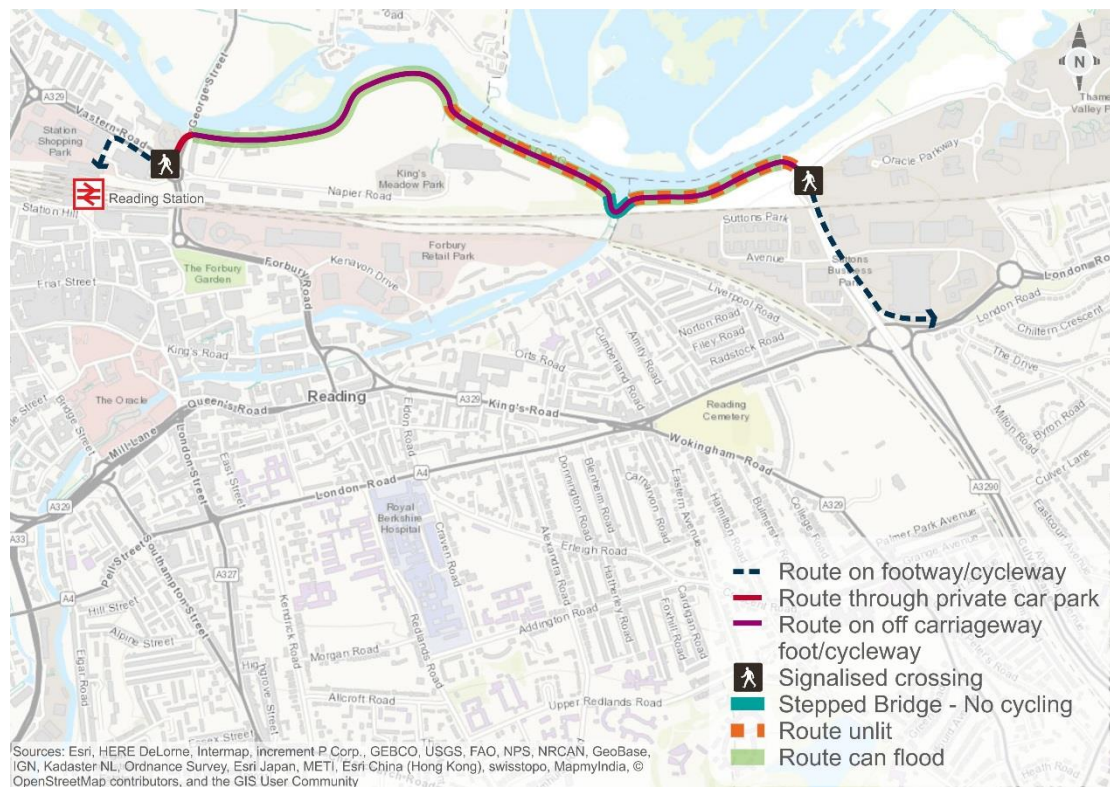
3.2.2 The routes are illustrated in **Figure 3.10, 3.11, 3.12, 3.13** and **3.14**.

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.

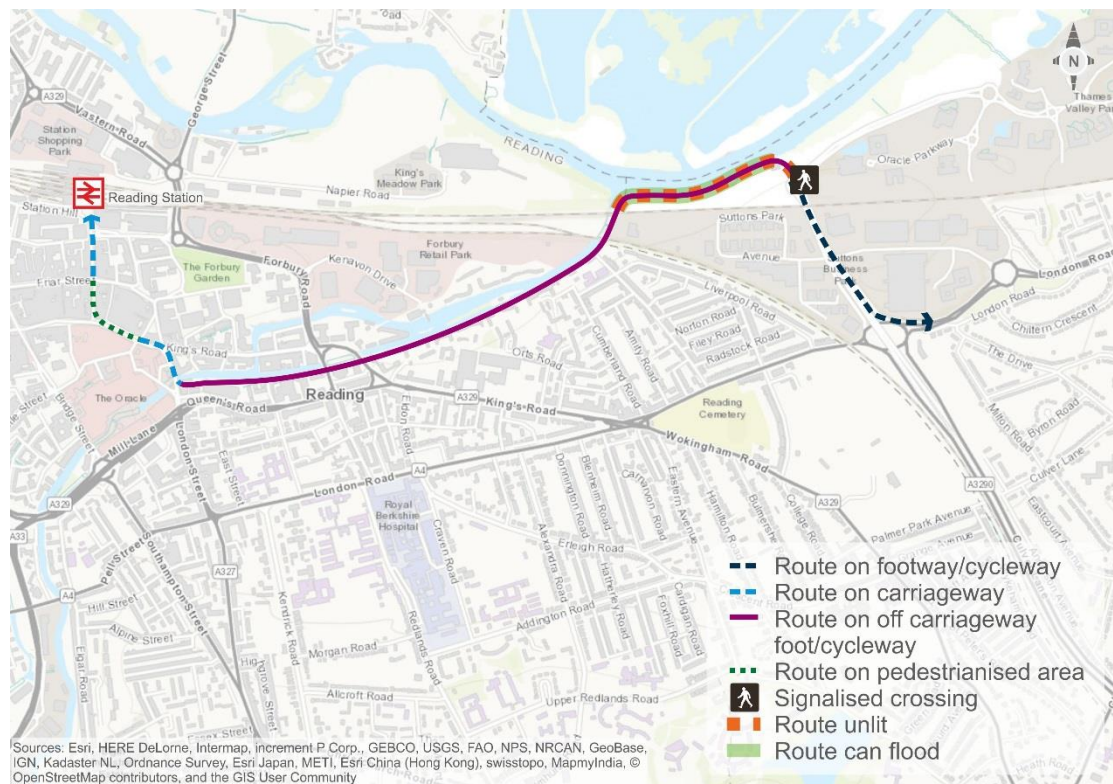
Figure 3.11: Cycle Route 1 – Via the River Thames



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.

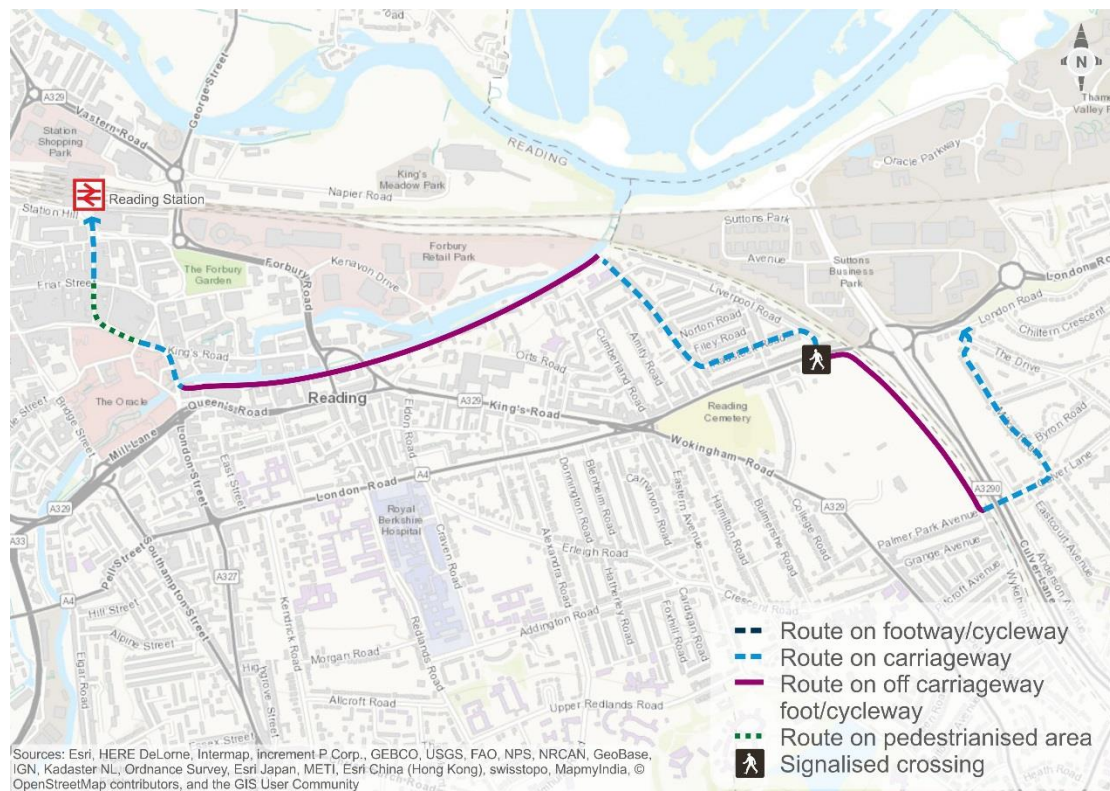
Figure 3.12: Cycle Route 2 – Via the River Thames and River Kennet



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.

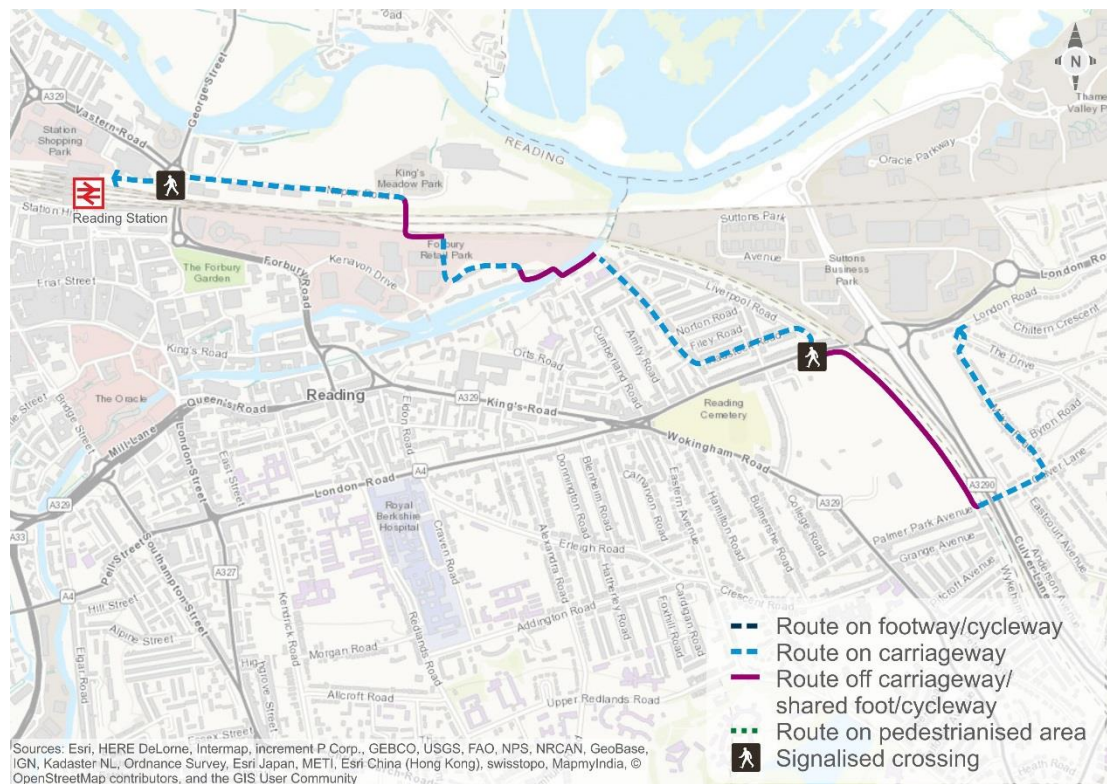
Figure 3.13: Cycle Route 3 – Via the River Kennet



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 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

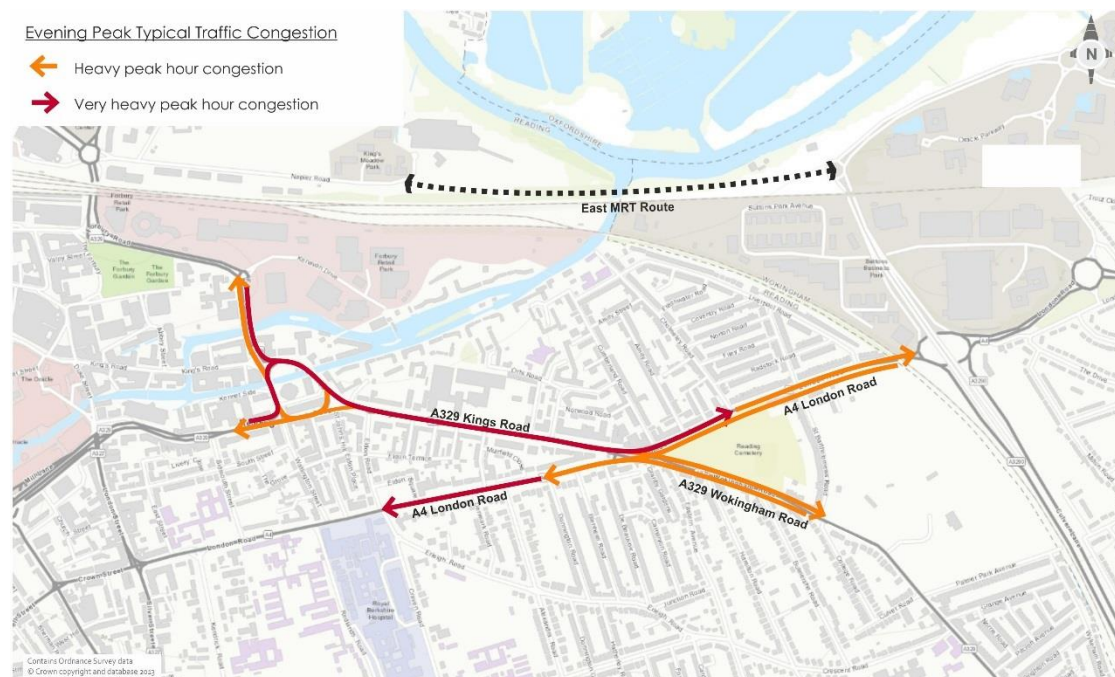
*Taken from timetables September 2018

- 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 Highway

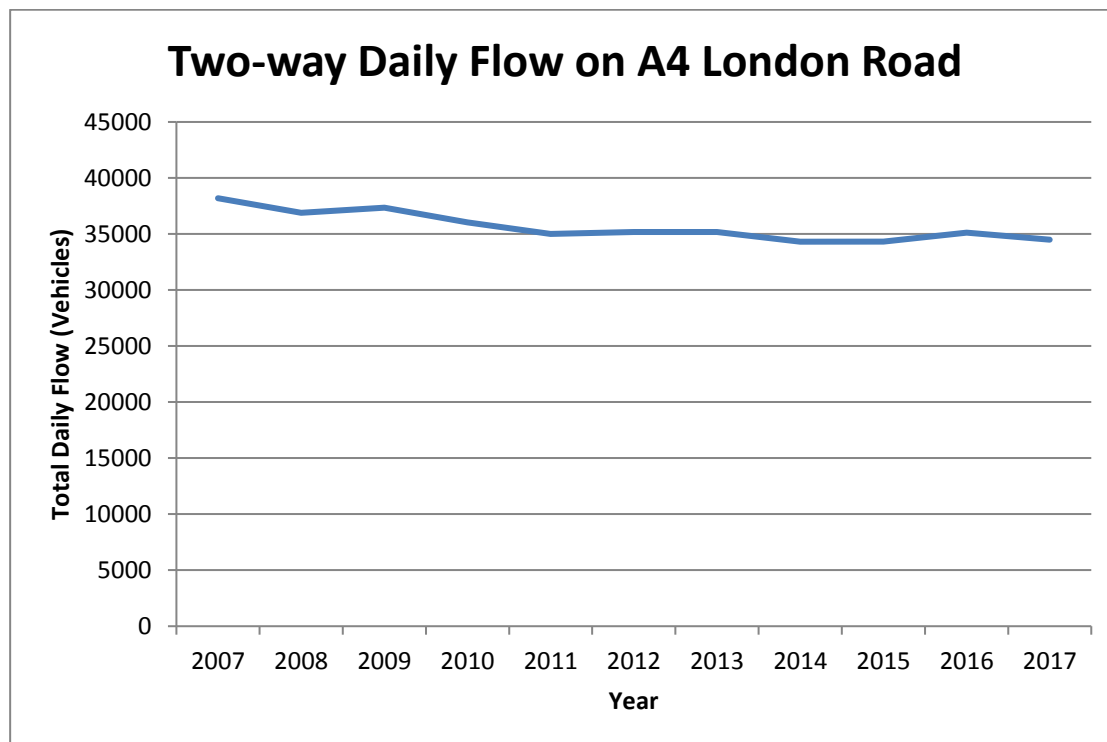
- 3.4.1 The A4 London Road is the main strategic route for vehicles travelling to and from Reading town centre to the east and provides a link to the M4 junction 10. It is heavily constrained comprising two narrow lanes for traffic travelling towards central Reading and a single narrow lane exiting towards 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.

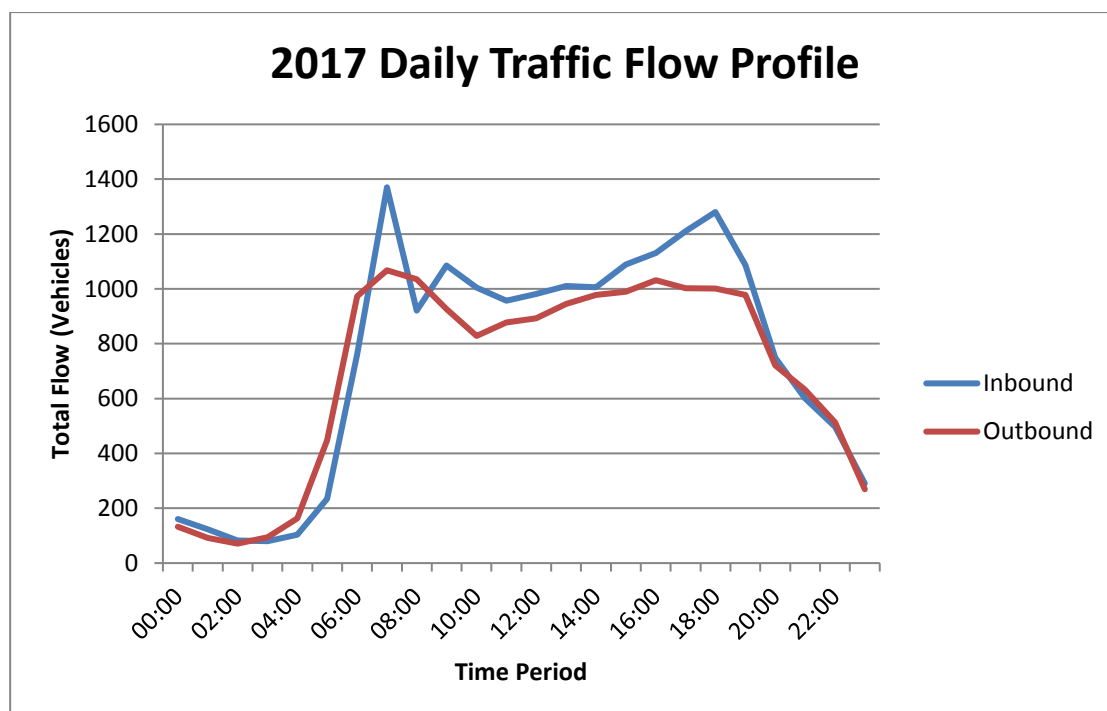
Figure 3.16: Two Way Flow on A4 London Road between Cemetery Junction and the A3290



(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

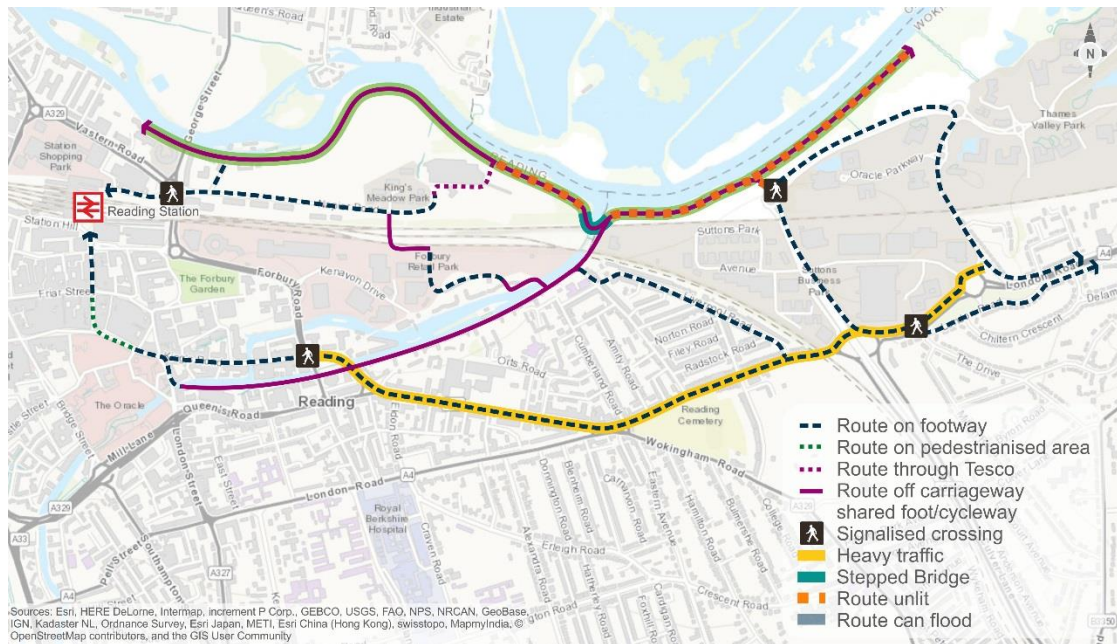


Figure 5.2: Walking Network AFTER East MRT Scheme

