

East Reading Mass Rapid Transit Scheme

Transport Statement

On behalf of: **Reading Borough Council, Highways and Transport Department**



Project Ref: 28791/5523 | Rev: 0 | Date: June 2017



Document Control Sheet

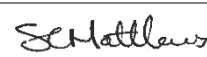
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Revision	Date	Description	Prepared	Reviewed	Approved

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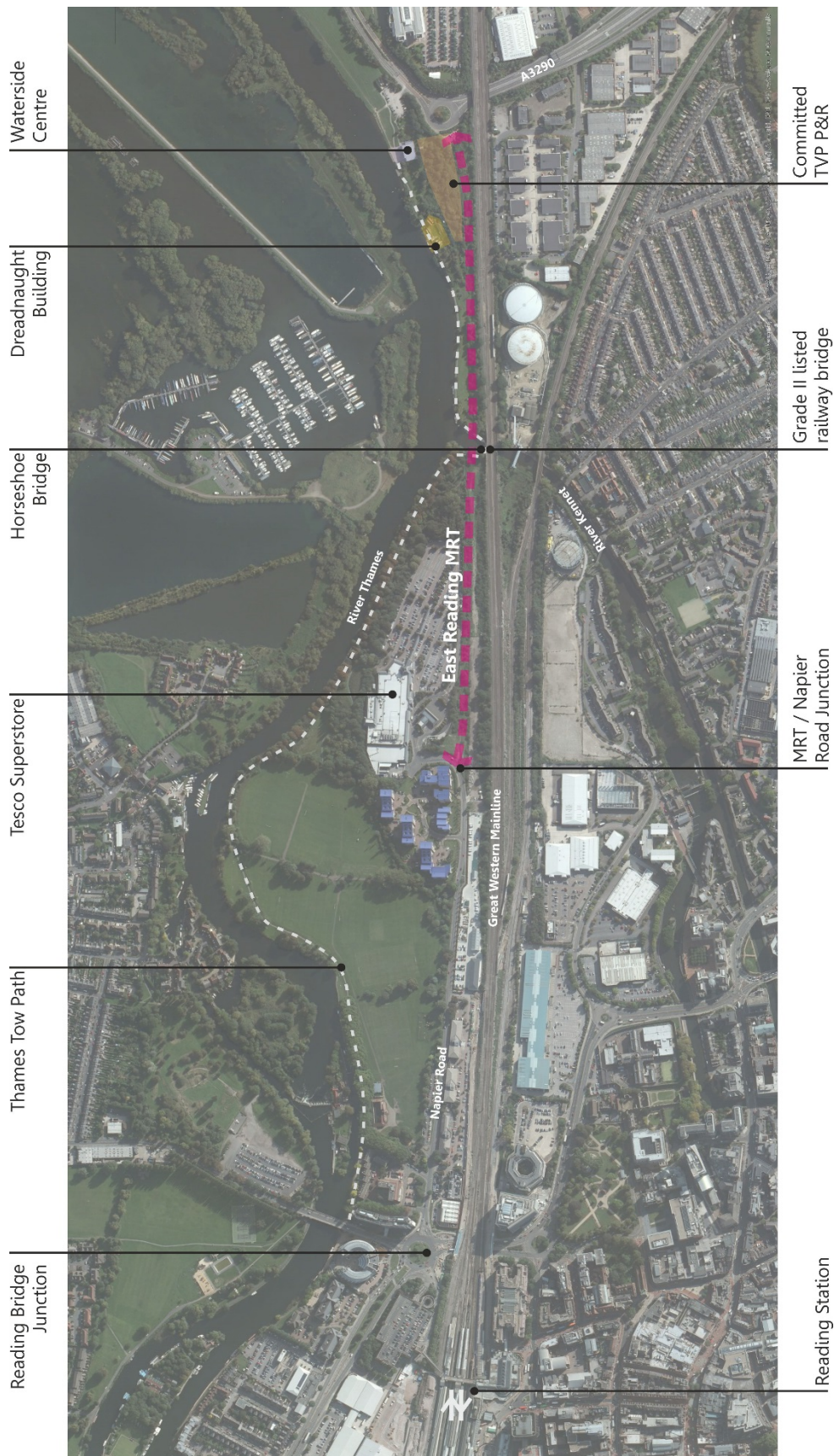
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1 Introduction

1.1 Background

- 1.1.1 This Transport Statement (TS) has been prepared to support a full planning application for a new Mass Rapid Transit (East MRT) scheme to the east of Reading, Berkshire. 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, 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 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.
- 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 proposed TVP P&R scheme (Wokingham planning ref: 161596) was approved on 10th November 2016.

Figure 1.1: Site Location



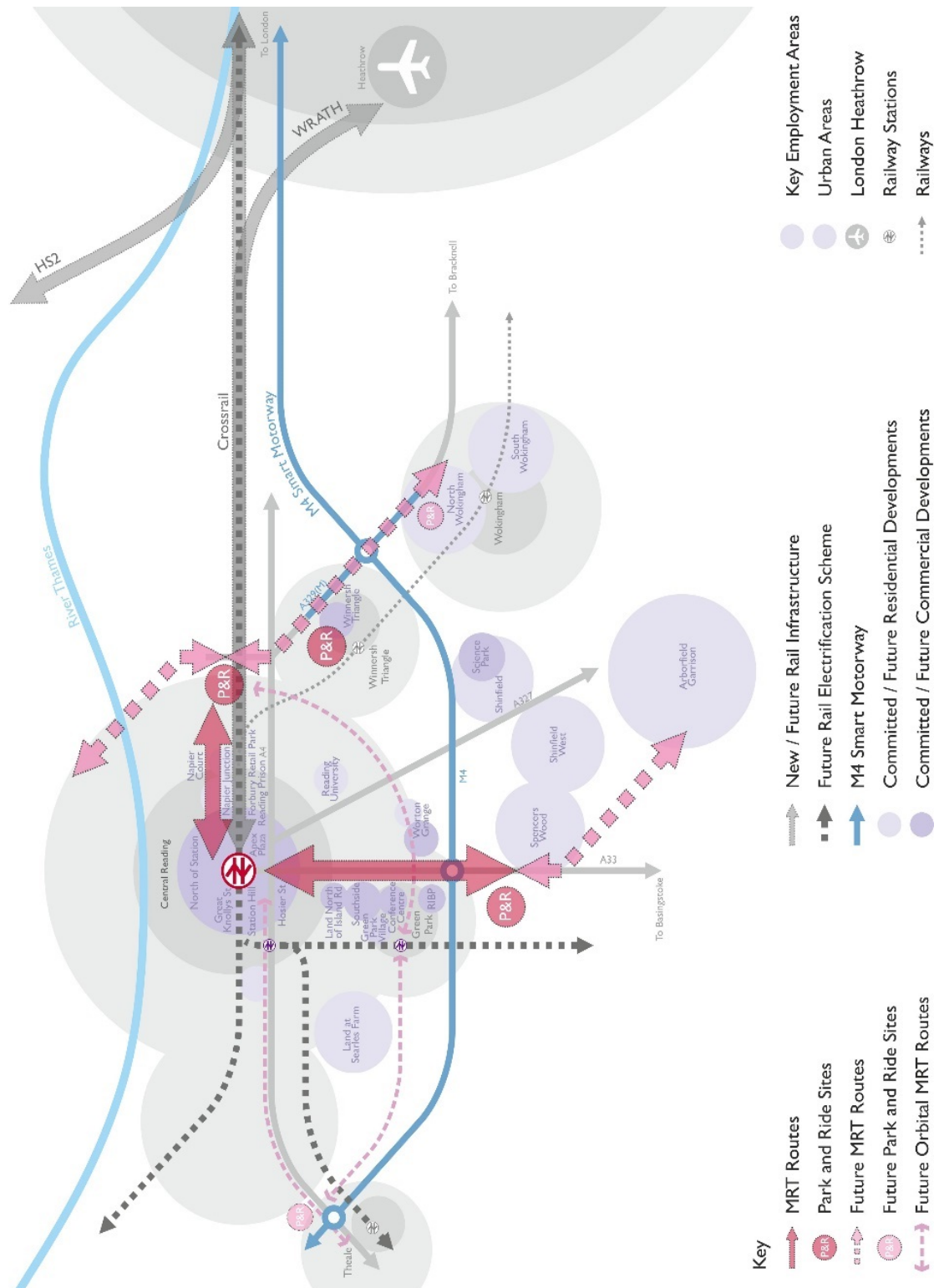
1.2 Transport Strategy

- 1.2.1 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. **Figure 1.2** shows Reading's public transport strategy to provide significantly improved radial and orbital MRT routes.
- 1.2.2 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.
- 1.2.3 The purpose of the scheme is to improve the attractiveness of travelling more sustainably, therefore reducing private car trips, easing forecast congestion and improving air quality along the existing highway network. The scheme will provide urban connectivity and access to wider strategic transport networks. The A4 corridor in east Reading linking the town centre and the A3290 is suffering from significant levels of congestion, particularly in the peak periods. This congestion is forecast to increase with the projected level of growth in Reading and Wokingham Borough.
- 1.2.4 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.
- 1.2.5 Reading is planned to benefit from significant investment in the following strategic networks (see **Figure 1.3**):
- Crossrail, which is planned to start running in 2018 and is reported to be generating the most homes of all the new rail lines.
 - The Western Rail Access to Heathrow (WRAtH) 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.
 - M4 Junctions 3-12: Smart Motorway.
- 1.2.6 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.

Key:

- Urban Areas
- Borough Boundaries
- Railway Network
- Existing Major Railway Stations
- Proposed Railway Stations
- Existing Highway Network
- River Thames
- M4 Motorway
- Existing Park & Ride Site
- Proposed Park & Ride Site
- Future Park & Ride Site
- Town Centre
- East Mass Rapid Transit Route
- Future Mass Rapid Transit Routes
- Third Thames Crossing

Figure 1.3: Strategic Transport Networks and Connections



2 Policy Context

2.1 National Policy

National Planning Policy Framework

- 2.1.1 The development proposal accords with the Government's National Planning Policy Framework (NPPF), in that it promotes and supports sustainable development.
- 2.1.2 The proposal also supports many of the main objectives of NPPF, for example it:
- *"proactively drives and supports sustainable economic development to deliver the homes, business and industrial units, infrastructure and thriving local places that the country needs;*
 - *promotes mixed use developments, and encourage multiple benefits from the use of land in urban and rural areas, recognising that some open land can perform many functions (such as for wildlife, recreation, flood risk mitigation, carbon storage, or food production);*
 - *actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable". (NPPF Paragraph 1.7).*

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. The scheme is included within the LEP's Strategic Economic Plan and is the third highest priority scheme for the Berkshire Local Transport Body.

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."

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."*

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.

3.1 Walking

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

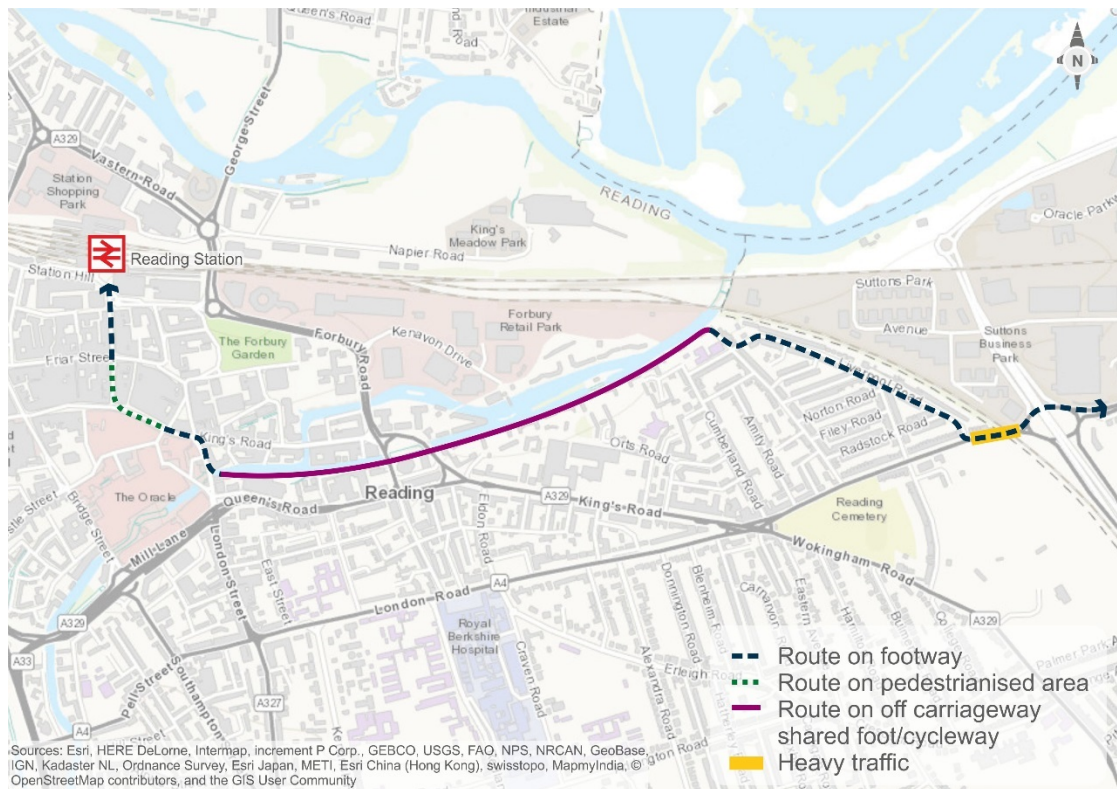
Figure 3.1: Pedestrian Route 1 – Via London Road and Kings Road



Pedestrian Route 1 (PR1)

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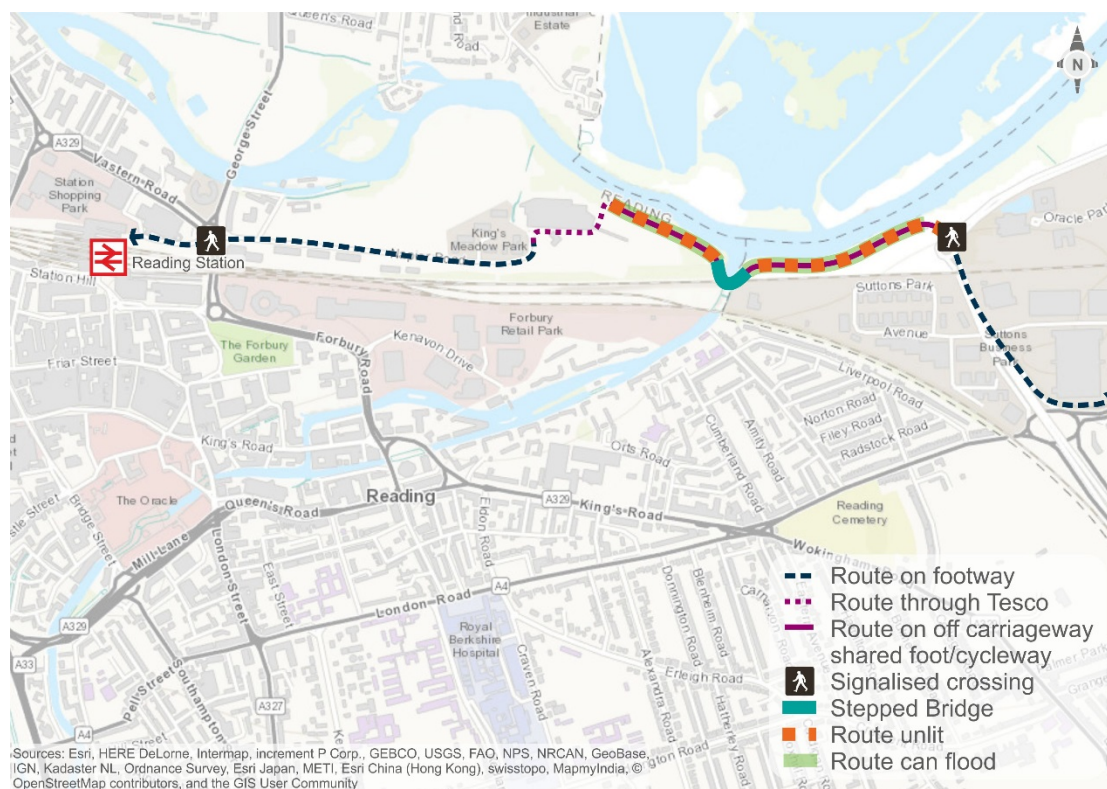
Figure 3.2: Pedestrian Route 2 – Via the River Kennet



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 3.4**. 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.

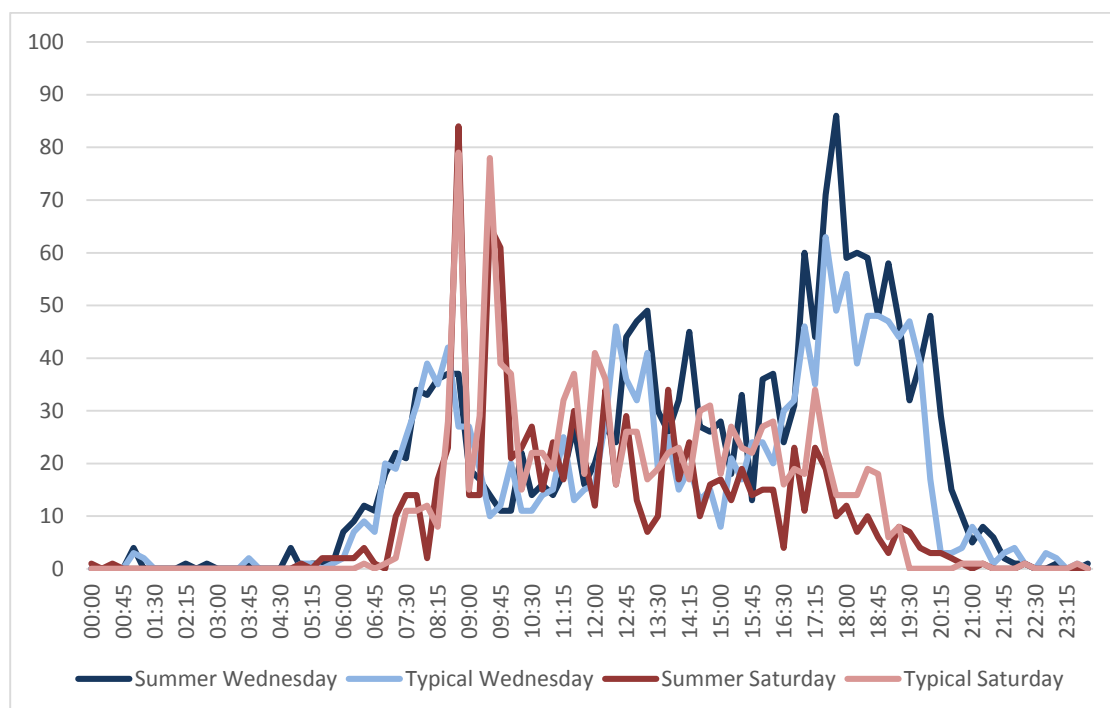
Figure 3.4: Stepped Horseshoe Bridge



Pedestrian Survey on Thames Towpath

- 3.1.6 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 pedestrian movement within the area, and to understand the use of the space.
- 3.1.7 **Figure 3.5** shows the results of the 24hr pedestrian count survey was undertaken on a Wednesday and a Saturday in the summer period of August and during a typical week in September.

Figure 3.5: Pedestrian Survey on Thames Towpath



- 3.1.8 **Figure 3.5** 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. A copy of the pedestrian movement survey is included within **Appendix A**.

Open Space Video Observation Survey

- 3.1.9 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.
- 3.1.10 The results of the survey showed no use of the space with people only using the tow path. 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 **Figures 3.7**.
- 3.1.11 It should be noted that the meadows further west and east opposite Tesco and Thames Valley Park Drive respectively were well used during the surveys periods.

Figure 3.6: Open Space Survey Area

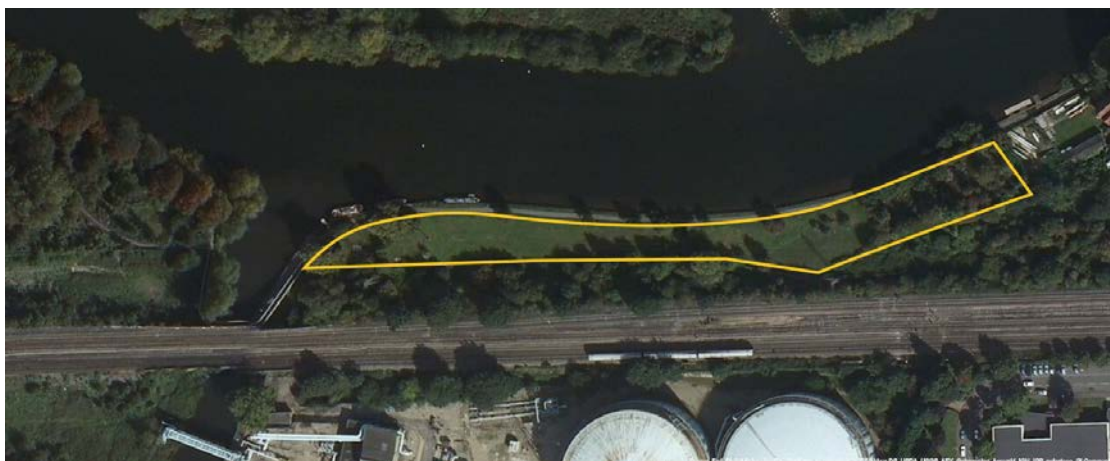


Figure 3.7: Survey Result Screenshots

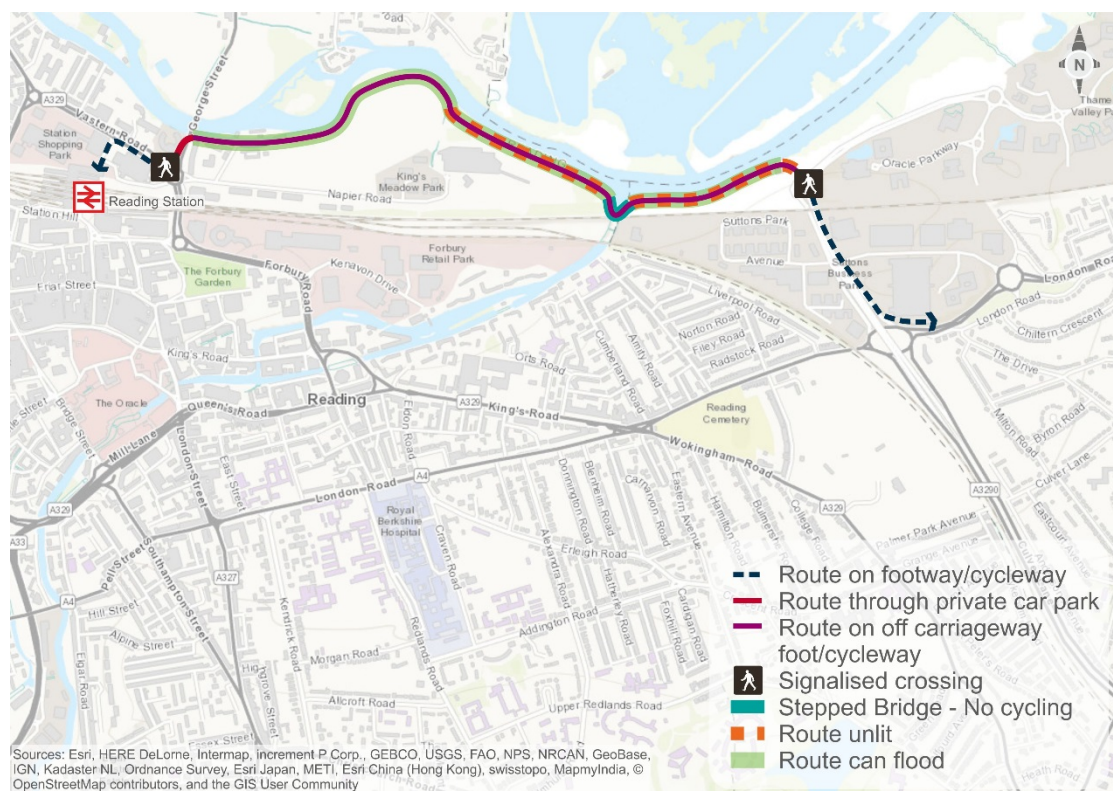


3.2.1 There are currently three signed route options for cyclists travelling from the A4 London Road / A3290 roundabout to Reading town centre and station, these are:

- 3.2.2 The routes are illustrated in **Figure 3.8, 3.9, 3.10** and **3.11**.

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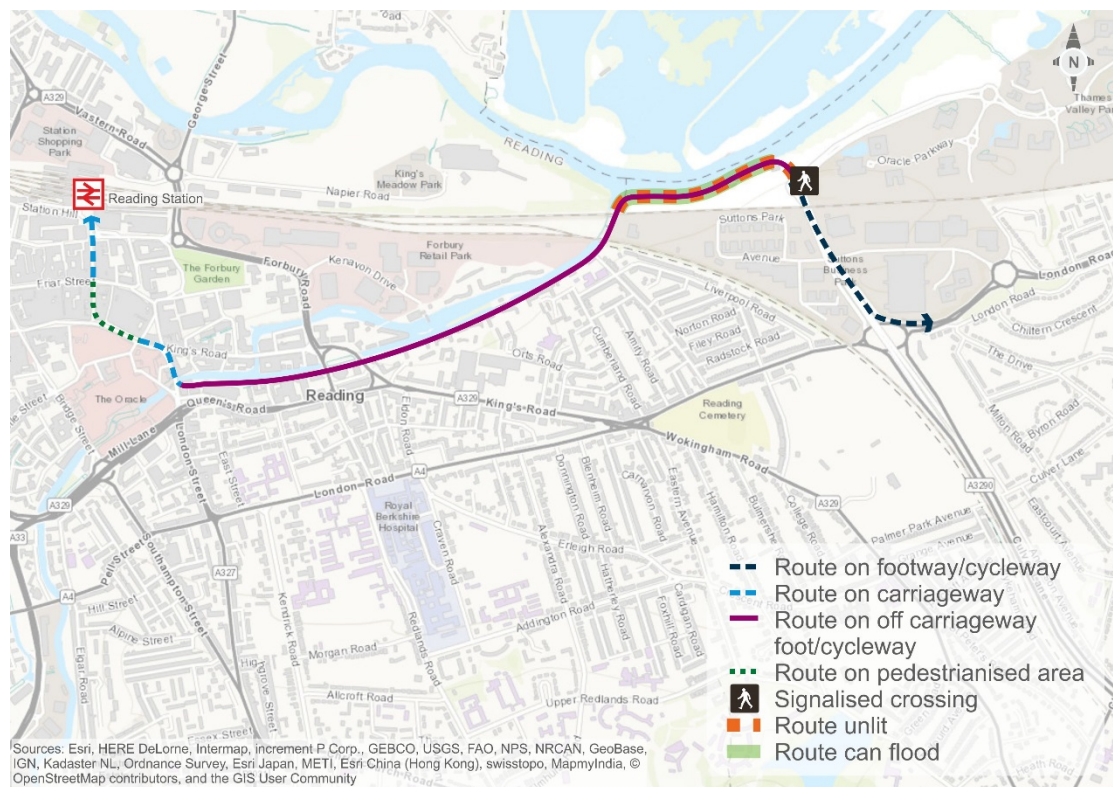
Figure 3.9: Cycle Route 1 – Via the River Thames



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 3.4](#). 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.

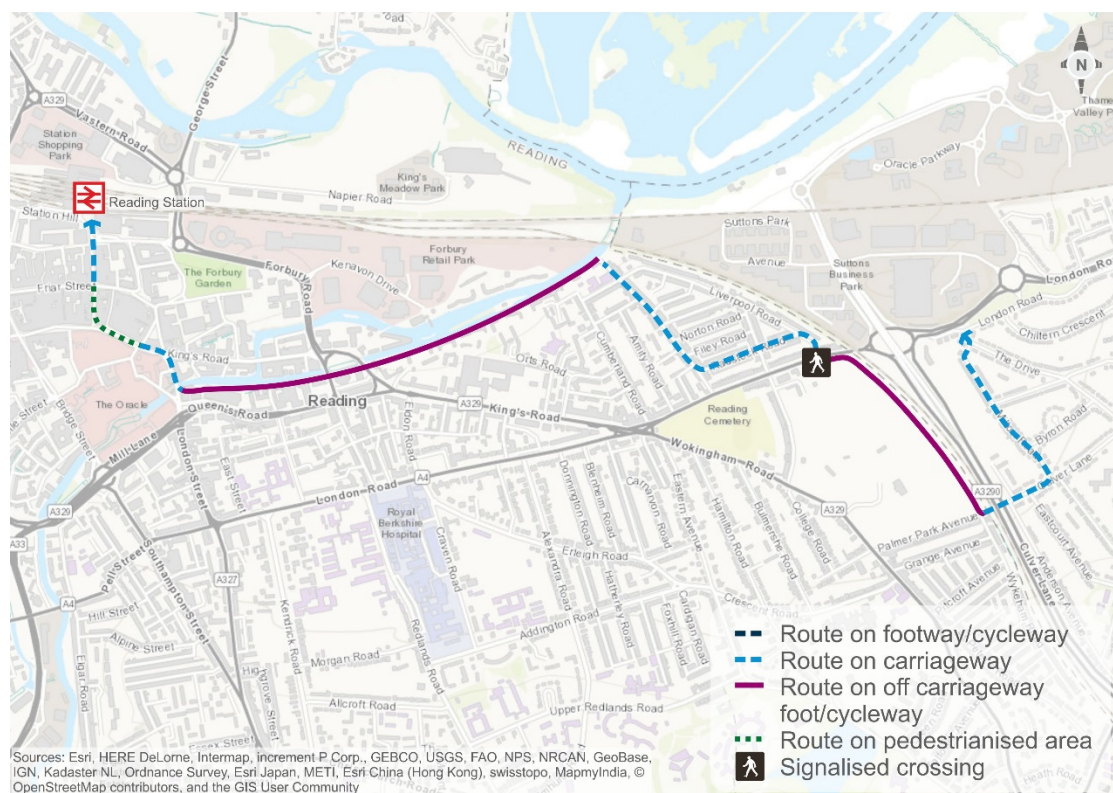
Figure 3.10: Cycle Route 2 – Via the River Thames and River Kennet



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 3.11: 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.

Cycle Hire

- 3.2.7 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

- 3.3.1 Public transport services on the A4 London Road between Reading and the A4 east of the A3290 roundabout, comprise of five different key bus services;

- 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)
- Service 28/28a, provides a shuttle bus service between Reading Town Centre and Tescos.

3.3.2 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	-	12	24	12
Reading Station - Thames Valley Park (TVP)	Stewarts	06:45 to 19:22	-	-	26	22	24
Reading Station - Heathrow Airport (RailAir)	First	04:00 to 23:00	04:00 to 23:00	04:00 to 23:00	9	18	8
Reading - Woodley (12, 13 & 14)	Reading Buses	05:00 to 00:19	05:00 to 03:19	07:30 to 23:19	15	28	15
Reading – Twyford – Henley – High Wycombe (850)	Arriva	05:25 to 23:43	06:40 to 23:43	07:45 to 21:47	5	7	4
Reading – Twyford – Wokingham (127/128/129)	Courtney Buses	06:07 to 19:27	07:38 to 18:23	-	4	6	4
Tesco – Reading - Kentwood Hill (28/28a)	Reading Buses	07:01 to 16.20	-	-	4	8	2

*Taken from timetables May 2017

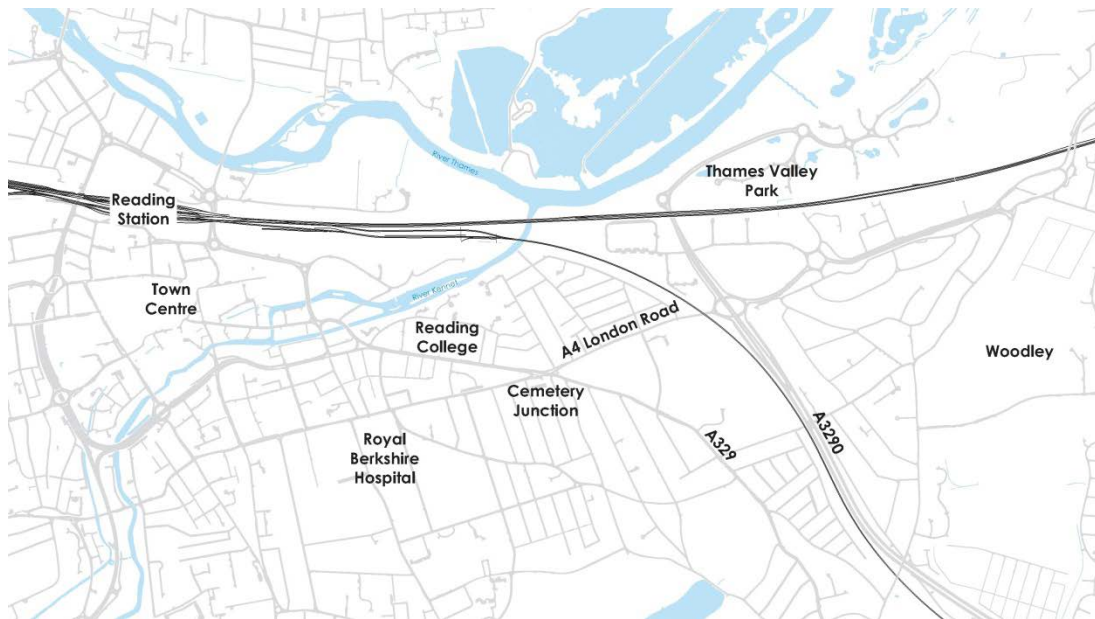
- 3.3.3 Commuter shuttle buses operate from Reading town centre and railway station to Thames Valley Park between 06:45 and 19:30. These bus services are primarily used towards TVP in the AM peak period and towards Reading Station in the PM peak period. Commuter shuttle buses also run between Thames Valley Park and Winnersh Triangle during peak periods only.
- 3.3.4 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 available space.

- 3.3.5 The London Road suffers from peak period traffic congestion which leads to unreliable public transport journey times. Journey times have been analysed using available on-line data sources. This shows that travelling between the A3290 / A4 roundabout and Reading Station can take between 12 and 24 minutes during peak traffic periods.

3.4 Highway

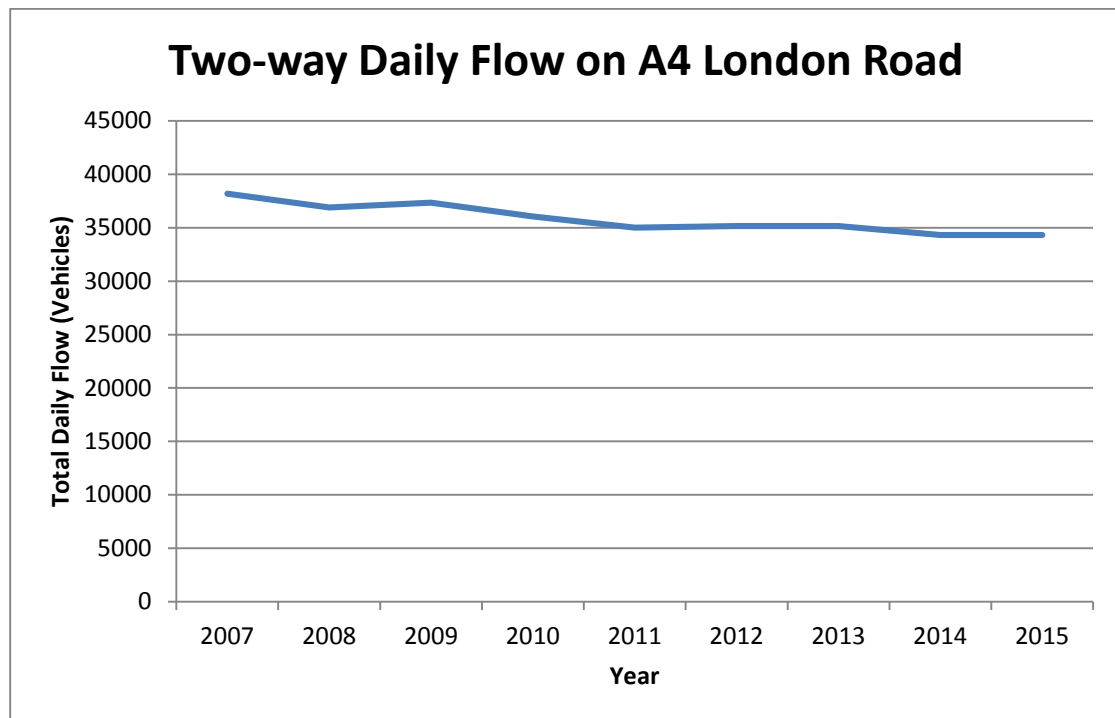
- 3.4.1 The A4 London Road is the main strategic route for vehicles travelling to and from Reading town centre to the east and provides a link to the M4 junction 10. It is heavily constrained comprising two narrow lanes for traffic travelling towards central Reading and a single narrow lane exiting towards the A3290. The A4/A329 Cemetery Junction is a pinch point along the route. The existing highway network is shown in **Figure 3.12**.

Figure 3.12: Existing Highway Network



- 3.4.2 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 3.13** 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 2015. 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.

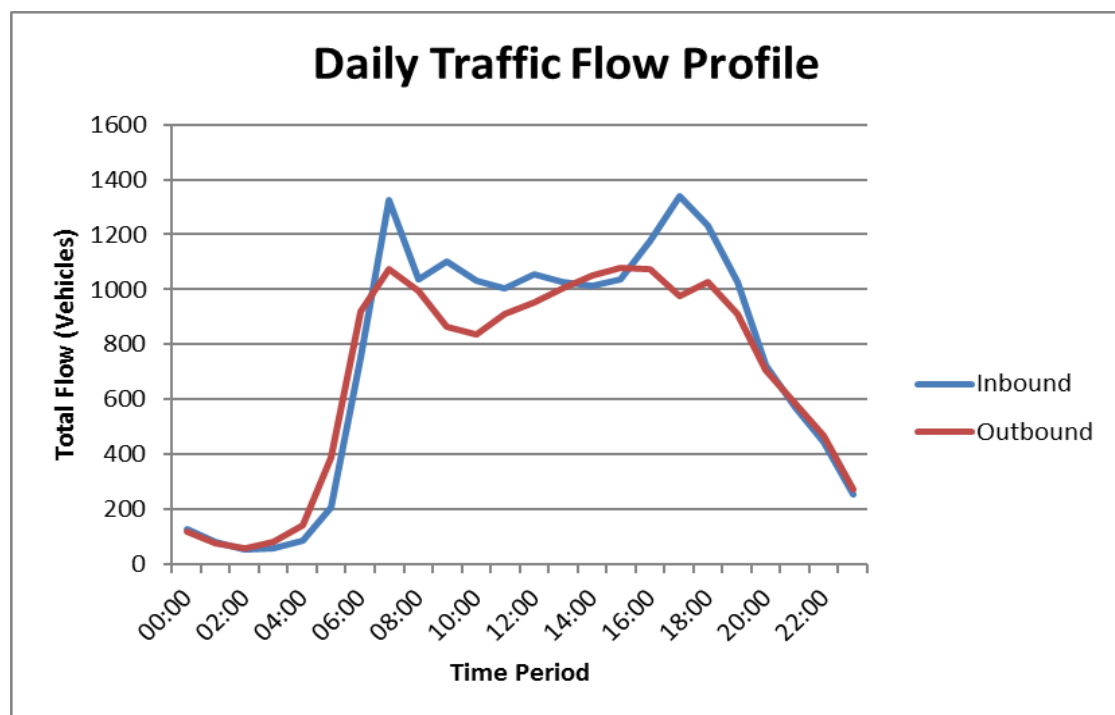
Figure 3.13: Two Way Flow on A4 London Road between Cemetery Junction and the A3290



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

- 3.4.3 **Figure 3.14** shows the profile of the daily traffic flow in 2015. This shows that peak spreading has occurred with traffic only reducing between 10:00–12:00, and only in the outbound direction, then gradually increasing towards an extended evening peak period.

Figure 3.14: Daily Traffic Profile on A4 London Road



- 3.4.4 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.
- 3.4.5 Journey times range from 7 to 24 minutes east bound, depending upon the time of day and westbound the journey times range from 10 to 24 minutes. 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.

3.5 Committed Development

- 3.5.1 The proposed TVP P&R scheme (Wokingham planning ref: 161596) was approved on 10th November 2016 and includes provision of 277 car parking spaces. The approved scheme is included in **Appendix B**.
- 3.5.2 The proposed TVP P&R is planned to 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.

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 Drawings **28791/2009/CIV/004** (Phase 1) and **28791/2009/CIV/005** (Phase 2). 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 a 2m footway.

4.1.4 The link 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 and a 2m footway. Shuttle working will operate with a signal/indicator system to allow bus progress between the stop lines 190m apart.

4.1.5 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 3m shared foot/cycleway and is also included within the TVP P&R planning permission.

4.1.6 There is an SGN valve at the western edge of the TVP P&R, Phase 1A of the scheme retains the valve and in Phase 1B the value will be relocated. The Phase 1A scheme includes a one-way section of 3.5m wide carriageway with signal/indicators either end approximately 100m apart, and a shared foot/cycleway that narrows to 2.5m at the pinch point. The Phase 1B scheme mirrors the permitted TVP P&R scheme with a 7.3m carriageway and 3.0m shared foot/cycleway.

4.1.7 Bus stops are located either end of the East MRT Scheme, at the TVP P&R and adjacent to Tesco.

4.1.8 The scheme ties into existing transport infrastructure to provide high quality, seamless connections for pedestrians, cyclists and buses using the new link.

4.1.9 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 the 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.

- 4.1.10 Enforcement cameras will be installed to deter private vehicles using the route. Once the scheme is operational, if these methods of control fail to deter private vehicles from using the East MRT Scheme, rising bollards will be installed to physically prevent the use of the route, and allow those with responders and/or registered vehicles. These cameras will be used to enforce any low emissions zone in the future.
- 4.1.11 Cyclists and pedestrians 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.
- 4.1.12 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.
- 4.1.13 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.
- 4.1.14 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.

Napier Road/East MRT Scheme Junction

- 4.1.15 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.

TVP P&R Hours of Operation

- 4.1.16 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.

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 **Drawing 28791/5505/029**. 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.

- 4.2.2 An application was submitted for the redevelopment of the Former Cooper Reading BMW Kings Meadow Road in November 2016 (Ref: 162166). As part of the application; an agreement has been made between RBC and the landowner for the transfer of an area of land adjacent to Kings Meadow Road for the future phase of East MRT Scheme. This will enable the delivery of a bus lane on the approach to the Reading Bridge Roundabout.
- 4.2.3 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.
- 4.2.4 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 station including the Ready Bike Cycle Hire scheme located in both locations.
- 5.1.2 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

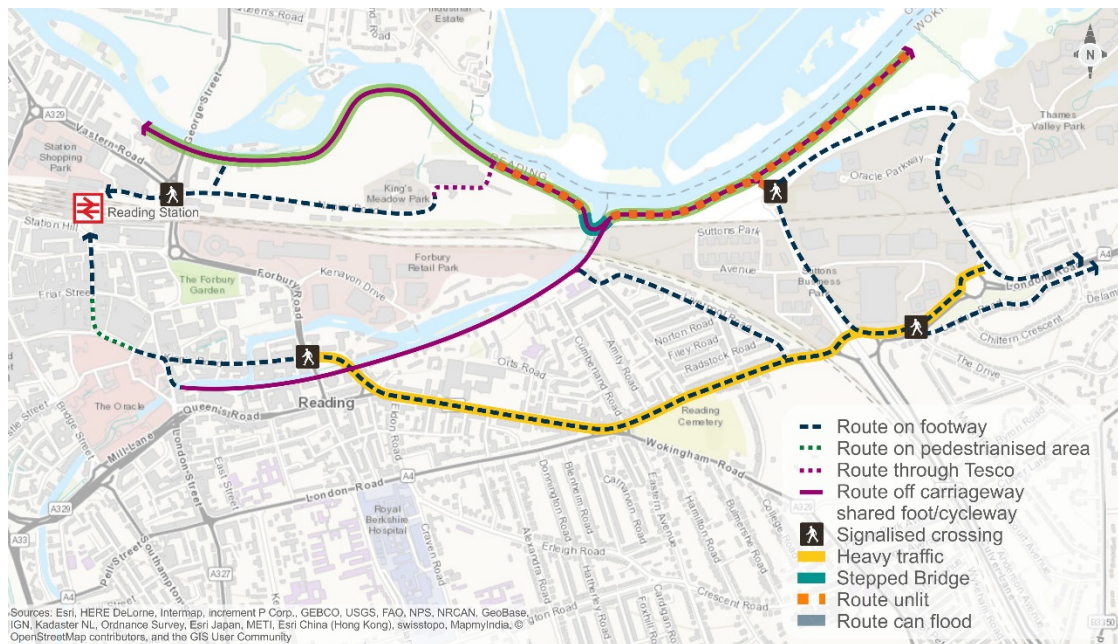


Figure 5.2: Walking Network AFTER East MRT Scheme

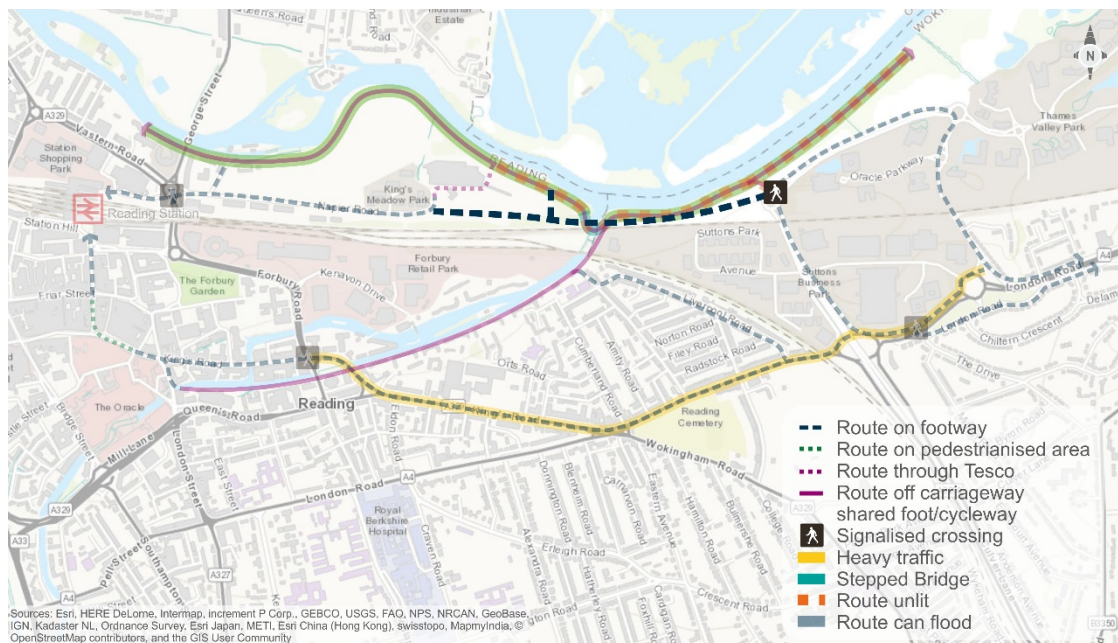


Figure 5.3: Cycling Network BEFORE East MRT Scheme

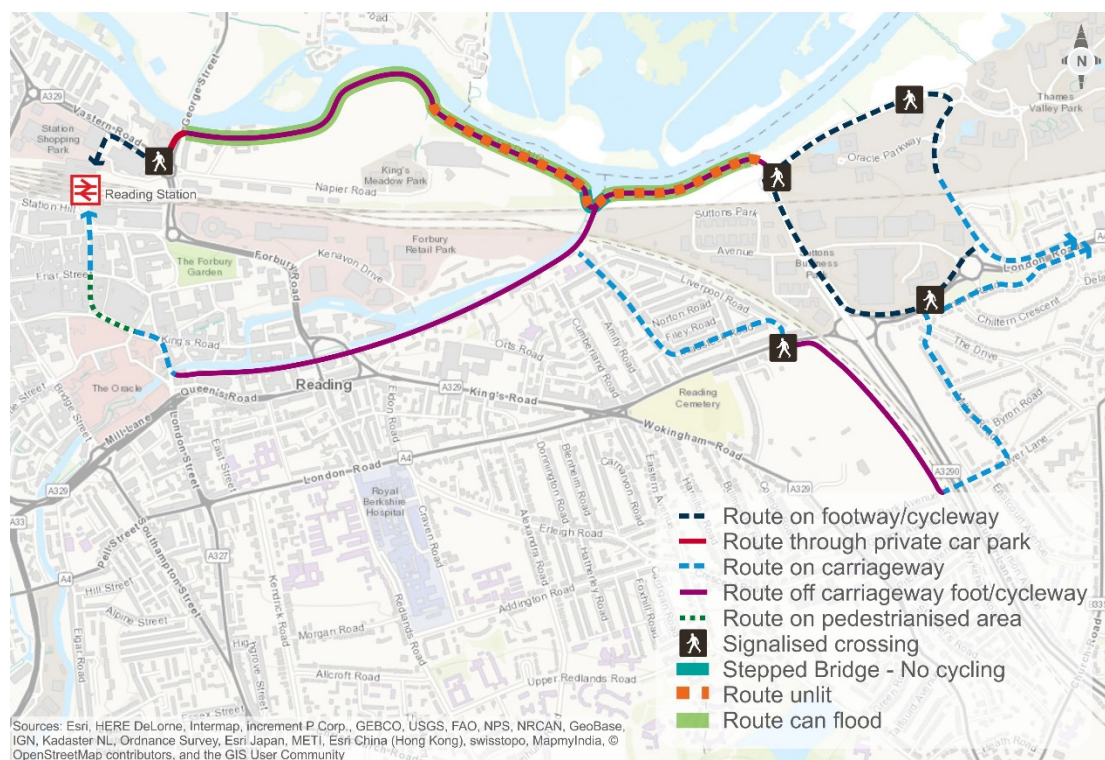
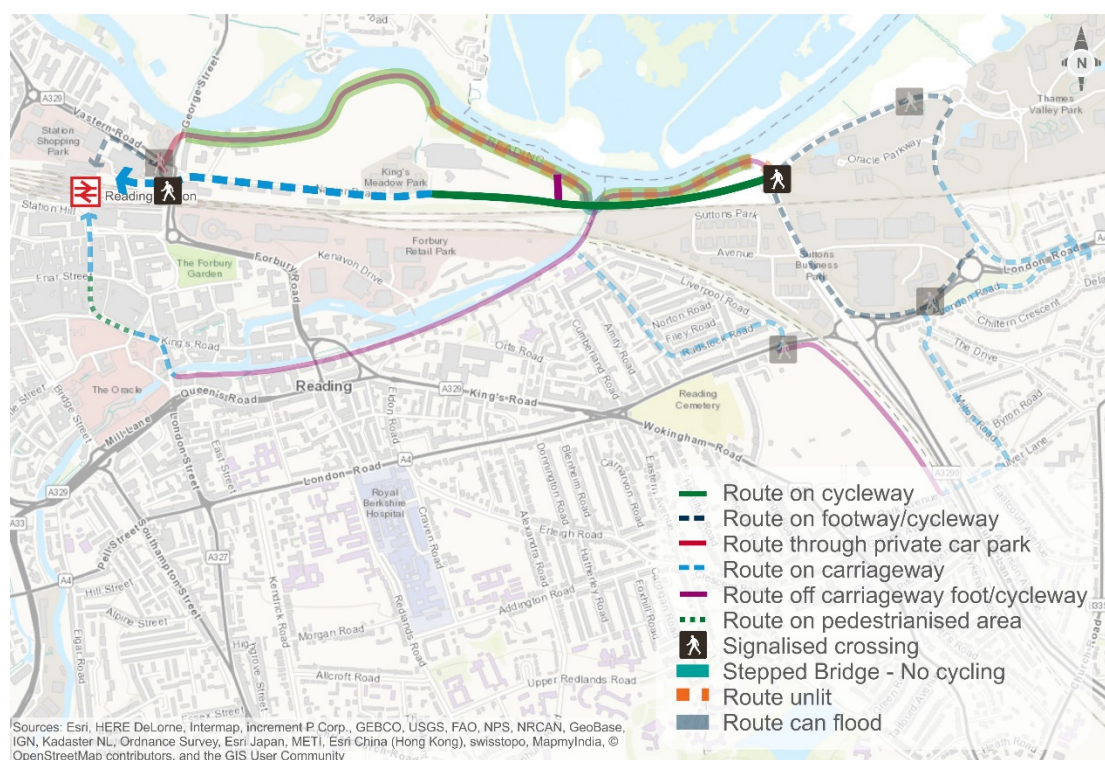


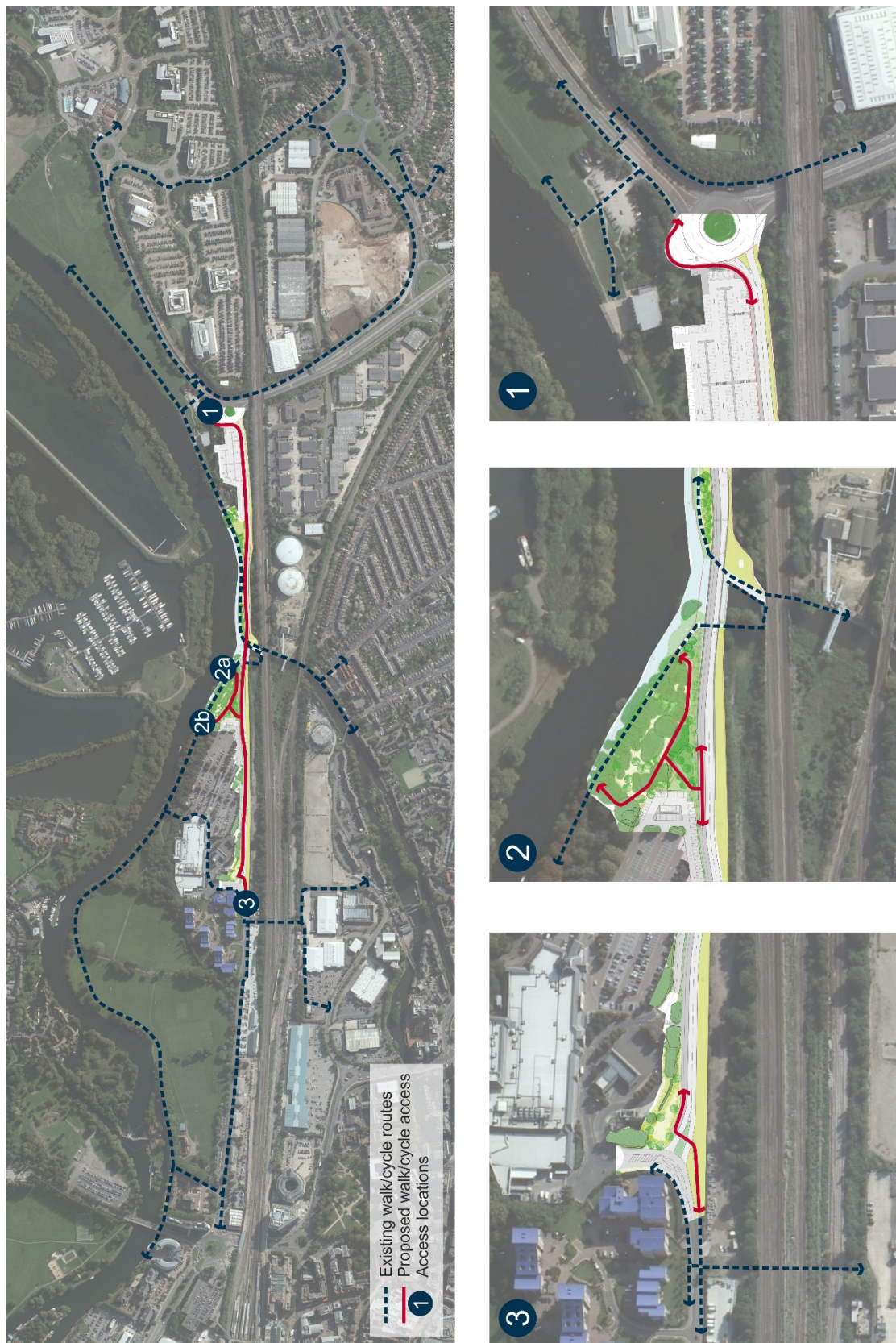
Figure 5.4: Cycling Network AFTER East MRT Scheme



5.1.3 The East MRT scheme provides an alternative crossing of the River Kennet for towpath users, avoiding the stepped Horseshoe bridge (see [Figure 3.4](#)).

- 5.1.4 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.
- 5.1.5 **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

- 5.1.6 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

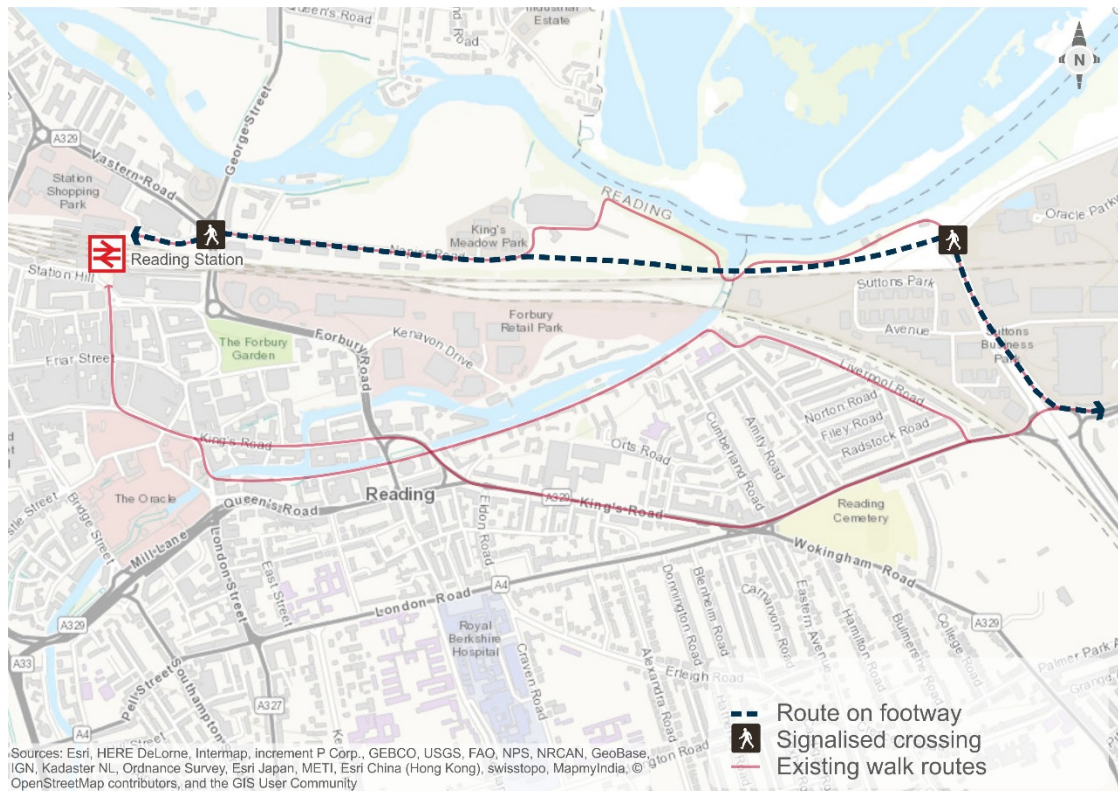


Table 5.1: Walking Route Assessment Comparison

Assessment Criteria	P1	P2	P3	East MRT Scheme
Length	1.75 miles	1.85 miles	1.85 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	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, low level lighting proposed
Surfacing	Maintained footways	Maintained footways	Maintained footways / Thames path poor in places	Maintained footways
Traffic	High 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 A3290 and East MRT Scheme / Residential, Retail, Employment on Napier Rd
Flood Risk	None	None	Thames path risk of flooding	None

- 5.1.7 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 and PR2 provide a similar level of comfort whilst PR3 provides the least attractive route.

Figure 5.7: Cycling Routes

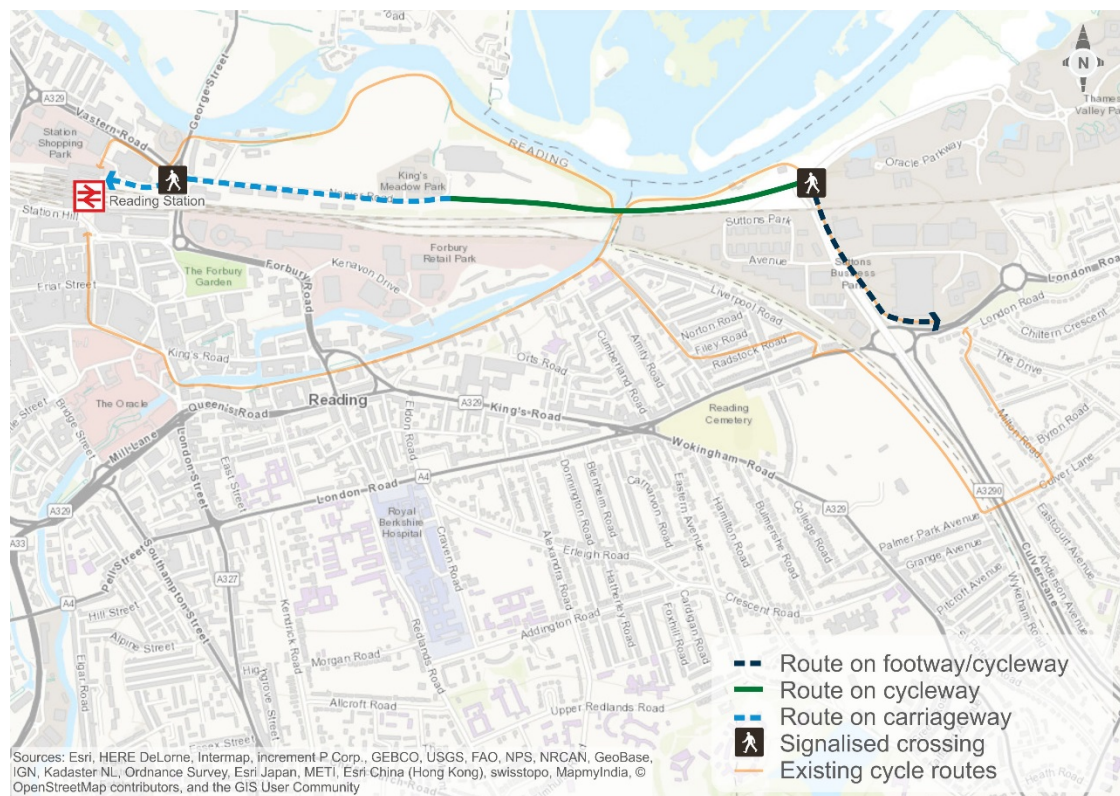


Table 5.2: Cycling Route Assessment Comparison

Assessment Criteria	CR1	CR2	CR3	East MRT Scheme
Length	1.9 miles	2.1 miles	2.7 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	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, 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
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 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 A3290 and East MRT Scheme / Residential, Retail, Employment on Napier Rd
Usability	Shared foot/cycleway, cyclists have to navigate pedestrians, narrow in places, cyclists dismount on Horseshoe Bridge	Shared foot/cycleway, cyclists have to navigate pedestrians	Shared foot/cycleway, cyclists have to navigate pedestrians	Dedicated cycle lane on East MRT Scheme / on carriageway on Napier Road
Flood Risk	Thames path risk of flooding	Thames path risk of flooding	None	None

- 5.1.8 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 and CR3 provides the second most attractive routes whilst CR1 provides the least attractive route.
- 5.1.9 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 has the potential to provide significant benefits in the form of improved journey times and enhanced reliability to public transport to/from central Reading and existing residential and employment areas to the east and south-east of Reading, including Thames Valley Park (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 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 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
- 5.2.4 The journey times are summarised in **Table 5.3**.

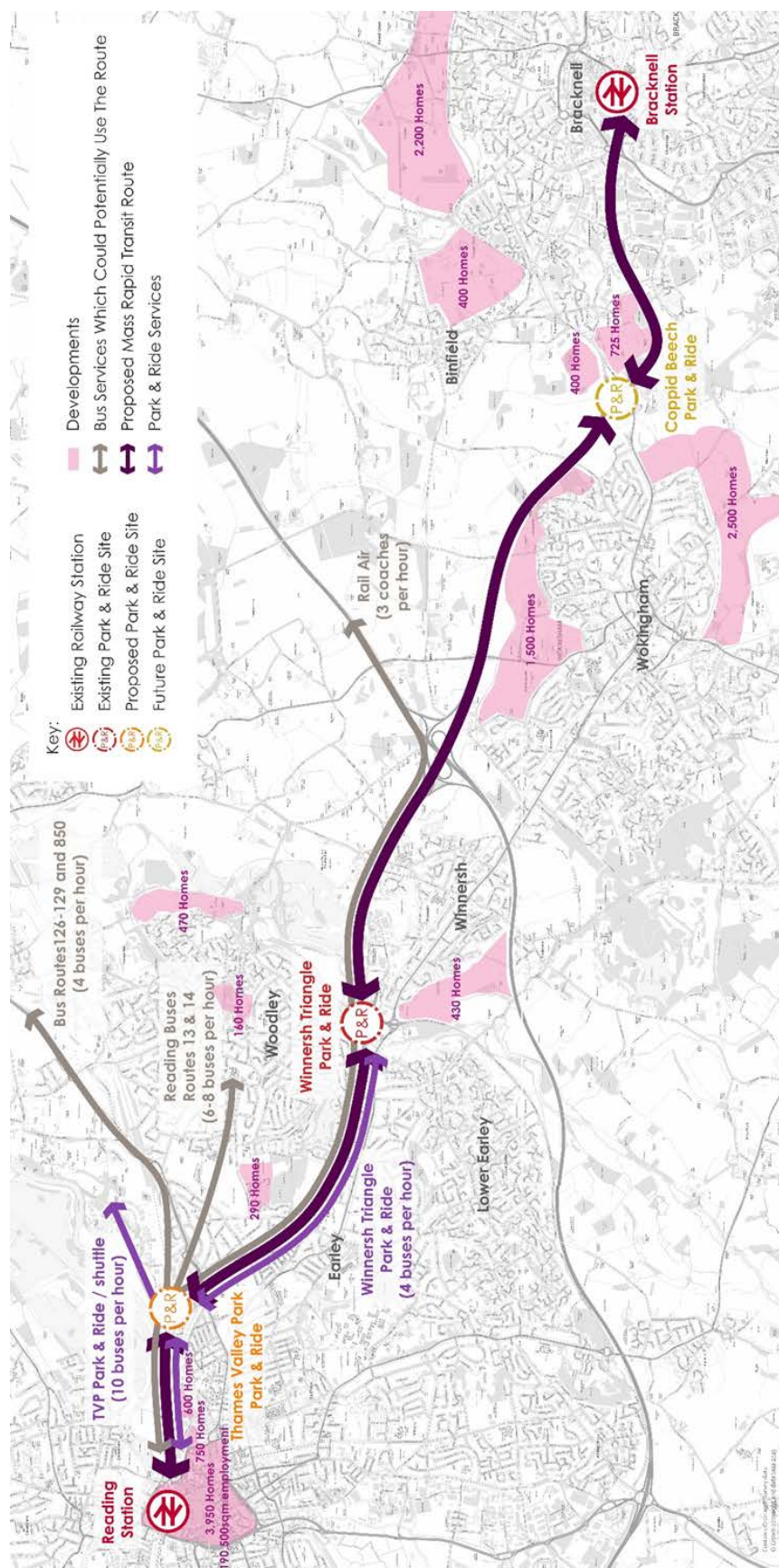
Table 5.3: Public Transport Journey Time Summary With and Without East MRT Scheme

Journey Time (Seconds)	Morning Peak Period		Evening Peak Period	
	Station Inbound	Station Outbound	Station Inbound	Station Outbound
Existing	752	1068	901	1003
Future	358	278	327	290
Journey Time Saving	394	790	574	713

- 5.2.5 The RTM predicts that the East MRT Scheme will provide significant journey time savings.

- 5.2.6 There are three existing services that currently operate a limited stop service along London Road/Kings Road, routing to strategic destinations, these are:
- Winnersh Park & Ride services;
 - Thames Valley Park commuter shuttle;
 - Rail-Air coach services to Heathrow;
- 5.2.7 These services have the potential to benefit from the shorter journey times and enhanced reliability created by the East MRT Scheme. **Figure 5.8** shows the services which could potential benefit from the East MRT scheme.
- 5.2.8 Bus services between east Reading and Reading town centre also have the potential to benefit from the East MRT Scheme. Services 12, 13 and 14 currently route along London Road and Kings Road between Reading and Woodley. There are aspirations to introduce a higher frequency service for the number 12 and route this 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.
- 5.2.9 The East MRT Scheme also has the potential to benefit bus services 850 and 127/128/129. These are stopping services that currently stop along London Road and Kings Road. Passenger usage of these services along Kings Road is not available to determine any benefit that would be realised in terms of improved journey time and reliability of service.
- 5.2.10 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.
- 5.2.11 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.

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 The Scheme results in reductions of between 1% and 3% across some of the eastern area roads. The modelling demonstrates that the scheme would release traffic constrained in entering the network, ease forecast congestion and reduce rat-running.

Reading Bridge Roundabout

6.1.3 A capacity assessment of Reading Bridge roundabout has been undertaken to understand if the proposed bus lane and pedestrian crossing impact on the operation of the roundabout during the morning and evening peak hours.

6.1.4 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.

6.1.5 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.

6.1.6 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.

6.1.7 The results of the assessment are summarised in **Table 4.1** and **4.2** with the Junctions 9 outputs and traffic flows included in **Appendix C**.

Table 4.1: 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 4.2: 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

- 6.1.8 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.

Proposed Napier Road / East MRT Scheme Junction

- 6.1.9 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.
- 6.1.10 The results of the assessment are summarised in **Table 4.3** with the Junctions 9 outputs and traffic flows included in **Appendix D**.

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

- 6.1.11 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

- 6.1.12 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.
- 6.1.13 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 Summary

- 8.1.1 The East MRT Scheme would provide a number of substantial benefits for sustainable travel between Central and areas east of Reading to support sustainable economic growth by increasing accessibility and capacity for walking, cycling and public transport usage.
- 8.1.2 Delivery of significant capacity and reliability enhancements to support sustainable travel to/from eastern and central areas of Reading will inevitably support future growth, through modal shift and alleviating congestion and increasing capacity in the transport network. This improved capacity will assist in unlocking housing development already committed in Reading and Wokingham boroughs, improvement of accessibility will act as a catalyst for improving the vibrancy of the town centre and the reliability of the network will encourage employers to locate here.
- 8.1.3 In Summary, the East MRT provides the following benefits:

Walking and Cycling

- 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;
- 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

- 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;

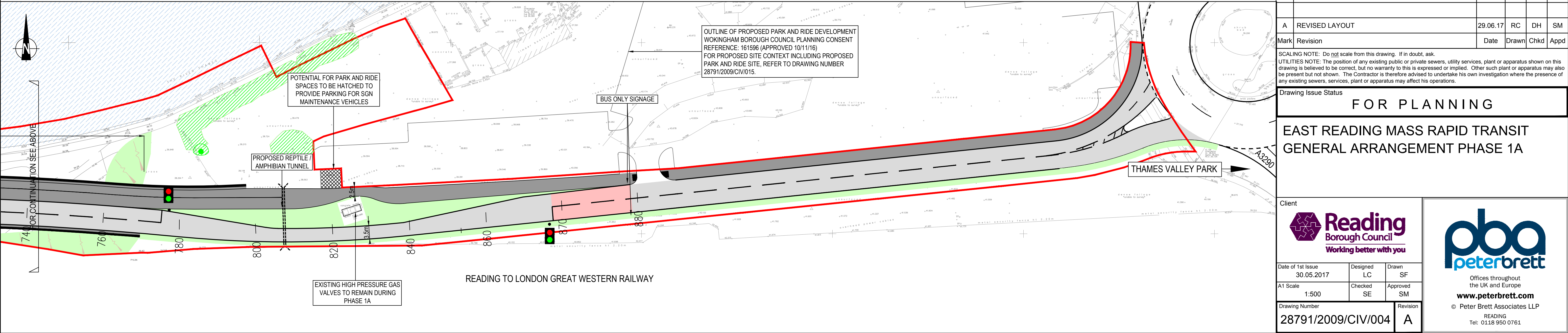
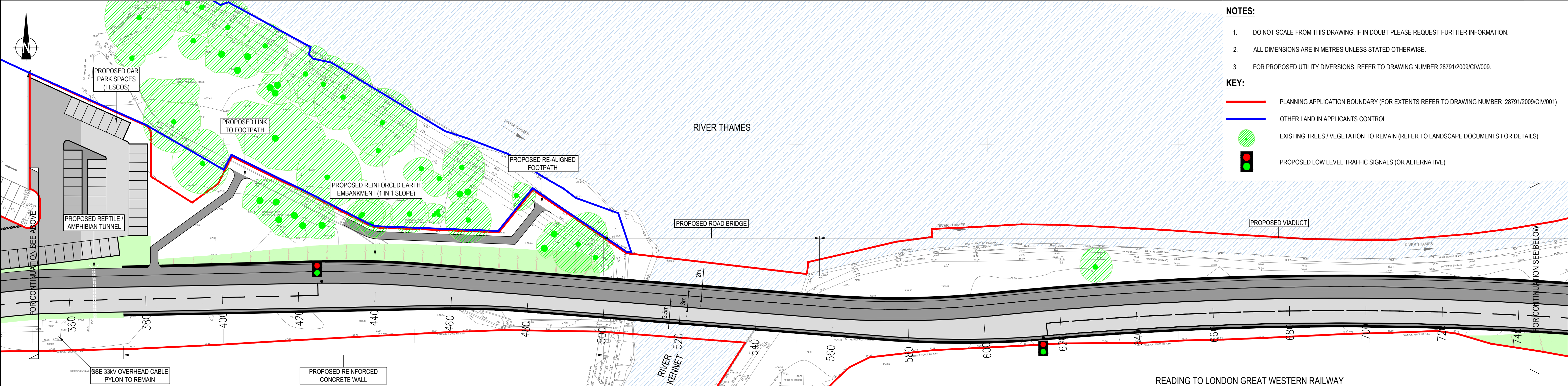
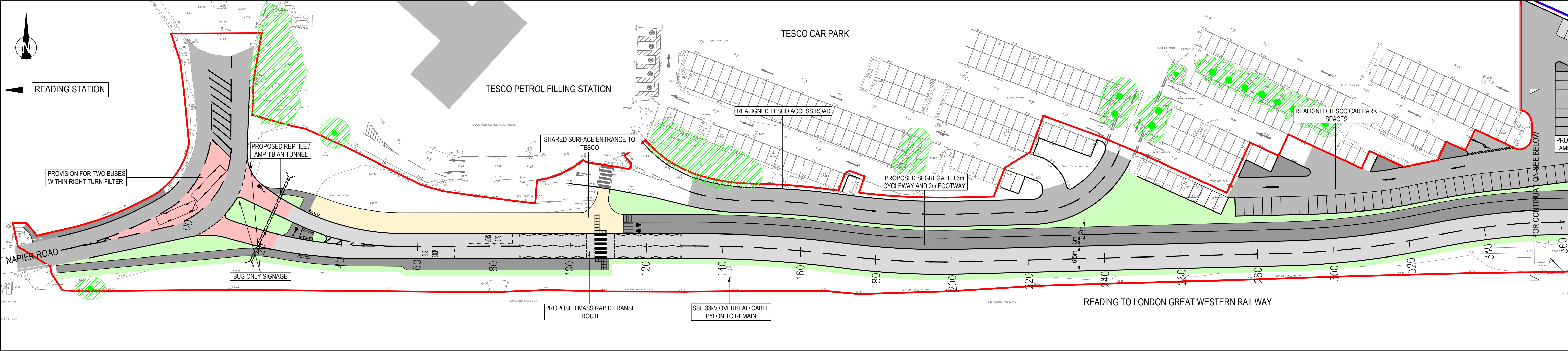
Highway

- eases forecast congestion and rat-running on the eastern parts of Reading
- The proposed junction with the East MRT Scheme and Napier Road have been designed to accommodate two right turning buses and is predicted to operate well within capacity causing minimal to no delays to traffic accessing and egressing Tesco.
- The off-site improvements at the Napier Road approach to Reading Bridge roundabout are not predicted to cause any significant delays to existing traffic.
- Bus movements can be accommodated at the Thames Valley Park Drive / A3290 roundabout.

Future Opportunities

- 8.1.4 The scheme will provide urban connectivity and access to wider strategic transport networks.
- 8.1.5 This eastern section will form part of a longer term MRT network for the Thames Valley or operate as a standalone East MRT Scheme. 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.
- 8.1.6 Reading is planned to benefit from significant investment in the following strategic networks:
- Crossrail, which is planned to start running in 2018 and is reported to be generating the most homes of all the new rail lines.
 - The Western Rail Access to Heathrow (WRAtH) 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.
 - M4 Junctions 3-12: Smart Motorway.
- 8.1.7 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 (and to the north using a third Thames crossing) to reach the rail services or visitors arriving from the motorway to use the P&R at TVP, Winnersh or Mere oak into Reading.

Drawings



- NOTES:**
- DO NOT SCALE FROM THIS DRAWING. IF IN DOUBT PLEASE REQUEST FURTHER INFORMATION.
 - ALL DIMENSIONS ARE IN METRES UNLESS STATED OTHERWISE.
 - FOR PROPOSED UTILITY DIVERSIONS, REFER TO DRAWING NUMBER 28791/2009/CIV/009.
- KEY:**
- PLANNING APPLICATION BOUNDARY (FOR EXTENTS REFER TO DRAWING NUMBER 28791/2009/CIV/001)
 - OTHER LAND IN APPLICANTS CONTROL
 - EXISTING TREES / VEGETATION TO REMAIN (REFER TO LANDSCAPE DOCUMENTS FOR DETAILS)
 - PROPOSED LOW LEVEL TRAFFIC SIGNALS (OR ALTERNATIVE)

Mark	Revision	Date	Drawn	Chkd	Appd
A	REVISED LAYOUT	29.06.17	RC	DH	SM

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.
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Drawing Issue Status
FOR PLANNING

**EAST READING MASS RAPID TRANSIT
GENERAL ARRANGEMENT PHASE 1A**

Client

Reading Borough Council
Working better with you

Date of 1st Issue
30.05.2017

A1 Scale
1:500

Drawing Number
28791/2009/CIV/004

Designed
LC

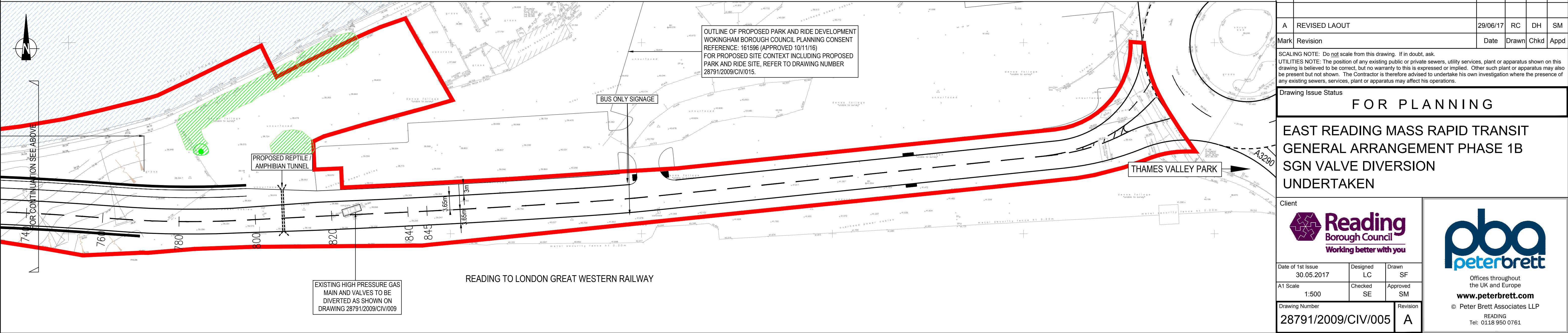
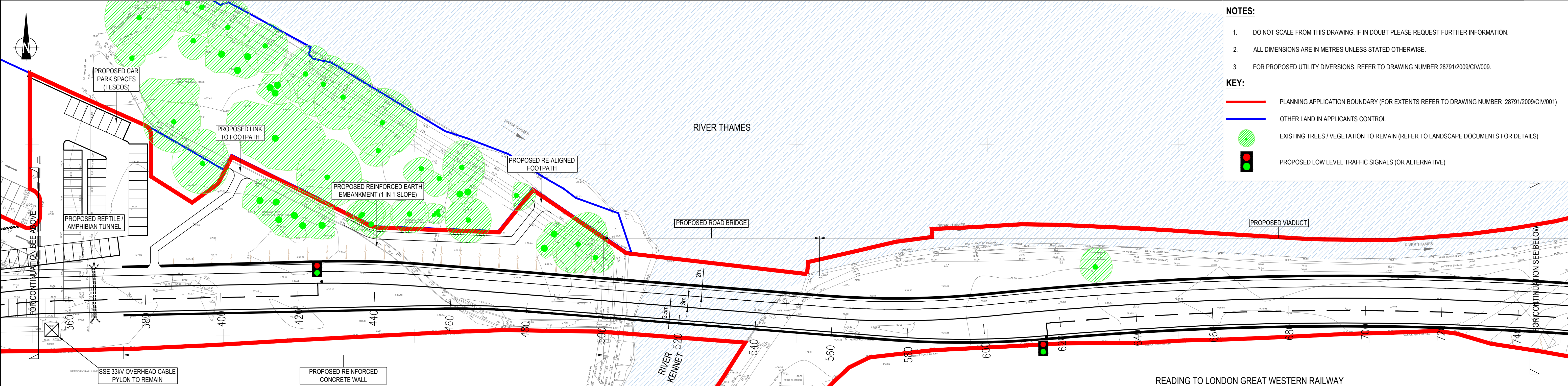
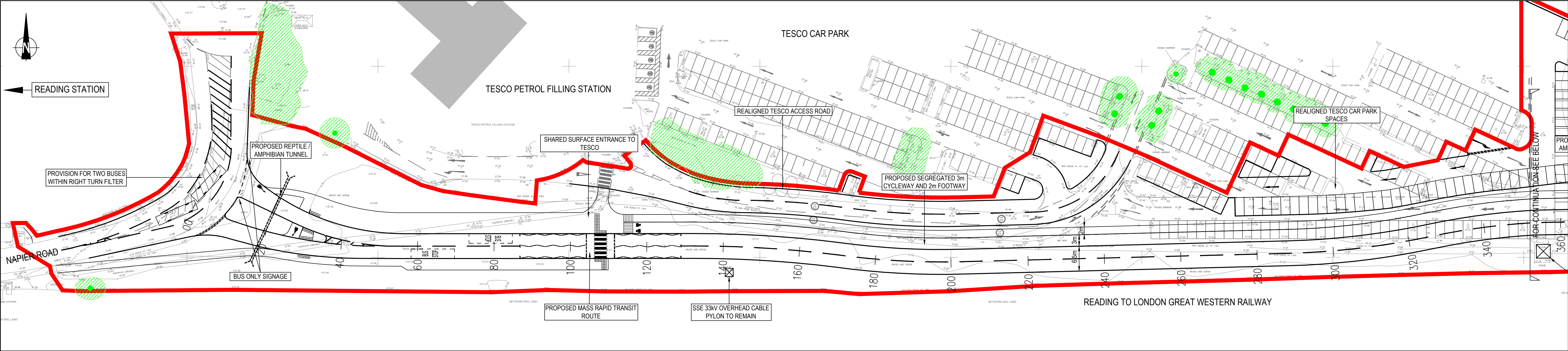
Checked
SE

Revision
A

Drawn
SF

Approved
SM

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 - ALL DIMENSIONS ARE IN METRES UNLESS STATED OTHERWISE.
 - FOR PROPOSED UTILITY DIVERSIONS, REFER TO DRAWING NUMBER 28791/2009/CIV/009.
- KEY:**
- PLANNING APPLICATION BOUNDARY (FOR EXTENTS REFER TO DRAWING NUMBER 28791/2009/CIV/001)
 - OTHER LAND IN APPLICANTS CONTROL
 - EXISTING TREES / VEGETATION TO REMAIN (REFER TO LANDSCAPE DOCUMENTS FOR DETAILS)
 - PROPOSED LOW LEVEL TRAFFIC SIGNALS (OR ALTERNATIVE)

OUTLINE OF PROPOSED PARK AND RIDE DEVELOPMENT
WOKINGHAM BOROUGH COUNCIL PLANNING CONSENT
REFERENCE: 161596 (APPROVED 10/11/16)
FOR PROPOSED SITE CONTEXT INCLUDING PROPOSED
PARK AND RIDE SITE, REFER TO DRAWING NUMBER
28791/2009/CIV/015.

A	REVISED LAOUT	29/06/17	RC	DH	SM	
Mark	Revision	Date	Drawn	Chkd	Appd	

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Drawing Issue Status

FOR PLANNING

EAST READING MASS RAPID TRANSIT
GENERAL ARRANGEMENT PHASE 1B
SGN VALVE DIVERSION
UNDERTAKEN

Client



Reading
Borough Council
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Date of 1st Issue 30.05.2017	Designed LC	Drawn SF
A1 Scale 1:500	Checked SE	Approved SM

Drawing Number

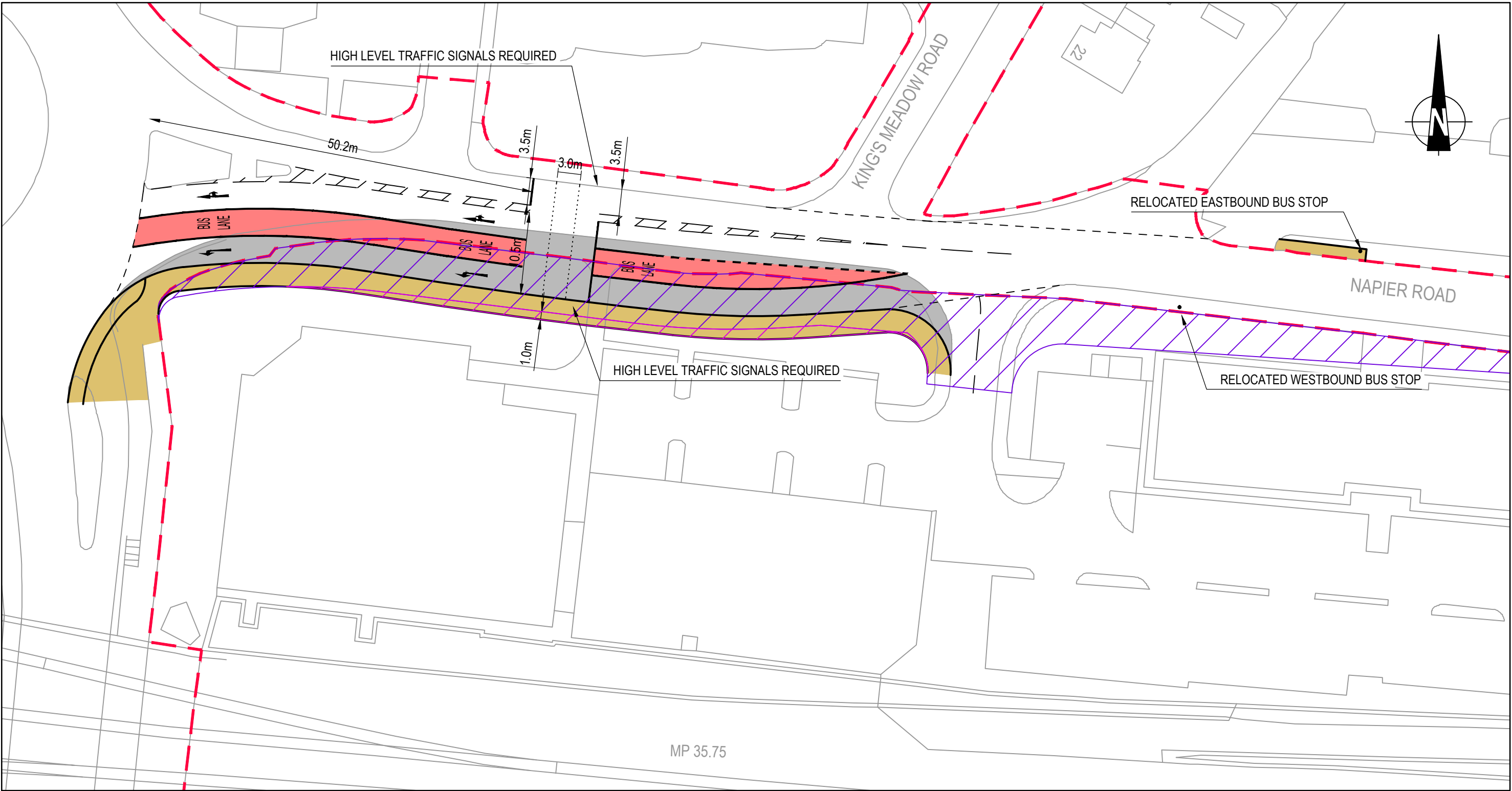
28791/2009/CIV/005

Revision

A



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- Key
- Highway Boundary
 - ▨ Proposed Safeguarded Area for Eastern MRT Route
 - ▨ Potential Safeguarded Area required to facilitate pedestrian crossing and tree mitigation

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MRT EAST

LAND TO BE SAFEGUARDED

REVISED APPROACH ONTO READING BRIDGE ROUNDABOUT

Mark	Revision				Date	Drawn	Chkd	Appd
Drawing Status								
FOR INFORMATION								
Date of 1st Issue		09.03.2016		Drawing Number			Revision	
A3 Scale		1:500		28791/5505/029			-	
Design	GS	Drawn	GS					
Chkd	SCM	Appd						

Appendix A Pedestrian Movement Survey

East Reading Mrt - Manual Traffic Survey, Wednesday 17th August 2011

Produced by Streetwise Services Ltd.



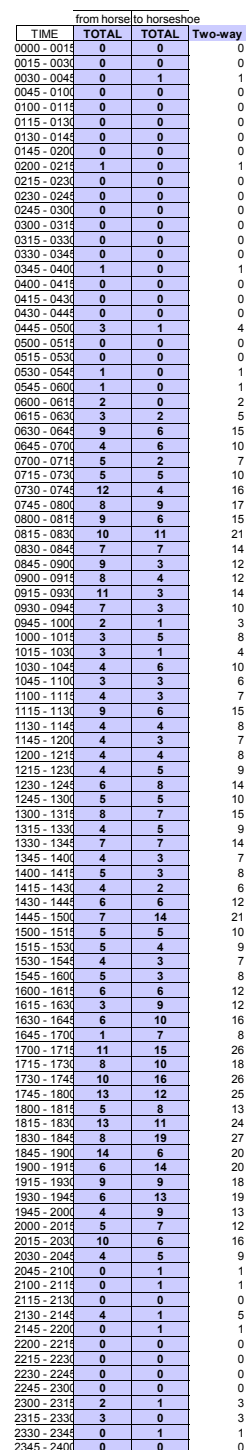
Produced by Streetwise Services Ltd.

TIME	A-B							B-A						
	<16	16-65	>65	LITY	IMPA	PICYCLE	TOTAL	<16	16-65	>65	LITY	IMPA	PICYCLE	TOTAL
0000 - 0015	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0015 - 0030	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0030 - 0045	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0045 - 0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100 - 0115	0	0	0	0	0	0	0	0	4	0	0	0	0	4
0115 - 0130	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0130 - 0145	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0145 - 0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	4	0	0	0	0	4
0200 - 0215	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0215 - 0230	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0230 - 0245	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0245 - 0300	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	2	2	0	0	0	0	0	0	0	0
0300 - 0315	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0315 - 0330	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0330 - 0345	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0345 - 0400	0	1	0	0	0	1	0	0	0	0	0	0	0	0
Hourly Total	0	1	0	0	0	1	0	0	0	0	0	0	0	0
0400 - 0415	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0415 - 0430	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0430 - 0445	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0445 - 0500	0	3	0	0	0	3	0	0	0	0	1	1	1	1
Hourly Total	0	3	0	0	0	3	0	0	0	0	1	1	1	1
0500 - 0515	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0515 - 0530	0	0	0	0	0	0	0	0	0	0	0	1	1	1
0530 - 0545	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0545 - 0600	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	2	2	0	0	0	0	1	1	1	1
0600 - 0615	0	2	0	0	5	7	0	0	0	0	0	0	0	0
0615 - 0630	0	2	0	0	1	3	0	2	0	0	4	6	6	6
0630 - 0645	0	3	0	0	4	7	0	4	0	0	1	5	5	5
0645 - 0700	0	3	0	0	3	6	0	6	0	0	2	8	8	8
Hourly Total	0	10	0	0	10	20	0	12	0	0	7	19	19	19
0700 - 0715	0	2	0	0	3	5	1	6	0	0	6	13	13	13
0715 - 0730	0	4	0	0	5	9	0	8	0	0	5	13	13	13
0730 - 0745	0	3	0	0	9	12	0	4	0	0	5	9	9	9
0745 - 0800	0	8	0	0	12	20	0	2	0	0	12	14	14	14
Hourly Total	0	17	0	0	29	46	1	20	0	0	28	49	49	49
0800 - 0815	0	7	0	0	5	12	0	3	0	0	18	21	21	21
0815 - 0830	1	11	0	0	13	25	0	6	0	0	5	11	11	11
0830 - 0845	1	14	0	0	13	28	0	5	0	0	4	9	9	9
0845 - 0900	0	11	0	0	14	25	1	3	0	0	8	12	12	12
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0915 - 0930	0	5	0	0	6	11	0	4	0	0	2	6	6	6
0930 - 0945	0	3	0	0	6	9	1	5	0	0	4	5	5	5
0945 - 1000	0	2	0	0	7	9	0	0	0	0	2	2	2	2
Hourly Total	0	12	0	0	28	40	0	8	0	0	13	21	21	21
1000 - 1015	1	0	0	0	5	6	0	5	0	0	0	0	0	5
1015 - 1030	0	6	0	0	0	6	0	11	0	0	5	16	16	16
1030 - 1045	0	3	0	0	3	6	0	6	0	0	2	8	8	8
1045 - 1100	0	10	0	0	2	12	1	3	0	0	0	0	4	4
Hourly Total	1	19	0	0	10	30	1	25	0	0	7	33	33	33
1100 - 1115	0	8	0	0	3	11	0	2	0	0	1	3	3	3
1115 - 1130	0	6	0	0	6	12	0	3	0	0	3	6	6	6
1130 - 1145	0	12	0	0	3	15	0	8	0	0	4	12	12	12
1145 - 1200	0	7	0	0	0	7	0	4	0	0	5	9	9	9
Hourly Total	0	33	0	0	12	45	0	17	0	0	13	30	30	30
1200 - 1215	0	7	0	0	1	8	0	10	0	0	2	12	12	12
1215 - 1230	0	13	0	0	2	15	0	10	0	0	2	12	12	12
1230 - 1245	1	12	0	0	1	14	0	9	0	0	1	10	10	10
1245 - 1300	0	13	0	0	5	18	0	20	0	0	6	26	26	26
Hourly Total	1	45	0	0	9	55	0	49	0	0	11	60	60	60
1300 - 1315	0	20	0	0	1	21	2	19	0	0	5	26	26	26
1315 - 1330	3	23	0	0	1	27	2	20	0	0	0	0	22	22
1330 - 1345	0	8	0	0	7	15	2	10	0	0	3	15	15	15
1345 - 1400	0	14	0	0	3	17	0	4	0	0	5	9	9	9
Hourly Total	3	65	0	0	12	80	6	53	0	0	13	72	72	72
1400 - 1415	0	8	0	0	10	18	1	9	0	0	4	14	14	14
1415 - 1430	3	16	0	0	3	22	3	17	0	0	3	23	23	23
1430 - 1445	1	8	0	0	10	19	1	4	0	0	3	8	8	8
1445 - 1500	0	5	0	0	7	12	2	9	0	0	3	14	14	14
Hourly Total	4	37	0	0	30	71	7	39	0	0	13	59	59	59
1500 - 1515	2	8	0	0	7	17	1	5	0	0	5	11	11	11
1515 - 1530	0	6	0	0	8	14	0	3	0	0	1	4	4	4
1530 - 1545	2	6	0	0	10	18	3	8	0	0	4	15	15	15
1545 - 1600	0	1	0	0	3	4	1	7	0	0	1	9	9	9
Hourly Total	4	21	0	0	28	53	5	23	0	0	11	39	39	39
1600 - 1615	0	5	0	0	4	9	0	13	0	0	14	27	27	27
1615 - 1630	1	8	0	0	4	13	2	9	0	0	13	24	24	24
1630 - 1645	0	6	0	0	5	11	0	7	0	0	6	13	13	13
1645 - 1700	2	8	0	0	8	18	0	5	0	0	8	13	13	13
Hourly Total	3	27	0	0	21	51	2	34	0	0	41	77	77	77
1700 - 1715	1	19	0	0	9	29	0	18	0	0	13	31	31	31
1715 - 1730	0	6	0	0	15	21	0	12	0	0	11	23	23	23
1730 - 1745	0	35	0	0	3	38	0	14	0	0	19	33	33	33
1745 - 1800	0	27	0	0	10	37	1	27	0	0	21	49	49	49
Hourly Total	1	87	0	0	37	125	1	71	0	0	64	136	136	136
1800 - 1815	0	15	0	0	7	22	2	27	0	0	8	37	37	37
1815 - 1830	0	12	0	0	18	30	0	14	0	0	16	30	30	30
1830 - 1845	0	15	0	0	8	23	0	23	0	0	13	36	36	36
1845 - 1900	0	16	0	0	12	28	0	13	0	0	7	20	20	20
Hourly Total	0	58	0	0	45	103	2	77	0	0	44	123	123	123
1900 - 1915	0	16	0	0	14	30	0	17	0	0	14	11	28	28
1915 - 1930	0	11	0	0	5	16	0	23	0	0	8	31	31	31
1930 - 1945	0	10	0	0	5	15	0	10	0	0	7	17	17	17
1945 - 2000	0	17	0	0	9	26	0	10	0	0	3	13	13	13
Hourly Total	0	54	0	0	33	87	0	60	0	0	29	89	89	89
2000 - 2015	0	4	0	0	6	10	0	24	0	0	14	38	38	38
2015 - 2030	1	5	0	0	4	10	0	13	0	0	6	19	19	19
2030 - 2045	0	4	0	0	0	4	0	6	0	0	5	11	11	11
2045 - 2100	0	1	0	0	1	2	0	3	0	0	5	8	8	8</

vey, Wednesday 17th August 2016

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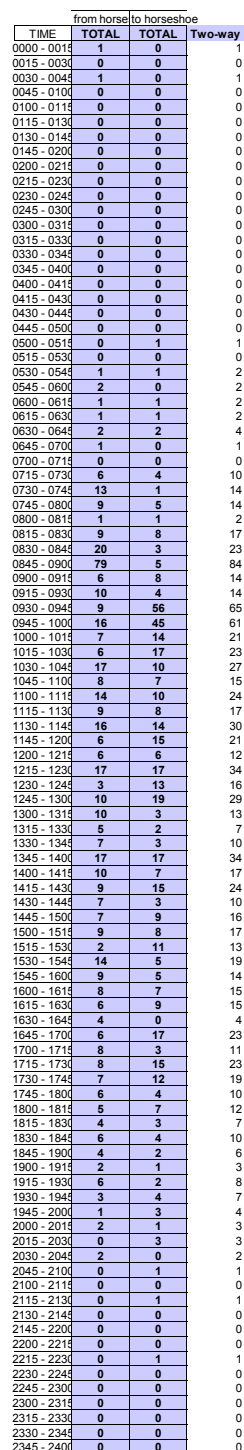
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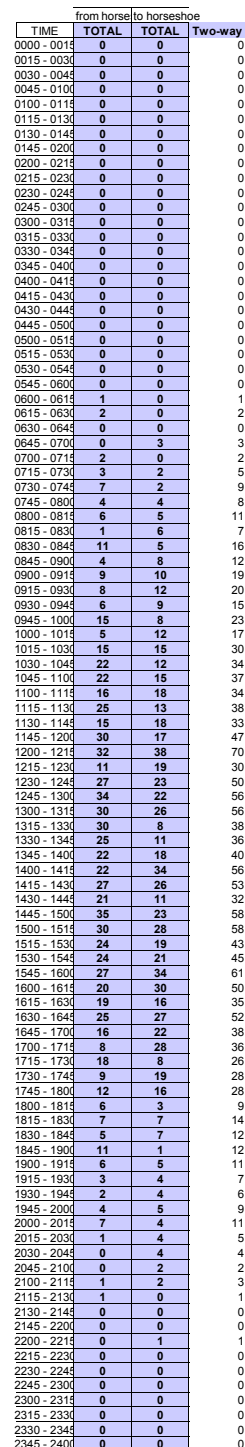
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East Reading Mrt - Manual Traffic Survey, Wednesday 14th September 2016

Produced by Streetwise Services Ltd.



TIME	A-B						B-A							
	<16	16-65	>65	LITY	IMPA	P/CYCLE	TOTAL	<16	16-65	>65	LITY	IMPA	P/CYCLE	TOTAL
0000 - 0015	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0015 - 0030	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0030 - 0045	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0045 - 0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100 - 0115	0	0	0	0	0	0	0	0	0	0	0	0	3	3
0115 - 0130	0	2	0	0	0	0	2	0	0	0	0	0	0	0
0130 - 0145	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0145 - 0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	2	0	0	0	0	2	0	0	0	0	0	3	3
0200 - 0215	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0215 - 0230	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0230 - 0245	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0245 - 0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300 - 0315	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0315 - 0330	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0330 - 0345	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0345 - 0400	0	2	0	0	0	0	2	0	0	0	0	0	0	0
Hourly Total	0	2	0	0	0	0	2	0	0	0	0	0	0	0
0400 - 0415	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0415 - 0430	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0430 - 0445	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0445 - 0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500 - 0515	0	1	0	0	0	0	1	0	0	0	0	0	0	0
0515 - 0530	0	1	0	0	0	0	1	0	0	0	0	0	0	0
0530 - 0545	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0545 - 0600	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Hourly Total	0	2	0	0	0	1	3	0	0	0	0	0	0	0
0600 - 0615	0	0	0	0	0	1	1	0	0	0	0	0	1	1
0615 - 0630	0	0	0	0	0	3	3	0	1	0	0	0	3	4
0630 - 0645	0	1	0	0	0	6	7	0	1	0	0	0	1	2
0645 - 0700	0	4	0	0	0	0	4	0	0	0	0	0	3	3
Hourly Total	0	5	0	0	0	10	15	0	2	0	0	0	8	10
0700 - 0715	0	4	0	0	0	4	8	0	9	0	0	0	3	12
0715 - 0730	0	8	0	0	0	14	14	0	3	0	0	0	2	5
0730 - 0745	1	9	0	0	0	6	16	0	5	0	0	0	4	9
0745 - 0800	0	3	0	0	0	17	20	0	3	0	0	0	8	11
Hourly Total	1	24	0	0	0	33	58	0	20	0	0	0	17	37
0800 - 0815	0	7	0	0	0	13	20	0	6	0	0	0	13	19
0815 - 0830	0	6	0	0	0	16	22	0	2	0	0	0	11	13
0830 - 0845	0	22	0	0	0	14	36	0	1	0	0	0	5	6
0845 - 0900	0	6	0	0	0	13	19	0	3	0	0	0	5	8
Hourly Total	0	41	0	0	0	56	97	0	12	0	0	0	34	46
0900 - 0915	0	8	0	0	0	11	19	0	6	0	0	0	2	8
0915 - 0930	0	5	0	0	0	5	10	0	2	0	0	0	7	9
0930 - 0945	0	4	0	0	0	3	7	0	2	0	0	0	1	3
0945 - 1000	0	1	0	0	0	5	6	0	2	0	0	0	4	6
Hourly Total	0	18	0	0	0	24	42	0	12	0	0	0	14	26
1000 - 1015	0	9	0	0	0	3	12	0	8	0	0	0	8	10
1015 - 1030	1	2	0	0	0	2	5	1	2	0	0	0	3	6
1030 - 1045	0	6	0	0	0	2	8	0	1	0	0	0	2	3
1045 - 1100	0	5	0	0	0	1	6	1	5	0	0	0	2	8
Hourly Total	1	22	0	0	0	8	31	2	16	0	0	0	7	25
1100 - 1115	0	4	0	0	0	4	8	0	3	0	0	0	4	7
1115 - 1130	1	6	0	0	0	2	9	1	12	0	0	0	3	16
1130 - 1145	0	3	0	0	0	3	6	0	4	0	0	0	3	7
1145 - 1200	0	4	0	0	0	3	7	0	6	0	0	0	2	8
Hourly Total	1	17	0	0	0	12	30	1	25	0	0	0	12	38
1200 - 1215	0	7	0	0	0	1	8	0	8	0	0	0	0	8
1215 - 1230	0	9	0	0	0	4	13	0	13	0	0	0	2	15
1230 - 1245	0	21	0	0	0	3	24	0	18	0	0	0	1	22
1245 - 1300	0	9	0	0	0	1	22	0	11	0	0	0	3	14
Hourly Total	0	58	0	0	0	9	67	0	50	0	1	0	8	59
1300 - 1315	0	11	0	0	0	1	12	1	17	0	0	0	2	20
1315 - 1330	0	15	0	0	0	7	22	0	14	0	0	0	5	19
1330 - 1345	0	6	0	0	0	4	10	0	7	0	0	0	2	9
1345 - 1400	0	12	0	0	0	1	13	0	8	0	0	0	4	12
Hourly Total	0	44	0	0	0	13	57	1	46	0	0	0	13	60
1400 - 1415	0	8	0	0	0	4	12	0	3	0	0	0	0	3
1415 - 1430	0	2	0	0	0	8	10	0	6	0	0	0	3	9
1430 - 1445	0	5	0	0	0	3	8	0	2	0	0	0	3	5
1445 - 1500	0	4	0	0	0	2	6	0	4	0	0	0	5	9
Hourly Total	0	19	0	0	0	17	36	0	15	0	0	0	11	26
1500 - 1515	0	3	0	0	0	1	4	0	2	0	0	0	2	4
1515 - 1530	0	2	0	0	0	11	13	0	6	0	0	0	2	8
1530 - 1545	0	3	0	0	0	5	8	0	3	0	0	0	6	9
1545 - 1600	0	11	0	0	0	5	16	0	2	0	0	0	6	8
Hourly Total	0	19	0	0	0	22	41	0	13	0	0	0	16	29
1600 - 1615	0	9	0	0	0	4	13	0	5	0	0	0	6	11
1615 - 1630	0	3	0	0	0	1	4	0	7	0	0	0	9	16
1630 - 1645	0	3	0	0	0	9	12	0	11	0	0	0	7	18
1645 - 1700	0	4	0	0	0	10	14	0	5	0	0	0	13	18
Hourly Total	0	19	0	0	0	24	43	0	28	0	0	0	35	63
1700 - 1715	1	8	0	0	0	7	16	0	15	0	0	0	15	30
1715 - 1730	0	5	0	0	0	4	9	0	12	0	0	0	14	26
1730 - 1745	2	9	0	0	0	13	24	1	15	0	0	0	23	39
1745 - 1800	0	6	0	0	0	17	23	0	8	0	0	0	18	26
Hourly Total	3	28	0	0	0	41	72	1	50	0	0	0	70	121
1800 - 1815	0	6	0	0	0	18	24	0	16	0	0	0	16	32
1815 - 1830	0	14	0	0	0	12	26	0	7	0	0	0	6	13
1830 - 1845	0	11	0	0	0	11	22	0	18	0	0	0	8	26
1845 - 1900	0	10	0	0	0	9	19	1	14	0	0	0	14	29
Hourly Total	0	41	0	0	0	50	91	1	55	0	0	0	44	100
1900 - 1915	0	17	0	0	0	7	24	0	11	0	0	0	12	23
1915 - 1930	0	24	0	0	0	1	25	0	13	0	0	0	6	19
1930 - 1945	1	15	0	0	0	16	1	24	0	0	0	0	6	31
1945 - 2000	0	6	0	0	0	11	17	0	17	0	0	0	5	22
Hourly Total	1	62	0	0	0	19	82	1	65	0	0	0	29	95
2000 - 2015	0	3	0	0	0	2	5	1	8	0	0	0	3	12
2015 - 2030	0	0	0	0	0	0	0	0	2	0	0	0	1	3
2030 - 2045	0	0	0	0	0	1	1	0	1	0	0	0	1	2
2045 - 2100	0	2	0	0	0	0	2	0	1	0	0	0	1	2
Hourly Total	0	5	0	0	0	3	8	1	12	0	0	0	6	19
2100 - 2115	0	2	0	0	0	3	5	0	3	0	0	0	0	3
2115 - 2130	0	0	0	0	0	2	2	0	1	0	0	0	2	3
2130 - 2145	0	1	0	0	0	0	1	0	0	0	0	0	0	0
2145 - 2200	0	0	0	0	0	0	0	0	3	0	0	0	0	3
Hourly Total	0	3	0	0	0	5	8	0	7	0	0	0	2	9
2200 - 2215	0	0	0	0	0	0	0	0	0	0	0	0	4	4
2215 - 2230	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2230 - 2245	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2245 - 2300	0	2	0	0	0	1	3	0	0	0	0	0	0	0
Hourly Total	0	3	0	0	0	1	4	0						

C	B/C	From (start,stop,step)			Time
		start	stop	step	
0	0	0000-0000	0	0	0
0	0	0001-0001	0	0	0
0	0	0010-0010	0	0	0
0	0	0011-0011	0	0	0
0	0	0100-0100	0	0	0
0	0	0101-0101	0	0	0
0	0	0110-0110	0	0	0
0	0	0111-0111	0	0	0
0	0	1000-1000	0	0	0
0	0	1001-1001	0	0	0
0	0	1010-1010	0	0	0
0	0	1011-1011	0	0	0
0	0	1100-1100	0	0	0
0	0	1101-1101	0	0	0
0	0	1110-1110	0	0	0
0	0	1111-1111	0	0	0
0	2	0011-0020	0	0	0
0	2	0101-0110	0	0	0
0	2	0111-0120	0	0	0
0	2	1011-1100	0	0	0
0	2	1101-1110	0	0	0
0	2	1111-1120	0	0	0
0	2	0000-0001	1	1	1
0	2	0001-0002	1	1	1
0	2	0002-0003	1	1	1
0	2	0003-0004	1	1	1
0	2	0004-0005	1	1	1
0	2	0005-0006	1	1	1
0	2	0006-0007	1	1	1
0	2	0007-0008	1	1	1
0	2	0008-0009	1	1	1
0	2	0009-0010	1	1	1
0	2	0010-0011	1	1	1
0	2	0011-0012	1	1	1
0	2	0012-0013	1	1	1
0	2	0013-0014	1	1	1
0	2	0014-0015	1	1	1
0	2	0015-0016	1	1	1
0	2	0016-0017	1	1	1
0	2	0017-0018	1	1	1
0	2	0018-0019	1	1	1
0	2	0019-0020	1	1	1
0	2	0020-0021	1	1	1
0	2	0021-0022	1	1	1
0	2	0022-0023	1	1	1
0	2	0023-0024	1	1	1
0	2	0024-0025	1	1	1
0	2	0025-0026	1	1	1
0	2	0026-0027	1	1	1
0	2	0027-0028	1	1	1
0	2	0028-0029	1	1	1
0	2	0029-0030	1	1	1
0	2	0030-0031	1	1	1
0	2	0031-0032	1	1	1
0	2	0032-0033	1	1	1
0	2	0033-0034	1	1	1
0	2	0034-0035	1	1	1
0	2	0035-0036	1	1	1
0	2	0036-0037	1	1	1
0	2	0037-0038	1	1	1
0	2	0038-0039	1	1	1
0	2	0039-0040	1	1	1
0	2	0040-0041	1	1	1
0	2	0041-0042	1	1	1
0	2	0042-0043	1	1	1
0	2	0043-0044	1	1	1
0	2	0044-0045	1	1	1
0	2	0045-0046	1	1	1
0	2	0046-0047	1	1	1
0	2	0047-0048	1	1	1
0	2	0048-0049	1	1	1
0	2	0049-0050	1	1	1
0	2	0050-0051	1	1	1
0	2	0051-0052	1	1	1
0	2	0052-0053	1	1	1
0	2	0053-0054	1	1	1
0	2	0054-0055	1	1	1
0	2	0055-0056	1	1	1
0	2	0056-0057	1	1	1
0	2	0057-0058	1	1	1
0	2	0058-0059	1	1	1
0	2	0059-0060	1	1	1
0	2	0060-0061	1	1	1
0	2	0061-0062	1	1	1
0	2	0062-0063	1	1	1
0	2	0063-0064	1	1	1
0	2	0064-0065	1	1	1
0	2	0065-0066	1	1	1
0	2	0066-0067	1	1	1
0	2	0067-0068	1	1	1
0	2	0068-0069	1	1	1
0	2	0069-0070	1	1	1
0	2	0070-0071	1	1	1
0	2	0071-0072	1	1	1
0	2	0072-0073	1	1	1
0	2	0073-0074	1	1	1
0	2	0074-0075	1	1	1
0	2	0075-0076	1	1	1
0	2	0076-0077	1	1	1
0	2	0077-0078	1	1	1
0	2	0078-0079	1	1	1
0	2	0079-0080	1	1	1
0	2	0080-0081	1	1	1
0	2	0081-0082	1	1	1
0	2	0082-0083	1	1	1
0	2	0083-0084	1	1	1
0	2	0084-0085	1	1	1
0	2	0085-0086	1	1	1
0	2	0086-0087	1	1	1
0	2	0087-0088	1	1	1
0	2	0088-0089	1	1	1
0	2	0089-0090	1	1	1
0	2	0090-0091	1	1	1
0	2	0091-0092	1	1	1
0	2	0092-0093	1	1	1
0	2	0093-0094	1	1	1
0	2	0094-0095	1	1	1
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0	2	0097-0098	1	1	1
0	2	0098-0099	1	1	1
0	2	0099-0100	1	1	1
0	2	0100-0101	1	1	1
0	2	0101-0102	1	1	1
0	2	0102-0103	1	1	1
0	2	0103-0104	1	1	1
0	2	0104-0105	1	1	1
0	2	0105-0106	1	1	1
0	2	0106-0107	1	1	1
0	2	0107-0108	1	1	1
0	2	0108-0109	1	1	1
0	2	0109-0110	1	1	1
0	2	0110-0111	1	1	1
0	2	0111-0112	1	1	1
0	2	0112-0113	1	1	1
0	2	0113-0114	1	1	1
0	2	0114-0115	1	1	1
0	2	0115-0116	1	1	1
0	2	0116-0117	1	1	1
0	2	0117-0118	1	1	1
0	2	0118-0119	1	1	1
0	2	0119-0120	1	1	1
0	2	0120-0121	1	1	1
0	2	0121-0122	1	1	1
0	2	0122-0123	1	1	1
0	2	0123-0124	1	1	1
0	2	0124-0125	1	1	1
0	2	0125-0126	1	1	1
0	2	0126-0127	1	1	1
0	2	0127-0128	1	1	1
0	2	0128-0129	1	1	1
0	2	0129-0130	1	1	1
0	2	0130-0131	1	1	1
0	2	0131-0132	1	1	1
0	2	0132-0133	1	1	1
0	2	0133-0134	1	1	1
0	2	0134-0135	1	1	1
0	2	0135-0136	1	1	1
0	2	0136-0137	1	1	1
0	2	0137-0138	1	1	1
0	2	0138-0139	1	1	1
0	2	0139-0140	1	1	1
0	2	0140-0141	1	1	1
0	2	0141-0142	1	1	1
0	2	0142-0143	1	1	1
0	2	0143-0144	1	1	1
0	2	0144-0145	1	1	1
0	2	0145-0146	1	1	1
0	2	0146-0147	1	1	1
0	2	0147-0148	1	1	1
0	2	0148-0149	1	1	1
0	2	0149-0150	1	1	1
0	2	0150-0151	1	1	1
0	2	0151-0152	1	1	1
0	2	0152-0153	1	1	1
0	2	0153-0154	1	1	1
0	2	0154-0155	1	1	1
0	2	0155-0156	1	1	1
0	2	0156-0157	1	1	1
0	2	0157-0158	1	1	1
0	2	0158-0159	1	1	1
0	2	0159-0160	1	1	1
0	2	0160-0161	1	1	1
0	2	0161-0162	1	1	1
0	2	0162-0163	1	1	1
0	2	0163-0164	1	1	1
0	2	0164-0165	1	1	1
0	2	0165-0166	1	1	1
0	2	0166-0167	1	1	1
0	2	0167-0168	1	1	1
0	2	0168-0169	1	1	1
0	2	0169-0170	1	1	1
0	2	0170-0171	1	1	1
0	2	0171-0172	1	1	1
0	2	0172-0173	1	1	1
0	2	0173-0174	1	1	1
0	2	0174-0175	1	1	1
0	2	0175-0176	1	1	1
0	2	0176-0177	1	1	1
0	2	0177-0178	1	1	1
0	2	0178-0179	1	1	1
0	2	0179-0180	1	1	1
0	2	0180-0181	1	1	1
0	2	0181-0182	1	1	1
0	2	0182-0183	1	1	1
0	2	0183-0184	1	1	1
0	2	0184-0185	1	1	1
0	2	0185-0186	1	1	1
0	2	0186-0187	1	1	1
0	2	0187-0188	1	1	1
0	2	0188-0189	1	1	1
0	2	0189-0190	1	1	1
0	2	0190-0191	1	1	1
0	2	0191-0192	1	1	1
0	2	0192-0193	1	1	1
0	2	0193-0194	1	1	1
0	2	0194-0195	1	1	1
0	2	0195-0196	1	1	1
0	2	0196-0197	1	1	1
0	2	0197-0198	1	1	1
0	2	0198-0199	1	1	1
0	2	0199-0200	1	1	1
0	2	0200-0201	1	1	1
0	2	0201-0202	1	1	1
0	2	0202-0203	1	1	1
0	2	0203-0204	1	1	1
0	2	0204-0205	1	1	1
0	2	0205-0206	1	1	1
0	2	0206-0207	1	1	1
0	2	0207-0208	1	1	1
0	2	0208-0209	1	1	1
0	2	0209-0210	1	1	1
0	2	0210-0211	1	1	1
0	2	0211-0212	1	1	1
0	2	0212-0213	1	1	1
0	2	0213-0214	1	1	1
0	2	0214-0215	1	1	1
0	2	0215-0216	1	1	1
0	2	0216-0217	1	1	1
0	2	0217-0218	1	1	1
0	2	0218-0219	1	1	1
0	2	0219-0220	1	1	1
0	2	0220-0221	1	1	1
0	2	0221-0222	1	1	1
0	2	0222-0223	1	1	1
0	2	0223-0224	1	1	1
0	2	0224-0225	1	1	1
0	2	0225-0226	1	1	1
0	2	0226-0227	1	1	1
0	2	0227-0228	1	1	1
0	2	0228-0229	1	1	1
0	2	0229-0230	1	1	1
0	2	0230-0231	1	1	1
0	2	0231-0232	1	1	1
0	2	0232-0233	1	1	1
0	2	0233-0234	1	1	1
0	2	0234-0235			

East Reading Mrt - Manual Traffic Survey, Friday 16th Septemeber 2016

Produced by Streetwise Services Ltd.



TIME	A-B						B-A							
	<16	16-65	>65	LITY	IMPA	PICYCLE	TOTAL	<16	16-65	>65	LITY	IMPA	PICYCLE	TOTAL
0000 - 0015	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0015 - 0030	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0030 - 0045	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0045 - 0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100 - 0115	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0115 - 0130	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0130 - 0145	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0145 - 0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200 - 0215	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0215 - 0230	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0230 - 0245	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0245 - 0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300 - 0315	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0315 - 0330	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0330 - 0345	0	1	0	0	0	0	1	0	0	0	0	0	0	0
0345 - 0400	0	1	0	0	0	0	1	0	0	0	0	0	0	0
Hourly Total	0	2	0	0	0	0	2	0	0	0	0	0	0	0
0400 - 0415	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0415 - 0430	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0430 - 0445	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0445 - 0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500 - 0515	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0515 - 0530	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0530 - 0545	0	0	0	0	1	1	1	0	0	0	0	0	0	0
0545 - 0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	1	1	1	0	0	0	0	0	0	0
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0615 - 0630	0	0	0	0	1	1	1	0	0	0	0	1	1	1
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0645 - 0700	0	2	0	0	0	0	2	0	0	0	0	2	2	2
Hourly Total	0	2	0	0	1	1	3	0	0	0	0	3	3	3
0700 - 0715	0	3	0	0	0	0	3	0	6	0	0	1	7	7
0715 - 0730	0	1	0	0	1	2	2	0	2	0	1	1	3	4
0730 - 0745	0	1	0	0	3	4	4	0	0	0	0	3	3	3
0745 - 0800	0	0	0	0	1	1	0	0	0	0	0	3	3	3
Hourly Total	0	5	0	0	5	10	0	8	0	0	0	8	16	16
0800 - 0815	0	4	0	0	5	9	0	1	0	0	4	5	5	5
0815 - 0830	0	2	0	0	6	8	0	1	0	0	3	4	4	4
0830 - 0845	0	5	0	0	3	8	0	1	0	0	2	3	3	3
0845 - 0900	0	6	0	0	9	15	0	0	0	0	2	2	2	2
Hourly Total	0	17	0	0	23	40	0	3	0	0	11	14	14	14
0900 - 0915	0	4	0	0	3	7	0	0	0	0	4	4	4	4
0915 - 0930	0	5	0	0	2	7	0	2	0	0	1	3	3	3
0930 - 0945	0	4	0	0	1	5	0	6	0	0	1	7	7	7
0945 - 1000	0	5	0	0	2	7	0	0	0	0	0	0	0	0
Hourly Total	0	18	0	0	8	26	0	8	0	0	6	14	14	14
1000 - 1015	0	1	0	0	2	3	0	5	0	0	0	5	5	5
1015 - 1030	0	0	0	0	1	1	0	0	0	0	0	0	0	0
1030 - 1045	0	3	0	0	3	6	0	1	0	0	2	3	3	3
1045 - 1100	0	0	0	0	2	2	0	0	0	0	0	0	0	0
Hourly Total	0	4	0	0	8	12	0	6	0	0	2	8	8	8
1100 - 1115	0	0	0	0	1	1	0	2	0	0	2	4	4	4
1115 - 1130	0	2	0	0	1	3	0	2	0	0	2	4	4	4
1130 - 1145	0	1	0	0	2	3	0	1	0	0	1	2	2	2
1145 - 1200	0	2	0	0	0	2	1	6	0	0	2	9	9	9
Hourly Total	0	5	0	0	4	9	1	11	0	0	7	19	19	19
1200 - 1215	0	1	0	0	3	4	0	3	0	0	2	5	5	5
1215 - 1230	0	20	0	0	5	25	0	0	0	0	3	3	3	3
1230 - 1245	0	1	0	0	13	14	0	1	7	0	7	0	0	0
1245 - 1300	0	3	0	0	1	4	0	5	0	0	0	5	5	5
Hourly Total	0	25	0	0	22	47	0	15	0	0	5	20	20	20
1300 - 1315	0	3	0	0	3	6	0	8	0	0	0	8	8	8
1315 - 1330	0	6	0	0	0	6	0	3	0	0	3	6	6	6
1330 - 1345	0	5	0	0	1	6	0	2	0	0	3	5	5	5
1345 - 1400	0	4	0	0	2	6	0	3	0	0	0	3	3	3
Hourly Total	0	18	0	0	6	24	0	16	0	0	6	22	22	22
1400 - 1415	0	0	0	0	0	0	0	2	0	0	1	3	3	3
1415 - 1430	0	3	0	0	1	4	0	4	0	0	0	4	4	4
1430 - 1445	0	0	0	0	2	2	0	0	0	0	1	1	1	1
1445 - 1500	1	3	0	0	1	5	0	2	0	0	1	3	3	3
Hourly Total	1	6	0	0	4	11	0	8	0	0	3	11	11	11
1500 - 1515	0	5	0	0	0	5	0	1	0	0	0	1	1	1
1515 - 1530	0	1	0	0	4	5	0	2	0	0	2	4	4	4
1530 - 1545	0	4	0	0	1	5	0	5	0	0	3	8	8	8
1545 - 1600	0	6	0	0	1	7	0	7	0	0	4	11	11	11
Hourly Total	0	16	0	0	6	22	0	15	0	0	9	24	24	24
1600 - 1615	0	6	0	0	1	7	0	6	0	0	1	7	7	7
1615 - 1630	0	3	0	0	4	7	0	6	0	0	1	7	7	7
1630 - 1645	0	3	0	0	6	9	0	8	0	0	4	12	12	12
1645 - 1700	0	2	0	0	6	8	0	6	0	0	6	12	12	12
Hourly Total	0	14	0	0	17	31	0	26	0	0	12	38	38	38
1700 - 1715	1	5	0	0	3	9	2	9	0	0	13	24	24	24
1715 - 1730	0	7	0	0	4	11	0	10	0	0	7	17	17	17
1730 - 1745	0	3	0	0	3	6	0	9	0	0	7	16	16	16
1745 - 1800	0	4	0	0	4	8	1	8	0	0	6	15	15	15
Hourly Total	1	19	0	0	14	34	3	36	0	0	33	72	72	72
1800 - 1815	0	5	0	0	6	11	0	12	0	0	9	21	21	21
1815 - 1830	0	7	0	0	6	13	0	4	0	0	7	11	11	11
1830 - 1845	0	7	0	0	3	10	0	7	0	0	1	8	8	8
1845 - 1900	0	4	0	0	2	6	0	7	0	0	5	12	12	12
Hourly Total	0	23	0	0	17	40	0	30	0	0	22	52	52	52
1900 - 1915	0	6	0	0	2	8	0	5	0	0	2	7	7	7
1915 - 1930	0	5	0	0	0	5	0	3	0	0	2	5	5	5
1930 - 1945	2	4	0	0	3	9	2	4	0	0	0	6	6	6
1945 - 2000	0	0	0	0	0	0	0	3	0	0	0	3	3	3
Hourly Total	2	15	0	0	5	22	2	15	0	0	4	21	21	21
2000 - 2015	0	1	0	0	0	1	0	1	0	0	0	1	1	1
2015 - 2030	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2030 - 2045	0	0	0	0	0	0	0	1	0	0	0	1	1	1
2045 - 2100	0	0	0	0	0	0	0	1	0	0	1	2	2	2
Hourly Total	0	1	0	0	0	1	0	3	0	0	1	4	4	4
2100 - 2115	0	0	0	0	0	0	0	0	0	0	1	1	1	1
2115 - 2130	0	1	0	0	0	1	0	1	0	0	0	1	1	1
2130 - 2145	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2145 - 2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	1	0	0	0	1	0	1	0	0	1	2	2	2
2200 - 2215	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2215 - 2230	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2230 - 2245	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2245 - 2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300 - 2315	0	0	0	0										

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0200 - 0215	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0215 - 0230	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0230 - 0245	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0245 - 0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300 - 0315	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0315 - 0330	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0330 - 0345	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0345 - 0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400 - 0415	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0415 - 0430	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0430 - 0445	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0445 - 0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500 - 0515	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0515 - 0530	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0530 - 0545	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0545 - 0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0	0	1	1
0645 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	1	1
0700 - 0715	0	0	0	0	0	0	0	1	0	0	0	0	0	0
0715 - 0730	0	2	0	0	0	2	0	0	0	0	0	0	0	0
0730 - 0745	0	3	0	0	5	8	0	1	0	1	0	0	2	3
0745 - 0800	0	4	0	0	3	7	0	3	0	0	0	0	1	4
Hourly Total	0	9	0	0	8	17	0	5	0	0	0	0	3	8
0800 - 0815	0	2	0	0	3	5	1	5	0	0	1	1	7	7
0815 - 0830	0	4	0	0	0	4	0	3	0	0	0	1	4	4
0830 - 0845	0	14	0	0	10	24	0	3	0	0	1	4	4	4
0845 - 0900	0	54	0	0	19	73	0	5	0	0	1	6	6	6
Hourly Total	0	74	0	0	32	106	1	16	0	0	4	21	4	21
0900 - 0915	0	6	0	0	1	7	0	7	0	0	1	8	8	8
0915 - 0930	0	11	0	0	2	13	0	13	0	0	3	16	16	16
0930 - 0945	0	7	0	0	2	9	0	48	0	0	21	69	69	69
0945 - 1000	1	14	0	0	7	17	0	12	0	0	10	10	22	22
Hourly Total	1	38	0	0	7	46	0	80	0	0	35	115	115	115
1000 - 1015	0	8	0	0	1	9	1	19	0	0	8	28	28	28
1015 - 1030	0	2	0	0	1	3	0	9	0	0	3	12	12	12
1030 - 1045	0	8	0	0	3	11	0	7	0	0	4	11	11	11
1045 - 1100	0	12	0	0	2	14	0	4	0	0	4	8	8	8
Hourly Total	0	30	0	0	7	37	1	39	0	0	19	59	59	59
1100 - 1115	0	8	0	0	3	11	0	5	0	0	3	8	8	8
1115 - 1130	0	11	0	0	0	11	0	12	0	0	9	21	21	21
1130 - 1145	0	11	0	0	9	20	0	13	0	0	4	17	17	17
1145 - 1200	0	2	0	0	3	5	0	12	0	0	1	13	13	13
Hourly Total	0	32	0	0	15	47	0	42	0	0	17	59	59	59
1200 - 1215	0	17	0	0	5	22	0	17	0	0	5	19	19	19
1215 - 1230	0	7	0	0	6	13	3	14	0	0	6	23	23	23
1230 - 1245	0	8	0	0	4	12	0	3	0	0	1	4	4	4
1245 - 1300	0	8	0	0	9	17	0	9	0	0	0	9	9	9
Hourly Total	0	40	0	0	24	64	4	39	0	0	12	55	55	55
1300 - 1315	0	5	0	0	5	10	0	7	0	0	9	16	16	16
1315 - 1330	0	5	0	0	5	10	1	5	0	0	1	7	7	7
1330 - 1345	1	4	0	0	2	7	0	10	0	0	2	12	12	12
1345 - 1400	1	10	0	0	3	14	0	7	0	0	1	8	8	8
Hourly Total	2	24	0	0	15	41	1	29	0	0	13	43	43	43
1400 - 1415	1	11	0	0	1	13	0	4	0	0	6	10	10	10
1415 - 1430	0	7	0	0	3	10	0	6	0	0	1	7	7	7
1430 - 1445	0	9	0	0	6	15	0	14	0	0	1	15	15	15
1445 - 1500	0	16	0	0	0	16	0	9	0	0	6	15	15	15
Hourly Total	1	43	0	0	10	54	0	33	0	0	14	47	47	47
1500 - 1515	2	9	0	0	2	13	0	2	0	0	3	5	5	5
1515 - 1530	0	18	0	0	0	18	0	6	0	0	3	9	9	9
1530 - 1545	0	6	0	0	7	13	3	5	0	0	2	10	10	10
1545 - 1600	0	7	0	0	0	7	1	11	0	0	3	15	15	15
Hourly Total	2	40	0	0	9	51	4	24	0	0	11	39	39	39
1600 - 1615	1	6	0	0	4	11	2	13	0	0	1	16	16	16
1615 - 1630	0	15	0	0	2	17	0	8	0	0	3	11	11	11
1630 - 1645	1	7	0	0	2	10	0	6	0	0	0	6	6	6
1645 - 1700	0	12	0	0	2	14	0	5	0	0	0	5	5	5
Hourly Total	2	40	0	0	10	52	2	32	0	0	4	38	38	38
1700 - 1715	0	4	0	0	11	15	0	3	0	0	0	4	3	3
1715 - 1730	0	9	0	0	5	14	0	16	0	0	4	20	20	20
1730 - 1745	2	9	0	0	2	13	0	5	0	0	4	9	9	9
1745 - 1800	0	3	0	0	2	5	0	0	0	0	9	9	9	9
Hourly Total	2	25	0	0	20	47	0	24	0	0	17	41	41	41
1800 - 1815	0	3	0	0	2	5	0	7	0	0	2	9	9	9
1815 - 1830	0	7	0	0	3	10	0	2	0	0	2	4	4	4
1830 - 1845	0	4	0	0	2	6	0	13	0	0	0	13	13	13
1845 - 1900	1	9	0	0	0	10	0	7	0	0	1	8	8	8
Hourly Total	1	23	0	0	7	31	0	29	0	0	5	34	34	34
1900 - 1915	0	1	0	0	0	1	0	1	0	0	4	5	5	5
1915 - 1930	0	4	0	0	0	4	3	0	0	0	1	4	4	4
1930 - 1945	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1945 - 2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	5	0	0	0	5	0	4	0	0	5	9	9	9
2000 - 2015	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2015 - 2030	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2030 - 2045	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2045 - 2100	0	0	0	0	0	0	0	0	0	0	1	1	1	1
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	1	1	1
2100 - 2115	0	0	0	0	0	0	0	0	0	0	0	1	1	1
2115 - 2130	0	0	0	0	0	0	0	0	0	0	0	1	1	1
2130 - 2145	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2145 - 2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	2	2	2
2200 - 2215	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2215 - 2230	0	0	0	0	0	0	0	0	0	0	0	1	1	1
2230 - 2245	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2245 - 2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	1	1	1
2300 - 2315	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2315 - 2330	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2330 - 2345	0	0	0	0	0	0	0	0	0	0	0	1	1	1
2345 - 2400	0													

	from horse to horsehoe		
TIME	TOTAL	TOTAL	Two-way
0000 - 0010	0	0	0
0015 - 0030	0	0	0
0030 - 0045	0	0	0
0045 - 0100	0	0	0
0100 - 0115	0	0	0
0115 - 0130	0	0	0
0130 - 0145	0	0	0
0145 - 0200	0	0	0
0200 - 0215	0	0	0
0215 - 0230	0	0	0
0230 - 0245	0	0	0
0245 - 0300	0	0	0
0300 - 0315	0	0	0
0315 - 0330	0	0	0
0330 - 0345	0	0	0
0345 - 0400	0	0	0
0400 - 0415	0	0	0
0415 - 0430	0	0	0
0430 - 0445	0	0	0
0445 - 0500	0	0	0
0500 - 0515	0	0	0
0515 - 0530	0	0	0
0530 - 0545	0	0	0
0545 - 0600	0	0	0
0600 - 0615	0	0	0
0615 - 0630	0	0	0
0630 - 0645	0	1	1
0645 - 0700	0	0	0
0700 - 0715	0	1	2
0715 - 0730	2	0	1
0730 - 0745	8	3	11
0745 - 0800	7	4	11
0800 - 0815	5	7	12
0815 - 0830	4	4	8
0830 - 0845	23	4	28
0845 - 0900	73	6	79
0900 - 0915	7	8	15
0915 - 0930	13	16	29
0930 - 0945	9	69	78
0945 - 1000	17	22	39
1000 - 1015	9	28	37
1015 - 1030	3	12	15
1030 - 1045	11	11	22
1045 - 1100	14	8	22
1100 - 1115	11	8	19
1115 - 1130	13	8	32
1130 - 1145	20	17	37
1145 - 1200	5	13	18
1200 - 1215	22	19	41
1215 - 1230	13	23	36
1230 - 1245	12	4	16
1245 - 1300	17	9	26
1300 - 1315	10	16	26
1315 - 1330	10	7	17
1330 - 1345	7	12	19
1345 - 1400	14	8	22
1400 - 1415	13	10	23
1415 - 1430	10	7	17
1430 - 1445	15	15	30
1445 - 1500	16	15	31
1500 - 1515	13	5	18
1515 - 1530	18	9	27
1530 - 1545	13	10	23
1545 - 1600	7	15	22
1600 - 1615	11	16	27
1615 - 1630	17	11	28
1630 - 1645	10	6	16
1645 - 1700	14	5	19
1700 - 1715	15	3	18
1715 - 1730	14	20	34
1730 - 1745	13	9	22
1745 - 1800	5	9	14
1800 - 1815	5	9	14
1815 - 1830	10	4	14
1830 - 1845	6	13	19
1845 - 1900	10	8	18
1900 - 1915	1	5	6
1915 - 1930	4	4	8
1930 - 1945	0	0	0
1945 - 2000	0	0	0
2000 - 2015	0	0	0
2015 - 2030	0	0	0
2030 - 2045	0	0	0
2045 - 2100	0	1	1
2100 - 2115	0	1	1
2115 - 2130	0	1	1
2130 - 2145	0	0	0
2145 - 2200	0	0	0
2200 - 2215	0	0	0
2215 - 2230	0	1	1
2230 - 2245	0	0	0
2245 - 2300	0	0	0
2300 - 2315	0	0	0
2315 - 2330	0	0	0
2330 - 2345	0	1	1
2345 - 2400	0	0	0



East Reading Mrt - Manual Traffic Survey, Sunday 18th September 2016

Produced by Streetwise Services Ltd.

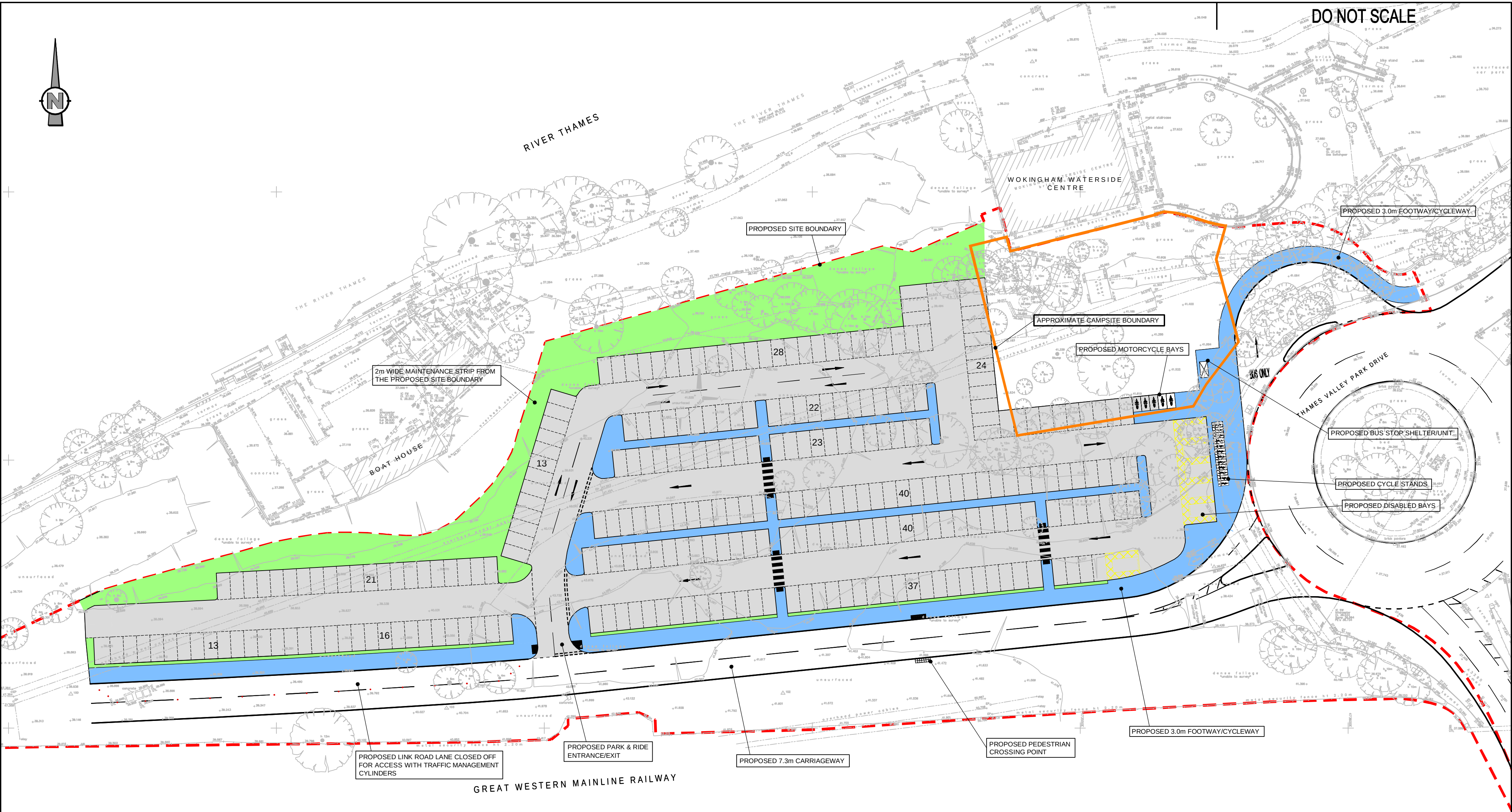


TIME	A-B						B-A							
	<16	16-65	>65	LITY	IMPA	P/CYCLE	TOTAL	<16	16-65	>65	LITY	IMPA	P/CYCLE	TOTAL
0000 - 0015	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0015 - 0030	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0030 - 0045	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0045 - 0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100 - 0115	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0115 - 0130	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0130 - 0145	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0145 - 0200	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	1	1	1
0200 - 0215	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0215 - 0230	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0230 - 0245	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0245 - 0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300 - 0315	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0315 - 0330	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0330 - 0345	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0345 - 0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400 - 0415	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0415 - 0430	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0430 - 0445	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0445 - 0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500 - 0515	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0515 - 0530	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0530 - 0545	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0545 - 0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600 - 0615	0	1	0	0	1	2	2	0	0	0	0	0	0	0
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0645 - 0700	0	1	0	0	0	1	1	0	0	0	0	1	1	1
Hourly Total	0	2	0	0	1	3	3	0	0	0	0	1	1	1
0700 - 0715	0	3	0	0	0	3	3	0	3	0	0	0	0	3
0715 - 0730	0	1	0	0	5	6	6	1	0	0	0	0	1	8
0730 - 0745	0	2	0	0	1	3	3	0	1	0	0	0	1	2
0745 - 0800	0	5	0	0	5	10	10	1	0	0	0	1	2	13
Hourly Total	0	11	0	0	11	22	22	0	6	0	0	1	7	13
0800 - 0815	0	2	0	0	2	4	4	0	1	0	0	0	1	5
0815 - 0830	0	6	0	0	0	6	6	0	2	0	0	2	4	12
0830 - 0845	0	1	0	0	1	2	2	0	5	0	0	1	6	13
0845 - 0900	0	3	0	0	0	3	3	0	3	0	0	1	4	10
Hourly Total	0	12	0	0	3	15	15	0	11	0	0	4	15	26
0900 - 0915	0	4	0	0	0	4	4	0	1	0	0	2	3	7
0915 - 0930	0	4	0	0	6	10	10	0	8	0	0	0	8	18
0930 - 0945	0	15	0	0	2	17	17	0	8	0	0	0	8	25
0945 - 1000	0	10	0	0	4	14	14	0	13	0	0	5	18	32
Hourly Total	0	33	0	0	12	45	45	0	30	0	0	7	37	48
1000 - 1015	0	4	0	0	3	7	7	0	10	0	0	3	13	21
1015 - 1030	1	10	0	0	5	16	16	0	13	0	0	2	15	31
1030 - 1045	0	14	0	0	2	16	16	1	13	0	0	7	21	38
1045 - 1100	0	8	0	0	0	8	8	2	12	0	0	2	16	26
Hourly Total	1	36	0	0	10	47	47	3	48	0	0	14	65	54
1100 - 1115	0	14	0	0	12	26	26	0	9	0	0	5	14	40
1115 - 1130	0	14	0	0	7	21	21	1	8	0	0	3	12	33
1130 - 1145	0	14	0	0	6	20	20	1	17	0	0	4	22	42
1145 - 1200	2	13	0	0	8	23	23	0	12	0	0	5	17	40
Hourly Total	2	55	0	0	33	90	90	2	46	0	0	17	65	48
1200 - 1215	0	12	0	0	0	12	12	0	5	0	0	4	9	21
1215 - 1230	6	19	0	0	4	29	29	2	17	0	0	0	19	50
1230 - 1245	1	13	0	0	3	17	17	1	18	0	0	7	26	47
1245 - 1300	1	19	0	0	3	23	23	0	15	0	0	4	19	54
Hourly Total	8	63	0	0	10	81	81	3	55	0	0	15	73	41
1300 - 1315	0	7	0	0	7	14	14	0	12	0	0	2	14	28
1315 - 1330	0	13	0	0	7	20	20	1	13	0	0	8	22	30
1330 - 1345	1	24	0	0	5	30	30	0	12	0	0	12	24	44
1345 - 1400	0	12	0	0	10	22	22	6	12	0	0	11	29	50
Hourly Total	1	56	0	0	29	86	86	7	49	0	0	33	89	36
1400 - 1415	0	13	0	0	2	15	15	1	4	0	0	5	10	27
1415 - 1430	0	18	0	0	4	22	22	0	14	0	0	4	18	30
1430 - 1445	2	12	0	0	5	19	19	0	11	0	0	8	19	25
1445 - 1500	0	14	0	0	5	19	19	4	17	0	0	8	29	23
Hourly Total	2	57	0	0	16	75	75	5	46	0	0	25	76	18
1500 - 1515	0	19	0	0	6	25	25	1	18	0	0	4	23	17
1515 - 1530	1	17	0	0	12	30	30	0	15	0	0	5	20	26
1530 - 1545	1	18	0	0	4	23	23	0	19	0	0	5	24	31
1545 - 1600	1	18	0	0	10	29	29	3	12	0	0	10	25	38
Hourly Total	3	72	0	0	32	107	107	4	64	0	0	24	92	1
1600 - 1615	2	16	0	0	4	22	22	0	14	0	0	5	19	2
1615 - 1630	0	17	0	0	8	25	25	1	9	0	1	5	16	1
1630 - 1645	0	12	0	0	9	21	21	0	22	0	0	7	29	0
1645 - 1700	0	12	0	1	2	15	15	1	21	0	0	7	29	0
Hourly Total	2	57	0	1	23	83	83	2	66	0	1	24	93	3
1700 - 1715	0	9	0	1	2	12	12	0	19	0	1	4	24	0
1715 - 1730	1	10	0	0	1	12	12	2	12	0	0	8	22	0
1730 - 1745	0	15	0	0	5	20	20	0	10	0	0	7	17	0
1745 - 1800	1	10	0	0	2	13	13	0	9	0	0	8	17	0
Hourly Total	2	44	0	1	10	57	57	2	50	0	1	27	80	0
1800 - 1815	1	7	0	0	7	15	15	1	8	0	0	1	10	0
1815 - 1830	2	5	0	0	3	10	10	1	7	0	0	5	13	0
1830 - 1845	0	7	0	0	3	10	10	1	5	0	0	2	8	0
1845 - 1900	0	4	0	0	0	4	4	2	7	0	0	4	13	0
Hourly Total	3	23	0	0	13	39	39	5	27	0	0	12	44	0
1900 - 1915	0	6	0	0	0	6	6	2	14	0	0	4	20	0
1915 - 1930	0	3	0	0	0	3	3	0	12	0	0	3	15	0
1930 - 1945	0	1	0	0	0	1	1	0	1	0	0	1	2	0
1945 - 2000	0	0	0	0	0	0	0	0	0	0	0	1	1	0
Hourly Total	0	10	0	0	0	10	10	2	27	0	0	9	38	0
2000 - 2015	0	1	0	0	0	1	1	0	0	0	0	1	1	0
2015 - 2030	0	0	0	0	0	0	0	0	1	0	0	0	1	0
2030 - 2045	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2045 - 2100	0	0	0	0	3	3	3	0	4	0	0	0	4	0
Hourly Total	0	1	0	0	3	4	4	0	5	0	0	1	6	0
2100 - 2115	0	1	0	0	2	3	3	0	0	0	0	0	0	0
2115 - 2130	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2130 - 2145	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2145 - 2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	1	0	0	2	3	3	0	0	0	0	0	0	0
2200 - 2215	0	0	0	0	0	0	0	0	0	0	0	1	1	0
2215 - 2230	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2230 - 2245	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2245 - 2300	0	0	0	0	1	1	1</							

A-B												A-C												B-A												B-C												C-A												C-B												From last 100 rows																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
TIME	15S	45S	1H	1H30	2H	3H	4H	5H	6H	7H	8H	9H	10H	11H	12H	13H	14H	15H	16H	17H	18H	19H	20H	21H	22H	23H	24H	25H	26H	27H	28H	29H	30H	31H	32H	33H	34H	35H	36H	37H	38H	39H	40H	41H	42H	43H	44H	45H	46H	47H	48H	49H	50H	51H	52H	53H	54H	55H	56H	57H	58H	59H	60H	61H	62H	63H	64H	65H	66H	67H	68H	69H	70H	71H	72H	73H	74H	75H	76H	77H	78H	79H	80H	81H	82H	83H	84H	85H	86H	87H	88H	89H	90H	91H	92H	93H	94H	95H	96H	97H	98H	99H	100H	101H	102H	103H	104H	105H	106H	107H	108H	109H	110H	111H	112H	113H	114H	115H	116H	117H	118H	119H	120H	121H	122H	123H	124H	125H	126H	127H	128H	129H	130H	131H	132H	133H	134H	135H	136H	137H	138H	139H	140H	141H	142H	143H	144H	145H	146H	147H	148H	149H	150H	151H	152H	153H	154H	155H	156H	157H	158H	159H	160H	161H	162H	163H	164H	165H	166H	167H	168H	169H	170H	171H	172H	173H	174H	175H	176H	177H	178H	179H	180H	181H	182H	183H	184H	185H	186H	187H	188H	189H	190H	191H	192H	193H	194H	195H	196H	197H	198H	199H	200H	201H	202H	203H	204H	205H	206H	207H	208H	209H	210H	211H	212H	213H	214H	215H	216H	217H	218H	219H	220H	221H	222H	223H	224H	225H	226H	227H	228H	229H	230H	231H	232H	233H	234H	235H	236H	237H	238H	239H	240H	241H	242H	243H	244H	245H	246H	247H	248H	249H	250H	251H	252H	253H	254H	255H	256H	257H	258H	259H	260H	261H	262H	263H	264H	265H	266H	267H	268H	269H	270H	271H	272H	273H	274H	275H	276H	277H	278H	279H	280H	281H	282H	283H	284H	285H	286H	287H	288H	289H	290H	291H	292H	293H	294H	295H	296H	297H	298H	299H	300H	301H	302H	303H	304H	305H	306H	307H	308H	309H	310H	311H	312H	313H	314H	315H	316H	317H	318H	319H	320H	321H	322H	323H	324H	325H	326H	327H	328H	329H	330H	331H	332H	333H	334H	335H	336H	337H	338H	339H	340H	341H	342H	343H	344H	345H	346H	347H	348H	349H	350H	351H	352H	353H	354H	355H	356H	357H	358H	359H	360H	361H	362H	363H	364H	365H	366H	367H	368H	369H	370H	371H	372H	373H	374H	375H	376H	377H	378H	379H	380H	381H	382H	383H	384H	385H	386H	387H	388H	389H	390H	391H	392H	393H	394H	395H	396H	397H	398H	399H	400H	401H	402H	403H	404H	405H	406H	407H	408H	409H	410H	411H	412H	413H	414H	415H	416H	417H	418H	419H	420H	421H	422H	423H	424H	425H	426H	427H	428H	429H	430H	431H	432H	433H	434H	435H	436H	437H	438H	439H	440H	441H	442H	443H	444H	445H	446H	447H	448H	449H	450H	451H	452H	453H	454H	455H	456H	457H	458H	459H	460H	461H	462H	463H	464H	465H	466H	467H	468H	469H	470H	471H	472H	473H	474H	475H	476H	477H	478H	479H	480H	481H	482H	483H	484H	485H	486H	487H	488H	489H	490H	491H	492H	493H	494H	495H	496H	497H	498H	499H	500H	501H	502H	503H	504H	505H	506H	507H	508H	509H	510H	511H	512H	513H	514H	515H	516H	517H	518H	519H	520H	521H	522H	523H	524H	525H	526H	527H	528H	529H	530H	531H	532H	533H	534H	535H	536H	537H	538H	539H	540H	541H	542H	543H	544H	545H	546H	547H	548H	549H	550H	551H	552H	553H	554H	555H	556H	557H	558H	559H	560H	561H	562H	563H	564H	565H	566H	567H	568H	569H	570H	571H	572H	573H	574H	575H	576H	577H	578H	579H	580H	581H	582H	583H	584H	585H	586H	587H	588H	589H	590H	591H	592H	593H	594H	595H	596H	597H	598H	599H	600H	601H	602H	603H	604H	605H	606H	607H	608H	609H	610H	611H	612H	613H	614H	615H	616H	617H	618H	619H	620H	621H	622H	623H	624H	625H	626H	627H	628H	629H	630H	631H	632H	633H	634H	635H	636H	637H	638H	639H	640H	641H	642H	643H	644H	645H	646H	647H	648H	649H	650H	651H	652H	653H	654H	655H	656H	657H	658H	659H	660H	661H	662H	663H	664H	665H	666H	667H	668H	669H	670H	671H	672H	673H	674H	675H	676H	677H	678H	679H	680H	681H	682H	683H	684H	685H	686H	687H	688H	689H	690H	691H	692H	693H	694H	695H	696H	697H	698H	699H	700H	701H	702H	703H	704H	705H	706H	707H	708H	709H	710H	711H	712H	713H	714H	715H	716H	717H	718H	719H	720H	721H	722H	723H	724H	725H	726H	727H	728H	729H	730H	731H	732H	733H	734H	735H	736H	737H	738H	739H	740H	741H	742H	743H	744H	745H	746H	747H	748H	749H	750H	751H	752H	753H	754H	755H	756H	757H	758H	759H	760H	761H	762H	763H	764H	765H	766H	767H	768H	769H	770H	771H	772H	773H	774H	775H	776H	777H	778H	779H	780H	781H	782H	783H	784H	785H	786H	787H	788H	789H	790H	791H	792H	793H	794H	795H	796H	797H	798H	799H	800H	801H	802H	803H	804H	805H	806H	807H	808H	809H	810H	811H	812H	813H	814H	815H	816H	817H	818H	819H	820H	821H	822H	823H	824H	825H	826H	827H	828H	829H	830H	831H	832H	833H	834H	835H	836H	837H	838H	839H	840H	841H	842H	843H	844H	845H	846H	847H	848H	849H	850H	851H	852H	853H	854H	855H	856H	857H	858H	859H	860H	861H	862H	863H	864H	865H	866H	867H	868H	869H	870H	871H	872H	873H	874H	875H	876H	877H	878H	879H	880H	881H	882H	883H	884H	885H	886H	887H	888H	889H	890H	891H	892H	893H	894H	895H	896H	897H	898H	899H	900H	901H	902H	903H	904H	905H	906H	907H	908H	909H	910H	911H	912H	913H	914H	915H	916H	917H	918H	919H	920H	921H	922H	923H	924H	925H	926H	927H	928H	929H	930H	931H	932H	933H	934H	935H	936H	937H	938H	939H	940H	941H	942H	943H	944H	945H	946H	947H	948H	949H	950H	951H	952H	953H	954H	955H	956H	957H	958H	959H	960H	961H	962H	963H	964H	965H	966H	967H	968H	969H	970H	971H	972H	973H	974H	975H	976H	977H	978H	979H	980H	981H	982H	983H	984H	985H	986H	987H	988H	989H	990H	991H	992H	993H	994H	995H	996H	997H	998H	999H	1000H

Appendix B TVP P&R Committed Scheme

S:\70012699 - TVP PARK AND RIDE (LSTF 2015-16)\E MODELS AND DRAWINGS\DEVELOPMENT\AUTOCAD\SK SKETCHES\5049_TVP_SK_006.DWG 17/08/2016 15:55:50 Marsland, Richard



REV	DATE	BY	DESCRIPTION	CHK	APD
D	08/08/16	RJM	BUS LAYBY LAYOUT UPDATED, TEMP LINK REMOVED	TB	TB
C	18/05/16	TRA	ROUNDABOUT/ENTRY ARM AMENDED	TRA	TB
B	03/02/16	TRA	BUS STOPS AND TOILET BLOCK REMOVED	TRA	TB
A	19/11/15	TRA	FIRST ISSUE	TRA	TB
DRAWING STATUS: FOR INFORMATION ONLY					



**WOKINGHAM
BOROUGH COUNCIL**

Shute End, Wokingham, Berkshire RG40 1BN
Tel: (0118) 974 6000 Web: www.wokingham.gov.uk

CLIENT:	WOKINGHAM BOROUGH COUNCIL
ARCHITECT:	

PROJECT:	THAMES VALLEY PARK PARK & RIDE
TITLE:	PRELIMINARY LAYOUT - OPTION 6 EXCLUDING CAMPSITE AREA & EXTRA SPACES 277 SPACES (INCLUDES 6 DISABLED SPACES)

SCALE @ A2:	1:500	CHECKED:	TB	APPROVED:	SR
CAD FILE:	5049_TVP_SK_006	DESIGN-DRAWN:	TRA	DATE:	November 2015
PROJECT No:	5049	DRAWING No:	TVP/SK/006	REV:	D

Appendix C **Reading Bridge Rbt Junctions 9 Summary Outputs**

Junctions 9							
ARCADY 9 - Roundabout Module							
Version: 9.0.0.4211 [] © Copyright TRL Limited, 2017							
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk							
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution							

Filename: Vastern Road Roundabout Existing Layout.j9

Path: J:\28791 RBC BLTB LA Scheme\03 East Reading MRT\Transport\Working Documents\Calculations\Vastern Road Rbt ARC

Report generation date: 16/05/2017 10:36:08

- »2021 + TVR P&R, AM
- »2021 + TVR P&R, PM
- »2021 + TVR P&R + MRT, AM
- »2021 + TVR P&R + MRT, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2021 + TVR P&R								
Arm 1	60.8	200.53	1.12	F	1.8	8.93	0.62	A
Arm 2	0.3	12.19	0.20	B	0.2	6.02	0.13	A
Arm 3	1.6	7.53	0.60	A	8.2	20.40	0.89	C
Arm 4	0.0	2.13	0.00	A	0.3	4.14	0.19	A
Arm 5	17.0	35.02	0.96	E	2.8	8.69	0.73	A
2021 + TVR P&R + MRT								
Arm 1	62.9	208.26	1.13	F	2.0	9.66	0.64	A
Arm 2	0.3	11.67	0.19	B	0.2	6.15	0.13	A
Arm 3	1.6	7.60	0.60	A	8.2	20.50	0.89	C
Arm 4	0.0	2.14	0.00	A	0.3	4.13	0.19	A
Arm 5	18.2	37.23	0.96	E	3.1	9.22	0.75	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

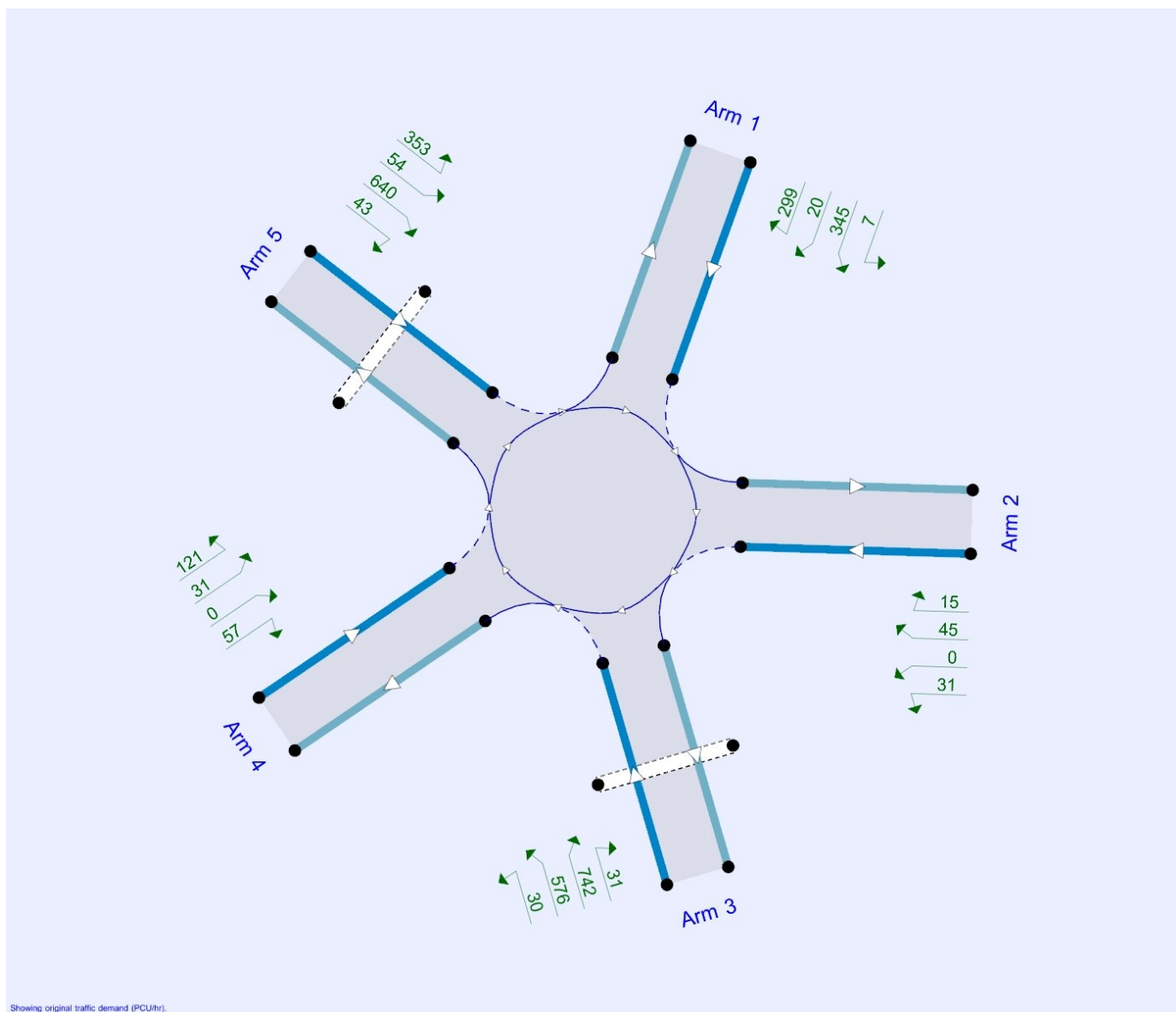
File summary

File Description

Title	Vastern Road
Location	Reading
Site number	-
Date	08/05/2017
Version	A
Status	-
Identifier	-
Client	-
Jobnumber	28791
Enumerator	PBA"jchurchill
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
2021 + TVR P&R	AM	ONE HOUR	07:45	09:15	15	✓
2021 + TVR P&R	PM	ONE HOUR	16:45	18:15	15	✓
2021 + TVR P&R + MRT	AM	ONE HOUR	07:45	09:15	15	✓
2021 + TVR P&R + MRT	PM	ONE HOUR	16:45	18:15	15	✓

2021 + TVR P&R, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4,5	72.99	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	George Street	
2	Napier Road	
3	Vastern Road (South)	
4	Bagnall Way	
5	Vastern Road (North-West)	

Capacity Options

Arm	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Assume flat start profile	Initial queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00
5	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	6.00	9.33	4.4	3.0	59.5	20.0	
2	3.00	7.61	14.9	15.0	59.5	27.0	
3	6.70	6.70	0.0	30.7	59.5	19.5	
4	8.00	9.57	1.5	20.0	59.5	29.0	
5	6.00	10.30	30.0	25.5	59.5	21.0	

Pedestrian Crossings

Arm	Crossing type	Average pedestrian flow (Ped/hr)
1	None	
2	None	
3	Pelican	500.00
4	None	
5	Pelican	500.00

Pelican/Puffin Crossings

Arm	Space between crossing and junction entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
3	3.90	3.00	2.90	1.00	6.00	6.00	7.00
5	6.00	3.00	2.90	1.00	6.00	6.00	7.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.479	1601.786
2	0.541	1601.156
3	0.650	2138.666
4	0.708	2544.406
5	0.767	2824.479

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021 + TVR P&R	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	898.00	100.000
2		ONE HOUR	✓	72.00	100.000
3		ONE HOUR	✓	697.00	100.000
4		ONE HOUR	✓	7.00	100.000
5		ONE HOUR	✓	1686.00	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1		
2		
3	Global	500.00
4		
5	Global	500.00

Origin-Destination Data

Demand (PCU/hr)

	To					
From		1	2	3	4	5
	1	0.000	19.000	549.000	50.000	280.000
	2	8.000	0.000	36.000	0.000	28.000
	3	387.000	63.000	0.000	140.000	107.000
	4	1.000	0.000	3.000	0.000	3.000
	5	376.000	76.000	1045.000	163.000	26.000

Proportions

	To					
From		1	2	3	4	5
	1	0.00	0.02	0.61	0.06	0.31
	2	0.11	0.00	0.50	0.00	0.39
	3	0.56	0.09	0.00	0.20	0.15
	4	0.14	0.00	0.43	0.00	0.43
	5	0.22	0.05	0.62	0.10	0.02

Vehicle Mix

Heavy Vehicle proportion

	To					
From		1	2	3	4	5
	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	10	10	10	10	10

Average PCU Per Veh

	To					
From		1	2	3	4	5
	1	1.100	1.100	1.100	1.100	1.100
	2	1.100	1.100	1.100	1.100	1.100
	3	1.100	1.100	1.100	1.100	1.100
	4	1.100	1.100	1.100	1.100	1.100
	5	1.100	1.100	1.100	1.100	1.100

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	1.12	200.53	60.8	F	824.02	1236.03
2	0.20	12.19	0.3	B	66.07	99.10
3	0.60	7.53	1.6	A	639.58	959.37
4	0.00	2.13	0.0	A	6.42	9.63
5	0.96	35.02	17.0	E	1547.10	2320.65

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	676.06	169.02	1028.41		1109.39	0.609	669.37	577.42	0.0	1.7	8.872	A
2	54.21	13.55	1579.66		746.45	0.073	53.86	118.12	0.0	0.1	5.715	A
3	524.74	131.18	414.16	376.43	1287.61	0.408	521.74	1219.37	0.0	0.7	5.151	A
4	5.27	1.32	672.02		2068.76	0.003	5.26	263.88	0.0	0.0	1.918	A
5	1269.31	317.33	345.84	376.43	1855.05	0.684	1259.99	331.44	0.0	2.3	6.556	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	807.28	201.82	1234.00		1010.96	0.799	798.07	692.55	1.7	4.0	17.868	C
2	64.73	16.18	1890.50		578.27	0.112	64.52	141.58	0.1	0.1	7.704	A
3	626.59	156.65	495.03	449.49	1290.56	0.486	625.48	1459.99	0.7	1.0	5.944	A
4	6.29	1.57	804.27		1975.15	0.003	6.29	316.25	0.0	0.0	2.011	A
5	1515.68	378.92	414.59	449.49	2010.64	0.754	1511.96	395.97	2.3	3.3	7.876	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	988.72	247.18	1480.79		892.80	1.107	872.97	838.93	4.0	32.9	90.936	F
2	79.27	19.82	2184.42		419.23	0.189	78.81	169.34	0.1	0.3	11.618	B
3	767.41	191.85	563.39	550.51	1288.74	0.595	765.16	1699.84	1.0	1.6	7.529	A
4	7.71	1.93	951.03		1871.28	0.004	7.70	377.53	0.0	0.0	2.124	A
5	1856.32	464.08	507.17	550.51	1940.77	0.956	1812.54	451.56	3.3	14.2	25.096	D

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	988.72	247.18	1506.32		880.57	1.123	877.28	847.60	32.9	60.8	200.525	F
2	79.27	19.82	2212.48		404.05	0.196	79.22	171.12	0.3	0.3	12.191	B
3	767.41	191.85	568.83	550.51	1324.92	0.579	767.62	1722.87	1.6	1.5	7.112	A
4	7.71	1.93	955.04		1868.44	0.004	7.71	381.41	0.0	0.0	2.127	A
5	1856.32	464.08	508.80	550.51	1940.77	0.956	1845.12	453.95	14.2	17.0	35.023	E

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	807.28	201.82	1279.21		989.31	0.816	971.72	707.28	60.8	19.7	153.605	F
2	64.73	16.18	2102.79		463.40	0.140	65.06	148.15	0.3	0.2	9.951	A
3	626.59	156.65	565.59	449.49	1317.57	0.476	628.69	1602.26	1.5	1.0	5.765	A
4	6.29	1.57	862.14		1934.19	0.003	6.30	332.15	0.0	0.0	2.053	A
5	1515.68	378.92	416.72	449.49	2012.34	0.753	1569.76	451.71	17.0	3.5	9.989	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	676.06	169.02	1041.31		1103.22	0.613	747.53	583.42	19.7	1.8	13.467	B
2	54.21	13.55	1667.96		698.67	0.078	54.56	120.88	0.2	0.1	6.152	A
3	524.74	131.18	445.03	376.43	1343.04	0.391	525.93	1277.48	1.0	0.7	4.853	A
4	5.27	1.32	700.33		2048.72	0.003	5.27	270.63	0.0	0.0	1.939	A
5	1269.31	317.33	348.63	376.43	2061.62	0.616	1276.09	356.98	3.5	1.8	5.085	A

2021 + TVR P&R, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4,5	13.11	B

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Pedestrian Crossings

Arm	Crossing type	Average pedestrian flow (Ped/hr)
1	None	
2	None	
3	Pelican	500.00
4	None	
5	Pelican	500.00

Pelican/Puffin Crossings

Arm	Space between crossing and junction entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
3	3.90	3.00	2.90	1.00	6.00	6.00	7.00
5	6.00	3.00	2.90	1.00	6.00	6.00	7.00

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021 + TVR P&R	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	667.00	100.000
2		ONE HOUR	✓	92.00	100.000
3		ONE HOUR	✓	1378.00	100.000
4		ONE HOUR	✓	210.00	100.000
5		ONE HOUR	✓	1068.00	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1		
2		
3	Global	500.00
4		
5	Global	500.00

Origin-Destination Data

Demand (PCU/hr)

	To					
From		1	2	3	4	5
	1	0.000	7.000	342.000	20.000	298.000
	2	16.000	0.000	31.000	0.000	45.000
	3	742.000	25.000	0.000	30.000	581.000
	4	32.000	0.000	57.000	0.000	121.000
	5	346.000	26.000	618.000	43.000	35.000

Proportions

	To					
From		1	2	3	4	5
	1	0.00	0.01	0.51	0.03	0.45
	2	0.17	0.00	0.34	0.00	0.49
	3	0.54	0.02	0.00	0.02	0.42
	4	0.15	0.00	0.27	0.00	0.58
	5	0.32	0.02	0.58	0.04	0.03

Vehicle Mix

Heavy Vehicle proportion

	To					
		1	2	3	4	5
	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	10	10	10	10	10

Average PCU Per Veh

	To					
		1	2	3	4	5
	1	1.100	1.100	1.100	1.100	1.100
	2	1.100	1.100	1.100	1.100	1.100
	3	1.100	1.100	1.100	1.100	1.100
	4	1.100	1.100	1.100	1.100	1.100
	5	1.100	1.100	1.100	1.100	1.100

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.62	8.93	1.8	A	612.05	918.08
2	0.13	6.02	0.2	A	84.42	126.63
3	0.89	20.40	8.2	C	1264.48	1896.72
4	0.19	4.14	0.3	A	192.70	289.05
5	0.73	8.69	2.8	A	980.02	1470.02

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	502.15	125.54	602.05		1313.53	0.382	499.45	848.00	0.0	0.7	4.849	A
2	69.26	17.32	1058.16		1028.62	0.067	68.95	43.34	0.0	0.1	4.125	A
3	1037.43	259.36	342.24	376.43	1452.95	0.714	1026.83	784.87	0.0	2.7	9.083	A
4	158.10	39.52	1299.54		1624.61	0.097	157.63	69.53	0.0	0.1	2.699	A
5	804.05	201.01	650.33	376.43	1612.69	0.499	799.72	806.84	0.0	1.1	4.846	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	599.62	149.90	721.32		1256.42	0.477	598.35	1019.10	0.7	1.0	6.008	A
2	82.71	20.68	1267.64		915.27	0.090	82.59	52.03	0.1	0.1	4.755	A
3	1238.79	309.70	410.00	449.49	1633.29	0.758	1236.11	940.23	2.7	3.3	9.890	A
4	188.79	47.20	1562.69		1438.35	0.131	188.60	83.43	0.1	0.2	3.168	A
5	960.11	240.03	782.32	449.49	1616.45	0.594	958.10	968.97	1.1	1.6	5.997	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	734.38	183.60	881.51		1179.73	0.623	731.27	1239.90	1.0	1.8	8.769	A
2	101.29	25.32	1549.38		762.83	0.133	101.06	63.40	0.1	0.2	5.983	A
3	1517.21	379.30	501.17	550.51	1704.41	0.890	1500.16	1149.27	3.3	7.6	18.000	C
4	231.21	57.80	1899.60		1199.89	0.193	230.83	101.73	0.2	0.3	4.083	A
5	1175.89	293.97	950.40	550.51	1621.87	0.725	1171.01	1180.03	1.6	2.8	8.688	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	734.38	183.60	885.83		1177.66	0.624	734.27	1249.83	1.8	1.8	8.926	A
2	101.29	25.32	1556.26		759.11	0.133	101.29	63.84	0.2	0.2	6.019	A
3	1517.21	379.30	503.18	550.51	1703.61	0.891	1514.91	1154.36	7.6	8.2	20.397	C
4	231.21	57.80	1915.71		1188.48	0.195	231.20	102.38	0.3	0.3	4.136	A
5	1175.89	293.97	958.81	550.51	1691.74	0.695	1176.85	1188.11	2.8	2.6	7.711	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	599.62	149.90	726.34		1254.02	0.478	602.73	1034.65	1.8	1.0	6.108	A
2	82.71	20.68	1276.38		910.54	0.091	82.94	52.68	0.2	0.1	4.785	A
3	1238.79	309.70	412.80	449.49	1765.96	0.701	1260.79	946.52	8.2	2.7	8.163	A
4	188.79	47.20	1589.23		1419.56	0.133	189.17	84.36	0.3	0.2	3.221	A
5	960.11	240.03	796.36	449.49	1707.03	0.562	964.64	982.04	2.6	1.4	5.367	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	502.15	125.54	606.58		1311.36	0.383	503.48	857.12	1.0	0.7	4.909	A
2	69.26	17.32	1066.30		1024.21	0.068	69.38	43.76	0.1	0.1	4.149	A
3	1037.43	259.36	344.90	376.43	1598.91	0.649	1039.76	790.79	2.7	2.1	7.112	A
4	158.10	39.52	1314.48		1614.03	0.098	158.30	70.18	0.2	0.1	2.720	A
5	804.05	201.01	657.89	376.43	1703.78	0.472	805.81	814.89	1.4	1.0	4.420	A

2021 + TVR P&R + MRT, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4,5	75.73	F

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Pedestrian Crossings

Arm	Crossing type	Average pedestrian flow (Ped/hr)
1	None	
2	None	
3	Pelican	500.00
4	None	
5	Pelican	500.00

Pelican/Puffin Crossings

Arm	Space between crossing and junction entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
3	3.90	3.00	2.90	1.00	6.00	6.00	7.00
5	6.00	3.00	2.90	1.00	6.00	6.00	7.00

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2021 + TVR P&R + MRT	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	895.00	100.000
2		ONE HOUR	✓	72.00	100.000
3		ONE HOUR	✓	708.00	100.000
4		ONE HOUR	✓	7.00	100.000
5		ONE HOUR	✓	1695.00	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1		
2		
3	Global	500.00
4		
5	Global	500.00

Origin-Destination Data

Demand (PCU/hr)

		To				
From		1	2	3	4	5
	1	0.000	19.000	551.000	46.000	279.000
	2	8.000	0.000	36.000	0.000	28.000
	3	392.000	69.000	0.000	140.000	107.000
	4	1.000	0.000	3.000	0.000	3.000
	5	374.000	103.000	1029.000	163.000	26.000

Proportions

		To				
From		1	2	3	4	5
	1	0.00	0.02	0.62	0.05	0.31
	2	0.11	0.00	0.50	0.00	0.39
	3	0.55	0.10	0.00	0.20	0.15
	4	0.14	0.00	0.43	0.00	0.43
	5	0.22	0.06	0.61	0.10	0.02

Vehicle Mix

Heavy Vehicle proportion

From	To					
		1	2	3	4	5
	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	10	10	10	10	10

Average PCU Per Veh

From	To					
		1	2	3	4	5
	1	1.100	1.100	1.100	1.100	1.100
	2	1.100	1.100	1.100	1.100	1.100
	3	1.100	1.100	1.100	1.100	1.100
	4	1.100	1.100	1.100	1.100	1.100
	5	1.100	1.100	1.100	1.100	1.100

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	1.13	208.26	62.9	F	821.27	1231.90
2	0.19	11.67	0.3	B	66.07	99.10
3	0.60	7.60	1.6	A	649.67	974.51
4	0.00	2.14	0.0	A	6.42	9.63
5	0.96	37.23	18.2	E	1555.36	2333.04

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	673.80	168.45	1041.02		1103.35	0.611	667.08	579.63	0.0	1.7	8.946	A
2	54.21	13.55	1565.32		754.21	0.072	53.87	142.78	0.0	0.1	5.652	A
3	533.02	133.25	410.40	376.43	1290.44	0.413	529.95	1208.79	0.0	0.8	5.186	A
4	5.27	1.32	679.47		2063.48	0.003	5.26	260.88	0.0	0.0	1.923	A
5	1276.08	319.02	354.06	376.43	1853.93	0.688	1266.60	330.67	0.0	2.4	6.640	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	804.59	201.15	1249.22		1003.67	0.802	795.15	695.23	1.7	4.0	18.212	C
2	64.73	16.18	1873.20		587.62	0.110	64.53	171.16	0.1	0.1	7.570	A
3	636.48	159.12	490.49	449.49	1295.45	0.491	635.35	1447.24	0.8	1.0	5.989	A
4	6.29	1.57	813.16		1968.86	0.003	6.29	312.67	0.0	0.0	2.017	A
5	1523.77	380.94	424.46	449.49	2012.34	0.757	1519.99	395.00	2.4	3.3	7.976	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	985.41	246.35	1497.09		884.99	1.113	866.16	841.66	4.0	33.9	93.666	F
2	79.27	19.82	2158.55		433.23	0.183	78.84	204.70	0.1	0.2	11.160	B
3	779.52	194.88	556.83	550.51	1296.11	0.601	777.21	1680.56	1.0	1.6	7.595	A
4	7.71	1.93	960.87		1864.31	0.004	7.70	373.18	0.0	0.0	2.132	A
5	1866.23	466.56	519.23	550.51	1940.77	0.962	1819.52	449.34	3.3	15.0	26.097	D

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	985.41	246.35	1523.65		872.28	1.130	869.28	850.55	33.9	62.9	208.260	F
2	79.27	19.82	2185.87		418.45	0.189	79.23	207.06	0.2	0.3	11.672	B
3	779.52	194.88	561.92	550.51	1333.29	0.585	779.75	1703.17	1.6	1.6	7.157	A
4	7.71	1.93	964.59		1861.68	0.004	7.71	377.09	0.0	0.0	2.135	A
5	1866.23	466.56	520.93	550.51	1940.77	0.962	1853.28	451.37	15.0	18.2	37.233	E

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	804.59	201.15	1298.22		980.21	0.821	963.36	710.89	62.9	23.2	164.776	F
2	64.73	16.18	2082.73		474.26	0.136	65.04	178.85	0.3	0.2	9.683	A
3	636.48	159.12	558.79	449.49	1324.49	0.481	638.64	1588.97	1.6	1.0	5.793	A
4	6.29	1.57	869.46		1929.01	0.003	6.30	327.97	0.0	0.0	2.060	A
5	1523.77	380.94	426.66	449.49	2012.34	0.757	1582.44	449.09	18.2	3.6	10.410	B

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	673.80	168.45	1054.33		1096.98	0.614	759.35	585.72	23.2	1.8	14.933	B
2	54.21	13.55	1667.53		698.91	0.078	54.54	146.16	0.2	0.1	6.150	A
3	533.02	133.25	446.08	376.43	1345.23	0.396	534.23	1275.98	1.0	0.7	4.889	A
4	5.27	1.32	712.25		2040.28	0.003	5.27	268.06	0.0	0.0	1.945	A
5	1276.08	319.02	356.92	376.43	2064.55	0.618	1283.13	360.60	3.6	1.8	5.111	A

2021 + TVR P&R + MRT, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4,5	13.40	B

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Pedestrian Crossings

Arm	Crossing type	Average pedestrian flow (Ped/hr)
1	None	
2	None	
3	Pelican	500.00
4	None	
5	Pelican	500.00

Pelican/Puffin Crossings

Arm	Space between crossing and junction entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
3	3.90	3.00	2.90	1.00	6.00	6.00	7.00
5	6.00	3.00	2.90	1.00	6.00	6.00	7.00

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2021 + TVR P&R + MRT	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	671.00	100.000
2		ONE HOUR	✓	91.00	100.000
3		ONE HOUR	✓	1379.00	100.000
4		ONE HOUR	✓	209.00	100.000
5		ONE HOUR	✓	1125.00	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1		
2		
3	Global	500.00
4		
5	Global	500.00

Origin-Destination Data

Demand (PCU/hr)

		To				
From		1	2	3	4	5
	1	0.000	7.000	345.000	20.000	299.000
	2	15.000	0.000	31.000	0.000	45.000
	3	742.000	31.000	0.000	30.000	576.000
	4	31.000	0.000	57.000	0.000	121.000
	5	353.000	54.000	640.000	43.000	35.000

Proportions

		To				
From		1	2	3	4	5
	1	0.00	0.01	0.51	0.03	0.45
	2	0.16	0.00	0.34	0.00	0.49
	3	0.54	0.02	0.00	0.02	0.42
	4	0.15	0.00	0.27	0.00	0.58
	5	0.31	0.05	0.57	0.04	0.03

Vehicle Mix

Heavy Vehicle proportion

	To					
		1	2	3	4	5
	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	10	10	10	10	10

Average PCU Per Veh

	To					
		1	2	3	4	5
	1	1.100	1.100	1.100	1.100	1.100
	2	1.100	1.100	1.100	1.100	1.100
	3	1.100	1.100	1.100	1.100	1.100
	4	1.100	1.100	1.100	1.100	1.100
	5	1.100	1.100	1.100	1.100	1.100

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.64	9.66	2.0	A	615.72	923.58
2	0.13	6.15	0.2	A	83.50	125.25
3	0.89	20.50	8.2	C	1265.39	1898.09
4	0.19	4.13	0.3	A	191.78	287.67
5	0.75	9.22	3.1	A	1032.32	1548.48

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	505.16	126.29	643.81		1293.53	0.391	502.37	851.67	0.0	0.7	4.989	A
2	68.51	17.13	1077.42		1018.20	0.067	68.19	68.77	0.0	0.1	4.167	A
3	1038.18	259.55	342.19	376.43	1453.28	0.714	1027.56	803.42	0.0	2.7	9.090	A
4	157.35	39.34	1300.23		1624.12	0.097	156.88	69.52	0.0	0.1	2.699	A
5	846.96	211.74	653.30	376.43	1619.00	0.523	842.19	803.81	0.0	1.2	5.068	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	603.22	150.80	771.47		1232.41	0.489	601.85	1023.54	0.7	1.0	6.265	A
2	81.81	20.45	1290.80		902.75	0.091	81.69	82.52	0.1	0.1	4.823	A
3	1239.69	309.92	409.95	449.49	1633.95	0.759	1237.01	962.54	2.7	3.3	9.896	A
4	187.89	46.97	1563.54		1437.75	0.131	187.70	83.42	0.1	0.2	3.167	A
5	1011.35	252.84	785.90	449.49	1635.13	0.619	1009.11	965.33	1.2	1.8	6.303	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	738.78	184.70	942.60		1150.48	0.642	735.27	1245.20	1.0	1.9	9.456	A
2	100.19	25.05	1577.27		747.75	0.134	99.95	100.61	0.1	0.2	6.112	A
3	1518.31	379.58	500.96	550.51	1704.50	0.891	1501.14	1176.26	3.3	7.6	18.065	C
4	230.11	57.53	1900.39		1199.33	0.192	229.73	101.71	0.2	0.3	4.081	A
5	1238.65	309.66	954.67	550.51	1657.22	0.747	1233.13	1175.45	1.8	3.1	9.216	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	738.78	184.70	947.67		1148.05	0.644	738.64	1255.40	1.9	2.0	9.664	A
2	100.19	25.05	1585.02		743.55	0.135	100.19	101.30	0.2	0.2	6.154	A
3	1518.31	379.58	503.18	550.51	1703.61	0.891	1515.98	1182.02	7.6	8.2	20.502	C
4	230.11	57.53	1916.77		1187.74	0.194	230.10	102.39	0.3	0.3	4.134	A
5	1238.65	309.66	963.18	550.51	1733.75	0.714	1239.89	1183.69	3.1	2.8	8.046	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	603.22	150.80	777.18		1229.68	0.491	606.74	1039.33	2.0	1.1	6.391	A
2	81.81	20.45	1300.44		897.53	0.091	82.05	83.48	0.2	0.1	4.856	A
3	1239.69	309.92	413.01	449.49	1765.87	0.702	1261.84	969.47	8.2	2.7	8.185	A
4	187.89	46.97	1590.47		1418.69	0.132	188.27	84.38	0.3	0.2	3.221	A
5	1011.35	252.84	800.12	449.49	1733.55	0.583	1016.39	978.62	2.8	1.6	5.561	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	505.16	126.29	648.88		1291.11	0.391	506.60	860.92	1.1	0.7	5.058	A
2	68.51	17.13	1086.06		1013.52	0.068	68.63	69.42	0.1	0.1	4.191	A
3	1038.18	259.55	344.95	376.43	1599.54	0.649	1040.53	809.74	2.7	2.1	7.117	A
4	157.35	39.34	1315.30		1613.45	0.098	157.54	70.18	0.2	0.1	2.721	A
5	846.96	211.74	660.92	376.43	1717.68	0.493	848.89	811.93	1.6	1.1	4.567	A

Junctions 9							
ARCADY 9 - Roundabout Module							
Version: 9.0.0.4211 [] © Copyright TRL Limited, 2017							
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Filename: Vastern Road Roundabout Proposed Layout.j9

Path: J:\28791 RBC BLTB LA Scheme\03 East Reading MRT\Transport\Working Documents\Calculations\Vastern Road Rbt ARC

Report generation date: 16/05/2017 11:44:25

»2021 + TVR, AM
»2021 + TVR, PM
»2021 + TVR + MRT, AM
»2021 + TVR + MRT, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2021 + TVR								
Arm 1	60.8	200.53	1.12	F	1.8	8.93	0.62	A
Arm 2	0.3	11.55	0.19	B	0.2	6.81	0.15	A
Arm 3	1.6	7.53	0.60	A	8.2	20.40	0.89	C
Arm 4	0.0	2.13	0.00	A	0.3	4.14	0.19	A
Arm 5	17.0	35.02	0.96	E	2.8	8.69	0.73	A
2021 + TVR + MRT								
Arm 1	62.9	208.26	1.13	F	2.0	9.66	0.64	A
Arm 2	0.4	11.89	0.26	B	0.3	7.29	0.20	A
Arm 3	1.7	7.75	0.61	A	8.8	22.01	0.90	C
Arm 4	0.0	2.14	0.00	A	0.3	4.13	0.19	A
Arm 5	18.2	37.23	0.96	E	3.1	9.21	0.75	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

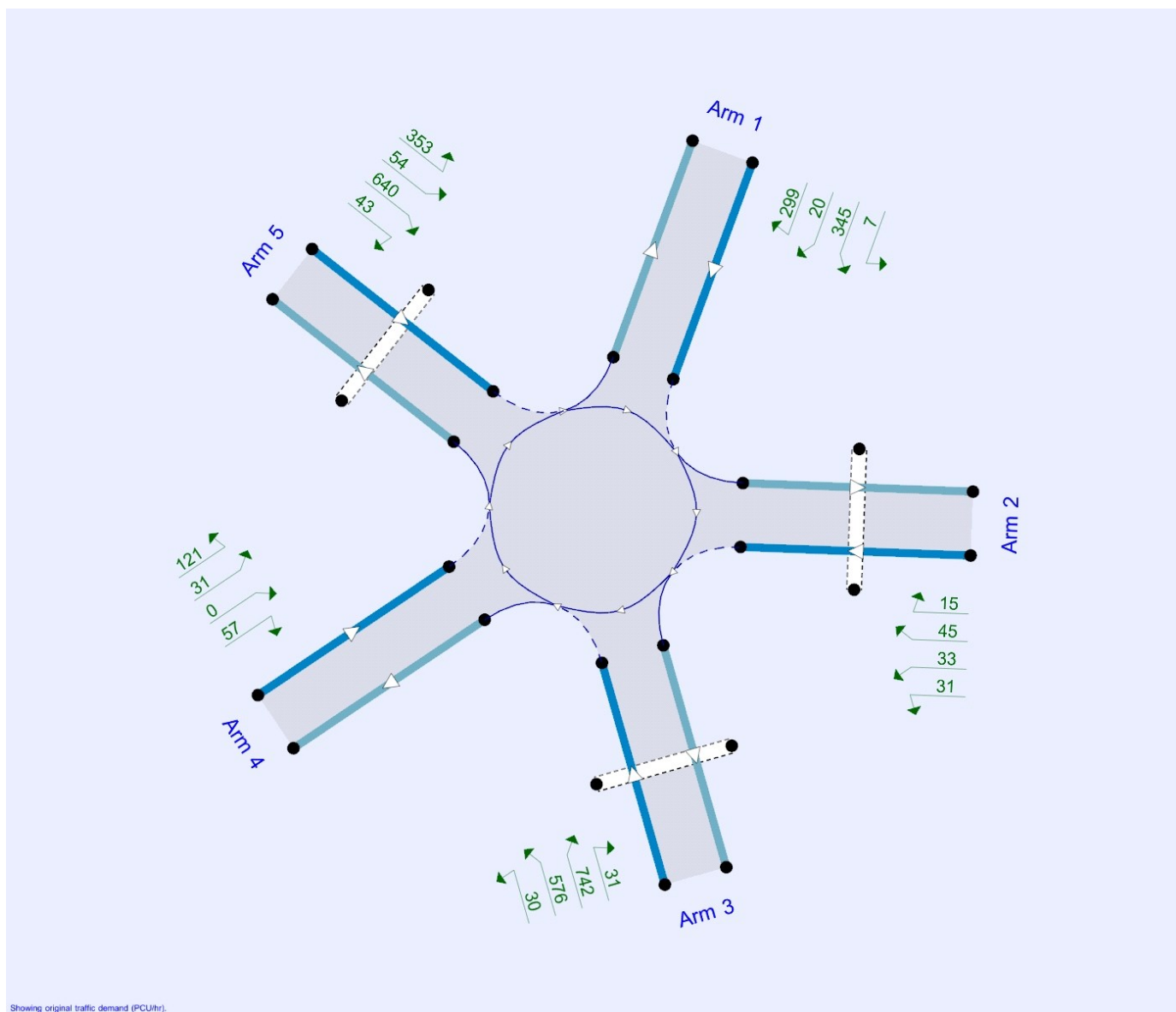
File summary

File Description

Title	Vastern Road
Location	Reading
Site number	-
Date	08/05/2017
Version	A
Status	-
Identifier	-
Client	-
Jobnumber	28791
Enumerator	PBA"jchurchill
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
2021 + TVR	AM	ONE HOUR	07:45	09:15	15	✓
2021 + TVR	PM	ONE HOUR	16:45	18:15	15	✓
2021 + TVR + MRT	AM	ONE HOUR	07:45	09:15	15	✓
2021 + TVR + MRT	PM	ONE HOUR	16:45	18:15	15	✓

2021 + TVR, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4,5	72.98	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	George Street	
2	Napier Road	
3	Vastern Road (South)	
4	Bagnall Wal	
5	Vastern Road (North-West)	

Capacity Options

Arm	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Assume flat start profile	Initial queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00
5	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	6.00	9.33	4.4	3.0	59.5	20.0	
2	3.50	7.20	30.0	23.0	59.5	27.0	
3	6.70	6.70	0.0	30.7	59.5	19.5	
4	8.00	9.57	1.5	20.0	59.5	29.0	
5	6.00	10.30	30.0	25.5	59.5	21.0	

Pedestrian Crossings

Arm	Crossing type	Average pedestrian flow (Ped/hr)
1	None	
2	Pelican	500.00
3	Pelican	500.00
4	None	
5	Pelican	500.00

Pelican/Puffin Crossings

Arm	Space between crossing and junction entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
2	9.40	3.00	2.90	1.00	6.00	11.60	7.00
3	3.90	3.00	2.90	1.00	6.00	6.00	7.00
5	6.00	3.00	2.90	1.00	6.00	6.00	7.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.479	1601.786
2	0.598	1896.122
3	0.650	2138.666
4	0.708	2544.406
5	0.767	2824.479

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2021 + TVR	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	898.00	100.000
2		ONE HOUR	✓	72.00	100.000
3		ONE HOUR	✓	697.00	100.000
4		ONE HOUR	✓	7.00	100.000
5		ONE HOUR	✓	1686.00	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1		
2	Global	500.00
3	Global	500.00
4		
5	Global	500.00

Origin-Destination Data

Demand (PCU/hr)

	To					
From		1	2	3	4	5
	1	0.000	19.000	549.000	50.000	280.000
	2	8.000	0.000	36.000	0.000	28.000
	3	387.000	63.000	0.000	140.000	107.000
	4	1.000	0.000	3.000	0.000	3.000
	5	376.000	76.000	1045.000	163.000	26.000

Proportions

	To					
From		1	2	3	4	5
	1	0.00	0.02	0.61	0.06	0.31
	2	0.11	0.00	0.50	0.00	0.39
	3	0.56	0.09	0.00	0.20	0.15
	4	0.14	0.00	0.43	0.00	0.43
	5	0.22	0.05	0.62	0.10	0.02

Vehicle Mix

Heavy Vehicle proportion

	To					
From		1	2	3	4	5
	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	10	10	10	10	10

Average PCU Per Veh

	To					
From		1	2	3	4	5
	1	1.100	1.100	1.100	1.100	1.100
	2	1.100	1.100	1.100	1.100	1.100
	3	1.100	1.100	1.100	1.100	1.100
	4	1.100	1.100	1.100	1.100	1.100
	5	1.100	1.100	1.100	1.100	1.100

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	1.12	200.53	60.8	F	824.02	1236.03
2	0.19	11.55	0.3	B	66.07	99.10
3	0.60	7.53	1.6	A	639.58	959.37
4	0.00	2.13	0.0	A	6.42	9.63
5	0.96	35.02	17.0	E	1547.10	2320.65

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	676.06	169.02	1028.41		1109.39	0.609	669.37	577.42	0.0	1.7	8.872	A
2	54.21	13.55	1579.66	376.43	682.25	0.079	53.83	118.12	0.0	0.1	6.297	A
3	524.74	131.18	414.14	376.43	1287.62	0.408	521.74	1219.35	0.0	0.7	5.151	A
4	5.27	1.32	672.00		2068.77	0.003	5.26	263.88	0.0	0.0	1.918	A
5	1269.31	317.33	345.83	376.43	1855.05	0.684	1259.99	331.42	0.0	2.3	6.556	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	807.28	201.82	1234.00		1010.96	0.799	798.07	692.55	1.7	4.0	17.868	C
2	64.73	16.18	1890.50	449.49	548.46	0.118	64.52	141.58	0.1	0.1	8.179	A
3	626.59	156.65	495.03	449.49	1290.56	0.486	625.48	1459.99	0.7	1.0	5.944	A
4	6.29	1.57	804.27		1975.15	0.003	6.29	316.25	0.0	0.0	2.011	A
5	1515.68	378.92	414.59	449.49	2010.64	0.754	1511.96	395.97	2.3	3.3	7.876	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	988.72	247.18	1480.79		892.80	1.107	872.97	838.93	4.0	32.9	90.936	F
2	79.27	19.82	2184.42	550.51	426.91	0.186	78.87	169.34	0.1	0.2	11.369	B
3	767.41	191.85	563.42	550.51	1288.73	0.595	765.16	1699.87	1.0	1.6	7.529	A
4	7.71	1.93	951.05		1871.26	0.004	7.70	377.53	0.0	0.0	2.124	A
5	1856.32	464.08	507.17	550.51	1940.77	0.956	1812.54	451.58	3.3	14.2	25.096	D

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	988.72	247.18	1506.32		880.57	1.123	877.28	847.61	32.9	60.8	200.525	F
2	79.27	19.82	2212.48	550.51	422.02	0.188	79.25	171.12	0.2	0.3	11.553	B
3	767.41	191.85	568.85	550.51	1324.92	0.579	767.62	1722.88	1.6	1.5	7.109	A
4	7.71	1.93	955.06		1868.43	0.004	7.71	381.41	0.0	0.0	2.127	A
5	1856.32	464.08	508.81	550.51	1940.77	0.956	1845.12	453.96	14.2	17.0	35.023	E

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	807.28	201.82	1279.21		989.31	0.816	971.72	707.27	60.8	19.7	153.605	F
2	64.73	16.18	2102.79	449.49	471.38	0.137	65.02	148.15	0.3	0.2	9.753	A
3	626.59	156.65	565.57	449.49	1317.58	0.476	628.69	1602.24	1.5	1.0	5.767	A
4	6.29	1.57	862.12		1934.21	0.003	6.30	332.15	0.0	0.0	2.053	A
5	1515.68	378.92	416.72	449.49	2012.34	0.753	1569.76	451.69	17.0	3.5	9.987	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	676.06	169.02	1041.31		1103.22	0.613	747.53	583.41	19.7	1.8	13.465	B
2	54.21	13.55	1667.96	376.43	655.63	0.083	54.51	120.88	0.2	0.1	6.590	A
3	524.74	131.18	445.01	376.43	1343.05	0.391	525.93	1277.46	1.0	0.7	4.854	A
4	5.27	1.32	700.31		2048.73	0.003	5.27	270.63	0.0	0.0	1.939	A
5	1269.31	317.33	348.62	376.43	2061.63	0.616	1276.09	356.96	3.5	1.8	5.083	A

2021 + TVR, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4,5	13.13	B

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Pedestrian Crossings

Arm	Crossing type	Average pedestrian flow (Ped/hr)
1	None	
2	Pelican	500.00
3	Pelican	500.00
4	None	
5	Pelican	500.00

Pelican/Puffin Crossings

Arm	Space between crossing and junction entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
2	9.40	3.00	2.90	1.00	6.00	11.60	7.00
3	3.90	3.00	2.90	1.00	6.00	6.00	7.00
5	6.00	3.00	2.90	1.00	6.00	6.00	7.00

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2021 + TVR	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	667.00	100.000
2		ONE HOUR	✓	92.00	100.000
3		ONE HOUR	✓	1378.00	100.000
4		ONE HOUR	✓	210.00	100.000
5		ONE HOUR	✓	1068.00	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1		
2	Global	500.00
3	Global	500.00
4		
5	Global	500.00

Origin-Destination Data

Demand (PCU/hr)

	To					
From		1	2	3	4	5
	1	0.000	7.000	342.000	20.000	298.000
	2	16.000	0.000	31.000	0.000	45.000
	3	742.000	25.000	0.000	30.000	581.000
	4	32.000	0.000	57.000	0.000	121.000
	5	346.000	26.000	618.000	43.000	35.000

Proportions

	To					
From		1	2	3	4	5
	1	0.00	0.01	0.51	0.03	0.45
	2	0.17	0.00	0.34	0.00	0.49
	3	0.54	0.02	0.00	0.02	0.42
	4	0.15	0.00	0.27	0.00	0.58
	5	0.32	0.02	0.58	0.04	0.03

Vehicle Mix

Heavy Vehicle proportion

From	To					
		1	2	3	4	5
	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	10	10	10	10	10

Average PCU Per Veh

From	To					
		1	2	3	4	5
	1	1.100	1.100	1.100	1.100	1.100
	2	1.100	1.100	1.100	1.100	1.100
	3	1.100	1.100	1.100	1.100	1.100
	4	1.100	1.100	1.100	1.100	1.100
	5	1.100	1.100	1.100	1.100	1.100

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.62	8.93	1.8	A	612.05	918.08
2	0.15	6.81	0.2	A	84.42	126.63
3	0.89	20.40	8.2	C	1264.48	1896.72
4	0.19	4.14	0.3	A	192.70	289.05
5	0.73	8.69	2.8	A	980.02	1470.02

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	502.15	125.54	602.05		1313.53	0.382	499.45	847.99	0.0	0.7	4.849	A
2	69.26	17.32	1058.16	376.43	904.10	0.077	68.90	43.34	0.0	0.1	4.739	A
3	1037.43	259.36	342.21	376.43	1452.96	0.714	1026.83	784.85	0.0	2.7	9.082	A
4	158.10	39.52	1299.51		1624.63	0.097	157.63	69.53	0.0	0.1	2.699	A
5	804.05	201.01	650.32	376.43	1612.69	0.499	799.72	806.81	0.0	1.1	4.846	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	599.62	149.90	721.32		1256.42	0.477	598.35	1019.09	0.7	1.0	6.008	A
2	82.71	20.68	1267.64	449.49	807.09	0.102	82.57	52.03	0.1	0.1	5.466	A
3	1238.79	309.70	409.99	449.49	1633.29	0.758	1236.11	940.22	2.7	3.3	9.890	A
4	188.79	47.20	1562.67		1438.36	0.131	188.60	83.43	0.1	0.2	3.168	A
5	960.11	240.03	782.31	449.49	1616.45	0.594	958.10	968.96	1.1	1.6	5.997	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	734.38	183.60	881.51		1179.73	0.623	731.27	1239.90	1.0	1.8	8.769	A
2	101.29	25.32	1549.38	550.51	681.81	0.149	101.03	63.40	0.1	0.2	6.815	A
3	1517.21	379.30	501.15	550.51	1704.42	0.890	1500.16	1149.26	3.3	7.6	17.999	C
4	231.21	57.80	1899.58		1199.90	0.193	230.83	101.73	0.2	0.3	4.083	A
5	1175.89	293.97	950.40	550.51	1621.87	0.725	1171.01	1180.02	1.6	2.8	8.688	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	734.38	183.60	885.83		1177.66	0.624	734.27	1249.83	1.8	1.8	8.926	A
2	101.29	25.32	1556.26	550.51	683.10	0.148	101.29	63.84	0.2	0.2	6.805	A
3	1517.21	379.30	503.18	550.51	1703.61	0.891	1514.91	1154.37	7.6	8.2	20.397	C
4	231.21	57.80	1915.72		1188.48	0.195	231.20	102.38	0.3	0.3	4.136	A
5	1175.89	293.97	958.81	550.51	1691.74	0.695	1176.85	1188.11	2.8	2.6	7.711	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	599.62	149.90	726.34		1254.02	0.478	602.73	1034.65	1.8	1.0	6.110	A
2	82.71	20.68	1276.38	449.49	809.64	0.102	82.97	52.68	0.2	0.1	5.450	A
3	1238.79	309.70	412.82	449.49	1765.95	0.701	1260.79	946.53	8.2	2.7	8.162	A
4	188.79	47.20	1589.25		1419.55	0.133	189.17	84.36	0.3	0.2	3.221	A
5	960.11	240.03	796.36	449.49	1707.03	0.562	964.64	982.05	2.6	1.4	5.365	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	502.15	125.54	606.58		1311.36	0.383	503.48	857.12	1.0	0.7	4.911	A
2	69.26	17.32	1066.30	376.43	908.24	0.076	69.40	43.76	0.1	0.1	4.723	A
3	1037.43	259.36	344.91	376.43	1598.91	0.649	1039.76	790.79	2.7	2.1	7.115	A
4	158.10	39.52	1314.49		1614.02	0.098	158.30	70.18	0.2	0.1	2.722	A
5	804.05	201.01	657.89	376.43	1703.78	0.472	805.81	814.90	1.4	1.0	4.420	A

2021 + TVR + MRT, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4,5	75.15	F

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Pedestrian Crossings

Arm	Crossing type	Average pedestrian flow (Ped/hr)
1	None	
2	Pelican	500.00
3	Pelican	500.00
4	None	
5	Pelican	500.00

Pelican/Puffin Crossings

Arm	Space between crossing and junction entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
2	9.40	3.00	2.90	1.00	6.00	11.60	7.00
3	3.90	3.00	2.90	1.00	6.00	6.00	7.00
5	6.00	3.00	2.90	1.00	6.00	6.00	7.00

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2021 + TVR + MRT	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	895.00	100.000
2		ONE HOUR	✓	105.00	100.000
3		ONE HOUR	✓	708.00	100.000
4		ONE HOUR	✓	7.00	100.000
5		ONE HOUR	✓	1695.00	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1		
2	Global	500.00
3	Global	500.00
4		
5	Global	500.00

Origin-Destination Data

Demand (PCU/hr)

	To					
From		1	2	3	4	5
	1	0.000	19.000	551.000	46.000	279.000
	2	8.000	0.000	36.000	33.000	28.000
	3	392.000	69.000	0.000	140.000	107.000
	4	1.000	0.000	3.000	0.000	3.000
	5	374.000	103.000	1029.000	163.000	26.000

Proportions

	To					
From		1	2	3	4	5
	1	0.00	0.02	0.62	0.05	0.31
	2	0.08	0.00	0.34	0.31	0.27
	3	0.55	0.10	0.00	0.20	0.15
	4	0.14	0.00	0.43	0.00	0.43
	5	0.22	0.06	0.61	0.10	0.02

Vehicle Mix

Heavy Vehicle proportion

From	To					
		1	2	3	4	5
	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	10	10	10	10	10

Average PCU Per Veh

From	To					
		1	2	3	4	5
	1	1.100	1.100	1.100	1.100	1.100
	2	1.100	1.100	1.100	1.100	1.100
	3	1.100	1.100	1.100	1.100	1.100
	4	1.100	1.100	1.100	1.100	1.100
	5	1.100	1.100	1.100	1.100	1.100

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	1.13	208.26	62.9	F	821.27	1231.90
2	0.26	11.89	0.4	B	96.35	144.52
3	0.61	7.75	1.7	A	649.67	974.51
4	0.00	2.14	0.0	A	6.42	9.63
5	0.96	37.23	18.2	E	1555.36	2333.04

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	673.80	168.45	1041.02		1103.36	0.611	667.08	579.60	0.0	1.7	8.946	A
2	79.05	19.76	1565.32	376.43	691.15	0.114	78.49	142.77	0.0	0.1	6.458	A
3	533.02	133.25	435.04	376.43	1280.57	0.416	529.91	1208.77	0.0	0.8	5.255	A
4	5.27	1.32	679.41		2063.52	0.003	5.26	285.54	0.0	0.0	1.923	A
5	1276.08	319.02	354.03	376.43	1853.94	0.688	1266.60	330.65	0.0	2.4	6.640	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	804.59	201.15	1249.22		1003.67	0.802	795.15	695.21	1.7	4.0	18.212	C
2	94.39	23.60	1873.20	449.49	563.04	0.168	94.08	171.16	0.1	0.2	8.439	A
3	636.48	159.12	520.05	449.49	1285.10	0.495	635.32	1447.23	0.8	1.1	6.083	A
4	6.29	1.57	813.14		1968.88	0.003	6.29	342.23	0.0	0.0	2.017	A
5	1523.77	380.94	424.44	449.49	2012.34	0.757	1519.99	394.99	2.4	3.3	7.976	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	985.41	246.35	1497.08		885.00	1.113	866.16	841.62	4.0	33.9	93.665	F
2	115.61	28.90	2158.55	550.51	449.93	0.257	114.99	204.69	0.2	0.4	11.800	B
3	779.52	194.88	592.97	550.51	1285.38	0.606	777.15	1680.56	1.1	1.7	7.754	A
4	7.71	1.93	960.82		1864.35	0.004	7.70	409.30	0.0	0.0	2.132	A
5	1866.23	466.56	519.19	550.51	1940.77	0.962	1819.52	449.33	3.3	15.0	26.097	D

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	985.41	246.35	1523.65		872.28	1.130	869.28	850.57	33.9	62.9	208.258	F
2	115.61	28.90	2185.86	550.51	448.63	0.258	115.59	207.07	0.4	0.4	11.890	B
3	779.52	194.88	598.27	550.51	1323.44	0.589	779.77	1703.19	1.7	1.6	7.288	A
4	7.71	1.93	964.62		1861.66	0.004	7.71	413.42	0.0	0.0	2.135	A
5	1866.23	466.56	520.94	550.51	1940.77	0.962	1853.28	451.38	15.0	18.2	37.233	E

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	804.59	201.15	1298.22		980.21	0.821	963.36	710.92	62.9	23.2	164.777	F
2	94.39	23.60	2082.72	449.49	492.82	0.192	94.85	178.86	0.4	0.3	9.961	A
3	636.48	159.12	588.60	449.49	1315.28	0.484	638.70	1588.97	1.6	1.0	5.871	A
4	6.29	1.57	869.50		1928.98	0.003	6.30	357.80	0.0	0.0	2.060	A
5	1523.77	380.94	426.70	449.49	2012.34	0.757	1582.44	449.10	18.2	3.6	10.410	B

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	673.80	168.45	1054.33		1096.98	0.614	759.35	585.73	23.2	1.8	14.933	B
2	79.05	19.76	1667.53	376.43	664.03	0.119	79.51	146.16	0.3	0.1	6.779	A
3	533.02	133.25	471.06	376.43	1336.09	0.399	534.25	1275.97	1.0	0.7	4.945	A
4	5.27	1.32	712.26		2040.27	0.003	5.27	293.05	0.0	0.0	1.945	A
5	1276.08	319.02	356.94	376.43	2064.55	0.618	1283.13	360.60	3.6	1.8	5.111	A

2021 + TVR + MRT, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4,5	13.96	B

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Pedestrian Crossings

Arm	Crossing type	Average pedestrian flow (Ped/hr)
1	None	
2	Pelican	500.00
3	Pelican	500.00
4	None	
5	Pelican	500.00

Pelican/Puffin Crossings

Arm	Space between crossing and junction entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
2	9.40	3.00	2.90	1.00	6.00	11.60	7.00
3	3.90	3.00	2.90	1.00	6.00	6.00	7.00
5	6.00	3.00	2.90	1.00	6.00	6.00	7.00

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2021 + TVR + MRT	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	671.00	100.000
2		ONE HOUR	✓	124.00	100.000
3		ONE HOUR	✓	1379.00	100.000
4		ONE HOUR	✓	209.00	100.000
5		ONE HOUR	✓	1125.00	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1		
2	Global	500.00
3	Global	500.00
4		
5	Global	500.00

Origin-Destination Data

Demand (PCU/hr)

		To				
From		1	2	3	4	5
	1	0.000	7.000	345.000	20.000	299.000
	2	15.000	0.000	31.000	33.000	45.000
	3	742.000	31.000	0.000	30.000	576.000
	4	31.000	0.000	57.000	0.000	121.000
	5	353.000	54.000	640.000	43.000	35.000

Proportions

		To				
From		1	2	3	4	5
	1	0.00	0.01	0.51	0.03	0.45
	2	0.12	0.00	0.25	0.27	0.36
	3	0.54	0.02	0.00	0.02	0.42
	4	0.15	0.00	0.27	0.00	0.58
	5	0.31	0.05	0.57	0.04	0.03

Vehicle Mix

Heavy Vehicle proportion

From	To					
		1	2	3	4	5
	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	10	10	10	10	10

Average PCU Per Veh

From	To					
		1	2	3	4	5
	1	1.100	1.100	1.100	1.100	1.100
	2	1.100	1.100	1.100	1.100	1.100
	3	1.100	1.100	1.100	1.100	1.100
	4	1.100	1.100	1.100	1.100	1.100
	5	1.100	1.100	1.100	1.100	1.100

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.64	9.66	2.0	A	615.72	923.58
2	0.20	7.29	0.3	A	113.78	170.68
3	0.90	22.01	8.8	C	1265.39	1898.09
4	0.19	4.13	0.3	A	191.78	287.67
5	0.75	9.21	3.1	A	1032.32	1548.48

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	505.16	126.29	643.81		1293.54	0.391	502.37	851.56	0.0	0.7	4.989	A
2	93.35	23.34	1077.42	376.43	898.07	0.104	92.85	68.76	0.0	0.1	4.914	A
3	1038.18	259.55	366.86	376.43	1445.89	0.718	1027.38	803.41	0.0	2.7	9.240	A
4	157.35	39.34	1300.02		1624.27	0.097	156.88	94.22	0.0	0.1	2.698	A
5	846.96	211.74	653.18	376.43	1619.05	0.523	842.19	803.71	0.0	1.2	5.068	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	603.22	150.80	771.47		1232.41	0.489	601.85	1023.54	0.7	1.0	6.265	A
2	111.47	27.87	1290.80	449.49	802.77	0.139	111.28	82.52	0.1	0.2	5.725	A
3	1239.69	309.92	439.55	449.49	1628.31	0.761	1237.01	962.53	2.7	3.4	10.038	B
4	187.89	46.97	1563.52		1437.76	0.131	187.70	113.03	0.1	0.2	3.167	A
5	1011.35	252.84	785.90	449.49	1635.12	0.619	1009.11	965.32	1.2	1.8	6.303	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	738.78	184.70	942.57		1150.49	0.642	735.27	1244.28	1.0	1.9	9.456	A
2	136.53	34.13	1577.27	550.51	678.80	0.201	136.13	100.57	0.2	0.3	7.293	A
3	1518.31	379.58	537.15	550.51	1690.00	0.898	1499.44	1176.25	3.4	8.1	19.079	C
4	230.11	57.53	1898.70		1200.53	0.192	229.73	137.90	0.2	0.3	4.076	A
5	1238.65	309.66	953.71	550.51	1657.51	0.747	1233.14	1174.72	1.8	3.1	9.209	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	738.78	184.70	947.66		1148.06	0.644	738.64	1255.16	1.9	2.0	9.663	A
2	136.53	34.13	1585.01	550.51	681.75	0.200	136.53	101.29	0.3	0.3	7.262	A
3	1518.31	379.58	539.52	550.51	1689.05	0.899	1515.54	1182.02	8.1	8.8	22.006	C
4	230.11	57.53	1916.35		1188.04	0.194	230.10	138.71	0.3	0.3	4.133	A
5	1238.65	309.66	962.94	550.51	1733.72	0.714	1239.88	1183.51	3.1	2.8	8.046	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	603.22	150.80	777.22		1229.66	0.491	606.74	1040.44	2.0	1.1	6.391	A
2	111.47	27.87	1300.43	449.49	807.87	0.138	111.86	83.53	0.3	0.2	5.694	A
3	1239.69	309.92	442.82	449.49	1753.49	0.707	1263.89	969.48	8.8	2.7	8.467	A
4	187.89	46.97	1592.50		1417.25	0.133	188.26	114.20	0.3	0.2	3.222	A
5	1011.35	252.84	801.27	449.49	1733.08	0.584	1016.39	979.49	2.8	1.6	5.562	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	505.16	126.29	648.89		1291.10	0.391	506.60	861.03	1.1	0.7	5.058	A
2	93.35	23.34	1086.07	376.43	905.07	0.103	93.55	69.43	0.2	0.1	4.880	A
3	1038.18	259.55	369.87	376.43	1594.89	0.651	1040.73	809.75	2.7	2.1	7.179	A
4	157.35	39.34	1315.51		1613.30	0.098	157.54	95.08	0.2	0.1	2.720	A
5	846.96	211.74	661.03	376.43	1717.70	0.493	848.89	812.02	1.6	1.1	4.567	A

Appendix D Napier Road / East MRT Scheme Junctions 9 Summary Outputs

Junctions 9							
PICADY 9 - Priority Intersection Module							
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2017							
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Filename: Napier MRT.j9

Path: J:\28791 RBC BLTB LA Scheme\03 East Reading MRT\Transport\Working Documents\Junction Analysis

Report generation date: 16/06/2017 15:49:45

»2021 + P&R + MRT, AM

»2021 + P&R + MRT, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2021 + P&R + MRT								
Stream B-AC	0.0	10.24	0.02	B	0.0	10.32	0.02	B
Stream C-AB	0.0	9.68	0.02	A	0.0	9.75	0.02	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	06/06/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\ldharvey
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021 + P&R + MRT	AM	ONE HOUR	07:45	09:15	15	✓
D2	2021 + P&R + MRT	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2021 + P&R + MRT, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	1.14	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Tesco		Major
B	MRT Scheme		Minor
C	Napier Road West		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.80		✓	5.00	45.0	✓	4.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	4.30	85	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	599	0.101	0.254	0.160	0.363
1	B-C	741	0.105	0.265	-	-
1	C-B	783	0.280	0.280	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021 + P&R + MRT	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	73	100.000
B		ONE HOUR	✓	15	100.000
C		ONE HOUR	✓	173	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A	B	C
	A	0	0	73
	B	0	0	15
	C	158	15	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A	B	C
	A	10	10	10
	B	10	10	100
	C	10	100	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.02	10.24	0.0	B	14	21
C-AB	0.02	9.68	0.0	A	14	21
C-A					145	217
A-B					0	0
A-C					67	100

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	11	3	726	0.016	11	0.0	0.0	10.069	B
C-AB	11	3	768	0.015	11	0.0	0.0	9.518	A
C-A	119	30			119				
A-B	0	0			0				
A-C	55	14			55				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	13	3	723	0.019	13	0.0	0.0	10.142	B
C-AB	13	3	765	0.018	13	0.0	0.0	9.585	A
C-A	142	36			142				
A-B	0	0			0				
A-C	66	16			66				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	17	4	719	0.023	16	0.0	0.0	10.242	B
C-AB	17	4	760	0.022	16	0.0	0.0	9.676	A
C-A	174	43			174				
A-B	0	0			0				
A-C	80	20			80				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	17	4	719	0.023	17	0.0	0.0	10.242	B
C-AB	17	4	760	0.022	17	0.0	0.0	9.676	A
C-A	174	43			174				
A-B	0	0			0				
A-C	80	20			80				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	13	3	723	0.019	14	0.0	0.0	10.143	B
C-AB	13	3	765	0.018	14	0.0	0.0	9.586	A
C-A	142	36			142				
A-B	0	0			0				
A-C	66	16			66				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	11	3	726	0.016	11	0.0	0.0	10.073	B
C-AB	11	3	768	0.015	11	0.0	0.0	9.520	A
C-A	119	30			119				
A-B	0	0			0				
A-C	55	14			55				

2021 + P&R + MRT, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	1.66	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021 + P&R + MRT	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	92	100.000
B		ONE HOUR	✓	15	100.000
C		ONE HOUR	✓	74	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	0	92
	B	0	0	15
	C	59	15	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	10	10	10
	B	10	10	100
	C	10	100	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.02	10.32	0.0	B	14	21
C-AB	0.02	9.75	0.0	A	14	21
C-A					54	81
A-B					0	0
A-C					84	127

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	11	3	722	0.016	11	0.0	0.0	10.122	B
C-AB	11	3	764	0.015	11	0.0	0.0	9.569	A
C-A	44	11			44				
A-B	0	0			0				
A-C	69	17			69				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	13	3	719	0.019	13	0.0	0.0	10.207	B
C-AB	13	3	760	0.018	13	0.0	0.0	9.647	A
C-A	53	13			53				
A-B	0	0			0				
A-C	83	21			83				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	17	4	714	0.023	16	0.0	0.0	10.323	B
C-AB	17	4	755	0.022	16	0.0	0.0	9.754	A
C-A	65	16			65				
A-B	0	0			0				
A-C	101	25			101				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	17	4	714	0.023	17	0.0	0.0	10.323	B
C-AB	17	4	755	0.022	17	0.0	0.0	9.754	A
C-A	65	16			65				
A-B	0	0			0				
A-C	101	25			101				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	13	3	719	0.019	14	0.0	0.0	10.208	B
C-AB	13	3	760	0.018	14	0.0	0.0	9.648	A
C-A	53	13			53				
A-B	0	0			0				
A-C	83	21			83				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	11	3	722	0.016	11	0.0	0.0	10.127	B
C-AB	11	3	764	0.015	11	0.0	0.0	9.571	A
C-A	44	11			44				
A-B	0	0			0				
A-C	69	17			69				