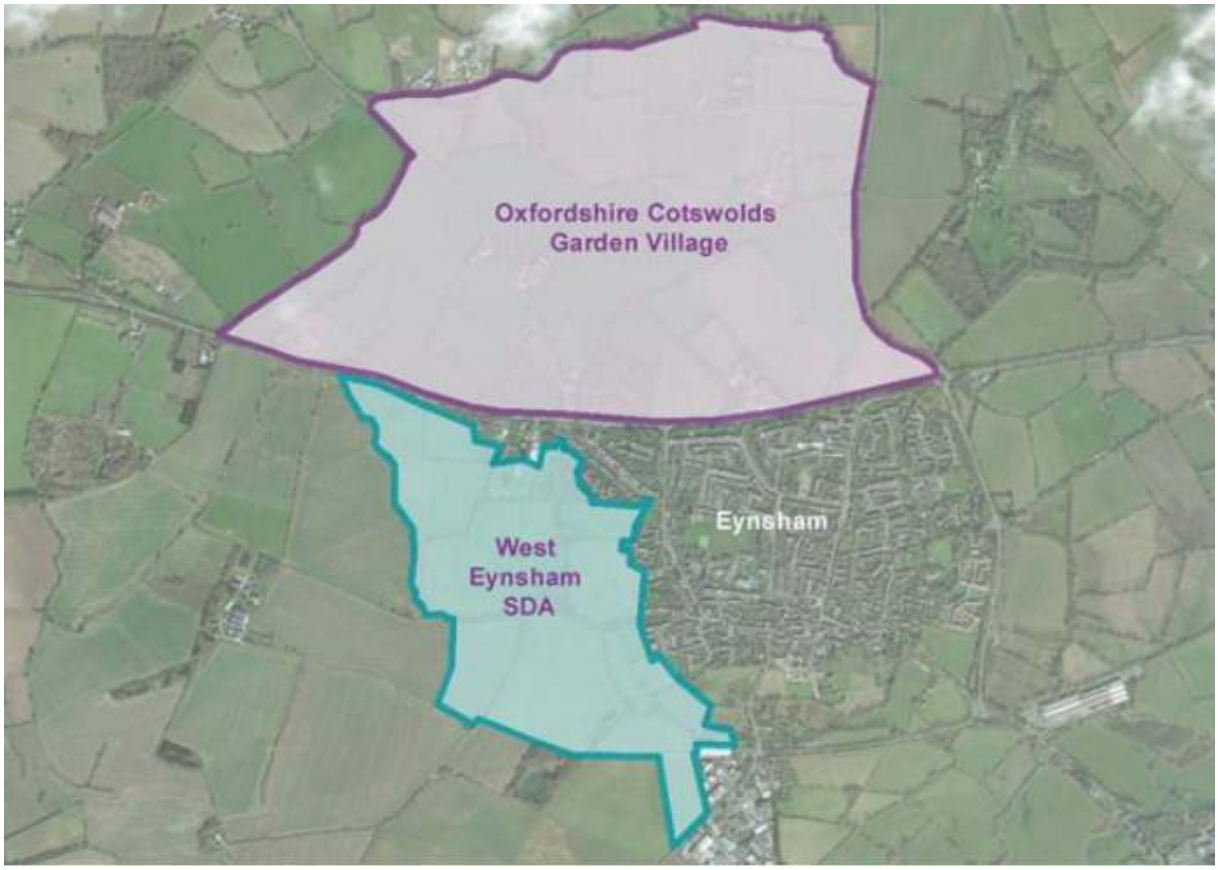
West Eynsham SDA Access Strategy

Final Report

A117736-01

West Oxfordshire District Council
September 2020



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OXFORDSHIRE COUNTY COUNCIL

West Eynsham SDA Access Strategy: Final Report, September 2020

Oxfordshire County Council: Officer Response

Date: October 2020

In May 2020 Oxfordshire County Council (OCC) and West Oxfordshire District Council (WODC) jointly commissioned White Young Green (WYG) to establish a preferred access strategy for the West Eynsham Strategic Development Area (WE SDA). This Report sets out the findings of that work.

The study considered the potential issues and options for access between the A40 and the B4449, including a secondary access route from the SDA into the existing village of Eynsham for cyclists and pedestrians. The agreed project objectives were to identify the most appropriate strategy to:

- Manage impacts on the wider highway network
- Encourage and enable safe, sustainable travel
- Protect and enhance the local environment
- Support positive place-making

With all aspects considered, the recommendation from the study was that the northern A40 access to the WE SDA should be via the proposed Park & Ride roundabout. This was based upon the following findings:

- **Highway network impacts:** The western roundabout option resulted in the greatest increase in delay on the A40, whilst the Park & Ride junction would require the relocation or replacement of the existing HGV layby.
- **Sustainable travel:** Linking to the Park & Ride junction would bring the northern element of the spine road slightly closer to existing sustainable transport options and local facilities.
- **Local environment:** A link to the Park & Ride junction would have the least impact on the Flood Plan; the Environment Agency's policy guidelines require a sequential look for alternatives which would be a significant issue for the western access.
- **Place-making:** All options scored well.

Next steps

Findings from the study are feeding into the design and modelling work being undertaken as part of the A40 Corridor improvements being delivered through the Local Growth Fund (LGF) and Housing Infrastructure Fund (HIF) programmes. This includes ensuring that the Park & Ride junction is designed such that it enables provision of a 4th arm serving the WE SDA. OCC will also engage further with WODC and the WE SDA developers to develop the preferred strategy for addressing the layby implications. This will include work as part of the HIF programme to identify and assess potential locations for a relocated layby along the A40.

The WYG Report will be a key informant for the Supplementary Planning Document that will guide development at the West Eynsham SDA and is due to be published towards the end of 2020.

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1.0 Introduction

1.1 Preamble

1.1.1 The West Eynsham Strategic Development Area (SDA) is one of the key growth areas identified within the West Oxfordshire Local Plan, helping to bring forward a significant level of residential development within the plan period (expected to be in the order of 1,000 new homes, supported by the provision of a new primary school).

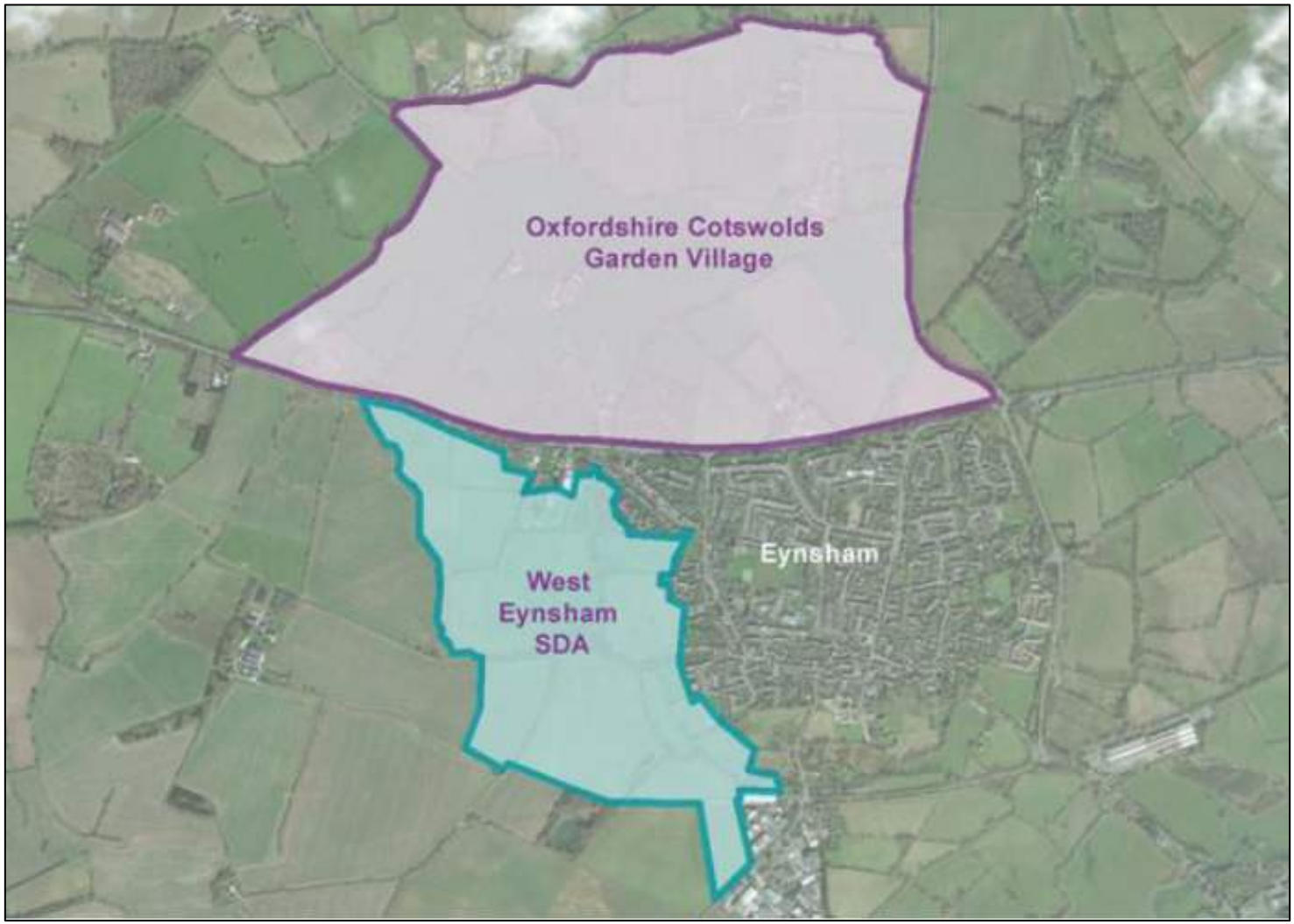
1.1.2 To the immediate north of the SDA there is further growth planned, with the development of the Oxfordshire Cotswolds Village on the northern side of the A40, providing approximately 2,200 homes, a Science / Technology Park, and a mix of local facilities.

1.1.3 The SDA is also located on a corridor where there are plans for considerable investment in transport infrastructure, including:

- Proposals for a Park and Ride site to the immediate north of the SDA, located on the northern side of the A40.
- Major improvement works proposed to the A40 corridor, including dualling between Eynsham and Witney to the west, and bus priority measures and bus lanes between Eynsham and the Wolvercote Roundabout to the east.
- Investment in pedestrian cycle connections and routes, both north – south (crossing the A40) and east – west.

1.1.4 A plan providing an overview of the project area is provided on the following page as **Figure 1-1**.

Figure 1-1 – Project study area



1.1.5 Recognising the key opportunities that the development of the SDA provides and the importance of identifying a comprehensive and coordinated access strategy, West Oxfordshire District Council and Oxfordshire County Council have commissioned WYG to carry out an impartial review of the access strategy options for the West Eynsham SDA.

1.1.6 This study work considers the three main elements expected to form the strategy, specifically:

- The issues and options associated with primary vehicular access to the SDA from the A40 (to the north) and the B4449 (to the south).
- The potential secondary access options available (focusing on pedestrian, cycle and emergency vehicle links) connecting the SDA to the western side of the existing settlement of Eynsham.
- The issues and options associated with varying alignment options for a development spine road through the SDA, between the A40 (to the north) and the B4449 (to the south).

1.1.7 The outcome of the study work will be the identification of a recommended access strategy for the SDA site, for further consideration by the project team.

1.1.8 This in turn will help inform the master planning of the SDA and the Council's preparation of a Supplementary Planning Document (SPD) for the site.

2.0 Methodology

2.1 Introduction

2.1.1 In order to meet the requirements of the project brief, as outlined in **Section 1.0**, the following methodology has been applied:

- The identification and agreement of a series of project objectives and associated measurement criteria, against which the access options considered can be assessed.
- Modelling the main access options using Oxfordshire County Council's approved A40 corridor VISSIM model.
- Carrying out more detailed modelling of the main junction options onto the A40 (to the north of the SDA) and the B4449 (to the south of the SDA), using industry standard junction modelling software (JUNCTIONS 9).
- Carrying out a review of the potential options for secondary access locations, connecting the SDA with the west of Eynsham, with a focus on sustainable links.
- Carrying out a high-level review of the potential alignment options for a development spine road, running north-south between the A40 and B4449.
- Identifying areas of delivery risk for each of the above.
- Bringing together the findings of each element of the options assessment work undertaken and identifying a preferred access strategy.

2.1.2 Further detail on each stage of the work undertaken is provided in the following sections of this report.

2.2 Project Objectives

2.2.1 In order for the potential strategy options to be assessed on a consistent and impartial basis, the first project task was to identify a series of objectives against which access strategy options could be appraised.

2.2.2 To help inform the development of the project objectives a review of applicable local policy was carried out, covering the following:

- Connecting Oxfordshire (Local Transport Plan)
- West Oxfordshire Local Plan
- Eynsham Neighbourhood Plan
- The A40 Strategy
- The Connecting Oxfordshire Bus, Healthy Travel, and Freight supporting documents

2.2.3 A review was also undertaken of the responses received to the West Eynsham SPD issues paper consultation (August 2018), to make sure that the opinions expressed through the consultation were taken into account.

2.2.4 A full breakdown of the policy aims reviewed and their correlation with the resulting identified project objectives for the West Eynsham SDA Access Strategy is provided in **Appendix A**, with a summary of the four main objectives, and related supporting sub-objectives, provided below.

Objective 1: Manage impacts on the wider highway network.

2.2.5 This overarching objective is focused upon the need to maintain the efficient operation of the highway network adjacent to the West Eynsham SDA site, in particular being mindful of the traffic sensitivity of the A40, and the impact of access options on laybys which currently serve an important role with regards to freight traffic. This objective was supported by two sub-objectives:

- H1: Minimise adverse impacts on A40 journey times
- H2: Accommodate existing and forecast freight movements on the strategic road network

Objective 2: Encourage and enable safe sustainable travel

2.2.6 This objective was based upon supporting policy goals related to sustainable trip making to, from, and within the SDA, with relevance to both its connectivity to the surrounding transport networks and the routes within the site. This objective was supported by the following three sub-objectives:

- S1: Enable improved access to, and use of, public transport
- S2: Maximise permeability through the site for pedestrians and cyclists
- S3: Maintain and enhance safety for all users

Objective 3: Protect and enhance the local environment

2.2.7 This objective was based upon policy goals relating to both the overarching need to deliver development which protects the environment and to also account for the specific environmental and heritage assets relevant to the West Eynsham SDA. This objective was supported by the following sub-objectives:

- E1: Protect the natural environmental and heritage assets of the West Eynsham SDA site
- E2: Maintain access to the surrounding countryside
- E3: Protect and enhance the environment within Eynsham

Objective 4: Support positive placemaking

2.2.8 This objective reflects the placemaking aims contained within local policy, with a focus on achieving a high quality, comprehensive and well-integrated development. This objective is supported by the following sub-objectives:

- P1: Provide a route which effectively serves the needs of the residents of the West Eynsham SDA
- P2: Enable the delivery of comprehensive development
- P3: Positively integrate the West Eynsham SDA with the existing community, providing access to and from local facilities

2.3 Measurement Criteria

2.3.1 In order for a comparative assessment of scheme options to be undertaken, a series of assessment criteria for each sub-objective were also identified.

2.3.2 The following figures summarise the main objective, sub-objectives and associated assessment criteria which follow through the remainder of the study work.

2.3.3 The assessment criteria related to the ability of access strategy options to support **Objective 1** are based upon the modelling of network and junction operation as detailed in **Section 4.0** of this report, which takes into account planned growth and development.

2.3.4 The impact upon current HGV parking / layby provision was also included, to help take into account the important freight function of the A40 and the potential implications of access strategy options.

Figure 2-1 - Objective 1

Objective	Sub-objective	Assessment criteria
Manage impacts on the wider highway network	Objective H1: Minimise adverse impacts on A40 journey times	**1.** VISSM Model and Junction Modelling Results (comparison between scenarios, delay on A40 approaches). **2.** Impact upon bus priority, including access to / from the Park and Ride.
	Objective H2: Accommodate existing and forecast freight movements on the strategic road network	**1.** Need to relocate lorry parking / layby areas. **2.** Delay on A40 approaches.

2.3.5 The assessment criteria for the second project objective are based around the ability of the access options to support and enable sustainable transport movements to and from the West Eynsham SDA. These criteria are based upon the ability of an option, or elements within an option, to make positive connections with surrounding sustainable transport infrastructure (both existing and planned).

Figure 2-2 - Objective 2

Objective	Sub-objective	Assessment criteria
Encourage and enable safe Sustainable Travel	Objective S1: Enable improved access to, and use of, public transport	**1.** Allowance for bus connections / services. **2.** Link to Park and Ride. **3.** Links to bus stops on the A40. **4.** Links to bus stops within Eynsham.
	Objective S2: Maximise permeability through the site for pedestrians and cyclists	**1.** Allowance for pedestrian and cycle routes along spine road. **2.** Protection of pedestrian east - west corridors within site. **3.** Allowance for connections north-south to the Garden Village and Science Park
	Objective S3: Maintain and enhance safety for all highway users	**1.** Allowance for appropriate crossing points at A40 junction. **2.** Allowance for safe crossing of the Spine Road.

2.3.6 The criteria for the third Objective are largely informed by the review of constraints provided in **Section 6.0** of this report, considering both the relationship of the access strategy with the local areas of floodplain and the impact upon local heritage assets. The findings of the stakeholder engagement process also feed into the assessment criteria for this objective, with the links to and from Eynsham and the impact upon Chilbridge Road taken into consideration.

Figure 2-3 - Objective 3

Objective	Sub-objective	Assessment criteria
Protect and enhance the local environment	Objective E1: Protect the natural environmental and heritage assets of the West Eynsham SDA site	**1.** Impact on Floodplain **2.** Impact on Chilbrook. **3.** Impact on Scheduled Ancient Monument. **4.** Impact on the Chil Bridge. **5.** Number of north-south crossings.
	Objective E2: Maintain access to the surrounding Countryside	**1.** Protection of east - west corridors within the site.
	Objective E3: Protect and enhance the environment within Eynsham	**1.** Scope to remove traffic from Eynsham Village. **2.** Number of vehicular connections into Eynsham.

2.3.7 Assessment criteria for the fourth objective were selected based upon the ability of access options to support positive placemaking, with criteria covering the role and function of the spine road itself, the relationship with adjacent development, and the links to and from Eynsham.

Figure 2-4 - Objective 4

Objective	Sub-objective	Assessment criteria
Support positive placemaking	Objective P1: Provide a route which effectively serves the needs of residents of the West Eynsham SDA	**1.** Nature of the Spine Road (i.e. development frontage / side friction / relationship with School Site). **2.** Standard / Speed of spine road. **3.** Provision of pedestrian / cycle facilities. **4.** Ability for east - west links to be maintained or provided.
	Objective P2: Enable delivery of comprehensive development	**1.** Positive relationship with the Garden Village Development. **2.** Positive relationship with Park and Ride site. **3.** Ability to deliver the full route.
	Objective P3: Positively integrate the West Eynsham SDA with the existing community, providing access to and from local facilities	**1.** Number and quality of links to the west of Eynsham. **2.** Walking and cycling distances to existing facilities with Eynsham using secondary access points.

2.4 Project Risks

2.4.1 In addition to the four main objectives (and supporting sub-objectives) identified, a further review of potential high-level risks to delivery, including land requirements and other physical constraints, was carried out. The main areas of risk identified are summarised in **Section 7.0** of this report.

3.0 Stakeholder Consultation

3.1 Introduction

3.1.1 As a major allocation within the West Oxfordshire Local Plan, there are several key stakeholder groups with an interest in the form, function, and future operation of any access strategy for the West Eynsham SDA.

3.1.2 As such, prior to undertaking the quantitative assessment of the access strategy options, contact was made with stakeholder groups to provide context to the appraisal of access strategy options. The following groups were contacted:

- County Councillor/s
- District Councillor/s
- Eynsham Parish Council
- Historic England
- Environment Agency
- Landowners / Developers (Berkeley, Jansons, Oxfordshire County Council, Grosvenor, Thomas Homes, Vanderbilt, Taylor Wimpey).

3.1.3 Discussions were also held with Officers from Oxfordshire County Council with regards to public transport and the proposed A40 improvement works.

3.2 Summary of comments

3.2.1 The following list summarises the main points of interest raised during the individual stakeholder discussions raised:

- The phasing and delivery of infrastructure alongside (or in advance of) individual areas of development will be important. This includes the timing of works on the A40, both in terms of capacity improvements and the provision of non-motorised user crossing facilities, providing a link between the West Eynsham SDA (and the existing community with Eynsham) on the southern side, with the Park and Ride and Cotswolds Garden Village to the north.

- That the opening of the spine road will offer alternative access options for development parcels currently being considered to the north and east of the site, either upon construction, or post construction, when connection to the spine road becomes possible.
- That any access works towards the western boundary of the site, including access onto the A40, would require justification in terms of appropriate sequential testing, to demonstrate that other feasible options had been considered and discounted, in order to comply with the policy guidance from the Environment Agency. In the event that an appropriate sequential testing argument can be made, then mitigation / compensation works would be required.
- The southern access junction's proximity to the Scheduled Ancient Monument, and potential to cross into the land designated as part of the monument site, will require careful consideration, including a justification as to why other options have been considered and discounted. Any such works would also require Scheduled Monument Consent and be supported by appropriate levels of investigative works to assess and mitigate the potential harm caused.
- That the current role, form and function of Chilbridge Road is very important, providing access to the Countryside for existing residents of Eynsham, with the ability to serve the same future role for residents of the West Eynsham SDA. As such, the view of the Parish Council was that no development should take place south of Chilbridge Road. However, should there be a need to cross the road and develop the south of site, that any crossing would have to be carefully designed and sympathetic to the nature and use of the existing road.
- Regardless of the eventual preferred option, a coordinated approach to infrastructure funding and delivery would be required, accounting for the various landowners and developers with an interest in the SDA and the varying timescales for delivery between different development parcels. In particular this would make sure that the infrastructure burdens associated with the delivery of the site would be fairly and proportionally shared between different development parcels.

4.0 Primary Access Options Review

4.1 Introduction

4.1.1 As detailed in **Section 2.0**, the first stage of assessment work concentrated on the location and form of primary junctions onto the major roads to the north and south of the West Eynsham SDA. The following sections of this report summarise the findings of this assessment, split between the primary access options to the north (onto the A40) and the south (connecting to the B4449).

4.2 A40 Access Options

4.2.1 Two main options have been proposed for the primary connection of the West Eynsham Spine Road onto the A40.

4.2.2 The first option considered is located close to the Western Boundary of the site, and has been assumed to be in the form of a four arm roundabout, with the southern arm providing access to the West Eynsham SDA, whilst the northern arm would serve as the western access to the Cotswolds Garden Village (located to the north of the A40). The location and geometry of the western roundabout option was based upon the joint access proposals being considered by Berkeley Homes and the Grosvenor Group.

4.2.3 The second option considered, as currently promoted by Jansons', would be further to the east, and has also been assumed to be in the form of a four arm roundabout, with the southern arm providing access to the West Eynsham SDA and the northern arm providing access to the planned Eynsham Park and Ride. The location and geometry of the eastern roundabout option was based upon the current proposed Park and Ride roundabout proposals prepared by Oxfordshire County Council, with an allowance for a fourth (southern) arm.

4.3 B4449 Access Options

4.3.1 To the southern end of the spine road, the options available are constrained by a number of physical factors:

- The proximity of the junction location to the adjacent Scheduled Ancient Monument, to the immediate west.
- Existing commercial access and junctions serving the Oakfields Industrial Estate and several individual units directly fronting the B4449.

4.3.2 The main option assessed for the southern junction is therefore the provision of a three-arm 40m ICD (Inscribed Circle Diameter) roundabout, located to the immediate west of the existing Polar Technology priority junction (which would be closed to traffic following the forming of the new junction).

4.3.3 Whilst a previous option for the southern access junction was considered in the form of a much smaller four-arm roundabout junction, replacing the existing Polar Technology priority junction, it is understood that this option had previously been discounted due to:

- Land constraints limiting the size of junction which could be delivered at this location (to a 'compact' roundabout circa 30m ICD).
- The requirement for a fourth arm, in combination with the smaller diameter of the roundabout, reducing the potential capacity of the junction.

4.4 Methodology

4.4.1 To provide some of the quantitative data used to inform the comparative assessment of the two options, two stages of modelling work were carried out.

4.4.2 The modelling of two initial scenarios was undertaken, using Oxfordshire County Council's VISSIM model, with the following assumptions applied in the case of each scenario:

Table 4-1 – VISSIM modelling infrastructure assumptions

Scenario	Western A40 Roundabout	Eastern A40 Roundabout	B4449 Roundabout	Spine Road
A	Three-arm 70m ICD serving Garden Village to the north.	Four-arm, serving P&R to the north and West Eynsham (full development) to the south	40m ICD onto Stanton Harcourt Road	30mph
B	Four-arm 70m ICD serving Garden Village to the north and 800 units at West Eynsham to the south.	Four-arm, serving P&R to the north and a limited number of units (assuming 200) for West Eynsham to the south (treated as a cul-de-sac)	40m ICD onto Stanton Harcourt Road	30mph

4.4.3 The subsequent modelling of a series of access options was then undertaken, using industry standard software Junctions 9, and based upon flows taken from the VISSIM model:

- **Option 1:** Access to the A40 from the western development roundabout only
- **Option 2:** Access to the A40 from the eastern (Park and Ride) roundabout only
- **Option 3:** Two accesses, but with a limited number of dwellings served from the Park and Ride roundabout
- **Option 4:** A bus-only link from the Park and Ride Roundabout

4.4.4 Where necessary, flows from the VISSIM model were manually re-assigned to inform the various options, for example by removing the flows from the 200 units served south of the Park and Ride roundabout in Scenario B and adding them onto the flows at the Western Roundabout for Option 1 (western development roundabout access only).

4.4.5 A number of further sensitivity tests were also undertaken on several of the options identified, with the details of these provided below:

- **Option 1a:** A sensitivity test of Option 1, in which a larger (80m ICD) roundabout was modelled as the western development roundabout.
- **Option 1b:** A sensitivity test of Option 1, in which all traffic currently using Cuckoo Lane to access / exit the A40 was displaced onto the western development roundabout.
- **Option 1c:** A sensitivity test of Option 1, in which all development traffic associated with the West Eynsham SDA used the western development roundabout onto the A40, assuming no southern connection onto the B4449.
- **Option 2a:** A sensitivity test of Option 2, in which all traffic currently using Cuckoo Lane to access / exit the A40 was displaced onto the western development roundabout.
- **Option 2b:** A sensitivity test of Option 2, in which all development traffic associated with the West Eynsham SDA used the Park and Ride roundabout onto the A40, assuming no southern connection onto the B4449.

4.4.6 A summary of the assumptions applied for each of the more detailed sets of junction assessments is provided in **Table 4-2** (below).

Table 4-2 - Option Test Assumptions

Option	1	1a	1b	1c	2	2a	2b	3	4
Western Roundabout	70m 4arm	80m 4arm	70m 4arm	70m 4arm	70m 3arm	70m 3arm	70m 3arm	70m 4arm	70m 4arm
Eastern Roundabout	P&R (no dev)	P&R (no dev)	P&R (no dev)	P&R (no dev)	P&R 4arm (full dev)	P&R 4arm (full dev)	P&R 4arm (full dev)	P&R 4arm (20% dev)	P&R 4arm (bus only)
Southern Roundabout	40m 3arm	40m 3arm	40m 3arm	No link	40m 3arm	40m 3arm	No Link	40m 3arm	40m 3arm
Cuckoo Lane	Open	Open	Closed	Open	Open	Closed	Open	Open	Open
Full Link Road	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes

4.5 VISSIM Model Results

4.5.1 The results of the VISSIM modelling work are summarised in the following section. The VISSIM results are provided as a series of metrics, covering:

- Average network speeds (by vehicle class)
- Average network delay (by vehicle class)
- Individual levels of junction delay and queuing

4.5.2 **Table 4-3** provides a summary of the VISSIM overall network statistics for each of the two model scenarios. The AM and PM peak hour periods were based upon those provided within the A40 VISSIM model (with the AM period being 08.00-09.00 and the PM period being 16.00-17.00).

Table 4-3 - VISSIM Scenario Test Summary Results (all vehicles)

Scenario		Average Network Speeds (mph)	Average Network Delay (s)
A	AM	20.0	250.1
	PM	23.9	186.4
B	AM	19.9	251.4
	PM	23.7	190.2

4.5.3 Summary results for the operation of individual junctions within the VISSIM network are provided in **Table 4-4** to **Table 4-7**. These table provide details of the average and maximum queue lengths experienced on any junction approach, the total number of vehicles passing through the junction during the hour period, the overall level of services (as a global metric for the efficiency of operation of the junction, with 'A' being the most efficient), and the average vehicle delay experienced at the junction).

Table 4-4 – AM Peak Hour Junction Summary Results (Scenario A)

Junction	Average Queue (metres)	Maximum Queue (metres)	Total PCU	Level of Service	Average Delay (Seconds)
Garden Village Roundabout	6.0	145.5	2,996	A	8.2
Development Link / P&R Roundabout	3.4	128.0	3,051	A	10.1
Development Link / Stanton Harcourt Roundabout	0.1	21.6	1,033	A	4.5
A40 / Cuckoo Lane	8.9	264.3	2,858	C	15.7

Table 4-5 – AM Peak Hour Junction Summary Results (Scenario B)

Junction	Average Queue (metres)	Maximum Queue (metres)	Total PCU	Level of Service	Average Delay (Seconds)
Development Link / Garden Village Roundabout	46.2	428.2	3,222	E	43.5
P&R Roundabout	0.8	71.7	2,711	A	5.1
Development Link / Stanton Harcourt Roundabout	0.1	28.7	984	A	4.5
A40 / Cuckoo Lane	6.3	248.9	2,831	B	14.1

Table 4-6 - PM Peak Hour Junction Summary Results (Scenario A)

Junction	Average Queue (metres)	Maximum Queue (metres)	Total PCU	Level of Service	Average Delay (Seconds)
Garden Village Roundabout	1.7	89.4	2,839	A	4.6
Development Link / Park & Ride Roundabout	0.6	69.4	2,792	A	5.4
Development Link / Stanton Harcourt Roundabout	0.0	15.2	592	A	4.9
A40 / Cuckoo Lane	8.2	263.4	2,632	B	14.2

Table 4-7 - PM Peak Hour Junction Summary Results (Scenario B)

Junction	Average Queue (metres)	Maximum Queue (metres)	Total PCU	Level of Service	Average Delay (Seconds)
Development Link / Garden Village Roundabout	2.6	113.5	2,909	A	6.7
Park & Ride Roundabout	1.1	44.5	2570	A	5.3
Development Link / Stanton Harcourt Roundabout	0.0	14.0	603	A	5.1
A40 / Cuckoo Lane	6.5	251.9	2624	A	13.0

4.5.4 The main outputs from this initial set of high-level scenario tests suggest that:

- Whilst the overall difference across the modelled network is limited, Scenario A generally performs better than Scenario B in terms of average speeds and delay.
- When considering the operation of individual junctions during the AM peak hour Scenario A also performs better, with less queueing and delay, particularly at the western (Cotswold Garden Village) junction. This appears to predominantly be as a result of increased delays on the western approach to the junction, which is worsened in Scenario B, as traffic on the western approach gives way to traffic exiting the West Eynsham development spine road onto the A40.
- During the PM peak hour, the degree of difference between the two options is marginal, however overall Scenario B appears to perform slightly better, with slightly less queuing and delay predicted on the junctions to the east of the site access on the A40.

4.6 Individual Junction Model Results

4.6.1 Flows were extracted from the VISSIM scenarios and used to carry out a series of subsequent and more detailed individual junction modelling using JUNCTIONS 9.

4.6.2 A series of network diagrams summarising the traffic flows used as the basis for each assessment option are provided as **Appendix B**.

4.6.3 This individual junction modelling exercise provides a summary of the overall operation of the junction along with analysis of the operation of each individual junction approach. The main metrics reported on in JUNCTIONS 9 are the Ratio of Flow to Capacity (RFC), which measures the proportion of an individual junction approaches theoretical capacity being used, and queue lengths.

4.6.4 Generally, a threshold RFC value of 0.85 identifies when queuing and delay may begin to be experienced on an individual junction approach, while values in excess of 1.00 suggest that the amount of traffic using an approach exceeds the junction's theoretical capacity.

4.6.5 The results for each of the options tested, and for each of the three junctions in the study area, are provided below, with **Table 4-8** to **Table 4-10** summarising the AM peak hour results, with the full JUNCTION 9 Reports provided as **Appendix C**.

Table 4-8 - AM Peak Hour Junction Summary (Garden Village Roundabout)

Western Roundabout 70m ICD (Results summarised for worst performing arm)				
Options	Assumptions	RFC	Queue (vehicles)	Delay [sec]
1	Western roundabout	0.81	4.3	10
1a	80m ICD	0.8	4	9
1b	Cuckoo Lane Closed	0.84	5.1	12
1c	No southern connection	0.97	17.8	37
2	Eastern roundabout	0.76	3.2	7
2a	Cuckoo Lane Closed	0.79	3.6	8
2b	No southern connection	0.87	6.3	13
3	Both roundabouts	0.80	3.9	9

Table 4-9 - AM Peak Hour Junction Summary (P&R Roundabout)

P&R Roundabout (Results summarised for worst performing arm)				
Options	Assumptions	RFC	Queue (vehicles)	Delay [sec]
1	Western roundabout	0.54	1.2	3
1a	80m ICD	0.54	1.2	3
1b	Cuckoo Lane Closed	0.55	1.2	3
1c	No southern connection	0.58	1.4	3
2	Eastern roundabout	0.54	1.2	3
2a	Cuckoo Lane Closed	0.55	1.2	3
2b	No southern connection	0.65	1.9	4
3	Both roundabouts	0.53	1.1	3

Table 4-10 - AM Peak Hour Junction Summary (B4449 Roundabout)

Southern Roundabout (B4449) (Results summarised for worst performing arm)				
Options	Assumptions	RFC	Queue (vehicles)	Delay [sec]
1	Western roundabout	0.32	0.5	3
1a	80m ICD	0.32	0.5	3
1b	Cuckoo Lane Closed	0.32	0.5	3
1c	No southern connection			
2	Eastern roundabout	0.32	0.5	3
2a	Cuckoo Lane Closed	0.32	0.5	3
2b	No southern connection			
3	Both roundabouts	0.32	0.5	3

4.6.6 Results for the study area covering the PM peak period are summarised in **Table 4-11** to **Table 4-13** (below).

Table 4-11 – PM Peak Hour Junction Summary (Garden Village Roundabout)

Western Roundabout 70m ICD (Results summarised for worst performing arm)				
Options	Assumptions	RFC	Queue (vehicles)	Delay [sec]
1	Western roundabout	0.72	2.6	6
1a	80m ICD	0.75	3.0	8
1b	Cuckoo Lane Closed	0.74	2.8	6
1c	No southern connection	0.76	3.2	7
2	Eastern roundabout	0.70	2.3	5
2a	Cuckoo Lane Closed	0.71	2.4	5
2b	No southern connection	0.74	2.8	6
3	Both roundabouts	0.71	2.4	6

Table 4-12 - PM Peak Hour Junction Summary (P&R Roundabout)

P&R Roundabout (Results summarised for worst performing arm)				
Options	Assumptions	RFC	Queue (vehicles)	Delay [sec]
1	Western roundabout	0.42	0.7	3
1a	80m ICD	0.42	0.7	3
1b	Cuckoo Lane Closed	0.42	0.7	3
1c	No southern connection	0.42	0.7	3
2	Eastern roundabout	0.48	0.9	3
2a	Cuckoo Lane Closed	0.45	0.8	3
2b	No southern connection	0.51	1.1	3
3	Both roundabouts	0.41	0.7	2

Table 4-13 - PM Peak Hour Junction Summary (B4449 Roundabout)

Southern Roundabout (B4449) (Results summarised for worst performing arm)				
Options	Assumptions	RFC	Queue (vehicles)	Delay [sec]
1	Western roundabout	0.21	0.3	3
1a	80m ICD	0.21	0.3	3
1b	Cuckoo Lane Closed	0.21	0.3	3
1c	No southern connection			
2	Eastern roundabout	0.20	0.3	3
2a	Cuckoo Lane Closed	0.20	0.3	3
2b	No southern connection			
3	Both roundabouts	0.21	0.3	3

4.6.7 The results of the individual junction modelling were generally consistent with the main VISSIM scenario tests, albeit that the individual junction models tended to show an overall more efficient level of operation. This may be due to the individual junction models not fully addressing the impacts of interaction between junctions on the A40 corridor, whilst it is also noted that the flows through the junctions are relatively unbalanced, with high mainline flows, and comparatively low side road movements.

4.6.8 As with the higher level VISSIM modelling, those options in which the western roundabout option was treated as the main point of access for the West Eynsham SDA performed poorer in the AM peak. During this period queuing and delay were predominantly predicted to take place on the western approach to the roundabout, albeit with the western approach only predicted to exceed the RFC threshold of 0.85 in those scenarios in which no full link through to the B4449 was provided.

4.6.9 Based upon the VISSIM flows assessed, the Park and Ride roundabout was predicted to operate within reasonable capacity during both peak periods in all of the options.

4.6.10 The roundabout at the southern end of the West Eynsham development link road, connecting onto the B4449 was also predicted to operate well within capacity during both peak periods in all of the options considered.

4.6.11 It is however important to note that the standalone modelling work only addresses the ability of individual junctions to accommodate predicted levels of traffic demand through the junction itself, i.e. the potential for the junction to be a 'pinch-point' or constraint on the wider network, whilst the VISSIM model provides a more comprehensive analysis of the corridor as a whole, taking account of queuing between junctions.

5.0 Secondary Access Options Review

5.1 Introduction

5.1.1 In addition to considering the primary vehicle access options serving the West Eynsham Strategic Development Area (SDA), connecting to the north and the south, the access strategy also needs to consider the role of east-west connectivity, supporting project objectives which promote the positive integration of the West Eynsham SDA with the existing settlement.

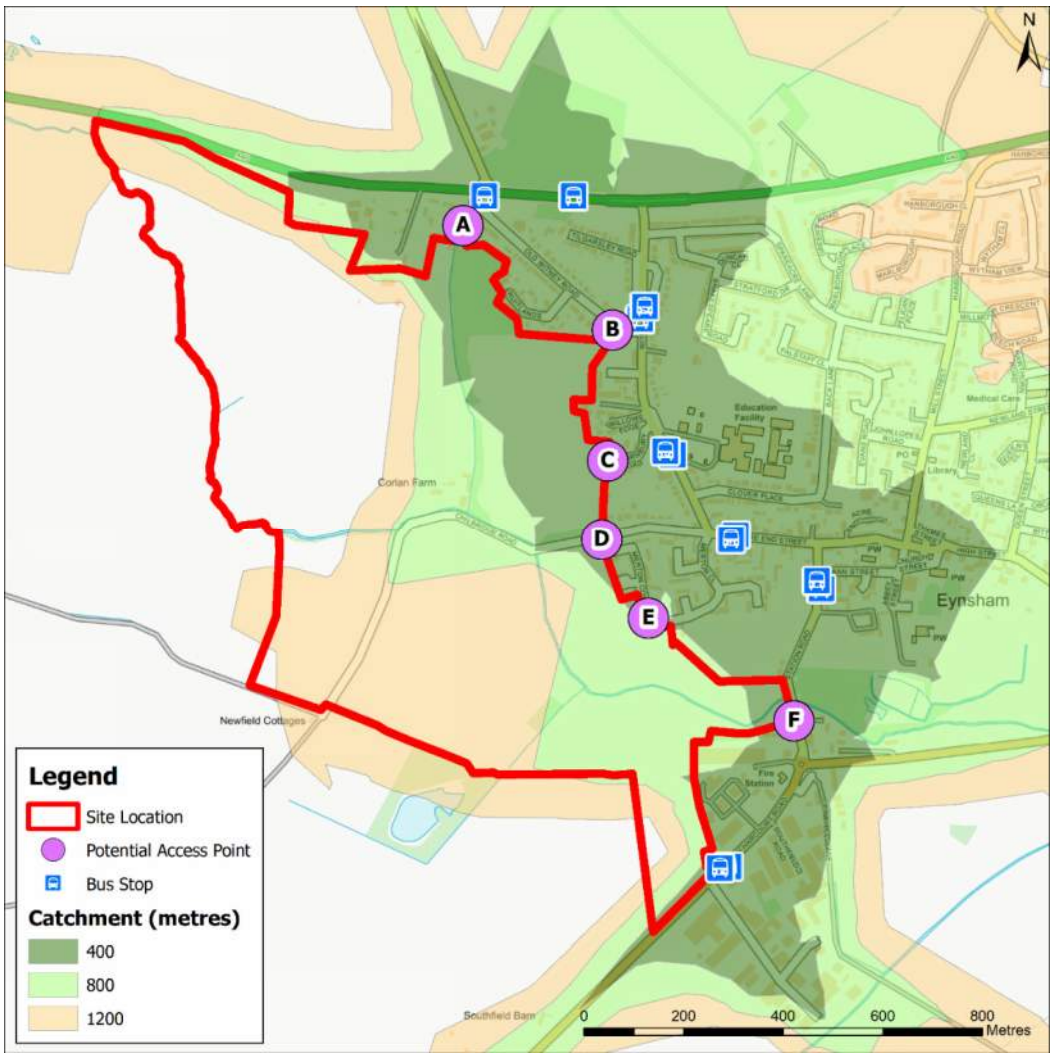
5.1.2 The assessment of secondary access options focused upon locations where sustainable connections could be made, addressing pedestrian, cycle and emergency vehicle access. This approach was consistent with the policy goals of the Eynsham Neighbourhood Plan, in which Policy ENP7 seeks to avoid development using existing village roads stating that 'Where achievable, new developments should be accessed by motor vehicle from existing main roads (A40, B4044, B4449) and not through existing village roads. This provision should apply to both construction and residential traffic'.

5.1.3 Six potential secondary access locations were identified for review, summarised below:

- (A) Old Witney Road (western end)
- (B) Old Witney Road (eastern end)
- (C) Thornbury Road
- (D) Chilbridge Road
- (E) Merton Court
- (F) Station Road

5.1.4 These access locations were identified by the Council in the West Eynsham Issues Paper (August 2018). The location of each (marked A – F) is shown on the plan provided below as **Figure 5-1**.

Figure 5-1 – Potential Secondary Access Locations



5.2 Methodology

5.2.1 In order to assess the potential secondary access locations and their possible future function, the following assessment was carried out:

- A site audit was undertaken to identify the current nature and general standard of each access location and to obtain on-site measurements for available carriageway and footway widths.
- A review of the current extent of highway boundary was carried out to determine whether there were any identifiable gaps between the boundary of the SDA and the current extent of adopted public highway.
- A review of the relative levels of access to a number of example local facilities was carried out to determine the degree to which each secondary access could enable improved access to existing local services for residents of the SDA.

5.2.2 Recommendations were then made on the function that each access could serve, split between:

- Pedestrian and / or cycle access
- Public transport access
- Emergency vehicle access
- Access for all traffic

5.3 Site Audit

5.3.1 A site visit was carried out on the 8th June to review the general standard and nature of each access location and the existing highway network immediate to the access. A brief summary of each is provided in the series of information sheets provided as **Appendix D**.

5.4 Highway Boundary Review

5.4.1 Highway Boundary records, provided by Oxfordshire County Council, were reviewed to determine the extent of adopted highway adjacent to each potential secondary access location, allowing any gaps in land ownership or queries on highway status which could influence the deliverability of each access to be identified. A brief summary of the extent of highway related to each option is provided in the information sheets provided as **Appendix D**.

5.5 Access to Services

5.5.1 Several of the identified project objectives are related to the ability of the SDA to integrate effectively with Eynsham, with Objective P3, in particular, focusing on achieving good connectivity with existing facilities and services.

5.5.2 To provide an objective, comparative assessment of the ability of each secondary access location to support this, a mapping exercise was undertaken in which the walking distances to several example facilities within Eynsham were reviewed based upon two criteria:

- Distance from each potential secondary access location to each of the example destinations
- Distance from a centroid within the SDA to each example destination, via each potential secondary access location.

5.5.3 The example destinations within Eynsham selected for assessment were:

- Bartholomew Secondary School
- Bartholomew Sports Centre
- Eynsham Medical Centre
- The Village Centre
- The nearest bus stops[1]

5.5.4 Assessment was based upon the desirable, acceptable, and recommended maximum walking distances as recommended by the Institute of Highways and Transportation and summarised in **Table 5-1**.

Table 5-1 - Recommended Walking Distances

	Town Centres (m)	Commuting / School / Sight-seeing (m)	Elsewhere (m)
Desirable	200	500	400
Acceptable	400	1,000	800
Recommended Maximum	800	2,000	1,200

[1] It should be noted that the current bus stops on the A40, north of the Evenlode, would be relocated as part of the works to deliver the Eynsham Park and Ride site.

5.5.5 A summary of the distances from each access to each destination is provided in **Table 5-2** below, with the distance colour coded to reflect whether the distance meets the 'Desirable', 'Acceptable', or 'Recommended Maximum' walking distances.

Table 5-2 - Walking Distances from potential access locations

	A Old Witney Road 1	B Old Witney Road 2	C Thornbury Road	D Chilbridge Road	E Merton Court	F Station Road
Bartholomew Secondary School	820	395	280	506	627	872
Bartholomew Sports Centre	1088	663	548	665	786	650
Eynsham Medical Centre	1182	757	634	632	753	617
Village Centre	1314	889	766	617	738	513
Nearest Bus Stop	74	136	182	264	385	280

Desirable
Acceptable
Preferred maximum
Greater than preferred maximum

5.5.6 Based upon the criteria applied, the most centrally located secondary access points, Thornbury Road and Chilbridge Road are the closest to the example destinations identified. Whilst the access options onto Old Witney Road provide a more limited degree of access to several of the destinations identified, they do allow for a good level of access to existing bus services and are well located to serve any development parcels to the northern end of the site.

5.5.7 Due to the size of the SDA, when taking the walking distances within the site into account, assuming a journey begins in a central location, the level of accessibility is reduced as summarised in **Table 5-3**. However, the general pattern remains consistent with the previous assessment, with the centrally located accesses at Thornbury Road and Chilbridge Road providing the best levels of overall access to existing services.

Table 5-3 - Walking distance from SDA Centroid

	A Old Witney Road 1	B Old Witney Road 2	C Thornbury Road	D Chilbridge Road	E Merton Court	F Station Road
Bartholomew Secondary School	1384	902	648	858	1145	1723
Bartholomew Sports Centre	1652	1170	916	1017	1304	1502
Eynsham Medical Centre	1746	1264	1002	984	1271	1469
Village Centre	1878	1396	1134	969	1256	1365
Nearest Bus Stop	638	643	550	616	903	1131

Desirable
Acceptable
Preferred maximum
Greater than preferred maximum

5.5.8 Plans summarising the findings of the two journey distance assessments undertaken are provided as **Appendix E**.

5.6 Initial Conclusions

5.6.1 Whilst all of the locations identified have the potential to serve a secondary access function, the review concluded that none of the locations were particularly well suited to accommodate significant levels of additional vehicular traffic, and of the options considered only Thornbury Road would be capable of providing for a bus link (if required).

5.6.2 Old Witney Road 1 (western end), Chilbridge Road, and Merton Court were not considered to be of sufficient standard to accommodate increases in traffic associated with a full vehicle link to the SDA, with sections of limited carriageway width, on-street parking, and residential frontages and accesses. However, Merton Court could potentially directly serve a very limited amount of further development, but without a full vehicle link through to the remainder of the SDA (which would require crossing the flood plain). Any further development would have to be considered in the context of the objectives of the Neighbourhood Plan.

5.6.3 Old Witney Road 2 (eastern end) could potentially provide for a vehicular access, if associated with improvement works to the eastern end of Old Witney Road and the associated junction onto Witney Road itself. However, this would replicate the function of the main site access in providing access onto the A40 and would potentially attract traffic onto more local residential roads to do so. As such, this option is not recommended as a full vehicle link.

5.6.4 Station Road could also potentially provide for a vehicle access in terms of the standard of road and immediacy to higher classification roads. However, the southern end of the road is currently used for on-street residential parking, and within the SDA any link would have to cross a large area of flood plain. As such, this option is not recommended as a vehicle link.

5.6.5 Thornbury Road is the highest standard route of those considered, with greater carriageway widths and footway provision to both sides. However the addition of the Taylor Wimpey development at its western end means that Thornbury Road already represents a lengthy cul-de-sac, with any further extension having the potential to create issues with regards to servicing, security of access, and permeability, due to the single point of access onto Witney Road. Conversely the forming of a full vehicle link to overcome the issue of cul-de-sac length could induce additional traffic through existing residential areas. It would also be contrary to Policy ENP7 of the Eynsham Neighbourhood Plan, which states that where achievable, new developments should be accessed by motor vehicle from existing main roads (A40, B4044, B4449), and not through existing village roads. As such, whilst considered appropriate for bus and emergency access, Thornbury Road is not recommended as a full vehicle link.

5.6.6 With regards to the priority of individual secondary access options, it is considered that Thornbury Road and Chilbridge Road offer the potential greatest benefits for non-motorised users and should be prioritised in terms of secondary access connections.

5.6.7 The western most Old Witney Road connection, whilst providing a poorer level of connectivity to the centre of Eynsham, does provide a potentially valuable link to existing bus services on the A40 and to future pedestrian and cycle connections across the A40, linking to the Cotswolds Garden Village and the Park and Ride site. As such this secondary connection is recommended as a further priority link, to be delivered early in any phased delivery of the SDA.

5.6.8 It is noted that this link would serve a similar role to that of the currently proposed Abbey Green[2] site access road, which could potentially provide for a pedestrian and cycle link to the north if and when the southern end of the site is connected to the wider SDA infrastructure.

[2] Thomas Homes development – planning reference 15/00761/FUL

5.6.9 Of the two options to the south, (Merton Court and Station Road), Merton Court is considered likely to present the better potential option for emergency access, due to a lesser need to cross areas of Flood Zone, however either option would require crossing the Chilbrook if they were to connect into the majority of the SDA site. As such the scope for the wider use of either access is considered to be relatively limited. As detailed above, there may however be scope for Merton Court to provide direct access to a very limited number of units, subject to further assessment and consideration against the objectives of the Neighbourhood Plan.

5.6.10 Based upon the review undertaken the following options are therefore considered appropriate for each of the secondary access locations.

Table 5-4 - Summary of Recommendations

	A	B	C	D	E	F
	Old Witney Road 1	Old Witney Road 2	Thornbury Road	Chilbridge Road	Merton Court	Station Road
Pedestrian/Cycle	✓	✓	✓	✓	✓	✓
Bus Link	✗	✗	✓	✗	✗	✗
Emergency	✓	✓	✓	✗	✓	✓
All Traffic	✗	✗	✗	✗	✗[3]	✗

[3] No full link to the SDA, but potential for very limited direct access.

6.0 Spine Road

6.1 Introduction

6.1.1 As detailed in **Section 2.0,** the third element of the study was to consider potential alignment options for the Spine Road itself, taking into account the areas of constraint or opportunity as identified in the preceding packages of work.

6.1.2 In general terms the alignment of the spine road has been considered in two main sections:

- Section 1: Running from the junction with the A40 (at its northern end), to the Chilbrook.
- Section 2: Running from the Chilbrook to the B4449 (at its southern end).

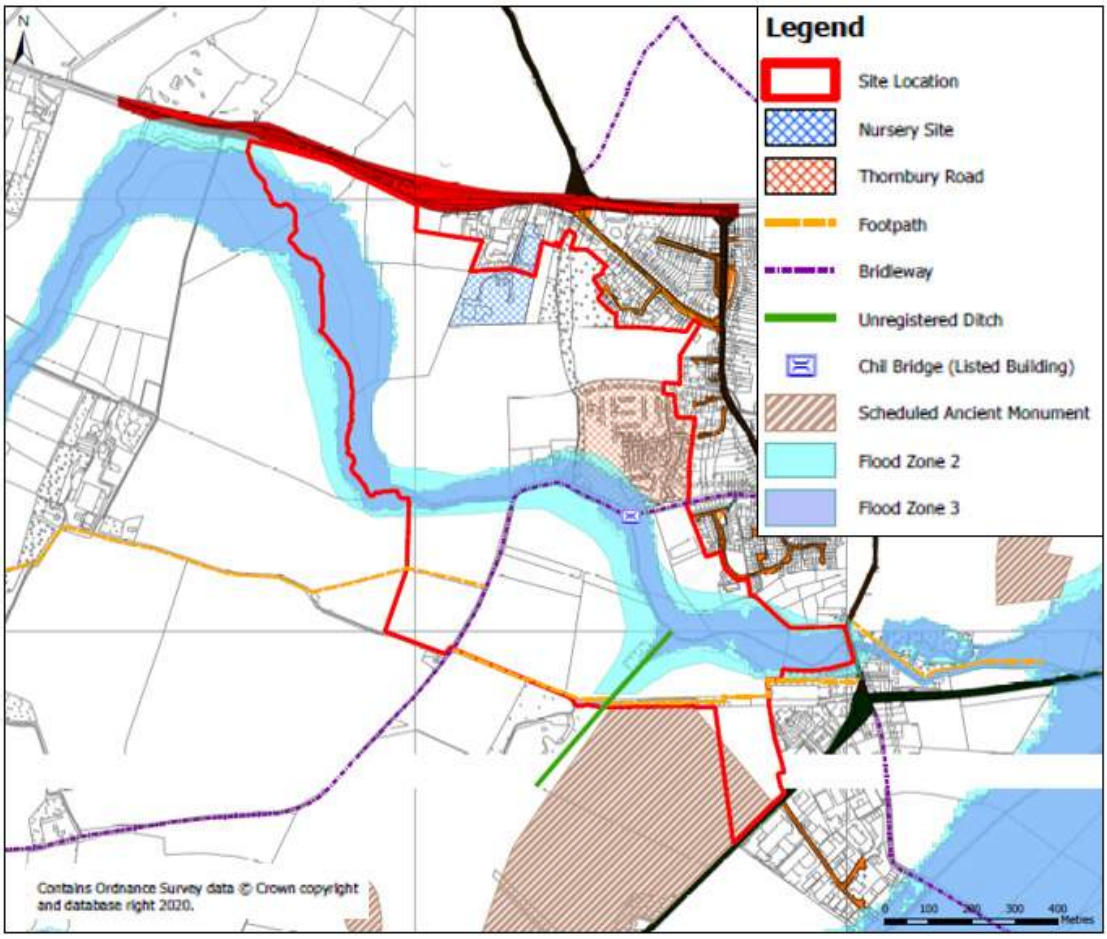
6.1.3 The review of route constraints was split on the basis that the alignment of the northern element (Section 1) would vary according to the preferred access option onto the A40, whereas the alignment of the southern section (Section 2) would be broadly consistent across the differing options.

6.1.4 When considering the alignment of the route there were a range of potential constraints to take into account, which are broadly summarised on the plan provided on the following page as **Figure 6-1** (and also at a larger scale as **Appendix F**).

6.1.5 The constraints considered were:

- The location of known areas of flood zones 2 & 3.
- The location of key heritage assets, in particular, the Scheduled Ancient Monument to the south of the site, and the Chilbridge located within the site, towards the eastern boundary (a listed structure).
- The location of existing development parcels with the site.
- The extent of existing public highway and the related ability to form secondary connections without crossing third party land.
- Land constraints associated with areas of unregistered land or unadopted highway.
- The location of existing HGV laybys on the southern side of the A40 (at the northern end of the site).

Figure 6-1 - Spine Road site constraints



6.2 Section 1: North of Chilbrook

6.2.1 To the north of the Chilbrook (Section 1) the main constraints identified were:

- Areas of flood zones 2 and 3 to the north-west of the SDA: Based upon initial advice received from the Environment Agency, the main implications of the flood zones would be the requirement for a sequential testing approach to support and evidence base any option which falls within the flood zones.
- Extent of highway / site ownership:
    - The location and form of any roundabout to the north-west would be dictated by the extent of land ownership and / or public highway. Options previously considered have included the provision of roundabouts offset to either the north or south of the A40, dependent upon the development implementing the scheme.

- The pedestrian / cycle connection into the site at the western end of Old Witney Road appears likely to require land outside of the current allocation boundary and / or the current extent of adopted public highway.

- Connections to existing development parcels: The development areas to the north and east of the site would be more easily and immediately accessed from a spine road located towards the centre or east of the site.

6.3 Section 2: South of Chilbrook

6.3.1 To the south of Chilbrook (Section 2) there are several constraints which have the potential to influence the alignment of the Spine Road, or the costs associated with its delivery. These being:

- The proximity of the southern element of the link road (and the associated junction onto the B4449) to the adjacent Scheduled Ancient Monument site.
- An unregistered ditch, running south-west to north-east, located to the immediate north of the Scheduled Ancient Monument.
- The unadopted status of the Chilbridge Road bridleway to the north.
- Crossing the Chilbrook.

6.3.2 At the northernmost end of Section 2, in addition to the bridge required to cross the Chilbrook, there will be a requirement to cross the Chilbridge Road bridleway.

6.3.3 The route and form of the spine road in this section will be informed by:

- The ability to connect to, or cross, Chilbridge Road.
- The desire to maintain the current form and function of Chilbridge Road.
- Maintaining a suitable degree of separation between the new road crossing and the listed Chilbridge.

6.3.4 Whilst the location of the southern access junction onto the B4449 is relatively fixed, as detailed in **Section 4.3**, the route of the southern section of the Spine Road between the Chilbrook and the junction would be largely informed by the scope for the route to cross two areas of land which currently fall outside the ownership of the site promoter/s and which are also outside of the public highway. These being a drainage ditch (marked as the green line in the plan provided as **Figure 6-1,** and Chilbridge Road (as an unadopted bridleway).

6.3.5 If it is not possible to cross the unregistered ditch, the alignment of the Spine Road to the immediate north of the Scheduled Ancient Monument site would be informed by a requirement to skirt the site boundary, running alongside Public Right of Way (PROW) ref. 206/30,

6.3.6 Further to the south, the extent and location of the junction onto the B4449 will largely be dictated by the location of the Scheduled Ancient Monument, with a requirement to locate the related southern-most section of the Spine Road as far as possible to the east to minimise any harm.

7.0 Deliverability Risks

7.1 Introduction

7.1.1 The final element of the study was the identification of factors which could influence the deliverability, timescales or costs of access strategy options (and / or elements forming part of the options considered). These are broadly summarised below.

7.2 Land

7.2.1 As detailed within **Section 6.0**, there are two areas of land which currently fall outside of the control of the landowners promoting the development of the site and which are also outside of the extent of existing public highway. Whilst influencing route options, these two areas of land also present a wider risk to the overall delivery of the spine road, as both locations would require suitable legal agreements or undertakings in order to regularise their use and allow for new highway to connect into and/or cross them.

7.2.2 Whilst it appears possible to avoid crossing the unregistered ditch, by running the Spine Road along the northern boundary of the Scheduled Ancient Monument, this would have an impact upon an existing PROW and have potentially greater impacts than a route further to the north. This would also bring a further section of the Spine Road relatively close to the northern boundary of the monument site.

7.2.3 Crossing the Chilbridge Road bridleway appears to be unavoidable if a full north-south link is to be provided, and as such the regularisation of its status and reaching agreement on a suitable means of connecting into and/or crossing over the bridleway is fundamental to the future delivery of the full spine road.

7.2.4 As these risk items relate to the southern element of the spine road, they are considered to be equally applicable to all of the main access strategy options considered within the study.

7.3 Heritage

7.3.1 As detailed in **Section 3.0**, following the initial Stakeholder consultation undertaken, it is understood that the proximity of the southern element of the Spine Road to the Scheduled Ancient Monument will necessitate further investigation and associated stages of work to demonstrate that this is the most deliverable / viable option and to identify and mitigate harm caused.

7.3.2 This presents a project risk, both in terms of deliverability (in the event that suitable evidence cannot be presented to English Heritage that this is the most viable / deliverable option) and in terms of timescales, to accommodate the further investigative works required to quantity the potential harm caused, determine appropriate mitigation, and achieve Scheduled Monument consent.

7.4 Flooding

7.4.1 The access options to the north of the site, in particular to the west of the site, have the potential to be constrained by the presence of area of flood zones (2 & 3), as detailed in **Figure 6-1**.

7.4.2 During stakeholder discussions held with the Environment Agency it is understood that the approach taken to the delivery of site access infrastructure should be on the basis of two main stages of work:

- A sequential analysis to demonstrate that other feasible and deliverable access options had been explored and discounted.
- That, subject to the provision of appropriate evidence that ingress into the Flood Zone areas is required to deliver appropriate access, that associated mitigation is designed and agreed.

7.4.3 As such the presence of the areas of flood zone presents a risk in terms of both timescale and deliverability in terms of demonstrating a suitable form of access option to the north, (whilst also demonstrating that other feasible options have been discounted), with a subsequent cost implication related to any associated mitigation works.

7.5 Phasing and cost sharing

7.5.1 As previously discussed, there are a number of constraints to the southern end of the site, which have associated implications in terms of timescales and costs. A large percentage of the infrastructure costs associated with the delivery of the spine road are related to the crossing of the Chilbrook Southwards.

7.5.2 The delivery of the full spine road and its connections to the north and south are expected to be required in order to meet the County Councils highway adoption requirements, enabling the delivery of the full site allocation, promoting a permeable development layout, and providing security of access.

7.5.3 As such there is a risk that there may be a disproportionate infrastructure burden placed on the development areas to the south of the Chilbrook, without an agreed phasing and cost sharing mechanism being put in place to address and enable the delivery of the full spine road, junctions, and secondary connections.

8.0 Option Appraisal

8.1 Introduction

8.1.1 Following the completion of the individual areas of review identified in the previous sections of his report, a comparative appraisal of the different options considered was carried out, covering the following:

- **Option 1:** Access to the A40 from the western development roundabout only
- **Option 2:** Access to the A40 from the eastern (Park and Ride) roundabout only
- **Option 3:** Two accesses, but with a limited number of dwellings served from the Park and Ride roundabout
- **Option 4:** A bus-only link from the Park and Ride roundabout

8.1.2 When appraising Options 3 and 4, it was assumed that the general access arrangements and route alignment of the development Spine Road would be as for Option 1 (i.e. the western roundabout), with additional works to provide a fourth, southern arm from the P&R site.

8.1.3 In the case of Option 3 the southern arm is assumed to provide access to a limited quantum of development (circa 200 units), while in Option 4 the southern arm is assumed to serve as a bus only link, with all other development traffic using the western roundabout.

8.1.4 This appraisal process was based upon the ability of each of the access strategy options to meet the project criteria identified in **Section 2.2** of this report.

8.1.5 The appraisal against individual criteria was informed by the findings of **Section 3.0** to **Section 7.0** of this report.

8.1.6 Each of the options assessed were scored against the agreed project objectives using a five-point Likert scale, ranging from +2 (for major benefit) to -2 (for major disbenefit) for each sub-objective identified.

8.1.7 The summary results of the appraisal are provided in **Table 8-1** to **Table 8-4**, on the following pages, with the full appraisal and associated scoring notes provided as **Appendix G**.

8.2 Objective 1

8.2.1 The summary appraisal for *Objective 1: Manage impacts on the wider highway network*, is provided in **Table 8-1** (below).

Table 8-1 – Appraisal Summary: Objective 1

Objective	Sub-objective	Assessment criteria	Option 1 A40 (W) junction only	Option 2 A40 (E) junction only	Option 3 Access from both	Option 4 Bus only link to P&R
Manage impacts on the wider highway network	Objective H1: Minimise adverse impacts on A40 journey times	1. VISSM Model and Junction Modelling Results (comparison between scenarios, delay on A40 approaches).	-1	1	0	-1
		2. Impact upon bus priority, including access to / from the Park and Ride.	1	-1	0	1
	Objective H2: Accommodate existing and forecast freight movements on the strategic road network	1. Need to relocate lorry parking / layby areas.	0	-2	-2	-2
		2. Delay on A40 Approaches.	-1	1	0	-1

8.2.2 The appraisal of options against the first objective was informed by the findings of the modelling work summarised in **Section 4.0** of this report. When considering Sub-objective *H1: Minimise adverse impacts on A40 journey times*, Option 1 performed the most poorly in terms of levels of predicted delay on the A40, particularly on the western approach to the Garden Village roundabout junction. Option 2 (utilising the P&R junction) was modelled as having the lowest levels of average delay, with Option 3 (using both), falling between the two.

8.2.3 Option 4, which assumes a bus only link onto the P&R is expected to have the same overall effects on the network as Option 1, due to the access arrangements for all traffic other than buses remaining the same.

8.2.4 When considering the impact upon bus priority and access to and from the Park and Ride site, Options 1 and 4 scored the most highly, with the lower levels of modelled average delay for movements from the P&R arm of the P&R roundabout junction. Whilst the difference in delay was limited, Option 2 resulted in higher levels of average delay. This was due to the increased demand for trips through the junction as a result of adding the southern arm and associated development traffic. The level of delay modelled for Option 3 again fell between the two, resulting in a neutral score.

8.2.5 When considering sub-objective *H2: Accommodate existing and forecast freight movements on the strategic road network*, Options 2 to 4 all scored poorly, due to the requirement to relocate or re-provide a suitable HGV layby facility, with the retention of the layby in its current form and location not appearing to be feasible.

8.2.6 Delay on the A40 was also taken into account, in light of the importance of the A40 for freight movements, with Option 1 and 4 scoring the most poorly, due to their greater impacts on the A40 eastbound.

8.3 Objective 2

8.3.1 The summary appraisal for *Objective 2: Encourage and enable safe, sustainable travel*, is provided in **Table 8-2** (below).

Table 8-2 - Appraisal Summary: Objective 2

Objective	Sub-objective	Assessment criteria	Option 1 A40 (W) junction only	Option 2 A40 (E) junction only	Option 3 Access from both	Option 4 Bus only link to P&R
Encourage and enable safe Sustain-able Travel	Objective S1: Enable improved access to, and use of, public transport	1. Allowance for bus connections / services.	0	0	0	2
		2. Link to Park and Ride	0	1	0	1
		3. Links to bus stops on the A40	0	1	0	0
		4. Links to bus stops within Eynsham	0	0	0	0
	Objective S2: Maximise permeability through the site for pedestrians and cyclists	1. Allowance for pedestrian and cycle routes along spine road.	2	2	2	2
		2. Protection of pedestrian east - west corridors within site.	-1	-1	-1	-1
		3. Allowance for connections north-south to the Garden Village and Science Park	2	0	2	2
	Objective S3: Maintain and enhance safety for all highway users	1. Allowance for appropriate crossing points at A40 junction.	0	1	0	0
		2. Allowance for safe crossing of the Spine Road.	1	1	1	1

8.3.2 Appraisal against this second objective, which concentrates on safe and sustainable access, was based upon a qualitative assessment of each option, considering the proximity of each option to existing and planned sustainable transport facilities, including potential crossing locations on the A40.

8.3.3 When consider sub-objective *S1: Enable improved access to, and use of, public transport*, Option 2 and Option 4 scored the highest, with the northern alignment of a spine road associated with Option 2 benefiting from closer proximity to existing bus stops and routes. Option 4 also scored well due to the priority given to bus movements associated with the bus only link.

8.3.4 It is however noted that the bus only link will not provide any benefit until such time as bus services enter the site, with early phases of the SDA likely to use existing bus routes on the A40 and Witney Road.

8.3.5 The appraisal of options against sub-objective *S2: Maximise permeability through the site for pedestrians and cyclists*, was largely consistent for all the options considered, as all are expected to provide a high standard of pedestrian and cycle provision. This provision is expected to include north-south routes (alongside the development spine road) and east-west routes, connecting the SDA with Eynsham.

8.3.6 Similarly, the appraisal of sub-objective *S3: Maintain and enhance safety for all highway users*, was broadly consistent across the options, the exception being Option 2, which was considered to offer a greater degree of support for safe crossing of the A40 due to:

- Proximity to future grade-separated crossing locations on the A40.
- The potential to provide early alternate vehicle access to the Abbey Green site, opening the opportunity for the existing access to be utilised for non-vehicular movements to / from the A40 and any associated crossing provision.

8.4 Objective 3

8.4.1 The summary appraisal for *Objective 3: Protect and enhance the local environment*, is provided in **Table 8-3** (below).

Table 8-3 - Appraisal Summary: Objective 3

Objective	Sub-objective	Assessment criteria	Option 1 A40 (W) junction only	Option 2 A40 (E) junction only	Option 3 Access from both	Option 4 Bus only link to P&R
Protect and enhance the local environ-ment	Objective E1: Protect the natural environmental and heritage assets of the West Eynsham SDA site	1. Impact on Floodplain.	-2	0	-2	-2
		2. Impact on Chilbrook.	0	0	0	0
		3. Impact on Scheduled Ancient Monument.	-1	-1	-1	-1
		4. Impact on Chil Bridge.	0	0	0	0
		5. Number of North-South Crossings.	0	0	0	0
	Objective E2: Maintain access to the surrounding Countryside	1. Protection of east - west corridors within the site.	-1	-1	-1	-1
	Objective E3: Protect and enhance the environment within Eynsham	1. Scope to remove traffic from Eynsham Village.	1	1	1	1
		2. Number of vehicular connections into Eynsham.	0	0	0	0

8.4.2 The appraisal of options against the third overarching objective, which addressed the potential environmental constraints associated with the site, was a qualitative assessment based upon the constraints identified during the stakeholder consultation and the desktop review summarised in **Section 6.0**.

8.4.3 The options all scored equally against Sub-objective *E1: Protect the natural environmental and heritage assets of the West Eynsham SDA site*, when considering the environmental and heritage constraints to the southern end of the site, due to the routing of the spine road's southern element being consistent between the options.

8.4.4 To the northern end of the site, those options which have the potential to impact upon Flood Zones 2 and 3 scored the most poorly, due to the requirement to demonstrate that other options have been discounted, and to subsequently agree and deliver mitigation works.

8.4.5 When considering Sub-objective *E2: Maintain access to the surrounding Countryside*, all of the options appraised were scored equally, due to the expectation that all of the options would require a road crossing of Chilbridge Road, with the associated potential negative impacts upon east-west movements.

8.4.6 With regards to this specific element it is considered that further detailed design of any junction / crossing arrangement at the point where the development spine road crosses Chilbridge Road would help to mitigate these potential negative impacts.

8.4.7 The appraisal of options against sub-objective *E3: Protect and enhance the environment within Eynsham*, also resulted in the access options scoring equally, as all of the options considered resulted in similar levels of non-development traffic using the development spine road, (which could otherwise potentially use existing routes within Eynsham), and with none of the options proposing additional vehicular links into Eynsham from the west.

8.5 Objective 4

8.5.1 The summary appraisal for *Objective 4: Support positive placemaking*, is provided in **Table 8-4** (below).

Table 8-4 - Appraisal Summary - Objective 4

Objective	Sub-objective	Assessment criteria	Option 1 A40 (W) junction only	Option 2 A40 (E) junction only	Option 3 Access from both	Option 4 Bus only link to P&R
Support positive place-making	Objective P1: Provide a route which effectively serves the needs of residents of the West Eynsham SDA	1. Nature of the Spine Road (i.e. development frontage / side friction / relationship with School Site).	-1	1	-1	-1
		2. Standard / Speed of spine road.	1	1	1	1
		3. Provision of pedestrian / cycle facilities.	2	2	2	2
		4. Ability for east - west links to be maintained or provided.	0	0	-1	0
	Objective P2: Enable delivery of comprehensive development	1. Positive relationship with the Garden Village Development.	2	0	2	2
		2. Positive relationship with Park and Ride site.	0	2	0	2
		3. Ability to deliver the full route.	2	1	2	2
	Objective P3: Positively integrate the West Eynsham SDA with the existing community, providing access to and from local facilities	1. Number and quality of links to the west of Eynsham.	2	2	2	2
		2. Walking and cycling distances to existing facilities with Eynsham using secondary access points.	0	1	0	0

8.5.2 The appraisal of options against the final over-arching objective, which focuses on the place-making role of the access strategy and the associated development spine road, was based upon largely qualitative assessments. These accounted for the relationship of the site with surrounding areas of development, the role and function of the spine road, and the ability of the access strategy to support integration with the existing settlement in Eynsham.

8.5.3 When considering *Sub-objective P1: Provide a route which effectively serves the needs of residents of the West Eynsham SDA*, each of the options scored equally when considering the standard and speed of the spine road and the provision of appropriate walking and cycling infrastructure, as all options are expected to provide good quality facilities.

8.5.4 Options which included the northern section of the development spine road towards the western boundary of the site (i.e. Options 1, 3 and 4) scored more poorly when considering the nature of the spine road and its relationship with development, due to the expectation that this section of road would have a single active frontage, making it more difficult to create a low speed and pedestrian friendly environment.

8.5.5 Option 3 also scored more poorly with regards to the provision of east – west links, due to the associated requirement for a second development access road, providing a potential further area of severance to east – west pedestrian and cycle movements.

8.5.6 With regards to Sub-objective *P2: Enable delivery of comprehensive development*, as might be expected, those options closest to the Garden Village (Options 1, 3 and 4) scored the most highly when considering the relationship of the access strategy with the Garden Village and Science Park, whilst Option 2 scored more highly when considering the relationship of access options to the Park and Ride site.

8.5.7 The importance of delivering the full spine road was also accounted for under this sub-objective, with the amount of development proposed expected to need more than a single point of access in order to meet Oxfordshire County Council's adoption requirements.

8.5.8 Option 2 involves a greater number of landowners to deliver the full route, and therefore has been ranked as having a slightly greater degree of risk in terms of delivery.

8.5.9 Sub-objective *P3: Positively integrate the West Eynsham SDA with the existing community, providing access to and from local facilities*, was appraised on the basis of the secondary access review summarised in **Section 5.0** of this report, in which the walking distances to important local facilities within Eynsham were assessed.

8.5.10 Based upon this review, Option 2 scored the highest, due to its closer proximity to the existing areas of the Eynsham and the identified priority secondary access locations at Thornbury Road and Chilbrook Road.

8.6 Summary

8.6.1 Following the appraisal of each option against the agreed project objectives and sub-objectives, a total score was assigned to each access strategy option, with the following overall unweighted scores per option:

Table 8-5 - Access Option Appraisal Summary

Objective	Option 1 A40 (W) junction only	Option 2 A40 (E) junction only	Option 3 Access from both	Option 4 Bus only link to P&R
Manage impacts on the wider highway network	-1	-1	-2	-3
Encourage and enable safe Sustainable Travel	4	5	4	7
Protect and enhance the local environment	-3	-1	-3	-3
Support positive place-making	8	10	7	10
Total	8	13	6	11

9.0 Recommended Access Strategy Option

9.1.1 Based upon the comparative appraisal carried out and summarised in **Section 8.0** of this report, the main findings were that:

9.1.2 Under Objective 1 (Manage impact on the wider highway network) Option 1 resulted in the greatest increases in delay on the A40, whilst Option 2 would require the relocation or replacement of the existing HGV layby.

9.1.3 Under Objective 2 (Encourage and enable safe, sustainable travel) Option 2 brings the northern element of the spine road slightly closer to existing sustainable transport options and local facilities (subject to securing appropriate pedestrian and cycle links into Eynsham).

9.1.4 Under Objective 3 (Protect and enhance the local environment) the need to consider all options available in terms of impacts upon the Flood Plain was highlighted in order to meet the Environment Agency's policy guidelines, with Option 2 having the lesser impact.

9.1.5 Under Objective 4 (Support positive placemaking) all of the options considered scored well.

9.1.6 Based upon the appraisal exercise undertaken, the recommended access strategy option for the West Eynsham SDA therefore consists of the following:

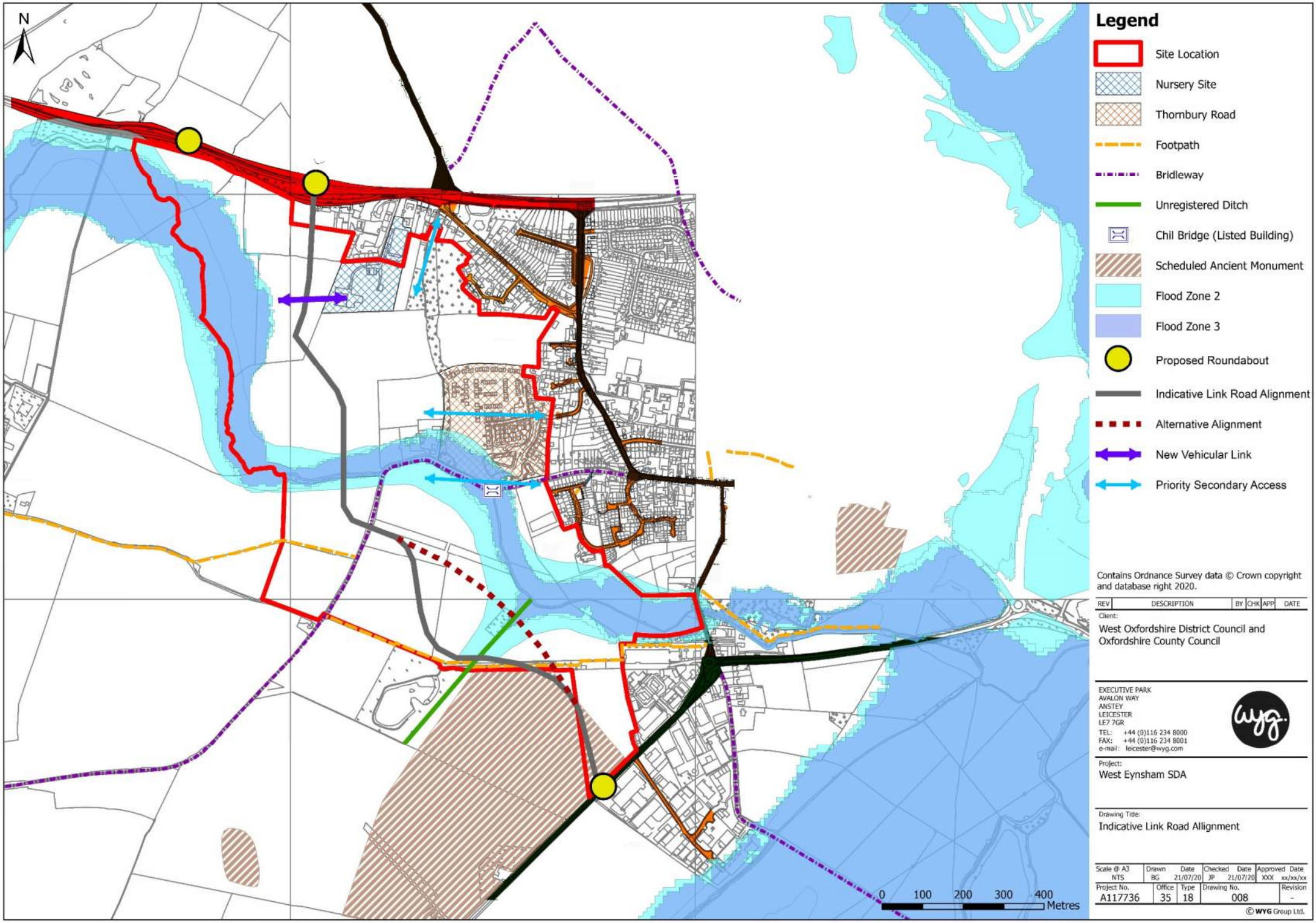
- The northern junction onto the A40 being in the form of a fourth, southern arm, connecting to the proposed roundabout serving the Eynsham Park and Ride site.
- That an alternate layby location for the southern side of the A40 is identified and provided. The size, location and layout to be agreed to make sure this provides a suitable replacement for the existing facility.
- The southern junction onto the B4449 being in the form of a three-arm, 40m ICD roundabout to the west of the Polar Technology site.
- A pedestrian and cycle link to the western end of Old Witney Road is provided with the further scope for use as an emergency vehicle access and / or
- That following the construction of the northern section of the West Eynsham development spine road, that the Abbey Green site connects to the spine road, and the currently proposed access is closed to vehicle traffic, reverting to a pedestrian and cycle link.
- A pedestrian and cycle link connecting to the east via Thornbury Road, with further scope for use as an emergency vehicle access. When the spine road is delivered the potential for

serving vehicular traffic from the Taylor Wimpey site via the Spine Road rather than Thornbury Road could also be explored.

- A pedestrian and cycle link connecting to the east via Chilbridge Road

9.1.7 These proposals are summarised on the plan provided as **Figure 9-1** on the following page, and also provided at a larger scale as **Appendix H**. The indicative alignment shown is based upon that detailed within the Jansons' masterplan for the site, but with a recommended amendment as detailed below.

9.1.8 The proposed amendment identifies a potential alternative route for the southern element of the spine road, in the event that crossing the unregistered ditch, (identified as a constraint in **Section 6.0** and **Section 7.0**), is possible. This alternative routing appears likely to have a lesser impact upon the northern boundary of the Scheduled Ancient Monument site, whilst also reducing any impact on the PROW running along the disused rail line.



REV	DESCRIPTION	BY	CHK	APP	DATE

Client:
West Oxfordshire District Council and Oxfordshire County Council

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TEL: +44 (0)116 234 8000
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Project:
West Eynsham SDA

Drawing Title:
Indicative Link Road Allignment

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
NTS	BG	21/07/20	JP	21/07/20	XXX	xx/xx/xx

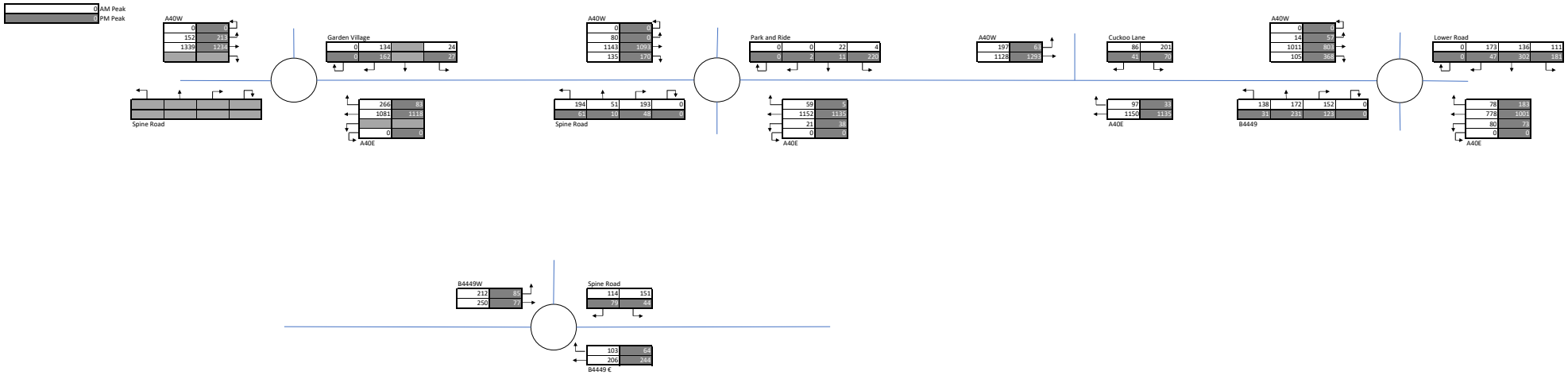
Project No.	Office	Type	Drawing No.	Revision
A117736	35	18	008	-

Appendix A – Study Objectives

West Eynsham Access Strategy Objectives			Manage impacts on the wider highway network		Encourage and enable safe Sustainable Travel			Protect and enhance the local environment			Support positive placemaking			Deliverability (Risk Register)
Project Objectives			Objective H1: Minimise adverse impacts on A40 journey times.	Objective H2: Accommodate existing and forecast freight movements on the strategic road network	Objective S1: Enable improved access to, and use of, public transport	Objective S2: Maximise permeability through the site for pedestrians and cyclists	Objective S3: Maintain and enhance safety for all highway users	Objective E1: Protect the natural environmental and heritage assets of the West Eynsham SDA site	Objective E2: Maintain access to the surrounding Countryside	Objective E3: Protect and enhance the environment within Eynsham	Objective P1: Provide a route which effectively serves the needs of residents of the West Eynsham SDA	Objective P2: Enable delivery of comprehensive development	Objective P3: Positively integrate the West Eynsham SDA with the existing community, providing access to and from local facilities	Objective D1: Be deliverable and not unduly constrained by land ownership or legal issues.
How will they be measured?			1. VISSIM Model and Junction Modelling Results (comparison between scenarios, delay on A40 approaches). 2. Impact upon bus priority, including access to / from the Park and Ride.	1. Need to relocate lorry parking / layby areas. 2. Delay on A40 approaches.	1. Allowance for bus connections / services. 2. Link to Park and Ride. 3. Links to bus stops on the A40. 4. Links to bus stops within Eynsham.	1. Allowance for pedestrian and cycle routes along spine road. 2. Protection of pedestrian east - west corridors within site. 3. Allowance for connections north-south to the Garden Village and Science Park.	1. Allowance for appropriate crossing points at A40 junction. 2. Allowance for safe crossing of the Spine Road.	1. Impact on Floodplain 2. Impact on Chilbrook. 3. Impact on Scheduled Ancient Monument. 4. Impact on the Chil Bridge. 5. Number of north-south crossings.	1. Protection of east - west corridors within the site.	1. Scope to remove traffic from Eynsham Village. 2. Number of vehicular connections into Eynsham.	1. Nature of the Spine Road (i.e. development frontage / side friction / relationship with School Site). 2. Standard / Speed of spine road. 3. Provision of pedestrian / cycle facilities. 4. Ability for east - west links to be maintained or provided.	1. Positive relationship with the Garden Village Development. 2. Positive relationship with Park and Ride site. 3. Ability to deliver the full route.	1. Number and quality of links to the west of Eynsham. 2. Walking and cycling distances to existing facilities with Eynsham using secondary access points.	1. Number of land / legal issues associated with each option (land within the SDA). 2. Number of land / legal issues associated with each option (land outside the SDA) 3. Impact upon the flood plain. 4. Financial Viability. 5. Potential to delay delivery of HIF programme.
Policy Basis														
Source	Goals / Objectives	Sub-Objective												
Connecting Oxfordshire	*To support jobs and housing growth and economic vitality*	Maintain and improve transport connections to support economic growth and vitality across the county	1	1	1						1			
		Make most effective use of all available transport capacity through innovative management of the network	1		1									
		Increase journey time reliability and minimise end-to-end public transport journey times on main routes	1		1									
		Develop a high-quality, innovative and resilient integrated transport system that is attractive to customers and generates inward investment	1		1									
	To reduce emissions, enhance air quality and support the transition to a low carbon economy	Minimise the need to travel												
		Reduce the proportion of journeys made by private car by making the use of public transport, walking and cycling more attractive			1	1	1				1			
		Influence the location and layout of development to maximise the use and value of existing and planned sustainable transport investment			1	1					1		1	1
		Reduce per capita carbon emissions from transport in Oxfordshire in line with UK Government targets.			1	1								
	To protect and enhance Oxfordshire's environment and improve quality of life (including public health, safety and individual wellbeing)	Mitigate and wherever possible enhance the impacts of transport on the local built, historic and natural environment			1	1		1	1	1	1			
		Improve public health and wellbeing by increasing levels of walking and cycling, reducing transport emissions, reducing casualties and enabling inclusive access to jobs, education, training and services.			1	1	1		1		1			1
A40 Route Strategy	*Policy A40 – We will improve access between towns in West Oxfordshire and Oxford, including the new employment site at Oxford's 'Northern Gateway' by utilising the Local Growth Fund to deliver public transport improvements in the A40 corridor.*	Improve travel times and journey reliability along the A40 corridor, particularly between Witney and Oxford.	1		1									
		Stimulate economic growth, in line with the Oxfordshire Strategic Economic Plan.	1	1										
		Improve safety and reduce environmental impacts such as air pollution and noise along the A40 corridor.	1		1		1	1						
Oxfordshire Freight Strategy		Understand patterns of freight movement												
		Inform freight operators of the best routes to use and those to avoid		1										
		Encourage use of the strategic road network and of rail freight	1	1										
		Deter use of inappropriate minor roads through towns and villages		1						1				
		Manage freight and logistics to achieve maximum efficiency	1	1										
		Plan the location of new employment sites and any related transport infrastructure												
Bus Strategy	*Commuting by bus*	To provide direct commercial services between residential and employment sites to ensure that the bus is a genuinely viable alternative to the car for trips to work.			1							1		
	Reliable Journey Times	Improve bus journey time reliability though implementing measures specific to the section of routes that are inter-urban from those within towns/villages to ensure operators run frequent and reliable commercial services which are attractive for users, particularly commuters	1		1									
	Serving new developments	Ensure the location and layout of new developments enable high quality commercial public transport services to serve the development.			1						1		1	
	Measures to enhance and promote bus travel	To take opportunities to seek measures to enhance and promote bus travel to make it accessible			1						1			
Active and Healthy Travel Strategy		Developers must demonstrate through master-planning how their site has been planned to make cycling convenient and safe, for cyclists travelling to and from major residential, employment, education, shopping and leisure sites within 5-10 miles, and also within and through the site.				1	1		1		1	1	1	
		Site road network and junctions must be constructed with cycling in mind, including providing space for cycling on main/spine roads through the provision of, as a minimum, advisory cycle lanes of acceptable width.				1	1				1		1	
West Oxfordshire Local Plan 2031	*Strong Market Towns and Villages*	CD1 Enable new development, services and facilities of an appropriate scale and type in locations which will help improve the quality of life of local communities and where the need to travel, particularly by car, can be minimised.				1			1	1	1	1	1	
		CD2 Ensure that new developments are suitably located and well designed to protect and enhance the individual form, character and identity of our towns and villages as well as contributing to the quality of life in West Oxfordshire.						1		1	1			
		CD3 Promote safe, vibrant and prosperous town and village centres and resist proposals that would damage their vitality and viability or adversely affect measures to improve those centres.								1			1	
	Meeting the specific housing needs of our communities	CD4 Locate new residential development where it will best help to meet housing needs and reduce the need to travel.				1							1	
		CD5 Plan for the timely delivery of new housing to meet forecast needs and support sustainable economic growth.												
		CD6 Plan for an appropriate mix of new residential accommodation which provides a variety of sizes, types and affordability with special emphasis on the provision of homes for local people in housing need who cannot afford to buy or rent at market prices including those wishing to self build, as well as homes to meet the needs of older people, younger people, black and minority ethnic communities, people with disabilities, families and travelling communities.												
	Sustainable economic growth	CD7 To support sustainable economic growth which adds value to the local economy, improves the balance between housing and local jobs, provides a diversity of local employment opportunities, capitalises on economic growth in adjoining areas, improves local skills and work readiness, removes potential barriers to investment and provides flexibility to adapt to changing economic needs.												
		CD8 To enable a prosperous and sustainable tourism economy.												
	Sustainable communities with access to services and facilities	CD9 Promote inclusive, healthy, safe and crime free communities.				1	1				1			
		CD10 Ensure that land is not released for new development until the supporting infrastructure and facilities are secured.											1	
		CD11 Maximise the opportunity for walking, cycling and use of public transport.			1	1	1				1			
		CD12 Look to maintain or improve where possible the health and wellbeing of the District's residents through increased choice and quality of shopping, leisure, recreation, arts, cultural and community facilities.							1					1
		CD13 Plan for enhanced access to services and facilities without unacceptably impacting upon the character and resources of West Oxfordshire.			1	1					1	1	1	
	Protecting and enhancing our environment and reducing the impact from climate change	CD14 Conserve and enhance the character and significance of West Oxfordshire's high quality natural, historic and cultural environment – including its geodiversity, landscape, biodiversity, heritage and arts – recognising and promoting their wider contribution to people's quality of life and social and economic well-being both within the District and beyond.						1	1		1			
		CD15 Contribute to reducing the causes and adverse impacts of climate change, especially flood risk.			1	1		1						
		CD16 Enable improvements in water and air quality.						1						
		CD17 Minimise the use of non-renewable natural resources and promote more widespread use of renewable energy solutions.												
		CD18 Improve the sustainable design and construction of new development, including improving energy, water efficiency and water management.												
Eynsham Neighbourhood Plan	*ENV1 Housing*	New development shall ensure a mix of housing types and tenures to make a balanced community suitable for this area of West Oxfordshire close to the city of Oxford. The ideal community will have a range of ages, incomes, education and skills so that the community could be largely self-sustaining.												
	ENV2 Design	New development shall be visually attractive and in harmony with its immediate setting and character. It shall provide a pleasant and safe place for all residents to live. Developments should achieve a Building for Life or equivalent accreditation and developers should aspire to achieve national recognition for excellence by attaining a 'green' in all categories.						1			1			
	ENV3 Community facilities	New development shall ensure that new residents have at least the same access to community facilities as existing residents and new developments shall, as far as reasonably practicable, contribute to the facilities of the entire community. Eynsham is successful as a community because it is compact and people can access schools, employment and other facilities without the use of a private car. New developments shall maintain this compact and well-connected feature of the village.			1	1					1		1	
	ENV4 Natural Environment	New developments shall bring together all aspects of design, connectivity and natural environment that constitute the landscape setting of the new (and existing) development, closely linking village and countryside. Quick and easy access to countryside and retaining trees, hedgerows and footpaths is a vital element in retaining a village feel, in some measure compensating for the lack of a village green or park within the existing village.						1	1		1			
	ENV5 Transport and parking	New development shall be planned and constructed to ensure that all residents have ready access to local transport networks by private car, bicycle or public transport and that excellent paths are created for pedestrians cyclists and mobility vehicles. New developments should not exacerbate existing parking problems within the village centre and shall ensure adequate and appropriate parking for new residents.			1	1	1			1	1			1
	ENV6 Economy – industry, commerce and retail	New developments shall ensure that Eynsham continues to offer a range of employment opportunities that reflects its location on the edge of the 'knowledge spine' around Oxford city and that potentially utilises a full range of skills from manual through to post-graduate levels. Development should also ensure the continued viability of the excellent range of local shops that allow residents to shop for day to day needs within the village.								1				1
	ENV7 Sustainability and climate change	New development shall be sustainable now and in the long term without compromising one for the other. Homes of a standard compatible with the intentions of the Climate Change Act are likely to be commercially viable in Eynsham and offer benefits to be reaped by the many generations that will live in them.												
	ENV8 A New Settlement	ENV1-7 shall be shared by the new settlement, which shall be built according to Garden Village principles as a new, separate, community. Settlements should be largely independent but with any shared facilities for their mutual benefit and without causing harm to either.								1				
West Eynsham SDA SPD Issues and Options Responses	*General Comments*	A comprehensive and coordinated approach to development around Eynsham is essential.										1	1	
		The compact and walkable layout of Eynsham should be replicated in the SDA.				1					1		1	
		As much of the 'natural' and rural character of the local area should be preserved.					1	1	1					
		Emphasis should be placed on providing pedestrian and cycling links, especially to the countryside, rather than facilitating car traffic through the village. Bus services should also be improved.			1	1			1	1	1	1		
		A new 'linear park' could provide important recreational, leisure, environmental and ecological value, as well as benefitting mental wellbeing and facilitating community cohesion.						1	1					
		Access to the countryside must be retained.						1	1					
		Public transportation service frequency, network coverage, and waiting facilities need significant improvement. Infrastructure for active forms of transportation also needs to be improved and/or expanded.	1		1									
	Western Spine Road specific comments	The new road should not become a rat-run.									1			
		New junction should not exacerbate traffic congestion problems currently experienced on the A40 during peak commuting times.	1											
		Avoidance of adverse impact upon the Scheduled Ancient Monument near the southern boundary.						1						
		Avoidance of adverse impact upon the Chilbridge Road.						1	1					

Appendix B – Option Test Network Flows

SCENARIO 1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PM Peak
A40W
Garden Village
A40W
Park and Ride
A40W
Cuckoo Lane
A40W
Lower Road
Spine Road
A40E
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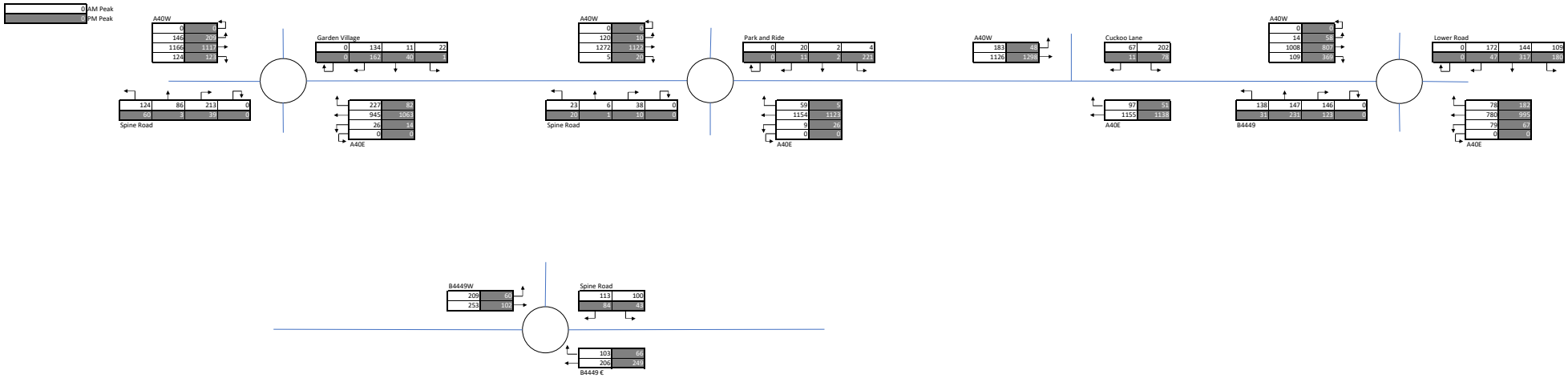
A40E
A40E
A40E
B4449
A40E
B4449W
Spine Road
B4449 E

SCENARIO 2


AM Peak
PM Peak
A40W
Garden Village
A40W
Park and Ride
A40W
Cuckoo Lane
A40W
Lower Road
Spine Road
A40E
Spine Road
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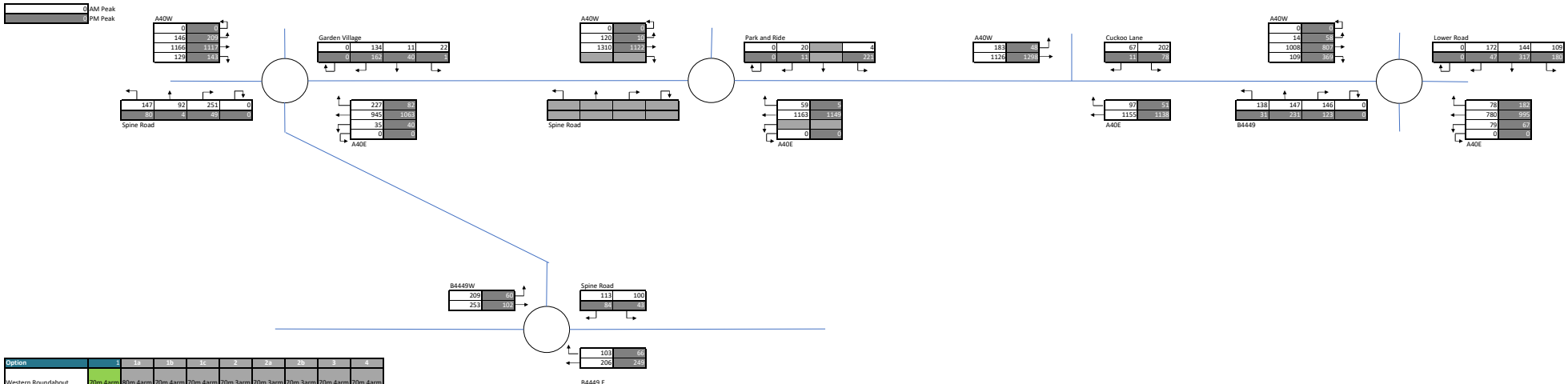
A40E
B4449
A40E
B4449W
Spine Road
B4449 E

Option 1



Option	1	1a	1b	1c	2	2a	2b	3	4
Western Roundabout	70m 4arm	80m 4arm	70m 4arm	70m 4arm	70m 3arm	70m 3arm	70m 3arm	70m 4arm	70m 4arm
Eastern Roundabout	P&R (no dev)	P&R (no dev)	P&R (no dev)	P&R (no dev)	P&R 4arm (full dev)	P&R 4arm (full dev)	P&R 4arm (full dev)	P&R 4arm (20% dev)	P&R 4arm (bus only)
Southern Roundabout	40m 3arm	40m 3arm	40m 3arm	No link	40m 3arm	40m 3arm	No Link	40m 3arm	40m 3arm
Cuckoo Lane	Open	Open	Closed	Open	Open	Closed	Open	Open	Open
Full Link Road	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes

OD matrices used in ARCADY models (Flows are taken from the diagram):

Western Roundabout:

AM	A	B	C	D	Total
A	0	35	945	227	1207
B	251	0	147	92	490
C	1166	129	0	146	1441
D	22	11	134	0	167
Total	1439	175	1226	465	3305

PM	A	B	C	D	Total
A	0	40	1063	82	1185
B	49	0	80	4	133
C	1117	143	0	209	1469
D	1	40	162	0	203
Total	1167	223	1305	295	2990

Park and Ride Roundabout

AM	A	B	C	D	Total
A	0	0	1163	59	1222
B	0	0	0	0	0
C	1310	0	0	120	1430
D	4	0	20	0	24
Total	1314	0	1183	179	2676

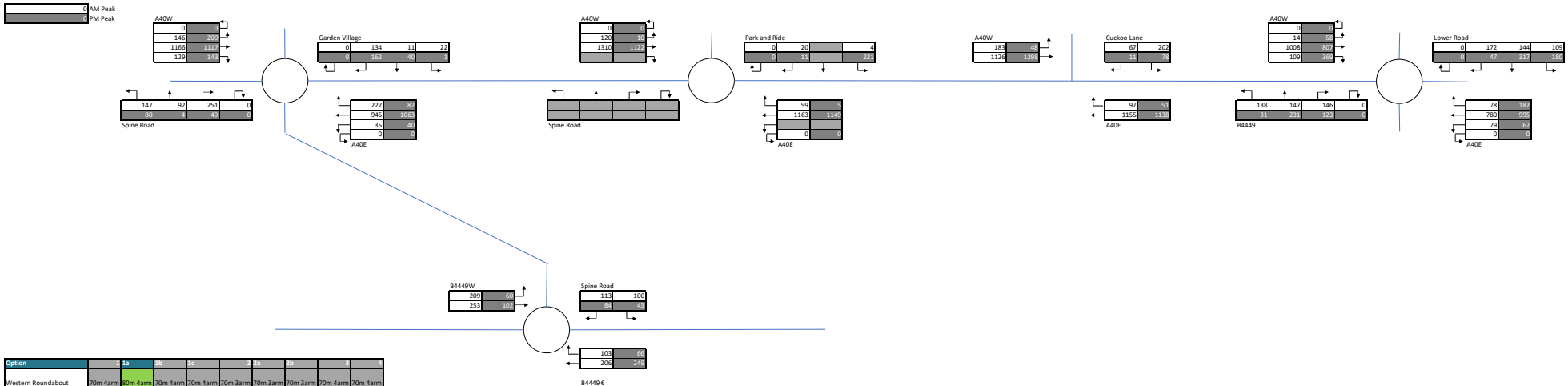
PM	A	B	C	D	Total
A	0	0	1149	5	1154
B	0	0	0	0	0
C	1122	0	0	10	1132
D	221	0	11	0	232
Total	1343	0	1160	15	2518

Southern Roundabout

AM	A	B	C	Total
A	0	206	103	309
B	253	0	209	462
C	100	113	0	213
Total	353	319	312	984

PM	A	B	C	Total
A	0	249	66	315
B	102	0	60	162
C	43	84	0	127
Total	145	333	126	604

Option 1a



Option		1a	1b	1c	2	2a	2b		4
Western Roundabout	70m 4arm	80m 4arm	70m 4arm	70m 4arm	70m 3arm	70m 3arm	70m 3arm	70m 4arm	70m 4arm
Eastern Roundabout	P&R (no dev)	P&R (no dev)	P&R (no dev)	P&R (no dev)	P&R 4arm (full dev)	P&R 4arm (full dev)	P&R 4arm (full dev)	P&R 4arm (20% dev)	P&R 4arm (bus only)
Southern Roundabout	40m 3arm	40m 3arm	40m 3arm	No link	40m 3arm	40m 3arm	No Link	40m 3arm	40m 3arm
Cuckoo Lane	Open	Open	Closed	Open	Open	Closed	Open	Open	Open
Full Link Road	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes

OD matrices used in ARCADY models (Flows are taken from the diagram):

Western Roundabout:

AM	A	B	C	D	Total
A	0	35	945	227	1207
B	251	0	147	92	490
C	1166	129	0	146	1441
D	22	11	134	0	167
Total	1439	175	1226	465	3305

PM	A	B	C	D	Total
A	0	40	1063	82	1185
B	49	0	80	4	133
C	1117	143	0	209	1469
D	1	40	162	0	203
Total	1167	223	1305	295	2990

Park and Ride Roundabout

AM	A	B	C	D	Total
A	0	0	1163	59	1222
B	0	0	0	0	0
C	1310	0	0	120	1430
D	4	0	20	0	24
Total	1314	0	1183	179	2676

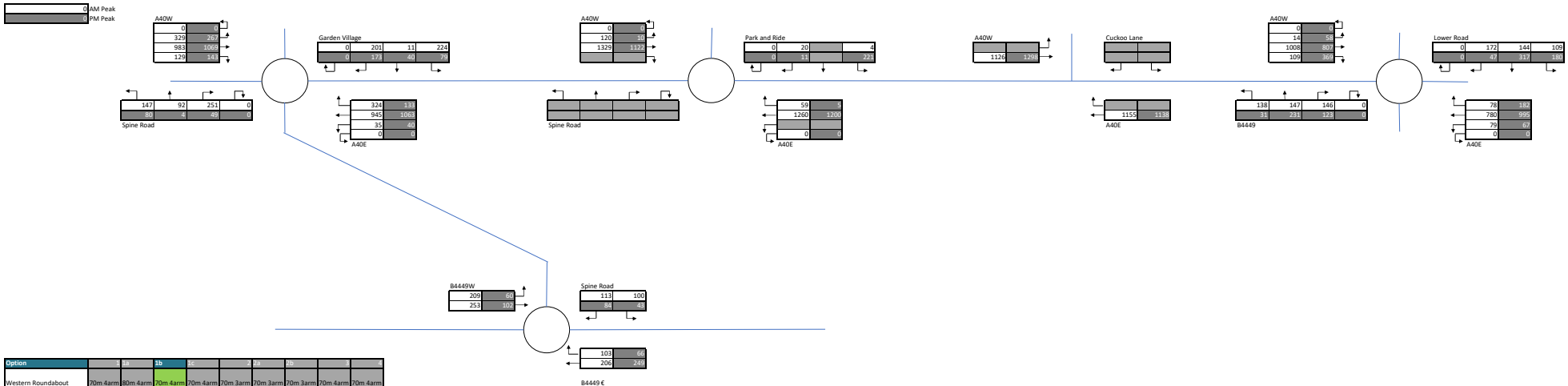
PM	A	B	C	D	Total
A	0	0	1149	5	1154
B	0	0	0	0	0
C	1122	0	0	10	1132
D	221	0	11	0	232
Total	1343	0	1160	15	2518

Southern Roundabout

AM	A	B	C		Total
A	0	206	103		309
B	253	0	209		462
C	100	113	0		213
Total	353	319	312		984

PM	A	B	C		Total
A	0	249	66		315
B	102	0	60		162
C	43	84	0		127
Total	145	333	126		604

Option 1b



Option	1	1a	1b	1c	2	2a	2b	3	4
Western Roundabout	70m 4arm	80m 4arm	70m 4arm	70m 4arm	70m 3arm	70m 3arm	70m 3arm	70m 4arm	70m 4arm
Eastern Roundabout	P&R (no dev)	P&R (no dev)	P&R (no dev)	P&R (no dev)	P&R 4arm (full dev)	P&R 4arm (full dev)	P&R 4arm (full dev)	P&R 4arm (20% dev)	P&R 4arm (bus only)
Southern Roundabout	40m 3arm	40m 3arm	40m 3arm	No link	40m 3arm	40m 3arm	No Link	40m 3arm	40m 3arm
Cuckoo Lane	Open	Open	Closed	Open	Open	Closed	Open	Open	Open
Full Link Road	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes

OD matrices used in ARCADY models (Flows are taken from the diagram):

Western Roundabout:

AM	A	B	C	D	Total
A	0	35	945	324	1304
B	251	0	147	92	490
C	983	129	0	329	1441
D	224	11	201	0	436
Total	1458	175	1293	745	3671

PM	A	B	C	D	Total
A	0	40	1063	133	1236
B	49	0	80	4	133
C	1069	143	0	267	1479
D	79	40	173	0	292
Total	1197	223	1316	404	3140

Park and Ride Roundabout

AM	A	B	C	D	Total
A	0	0	1260	59	1319
B	0	0	0	0	0
C	1329	0	0	120	1449
D	4	0	20	0	24
Total	1333	0	1280	179	2792

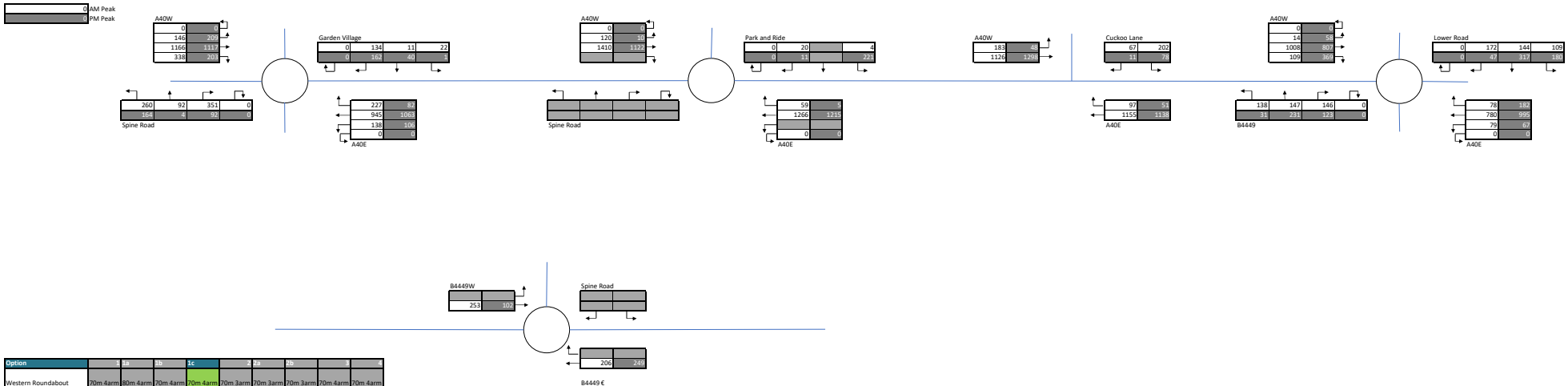
PM	A	B	C	D	Total
A	0	0	1200	5	1205
B	0	0	0	0	0
C	1122	0	0	10	1132
D	221	0	11	0	232
Total	1343	0	1211	15	2569

Southern Roundabout

AM	A	B	C		Total
A	0	206	103		309
B	253	0	209		462
C	100	113	0		213
Total	353	319	312		984

PM	A	B	C		Total
A	0	249	66		315
B	102	0	60		162
C	43	84	0		127
Total	145	333	126		604

Option 1c



Option	1	1a	1b	1c	2	2a	2b	3	4
Western Roundabout	70m 4arm	80m 4arm	70m 4arm	70m 4arm	70m 3arm	70m 3arm	70m 3arm	70m 4arm	70m 4arm
Eastern Roundabout	P&R (no dev)	P&R (no dev)	P&R (no dev)	P&R (no dev)	P&R 4arm (full dev)	P&R 4arm (full dev)	P&R 4arm (full dev)	P&R 4arm (20% dev)	P&R 4arm (bus only)
Southern Roundabout	40m 3arm	40m 3arm	40m 3arm	No link	40m 3arm	40m 3arm	No Link	40m 3arm	40m 3arm
Cuckoo Lane	Open	Open	Closed	Open	Open	Closed	Open	Open	Open
Full Link Road	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes

OD matrices used in ARCADY models (Flows are taken from the diagram):

Western Roundabout:

AM	A	B	C	D	Total
A	0	138	945	227	1310
B	351	0	260	92	703
C	1166	338	0	146	1650
D	22	11	134	0	167
Total	1539	487	1339	465	3830

PM	A	B	C	D	Total
A	0	106	1063	82	1251
B	92	0	164	4	260
C	1117	203	0	209	1529
D	1	40	162	0	203
Total	1210	349	1389	295	3243

Park and Ride Roundabout

AM	A	B	C	D	Total
A	0	0	1266	59	1325
B	0	0	0	0	0
C	1410	0	0	120	1530
D	4	0	20	0	24
Total	1414	0	1286	179	2879

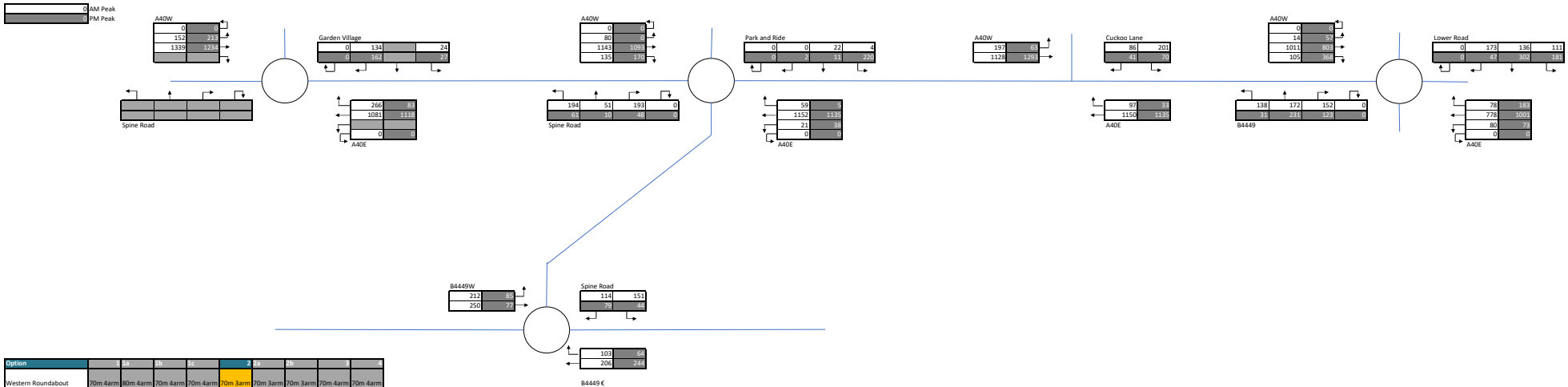
PM	A	B	C	D	Total
A	0	0	1215	5	1220
B	0	0	0	0	0
C	1122	0	0	10	1132
D	221	0	11	0	232
Total	1343	0	1226	15	2584

Southern Roundabout

AM	A	B	C	Total
A	0	206	0	206
B	253	0	0	253
C	0	0	0	0
Total	253	206	0	459

PM	A	B	C	Total
A	0	249	0	249
B	102	0	0	102
C	0	0	0	0
Total	102	249	0	351

Option 2



Option	1	1a	1b	1c	2	2a	2b	3	4
Western Roundabout	70m 4arm	80m 4arm	70m 4arm	70m 4arm	70m 3arm	70m 3arm	70m 3arm	70m 4arm	70m 4arm
Eastern Roundabout	P&R (no dev)	P&R (no dev)	P&R (no dev)	P&R (no dev)	P&R 4arm (full dev)	P&R 4arm (full dev)	P&R 4arm (full dev)	P&R 4arm (20% dev)	P&R 4arm (bus only)
Southern Roundabout	40m 3arm	40m 3arm	40m 3arm	No link	40m 3arm	40m 3arm	No Link	40m 3arm	40m 3arm
Cuckoo Lane	Open	Open	Closed	Open	Open	Closed	Open	Open	Open
Full Link Road	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes

OD matrices used in ARCADY models (Flows are taken from the diagram):

Western Roundabout:

AM	A	B	C	D	Total
A	0	0	1081	266	1347
B	0	0	0	0	0
C	1339	0	0	152	1491
D	24	0	134	0	158
Total	1363	0	1215	418	2996

PM	A	B	C	D	Total
A	0	0	1118	83	1201
B	0	0	0	0	0
C	1234	0	0	213	1447
D	27	0	162	0	189
Total	1261	0	1280	296	2837

Park and Ride Roundabout

AM	A	B	C	D	Total
A	0	21	1152	59	1232
B	193	0	194	51	438
C	1143	135	0	80	1358
D	4	22	0	0	26
Total	1340	178	1346	190	3054

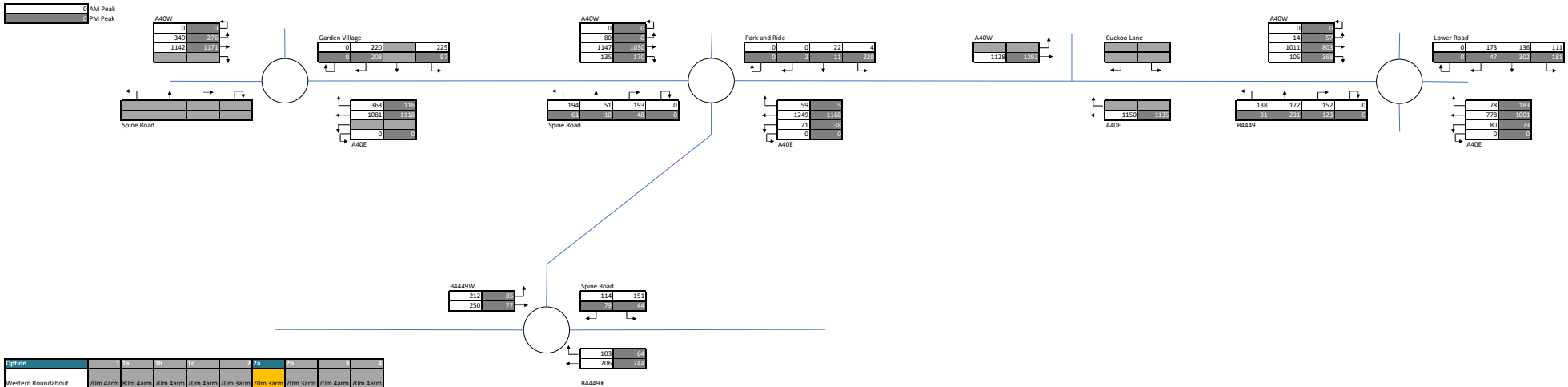
PM	A	B	C	D	Total
A	0	38	1135	5	1178
B	48	0	61	10	119
C	1093	170	0	0	1263
D	220	11	2	0	233
Total	1361	219	1198	15	2793

Southern Roundabout

AM	A	B	C		Total
A	0	206	103		309
B	250	0	212		462
C	151	114	0		265
Total	401	320	315		1036

PM	A	B	C		Total
A	0	244	64		308
B	77	0	85		162
C	44	79	0		123
Total	121	323	149		593

Option 2a



Option	1	1a	1b	1c	2	2a	2b	3	4
Western Roundabout	70m 4arm	80m 4arm	70m 4arm	70m 4arm	70m 3arm	70m 3arm	70m 3arm	70m 4arm	70m 4arm
Eastern Roundabout	P&R (no dev)	P&R (no dev)	P&R (no dev)	P&R (no dev)	P&R 4arm (full dev)	P&R 4arm (full dev)	P&R 4arm (full dev)	P&R 4arm (20% dev)	P&R 4arm (bus only)
Southern Roundabout	40m 3arm	40m 3arm	40m 3arm	No link	40m 3arm	40m 3arm	No Link	40m 3arm	40m 3arm
Cuckoo Lane	Open	Open	Closed	Open	Open	Closed	Open	Open	Open
Full Link Road	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes

OD matrices used in ARCADY models (Flows are taken from the diagram):

Western Roundabout:

AM	A	B	C	D	Total
A	0	0	1081	363	1444
B	0	0	0	0	0
C	1142	0	0	349	1491
D	225	0	220	0	445
Total	1367	0	1301	712	3380

PM	A	B	C	D	Total
A	0	0	1118	116	1234
B	0	0	0	0	0
C	1171	0	0	276	1447
D	97	0	203	0	300
Total	1268	0	1321	392	2981

Park and Ride Roundabout

AM	A	B	C	D	Total
A	0	21	1249	59	1329
B	193	0	194	51	438
C	1147	135	0	80	1362
D	4	22	0	0	26
Total	1344	178	1443	190	3155

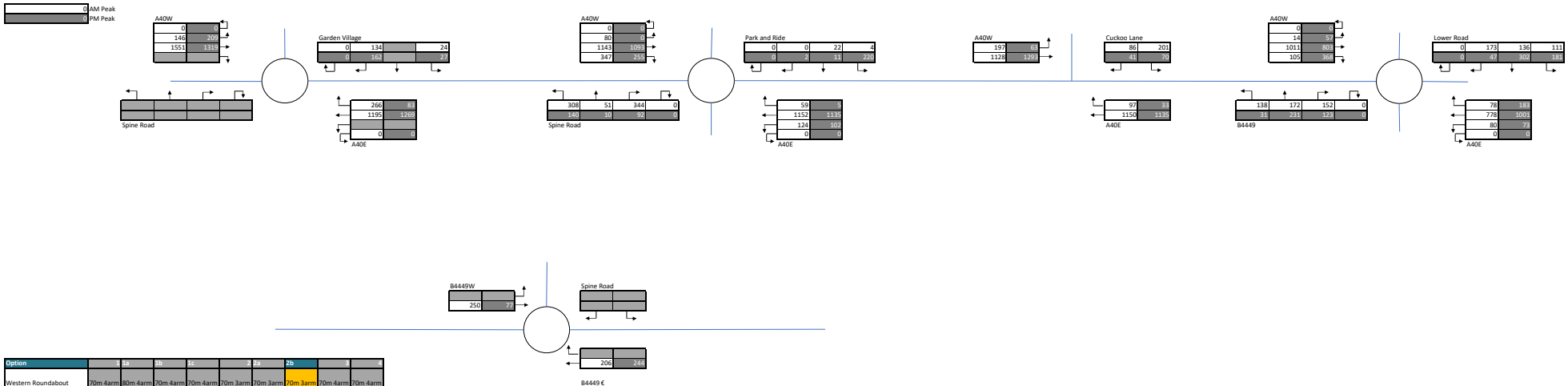
PM	A	B	C	D	Total
A	0	38	1168	5	1211
B	48	0	61	10	119
C	1030	170	0	0	1200
D	220	11	2	0	233
Total	1298	219	1231	15	2763

Southern Roundabout

AM	A	B	C		Total
A	0	206	103		309
B	250	0	212		462
C	151	114	0		265
Total	401	320	315		1036

PM	A	B	C		Total
A	0	244	64		308
B	77	0	85		162
C	44	79	0		123
Total	121	323	149		593

Option 2b



Option	1	1a	1b	1c	2	2a	2b	3	4
Western Roundabout	70m 4arm	80m 4arm	70m 4arm	70m 4arm	70m 3arm	70m 3arm	70m 3arm	70m 4arm	70m 4arm
Eastern Roundabout	P&R (no dev)	P&R (no dev)	P&R (no dev)	P&R (no dev)	P&R 4arm (full dev)	P&R 4arm (full dev)	P&R 4arm (full dev)	P&R 4arm (20% dev)	P&R 4arm (bus only)
Southern Roundabout	40m 3arm	40m 3arm	40m 3arm	No link	40m 3arm	40m 3arm	No Link	40m 3arm	40m 3arm
Cuckoo Lane	Open	Open	Closed	Open	Open	Closed	Open	Open	Open
Full Link Road	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes

OD matrices used in ARCADY models (Flows are taken from the diagram):

Western Roundabout:

AM	A	B	C	D	Total
A	0	0	1195	266	1461
B	0	0	0	0	0
C	1551	0	0	146	1697
D	24	0	134	0	158
Total	1575	0	1329	412	3316

PM	A	B	C	D	Total
A	0	0	1269	83	1352
B	0	0	0	0	0
C	1319	0	0	209	1528
D	27	0	162	0	189
Total	1346	0	1431	292	3069

Park and Ride Roundabout

AM	A	B	C	D	Total
A	0	124	1152	59	1335
B	344	0	308	51	703
C	1143	347	0	80	1570
D	4	22	0	0	26
Total	1491	493	1460	190	3634

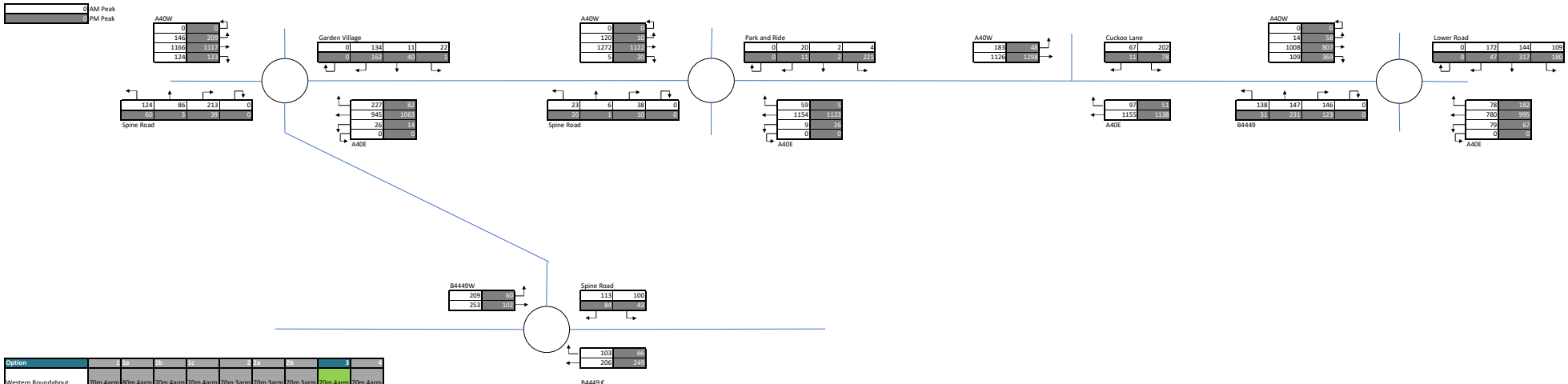
PM	A	B	C	D	Total
A	0	102	1135	5	1242
B	92	0	140	10	242
C	1093	255	0	0	1348
D	220	11	2	0	233
Total	1405	368	1277	15	3065

Southern Roundabout

AM	A	B	C		Total
A	0	206	0		206
B	250	0	0		250
C	0	0	0		0
Total	250	206	0		456

PM	A	B	C		Total
A	0	244	0		244
B	77	0	0		77
C	0	0	0		0
Total	77	244	0		321

Option 3



Option	1	1a	1b	1c	2	2a	2b	3	4
Western Roundabout	70m 4arm	80m 4arm	70m 4arm	70m 4arm	70m 3arm	70m 3arm	70m 3arm	70m 4arm	70m 4arm
Eastern Roundabout	P&R (no dev)	P&R (no dev)	P&R (no dev)	P&R (no dev)	P&R 4arm (full dev)	P&R 4arm (full dev)	P&R 4arm (full dev)	P&R 4arm (20% dev)	P&R 4arm (bus only)
Southern Roundabout	40m 3arm	40m 3arm	40m 3arm	No link	40m 3arm	40m 3arm	No Link	40m 3arm	40m 3arm
Cuckoo Lane	Open	Open	Closed	Open	Open	Closed	Open	Open	Open
Full Link Road	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes

OD matrices used in ARCADY models (Flows are taken from the diagram):

Western Roundabout:

AM	A	B	C	D	Total
A	0	26	945	227	1198
B	213	0	124	86	423
C	1166	124	0	146	1436
D	22	11	134	0	167
Total	1401	161	1203	459	3224

PM	A	B	C	D	Total
A	0	14	1063	82	1159
B	39	0	60	3	102
C	1117	123	0	209	1449
D	1	40	162	0	203
Total	1157	177	1285	294	2913

Park and Ride Roundabout

AM	A	B	C	D	Total
A	0	9	1154	59	1222
B	38	0	23	6	67
C	1272	5	0	120	1397
D	4	2	20	0	26
Total	1314	16	1197	185	2712

PM	A	B	C	D	Total
A	0	26	1123	5	1154
B	10	0	20	1	31
C	1122	20	0	10	1152
D	221	2	11	0	234
Total	1353	48	1154	16	2571

Southern Roundabout

AM	A	B	C		Total
A	0	206	103		309
B	253	0	209		462
C	100	113	0		213
Total	353	319	312		984

PM	A	B	C		Total
A	0	249	66		315
B	102	0	60		162
C	43	84	0		127
Total	145	333	126		604

Appendix C – JUNCTIONS 9 Model Reports

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: A40 Proposed Access 70m ICD.j9
Path: \\Leicester12\3501Data\Projects\A117736 - West Eynsham\06 - Calculations\06 - Capacity Assessments\03 - Proposed Junctions
Report generation date: 15/07/2020 19:51:53

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
Option 1												
Arm 1	D1	1.7	4.56	0.63	A	14 % [Arm 3]	D2	1.7	4.69	0.63	A	32 % [Arm 3]
Arm 2		0.6	4.01	0.38	A			0.1	2.79	0.10	A	
Arm 3		4.3	9.92	0.81	A			2.6	5.81	0.72	A	
Arm 4		0.2	3.59	0.15	A			0.2	3.23	0.17	A	
Option 1b												
Arm 1	D3	2.2	5.63	0.69	A	11 % [Arm 3]	D4	1.9	5.11	0.66	A	29 % [Arm 3]
Arm 2		0.7	4.55	0.41	A			0.1	2.88	0.10	A	
Arm 3		5.1	12.01	0.84	B			2.8	6.27	0.74	A	
Arm 4		0.6	4.37	0.37	A			0.3	3.44	0.24	A	
Option 1c												
Arm 1	D5	2.6	6.65	0.73	A	-1 % [Arm 3]	D6	2.1	5.49	0.68	A	25 % [Arm 3]
Arm 2		1.2	5.43	0.54	A			0.2	3.13	0.20	A	
Arm 3		17.8	37.17	0.97	E			3.2	6.86	0.76	A	
Arm 4		0.2	4.42	0.18	A			0.2	3.43	0.18	A	
Option 2												
Arm 1	D7	2.0	4.95	0.67	A	24 % [Arm 3]	D8	1.5	4.14	0.60	A	37 % [Arm 3]
Arm 2		0.0	0.00	0.00	A			0.0	0.00	0.00	A	
Arm 3		3.2	7.08	0.76	A			2.3	5.31	0.70	A	
Arm 4		0.2	3.14	0.13	A			0.2	3.06	0.15	A	
Option 2a												
Arm 1	D9	2.8	6.37	0.74	A	20 % [Arm 3]	D10	1.7	4.46	0.63	A	35 % [Arm 3]
Arm 2		0.0	0.00	0.00	A			0.0	0.00	0.00	A	
Arm 3		3.6	8.10	0.79	A			2.4	5.49	0.71	A	
Arm 4		0.5	3.77	0.34	A			0.3	3.29	0.23	A	
Option 2b												
Arm 1	D11	2.6	5.97	0.73	A	10 % [Arm 3]	D12	2.1	5.11	0.68	A	30 % [Arm 3]
Arm 2		0.0	0.00	0.00	A			0.0	0.00	0.00	A	
Arm 3		6.3	12.64	0.87	B			2.8	6.11	0.74	A	
Arm 4		0.2	3.56	0.15	A			0.2	3.20	0.16	A	
Option 3												
Arm 1	D13	1.6	4.48	0.62	A	16 % [Arm 3]	D14	1.6	4.45	0.61	A	34 % [Arm 3]
Arm 2		0.5	3.70	0.32	A			0.1	2.72	0.08	A	
Arm 3		3.9	9.06	0.80	A			2.4	5.55	0.71	A	
Arm 4		0.2	3.49	0.15	A			0.2	3.18	0.16	A	
Option 4												
Arm 1	D15	0.0	0.00	0.00	A	900 % []	D16	0.0	0.00	0.00	A	900 % []
Arm 2		0.0	0.00	0.00	A			0.0	0.00	0.00	A	
Arm 3		0.0	0.00	0.00	A			0.0	0.00	0.00	A	
Arm 4		0.0	0.00	0.00	A			0.0	0.00	0.00	A	
Sensitivity Test 1												
Arm 1	D17	1.7	4.61	0.63	A	12 % [Arm 3]	D18	1.9	4.94	0.66	A	37 % [Arm 3]
Arm 2		0.6	4.01	0.38	A			0.1	2.79	0.10	A	
Arm 3		4.7	11.05	0.83	B			2.2	5.25	0.69	A	
Arm 4		0.2	3.76	0.16	A			0.2	3.15	0.16	A	

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

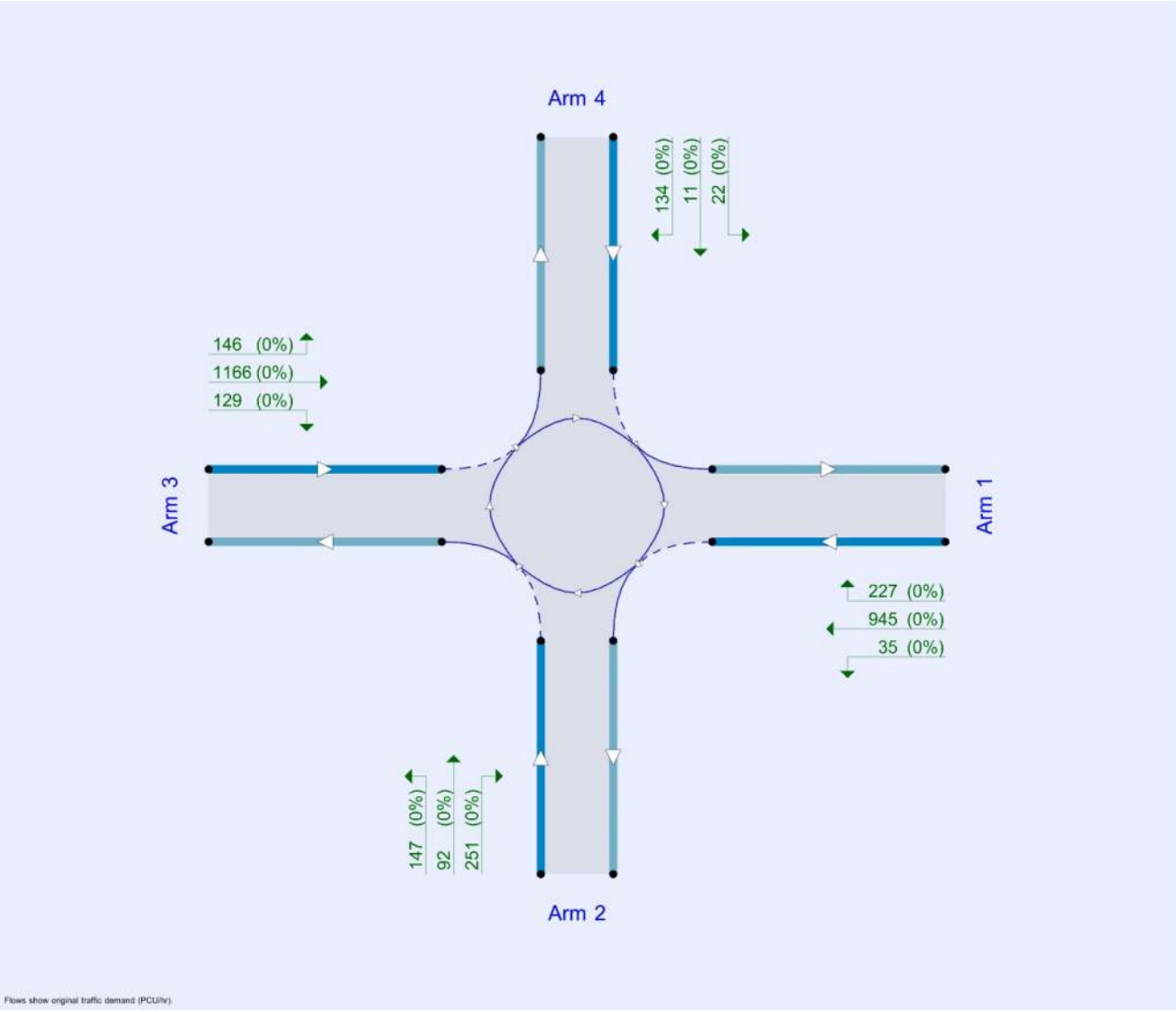
File summary

File Description

Title	A40 Proposed Access 70m ICD (Option B)
Location	Eynsham
Site number	
Date	03/07/2020
Version	
Status	(new file)
Identifier	
Client	Oxfordshire County Council
Jobnumber	A117736
Enumerator	WYG\petr.jandik
Description	Junction Geometry: File: \\Leicester12\3501Data\Projects\A117736 - West Eynsham\06 - Calculations\06 - Capacity Assessments\03 - Proposed Junctions\5588.030 - Shared Access from A40 (70m ICD Rbt) Option B - Junction Geometry.dwg

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	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Option 1	AM		ONE HOUR	07:45	09:15	15	✓
D2	Option 1	PM		ONE HOUR	16:45	18:15	15	✓
D3	Option 1b	AM		ONE HOUR	07:45	09:15	15	✓
D4	Option 1b	PM		ONE HOUR	16:45	18:15	15	✓
D5	Option 1c	AM		ONE HOUR	07:45	09:15	15	✓
D6	Option 1c	PM		ONE HOUR	16:45	18:15	15	✓
D7	Option 2	AM	Arm 2 (relief road) does not exist in Options 2/2a/2b.	ONE HOUR	07:45	09:15	15	✓
D8	Option 2	PM	Arm 2 (relief road) does not exist in Options 2/2a/2b.	ONE HOUR	16:45	18:15	15	✓
D9	Option 2a	AM	Arm 2 (relief road) does not exist in Options 2/2a/2b.	ONE HOUR	07:45	09:15	15	✓
D10	Option 2a	PM	Arm 2 (relief road) does not exist in Options 2/2a/2b.	ONE HOUR	16:45	18:15	15	✓
D11	Option 2b	AM	Arm 2 (relief road) does not exist in Options 2/2a/2b.	ONE HOUR	07:45	09:15	15	✓
D12	Option 2b	PM	Arm 2 (relief road) does not exist in Options 2/2a/2b.	ONE HOUR	16:45	18:15	15	✓
D13	Option 3	AM		ONE HOUR	07:45	09:15	15	✓
D14	Option 3	PM		ONE HOUR	16:45	18:15	15	✓
D15	Option 4	AM		ONE HOUR	07:45	09:15	15	✓
D16	Option 4	PM		ONE HOUR	16:45	18:15	15	✓
D17	Sensitivity Test 1	AM	A40 Sensitivity Test 1	ONE HOUR	07:45	09:15	15	✓
D18	Sensitivity Test 1	PM	A40 Sensitivity Test 1	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

Option 1, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 / West Eynsham SDA / Garden Village	Standard Roundabout		1, 2, 3, 4	6.76	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	14	Arm 3

Arms

Arms

Arm	Name	Description
1	A40 East	
2	Access to West Eynsham SDA	
3	A40 West	
4	Access to Cotswold Garden Village	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	7.00	8.00	7.5	30.0	70.0	39.0	
2	3.65	9.00	56.2	27.0	70.0	41.0	
3	4.00	8.00	180.0	34.0	70.0	38.0	
4	7.00	7.30	4.5	26.0	70.0	37.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.596	2299
2	0.592	2289
3	0.602	2326
4	0.576	2167

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	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Option 1	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 (%)
1		ONE HOUR	✓	1207	100.000
2		ONE HOUR	✓	490	100.000
3		ONE HOUR	✓	1441	100.000
4		ONE HOUR	✓	167	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	35	945	227
	2	251	0	147	92
	3	1166	129	0	146
	4	22	11	134	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.63	4.56	1.7	A	1108	1661
2	0.38	4.01	0.6	A	450	674
3	0.81	9.92	4.3	A	1322	1983
4	0.15	3.59	0.2	A	153	230

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	909	227	206	2176	0.418	906	1079	0.0	0.7	2.828	A
2	369	92	980	1708	0.216	368	131	0.0	0.3	2.683	A
3	1085	271	428	2068	0.525	1080	920	0.0	1.1	3.629	A
4	126	31	1159	1500	0.084	125	349	0.0	0.1	2.619	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1085	271	246	2152	0.504	1084	1291	0.7	1.0	3.368	A
2	440	110	1173	1594	0.276	440	157	0.3	0.4	3.119	A
3	1295	324	512	2017	0.642	1293	1101	1.1	1.8	4.948	A
4	150	38	1387	1368	0.110	150	417	0.1	0.1	2.954	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1329	332	301	2119	0.627	1326	1576	1.0	1.7	4.525	A
2	540	135	1435	1439	0.375	539	192	0.4	0.6	3.996	A
3	1587	397	626	1948	0.814	1577	1347	1.8	4.2	9.458	A
4	184	46	1693	1192	0.154	184	510	0.1	0.2	3.569	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1329	332	302	2119	0.627	1329	1584	1.7	1.7	4.557	A
2	540	135	1438	1437	0.375	539	193	0.6	0.6	4.009	A
3	1587	397	628	1948	0.815	1586	1350	4.2	4.3	9.919	A
4	184	46	1702	1187	0.155	184	512	0.2	0.2	3.587	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1085	271	247	2151	0.504	1088	1302	1.7	1.0	3.392	A
2	440	110	1177	1592	0.277	441	158	0.6	0.4	3.132	A
3	1295	324	514	2016	0.642	1305	1105	4.3	1.8	5.130	A
4	150	38	1399	1362	0.110	150	420	0.2	0.1	2.972	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	909	227	207	2175	0.418	910	1086	1.0	0.7	2.849	A
2	369	92	985	1706	0.216	369	132	0.4	0.3	2.696	A
3	1085	271	430	2067	0.525	1088	924	1.8	1.1	3.685	A
4	126	31	1167	1495	0.084	126	351	0.1	0.1	2.630	A

Option 1, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 / West Eynsham SDA / Garden Village	Standard Roundabout		1, 2, 3, 4	5.06	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	32	Arm 3

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	Option 1	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 (%)
1		ONE HOUR	✓	1185	100.000
2		ONE HOUR	✓	133	100.000
3		ONE HOUR	✓	1469	100.000
4		ONE HOUR	✓	203	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	40	1063	82
	2	49	0	80	4
	3	1117	143	0	209
	4	1	40	162	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.63	4.69	1.7	A	1087	1631
2	0.10	2.79	0.1	A	122	183
3	0.72	5.81	2.6	A	1348	2022
4	0.17	3.23	0.2	A	186	279

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	892	223	259	2144	0.416	889	876	0.0	0.7	2.863	A
2	100	25	981	1708	0.059	100	167	0.0	0.1	2.238	A
3	1106	276	101	2265	0.488	1102	979	0.0	0.9	3.086	A
4	153	38	982	1602	0.095	152	221	0.0	0.1	2.484	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1065	266	310	2114	0.504	1064	1048	0.7	1.0	3.427	A
2	120	30	1174	1594	0.075	119	200	0.1	0.1	2.441	A
3	1321	330	121	2253	0.586	1319	1172	0.9	1.4	3.847	A
4	182	46	1175	1491	0.122	182	265	0.1	0.1	2.751	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1305	326	379	2073	0.630	1302	1281	1.0	1.7	4.657	A
2	146	37	1436	1438	0.102	146	245	0.1	0.1	2.786	A
3	1617	404	148	2236	0.723	1613	1434	1.4	2.6	5.731	A
4	224	56	1437	1340	0.167	223	324	0.1	0.2	3.224	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1305	326	380	2072	0.630	1305	1285	1.7	1.7	4.690	A
2	146	37	1439	1437	0.102	146	246	0.1	0.1	2.789	A
3	1617	404	149	2236	0.723	1617	1437	2.6	2.6	5.815	A
4	224	56	1441	1337	0.167	224	325	0.2	0.2	3.231	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1065	266	311	2113	0.504	1068	1053	1.7	1.0	3.451	A
2	120	30	1178	1591	0.075	120	201	0.1	0.1	2.447	A
3	1321	330	122	2252	0.586	1325	1176	2.6	1.4	3.902	A
4	182	46	1181	1487	0.123	183	266	0.2	0.1	2.759	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	892	223	260	2144	0.416	893	880	1.0	0.7	2.881	A
2	100	25	985	1705	0.059	100	168	0.1	0.1	2.244	A
3	1106	276	102	2264	0.488	1108	984	1.4	1.0	3.116	A
4	153	38	987	1599	0.096	153	222	0.1	0.1	2.491	A

Option 1b, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 / West Eynsham SDA / Garden Village	Standard Roundabout		1, 2, 3, 4	7.84	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	11	Arm 3

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
D3	Option 1b	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 (%)
1		ONE HOUR	✓	1304	100.000
2		ONE HOUR	✓	490	100.000
3		ONE HOUR	✓	1441	100.000
4		ONE HOUR	✓	436	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	35	945	324
	2	251	0	147	92
	3	983	129	0	329
	4	224	11	201	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.69	5.63	2.2	A	1197	1795
2	0.41	4.55	0.7	A	450	674
3	0.84	12.01	5.1	B	1322	1983
4	0.37	4.37	0.6	A	400	600

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	982	245	256	2146	0.457	978	1093	0.0	0.8	3.074	A
2	369	92	1103	1636	0.226	368	131	0.0	0.3	2.836	A
3	1085	271	501	2024	0.536	1080	970	0.0	1.1	3.795	A
4	328	82	1022	1579	0.208	327	559	0.0	0.3	2.873	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1172	293	306	2116	0.554	1171	1308	0.8	1.2	3.801	A
2	440	110	1320	1507	0.292	440	157	0.3	0.4	3.371	A
3	1295	324	599	1965	0.659	1292	1161	1.1	1.9	5.327	A
4	392	98	1223	1463	0.268	392	669	0.3	0.4	3.360	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1436	359	374	2076	0.692	1432	1596	1.2	2.2	5.559	A
2	540	135	1614	1333	0.405	538	191	0.4	0.7	4.526	A
3	1587	397	733	1884	0.842	1574	1420	1.9	4.9	11.195	B
4	480	120	1491	1309	0.367	479	816	0.4	0.6	4.335	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1436	359	375	2075	0.692	1436	1605	2.2	2.2	5.630	A
2	540	135	1618	1330	0.406	539	193	0.7	0.7	4.551	A
3	1587	397	734	1883	0.842	1586	1424	4.9	5.1	12.012	B
4	480	120	1500	1303	0.368	480	820	0.6	0.6	4.372	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1172	293	308	2115	0.554	1176	1320	2.2	1.3	3.851	A
2	440	110	1326	1504	0.293	442	159	0.7	0.4	3.391	A
3	1295	324	601	1964	0.660	1308	1166	5.1	2.0	5.593	A
4	392	98	1236	1456	0.269	393	674	0.6	0.4	3.388	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	982	245	257	2145	0.458	983	1100	1.3	0.8	3.102	A
2	369	92	1108	1632	0.226	369	132	0.4	0.3	2.850	A
3	1085	271	503	2023	0.536	1088	975	2.0	1.2	3.864	A
4	328	82	1029	1575	0.208	329	562	0.4	0.3	2.889	A

Option 1b, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 / West Eynsham SDA / Garden Village	Standard Roundabout		1, 2, 3, 4	5.41	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	29	Arm 3

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
D4	Option 1b	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 (%)
1		ONE HOUR	✓	1236	100.000
2		ONE HOUR	✓	133	100.000
3		ONE HOUR	✓	1479	100.000
4		ONE HOUR	✓	292	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	40	1063	133
	2	49	0	80	4
	3	1069	143	0	267
	4	79	40	173	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.66	5.11	1.9	A	1134	1701
2	0.10	2.88	0.1	A	122	183
3	0.74	6.27	2.8	A	1357	2036
4	0.24	3.44	0.3	A	268	402

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	931	233	267	2139	0.435	927	898	0.0	0.8	2.963	A
2	100	25	1027	1680	0.060	100	167	0.0	0.1	2.277	A
3	1113	278	140	2242	0.497	1110	988	0.0	1.0	3.170	A
4	220	55	946	1622	0.135	219	303	0.0	0.2	2.564	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1111	278	320	2108	0.527	1110	1075	0.8	1.1	3.602	A
2	120	30	1229	1561	0.077	119	200	0.1	0.1	2.497	A
3	1330	332	167	2225	0.598	1328	1182	1.0	1.5	4.002	A
4	263	66	1132	1515	0.173	262	363	0.2	0.2	2.872	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1361	340	391	2065	0.659	1358	1314	1.1	1.9	5.063	A
2	146	37	1504	1398	0.105	146	245	0.1	0.1	2.875	A
3	1628	407	204	2203	0.739	1623	1446	1.5	2.8	6.158	A
4	321	80	1384	1370	0.235	321	444	0.2	0.3	3.432	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1361	340	392	2065	0.659	1361	1318	1.9	1.9	5.112	A
2	146	37	1507	1396	0.105	146	246	0.1	0.1	2.879	A
3	1628	407	205	2202	0.739	1628	1449	2.8	2.8	6.266	A
4	321	80	1388	1368	0.235	321	445	0.3	0.3	3.439	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1111	278	321	2107	0.527	1114	1080	1.9	1.1	3.635	A
2	120	30	1234	1558	0.077	120	201	0.1	0.1	2.502	A
3	1330	332	168	2225	0.598	1335	1186	2.8	1.5	4.068	A
4	263	66	1138	1512	0.174	263	364	0.3	0.2	2.882	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	931	233	268	2139	0.435	932	903	1.1	0.8	2.986	A
2	100	25	1032	1678	0.060	100	168	0.1	0.1	2.282	A
3	1113	278	140	2241	0.497	1115	992	1.5	1.0	3.205	A
4	220	55	951	1620	0.136	220	305	0.2	0.2	2.574	A

Option 1c, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 / West Eynsham SDA / Garden Village	Standard Roundabout		1, 2, 3, 4	19.47	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-1	Arm 3

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
D5	Option 1c	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 (%)
1		ONE HOUR	✓	1310	100.000
2		ONE HOUR	✓	703	100.000
3		ONE HOUR	✓	1650	100.000
4		ONE HOUR	✓	167	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	138	945	227
	2	351	0	260	92
	3	1166	338	0	146
	4	22	11	134	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.73	6.65	2.6	A	1202	1803
2	0.54	5.43	1.2	A	645	968
3	0.97	37.17	17.8	E	1514	2271
4	0.18	4.42	0.2	A	153	230

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	986	247	362	2083	0.474	983	1153	0.0	0.9	3.261	A
2	529	132	980	1709	0.310	527	365	0.0	0.4	3.044	A
3	1242	311	503	2023	0.614	1236	1005	0.0	1.6	4.538	A
4	126	31	1390	1367	0.092	125	349	0.0	0.1	2.900	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1178	294	433	2040	0.577	1176	1379	0.9	1.4	4.155	A
2	632	158	1172	1595	0.396	631	436	0.4	0.7	3.733	A
3	1483	371	601	1963	0.755	1478	1202	1.6	3.0	7.323	A
4	150	38	1662	1210	0.124	150	417	0.1	0.1	3.395	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1442	361	522	1987	0.726	1437	1661	1.4	2.6	6.489	A
2	774	194	1433	1440	0.538	772	526	0.7	1.1	5.373	A
3	1817	454	736	1883	0.965	1771	1470	3.0	14.4	25.536	D
4	184	46	2000	1016	0.181	184	507	0.1	0.2	4.326	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1442	361	529	1983	0.727	1442	1685	2.6	2.6	6.647	A
2	774	194	1438	1437	0.538	774	533	1.1	1.2	5.426	A
3	1817	454	738	1882	0.966	1803	1474	14.4	17.8	37.166	E
4	184	46	2030	998	0.184	184	511	0.2	0.2	4.421	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1178	294	446	2032	0.579	1183	1426	2.6	1.4	4.261	A
2	632	158	1179	1591	0.397	634	450	1.2	0.7	3.769	A
3	1483	371	604	1962	0.756	1542	1208	17.8	3.2	9.716	A
4	150	38	1722	1176	0.128	150	424	0.2	0.1	3.514	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	986	247	365	2081	0.474	988	1164	1.4	0.9	3.299	A
2	529	132	985	1705	0.310	530	368	0.7	0.5	3.067	A
3	1242	311	505	2021	0.615	1249	1010	3.2	1.6	4.697	A
4	126	31	1403	1359	0.092	126	351	0.1	0.1	2.918	A

Option 1c, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 / West Eynsham SDA / Garden Village	Standard Roundabout		1, 2, 3, 4	5.82	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	25	Arm 3

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
D6	Option 1c	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 (%)
1		ONE HOUR	✓	1251	100.000
2		ONE HOUR	✓	260	100.000
3		ONE HOUR	✓	1529	100.000
4		ONE HOUR	✓	203	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	106	1063	82
	2	92	0	164	4
	3	1117	203	0	209
	4	1	40	162	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.68	5.49	2.1	A	1148	1722
2	0.20	3.13	0.2	A	239	358
3	0.76	6.86	3.2	A	1403	2105
4	0.18	3.43	0.2	A	186	279

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	942	235	304	2117	0.445	939	908	0.0	0.8	3.047	A
2	196	49	981	1708	0.115	195	262	0.0	0.1	2.380	A
3	1151	288	134	2245	0.513	1147	1042	0.0	1.0	3.266	A
4	153	38	1059	1557	0.098	152	221	0.0	0.1	2.562	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1125	281	364	2082	0.540	1123	1086	0.8	1.2	3.751	A
2	234	58	1174	1594	0.147	234	313	0.1	0.2	2.646	A
3	1375	344	160	2229	0.617	1372	1247	1.0	1.6	4.189	A
4	182	46	1267	1437	0.127	182	265	0.1	0.1	2.868	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1377	344	445	2033	0.677	1374	1328	1.2	2.1	5.429	A
2	286	72	1436	1439	0.199	286	383	0.2	0.2	3.123	A
3	1683	421	196	2208	0.762	1677	1526	1.6	3.1	6.708	A
4	224	56	1549	1275	0.175	223	324	0.1	0.2	3.422	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1377	344	446	2033	0.678	1377	1332	2.1	2.1	5.490	A
2	286	72	1439	1437	0.199	286	384	0.2	0.2	3.128	A
3	1683	421	196	2208	0.763	1683	1529	3.1	3.2	6.858	A
4	224	56	1554	1272	0.176	224	325	0.2	0.2	3.432	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1125	281	365	2081	0.540	1128	1092	2.1	1.2	3.792	A
2	234	58	1178	1591	0.147	234	315	0.2	0.2	2.653	A
3	1375	344	160	2229	0.617	1381	1252	3.2	1.6	4.272	A
4	182	46	1275	1433	0.127	183	266	0.2	0.1	2.881	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	942	235	305	2117	0.445	943	913	1.2	0.8	3.071	A
2	196	49	985	1705	0.115	196	263	0.2	0.1	2.387	A
3	1151	288	134	2245	0.513	1153	1047	1.6	1.1	3.306	A
4	153	38	1065	1554	0.098	153	223	0.1	0.1	2.571	A

Option 2, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 / West Eynsham SDA / Garden Village	Standard Roundabout		1, 2, 3, 4	5.91	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	24	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	Option 2	AM	Arm 2 (relief road) does not exist in Options 2/2a/2b.	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 (%)
1		ONE HOUR	✓	1347	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1491	100.000
4		ONE HOUR	✓	158	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	1081	266
	2	0	0	0	0
	3	1339	0	0	152
	4	24	0	134	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.67	4.95	2.0	A	1236	1854
2	0.00	0.00	0.0	A	0	0
3	0.76	7.08	3.2	A	1368	2052
4	0.13	3.14	0.2	A	145	217

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1014	254	101	2239	0.453	1011	1022	0.0	0.8	2.925	A
2	0	0	1111	1631	0.000	0	0	0.0	0.0	0.000	A
3	1123	281	200	2205	0.509	1118	912	0.0	1.0	3.300	A
4	119	30	1004	1589	0.075	119	314	0.0	0.1	2.448	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1211	303	120	2227	0.544	1209	1223	0.8	1.2	3.534	A
2	0	0	1330	1501	0.000	0	0	0.0	0.0	0.000	A
3	1340	335	239	2182	0.614	1338	1091	1.0	1.6	4.256	A
4	142	36	1202	1475	0.096	142	375	0.1	0.1	2.699	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1483	371	147	2211	0.671	1480	1495	1.2	2.0	4.902	A
2	0	0	1627	1325	0.000	0	0	0.0	0.0	0.000	A
3	1642	410	292	2150	0.764	1635	1335	1.6	3.1	6.915	A
4	174	43	1469	1321	0.132	174	459	0.1	0.2	3.136	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1483	371	148	2211	0.671	1483	1501	2.0	2.0	4.947	A
2	0	0	1631	1323	0.000	0	0	0.0	0.0	0.000	A
3	1642	410	293	2149	0.764	1641	1338	3.1	3.2	7.081	A
4	174	43	1474	1318	0.132	174	460	0.2	0.2	3.145	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1211	303	121	2227	0.544	1214	1231	2.0	1.2	3.566	A
2	0	0	1335	1498	0.000	0	0	0.0	0.0	0.000	A
3	1340	335	240	2181	0.614	1347	1095	3.2	1.6	4.344	A
4	142	36	1209	1471	0.097	142	377	0.2	0.1	2.709	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1014	254	101	2238	0.453	1016	1028	1.2	0.8	2.949	A
2	0	0	1117	1628	0.000	0	0	0.0	0.0	0.000	A
3	1123	281	201	2205	0.509	1125	916	1.6	1.0	3.341	A
4	119	30	1010	1586	0.075	119	315	0.1	0.1	2.454	A

Option 2, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 / West Eynsham SDA / Garden Village	Standard Roundabout		1, 2, 3, 4	4.66	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	37	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	Option 2	PM	Arm 2 (relief road) does not exist in Options 2/2a/2b.	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 (%)
1		ONE HOUR	✓	1201	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1447	100.000
4		ONE HOUR	✓	189	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	1118	83
	2	0	0	0	0
	3	1234	0	0	213
	4	27	0	162	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.60	4.14	1.5	A	1102	1653
2	0.00	0.00	0.0	A	0	0
3	0.70	5.31	2.3	A	1328	1992
4	0.15	3.06	0.2	A	173	260

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	904	226	122	2226	0.406	901	946	0.0	0.7	2.712	A
2	0	0	1023	1683	0.000	0	0	0.0	0.0	0.000	A
3	1089	272	62	2288	0.476	1086	961	0.0	0.9	2.985	A
4	142	36	926	1634	0.087	142	222	0.0	0.1	2.412	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1080	270	146	2212	0.488	1079	1132	0.7	0.9	3.174	A
2	0	0	1224	1564	0.000	0	0	0.0	0.0	0.000	A
3	1301	325	75	2281	0.570	1299	1150	0.9	1.3	3.661	A
4	170	42	1108	1529	0.111	170	266	0.1	0.1	2.647	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1322	331	178	2192	0.603	1320	1385	0.9	1.5	4.116	A
2	0	0	1498	1402	0.000	0	0	0.0	0.0	0.000	A
3	1593	398	91	2271	0.702	1589	1407	1.3	2.3	5.252	A
4	208	52	1355	1387	0.150	208	325	0.1	0.2	3.053	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1322	331	178	2192	0.603	1322	1388	1.5	1.5	4.138	A
2	0	0	1501	1400	0.000	0	0	0.0	0.0	0.000	A
3	1593	398	91	2271	0.702	1593	1409	2.3	2.3	5.311	A
4	208	52	1359	1385	0.150	208	326	0.2	0.2	3.058	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1080	270	146	2212	0.488	1082	1137	1.5	1.0	3.192	A
2	0	0	1228	1562	0.000	0	0	0.0	0.0	0.000	A
3	1301	325	75	2281	0.570	1305	1153	2.3	1.3	3.702	A
4	170	42	1113	1526	0.111	170	267	0.2	0.1	2.656	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	904	226	122	2226	0.406	905	951	1.0	0.7	2.730	A
2	0	0	1027	1680	0.000	0	0	0.0	0.0	0.000	A
3	1089	272	63	2288	0.476	1091	965	1.3	0.9	3.011	A
4	142	36	930	1631	0.087	142	223	0.1	0.1	2.417	A

Option 2a, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 / West Eynsham SDA / Garden Village	Standard Roundabout		1, 2, 3, 4	6.79	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	20	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	Option 2a	AM	Arm 2 (relief road) does not exist in Options 2/2a/2b.	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 (%)
1		ONE HOUR	✓	1444	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1491	100.000
4		ONE HOUR	✓	445	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	1081	363
	2	0	0	0	0
	3	1142	0	0	349
	4	225	0	220	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.74	6.37	2.8	A	1325	1988
2	0.00	0.00	0.0	A	0	0
3	0.79	8.10	3.6	A	1368	2052
4	0.34	3.77	0.5	A	408	613

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1087	272	165	2200	0.494	1083	1025	0.0	1.0	3.213	A
2	0	0	1248	1550	0.000	0	0	0.0	0.0	0.000	A
3	1123	281	272	2162	0.519	1118	976	0.0	1.1	3.436	A
4	335	84	856	1674	0.200	334	534	0.0	0.2	2.685	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1298	325	198	2181	0.595	1296	1227	1.0	1.5	4.060	A
2	0	0	1494	1404	0.000	0	0	0.0	0.0	0.000	A
3	1340	335	326	2129	0.629	1338	1168	1.1	1.7	4.535	A
4	400	100	1025	1577	0.254	400	639	0.2	0.3	3.057	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1590	397	242	2154	0.738	1585	1499	1.5	2.7	6.262	A
2	0	0	1827	1207	0.000	0	0	0.0	0.0	0.000	A
3	1642	410	398	2086	0.787	1634	1428	1.7	3.6	7.841	A
4	490	122	1252	1446	0.339	489	781	0.3	0.5	3.759	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1590	397	242	2154	0.738	1590	1505	2.7	2.8	6.374	A
2	0	0	1832	1204	0.000	0	0	0.0	0.0	0.000	A
3	1642	410	400	2085	0.787	1641	1432	3.6	3.6	8.099	A
4	490	122	1257	1443	0.339	490	784	0.5	0.5	3.775	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1298	325	198	2180	0.595	1303	1235	2.8	1.5	4.129	A
2	0	0	1501	1400	0.000	0	0	0.0	0.0	0.000	A
3	1340	335	328	2128	0.630	1348	1174	3.6	1.7	4.656	A
4	400	100	1032	1573	0.254	401	643	0.5	0.3	3.072	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1087	272	166	2200	0.494	1089	1031	1.5	1.0	3.249	A
2	0	0	1255	1546	0.000	0	0	0.0	0.0	0.000	A
3	1123	281	274	2161	0.519	1125	981	1.7	1.1	3.486	A
4	335	84	862	1671	0.200	335	537	0.3	0.3	2.697	A

Option 2a, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 / West Eynsham SDA / Garden Village	Standard Roundabout		1, 2, 3, 4	4.84	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	35	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	Option 2a	PM	Arm 2 (relief road) does not exist in Options 2/2a/2b.	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 (%)
1		ONE HOUR	✓	1234	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1447	100.000
4		ONE HOUR	✓	300	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	1118	116
	2	0	0	0	0
	3	1171	0	0	276
	4	97	0	203	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.63	4.46	1.7	A	1132	1699
2	0.00	0.00	0.0	A	0	0
3	0.71	5.49	2.4	A	1328	1992
4	0.23	3.29	0.3	A	275	413

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	929	232	152	2208	0.421	926	951	0.0	0.7	2.803	A
2	0	0	1079	1650	0.000	0	0	0.0	0.0	0.000	A
3	1089	272	87	2273	0.479	1086	991	0.0	0.9	3.023	A
4	226	56	879	1661	0.136	225	294	0.0	0.2	2.505	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1109	277	182	2190	0.507	1108	1138	0.7	1.0	3.325	A
2	0	0	1291	1525	0.000	0	0	0.0	0.0	0.000	A
3	1301	325	104	2263	0.575	1299	1186	0.9	1.3	3.729	A
4	270	67	1051	1562	0.173	269	352	0.2	0.2	2.785	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1359	340	223	2165	0.627	1356	1393	1.0	1.7	4.433	A
2	0	0	1579	1354	0.000	0	0	0.0	0.0	0.000	A
3	1593	398	127	2249	0.708	1589	1452	1.3	2.4	5.420	A
4	330	83	1286	1427	0.232	330	431	0.2	0.3	3.282	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1359	340	224	2165	0.627	1359	1396	1.7	1.7	4.462	A
2	0	0	1582	1352	0.000	0	0	0.0	0.0	0.000	A
3	1593	398	128	2249	0.708	1593	1454	2.4	2.4	5.488	A
4	330	83	1289	1425	0.232	330	432	0.3	0.3	3.288	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1109	277	183	2190	0.507	1112	1143	1.7	1.0	3.350	A
2	0	0	1295	1522	0.000	0	0	0.0	0.0	0.000	A
3	1301	325	105	2263	0.575	1305	1190	2.4	1.4	3.776	A
4	270	67	1056	1559	0.173	270	353	0.3	0.2	2.792	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	929	232	153	2207	0.421	930	956	1.0	0.7	2.823	A
2	0	0	1083	1647	0.000	0	0	0.0	0.0	0.000	A
3	1089	272	87	2273	0.479	1091	996	1.4	0.9	3.052	A
4	226	56	883	1659	0.136	226	296	0.2	0.2	2.512	A

Option 2b, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 / West Eynsham SDA / Garden Village	Standard Roundabout		1, 2, 3, 4	9.27	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	10	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	Option 2b	AM	Arm 2 (relief road) does not exist in Options 2/2a/2b.	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 (%)
1		ONE HOUR	✓	1461	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1697	100.000
4		ONE HOUR	✓	158	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	1195	266
	2	0	0	0	0
	3	1551	0	0	146
	4	24	0	134	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.73	5.97	2.6	A	1341	2011
2	0.00	0.00	0.0	A	0	0
3	0.87	12.64	6.3	B	1557	2336
4	0.15	3.56	0.2	A	145	217

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1100	275	101	2239	0.491	1096	1181	0.0	1.0	3.141	A
2	0	0	1197	1580	0.000	0	0	0.0	0.0	0.000	A
3	1278	319	200	2206	0.579	1272	997	0.0	1.4	3.835	A
4	119	30	1163	1498	0.079	119	309	0.0	0.1	2.610	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1313	328	120	2227	0.590	1312	1413	1.0	1.4	3.925	A
2	0	0	1432	1441	0.000	0	0	0.0	0.0	0.000	A
3	1526	381	239	2182	0.699	1522	1193	1.4	2.3	5.424	A
4	142	36	1391	1366	0.104	142	370	0.1	0.1	2.940	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1609	402	147	2211	0.728	1604	1720	1.4	2.6	5.887	A
2	0	0	1751	1252	0.000	0	0	0.0	0.0	0.000	A
3	1868	467	292	2150	0.869	1853	1459	2.3	6.0	11.592	B
4	174	43	1694	1192	0.146	174	451	0.1	0.2	3.536	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1609	402	148	2211	0.728	1608	1733	2.6	2.6	5.973	A
2	0	0	1756	1249	0.000	0	0	0.0	0.0	0.000	A
3	1868	467	293	2149	0.869	1867	1463	6.0	6.3	12.637	B
4	174	43	1707	1184	0.147	174	454	0.2	0.2	3.561	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1313	328	121	2227	0.590	1318	1430	2.6	1.5	3.982	A
2	0	0	1439	1437	0.000	0	0	0.0	0.0	0.000	A
3	1526	381	240	2181	0.699	1541	1199	6.3	2.4	5.762	A
4	142	36	1409	1356	0.105	142	373	0.2	0.1	2.965	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1100	275	101	2238	0.491	1102	1189	1.5	1.0	3.172	A
2	0	0	1203	1576	0.000	0	0	0.0	0.0	0.000	A
3	1278	319	201	2205	0.579	1282	1002	2.4	1.4	3.915	A
4	119	30	1171	1493	0.080	119	311	0.1	0.1	2.620	A

Option 2b, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 / West Eynsham SDA / Garden Village	Standard Roundabout		1, 2, 3, 4	5.49	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	30	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	Option 2b	PM	Arm 2 (relief road) does not exist in Options 2/2a/2b.	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 (%)
1		ONE HOUR	✓	1352	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1528	100.000
4		ONE HOUR	✓	189	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	1269	83
	2	0	0	0	0
	3	1319	0	0	209
	4	27	0	162	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.68	5.11	2.1	A	1241	1861
2	0.00	0.00	0.0	A	0	0
3	0.74	6.11	2.8	A	1402	2103
4	0.16	3.20	0.2	A	173	260

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1018	254	122	2226	0.457	1015	1010	0.0	0.8	2.962	A
2	0	0	1136	1616	0.000	0	0	0.0	0.0	0.000	A
3	1150	288	62	2288	0.503	1146	1074	0.0	1.0	3.143	A
4	142	36	990	1597	0.089	142	219	0.0	0.1	2.473	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1215	304	146	2212	0.550	1214	1208	0.8	1.2	3.603	A
2	0	0	1359	1484	0.000	0	0	0.0	0.0	0.000	A
3	1374	343	75	2281	0.602	1372	1285	1.0	1.5	3.951	A
4	170	42	1184	1485	0.114	170	262	0.1	0.1	2.736	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1489	372	178	2192	0.679	1485	1477	1.2	2.1	5.065	A
2	0	0	1663	1304	0.000	0	0	0.0	0.0	0.000	A
3	1682	421	91	2271	0.741	1677	1572	1.5	2.8	6.012	A
4	208	52	1448	1333	0.156	208	321	0.1	0.2	3.198	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1489	372	178	2192	0.679	1489	1482	2.1	2.1	5.113	A
2	0	0	1667	1302	0.000	0	0	0.0	0.0	0.000	A
3	1682	421	91	2271	0.741	1682	1575	2.8	2.8	6.114	A
4	208	52	1452	1331	0.156	208	321	0.2	0.2	3.205	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1215	304	146	2212	0.550	1219	1215	2.1	1.2	3.640	A
2	0	0	1365	1481	0.000	0	0	0.0	0.0	0.000	A
3	1374	343	75	2281	0.602	1379	1290	2.8	1.5	4.014	A
4	170	42	1190	1482	0.115	170	263	0.2	0.1	2.744	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1018	254	122	2226	0.457	1019	1015	1.2	0.8	2.987	A
2	0	0	1141	1613	0.000	0	0	0.0	0.0	0.000	A
3	1150	288	63	2288	0.503	1152	1079	1.5	1.0	3.175	A
4	142	36	995	1594	0.089	142	220	0.1	0.1	2.481	A

Option 3, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 / West Eynsham SDA / Garden Village	Standard Roundabout		1, 2, 3, 4	6.37	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	16	Arm 3

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
D13	Option 3	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 (%)
1		ONE HOUR	✓	1198	100.000
2		ONE HOUR	✓	423	100.000
3		ONE HOUR	✓	1436	100.000
4		ONE HOUR	✓	167	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	26	945	227
	2	213	0	124	86
	3	1166	124	0	146
	4	22	11	134	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	4.48	1.6	A	1099	1649
2	0.32	3.70	0.5	A	388	582
3	0.80	9.06	3.9	A	1318	1977
4	0.15	3.49	0.2	A	153	230

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	902	225	202	2178	0.414	899	1051	0.0	0.7	2.809	A
2	318	80	980	1708	0.186	318	121	0.0	0.2	2.587	A
3	1081	270	395	2088	0.518	1077	903	0.0	1.1	3.546	A
4	126	31	1127	1518	0.083	125	344	0.0	0.1	2.584	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1077	269	242	2155	0.500	1076	1257	0.7	1.0	3.334	A
2	380	95	1173	1594	0.239	380	144	0.2	0.3	2.964	A
3	1291	323	472	2041	0.632	1288	1080	1.1	1.7	4.765	A
4	150	38	1349	1391	0.108	150	412	0.1	0.1	2.901	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1319	330	295	2123	0.621	1317	1535	1.0	1.6	4.451	A
2	466	116	1435	1439	0.324	465	176	0.3	0.5	3.695	A
3	1581	395	578	1978	0.800	1573	1322	1.7	3.8	8.713	A
4	184	46	1647	1219	0.151	184	504	0.1	0.2	3.477	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1319	330	296	2122	0.622	1319	1542	1.6	1.6	4.482	A
2	466	116	1438	1437	0.324	466	177	0.5	0.5	3.704	A
3	1581	395	579	1977	0.800	1581	1324	3.8	3.9	9.062	A
4	184	46	1655	1214	0.151	184	505	0.2	0.2	3.492	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1077	269	243	2154	0.500	1079	1267	1.6	1.0	3.360	A
2	380	95	1177	1592	0.239	381	146	0.5	0.3	2.975	A
3	1291	323	474	2040	0.633	1300	1084	3.9	1.7	4.915	A
4	150	38	1359	1385	0.108	150	414	0.2	0.1	2.919	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	902	225	203	2178	0.414	903	1057	1.0	0.7	2.828	A
2	318	80	984	1706	0.187	319	121	0.3	0.2	2.595	A
3	1081	270	396	2087	0.518	1084	907	1.7	1.1	3.599	A
4	126	31	1134	1514	0.083	126	346	0.1	0.1	2.592	A

Option 3, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 / West Eynsham SDA / Garden Village	Standard Roundabout		1, 2, 3, 4	4.85	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	34	Arm 3

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
D14	Option 3	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 (%)
1		ONE HOUR	✓	1159	100.000
2		ONE HOUR	✓	102	100.000
3		ONE HOUR	✓	1449	100.000
4		ONE HOUR	✓	203	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	14	1063	82
	2	39	0	60	3
	3	1117	123	0	209
	4	1	40	162	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.61	4.45	1.6	A	1064	1595
2	0.08	2.72	0.1	A	94	140
3	0.71	5.55	2.4	A	1330	1994
4	0.16	3.18	0.2	A	186	279

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	873	218	244	2153	0.405	870	868	0.0	0.7	2.799	A
2	77	19	981	1708	0.045	77	133	0.0	0.0	2.206	A
3	1091	273	93	2270	0.481	1087	964	0.0	0.9	3.036	A
4	153	38	960	1615	0.095	152	221	0.0	0.1	2.462	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1042	260	292	2125	0.490	1041	1039	0.7	1.0	3.319	A
2	92	23	1174	1594	0.058	92	159	0.0	0.1	2.396	A
3	1303	326	111	2259	0.577	1301	1154	0.9	1.3	3.753	A
4	182	46	1148	1506	0.121	182	264	0.1	0.1	2.719	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1276	319	357	2086	0.612	1274	1271	1.0	1.6	4.420	A
2	112	28	1436	1438	0.078	112	194	0.1	0.1	2.714	A
3	1595	399	136	2244	0.711	1591	1412	1.3	2.4	5.481	A
4	224	56	1405	1358	0.165	223	323	0.1	0.2	3.171	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1276	319	358	2085	0.612	1276	1274	1.6	1.6	4.448	A
2	112	28	1439	1437	0.078	112	195	0.1	0.1	2.717	A
3	1595	399	137	2243	0.711	1595	1415	2.4	2.4	5.552	A
4	224	56	1408	1356	0.165	224	324	0.2	0.2	3.177	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1042	260	293	2124	0.491	1044	1043	1.6	1.0	3.343	A
2	92	23	1178	1591	0.058	92	160	0.1	0.1	2.402	A
3	1303	326	112	2258	0.577	1307	1158	2.4	1.4	3.798	A
4	182	46	1153	1503	0.121	183	265	0.2	0.1	2.726	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	873	218	245	2153	0.405	874	872	1.0	0.7	2.819	A
2	77	19	985	1705	0.045	77	133	0.1	0.0	2.210	A
3	1091	273	93	2269	0.481	1093	969	1.4	0.9	3.063	A
4	153	38	964	1612	0.095	153	222	0.1	0.1	2.467	A

Option 4, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 / West Eynsham SDA / Garden Village	Standard Roundabout		1, 2, 3, 4	0.00	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	900	

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
D15	Option 4	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 (%)
1		ONE HOUR	✓	0	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	0	100.000
4		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.00	0.00	0.0	A	0	0
2	0.00	0.00	0.0	A	0	0
3	0.00	0.00	0.0	A	0	0
4	0.00	0.00	0.0	A	0	0

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	2299	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2289	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2326	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2167	0.000	0	0	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	2299	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2289	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2326	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2167	0.000	0	0	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	2299	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2289	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2326	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2167	0.000	0	0	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	2299	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2289	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2326	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2167	0.000	0	0	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	2299	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2289	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2326	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2167	0.000	0	0	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	2299	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2289	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2326	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2167	0.000	0	0	0.0	0.0	0.000	A

Option 4, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 / West Eynsham SDA / Garden Village	Standard Roundabout		1, 2, 3, 4	0.00	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	900	

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
D16	Option 4	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 (%)
1		ONE HOUR	✓	0	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	0	100.000
4		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.00	0.00	0.0	A	0	0
2	0.00	0.00	0.0	A	0	0
3	0.00	0.00	0.0	A	0	0
4	0.00	0.00	0.0	A	0	0

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	2299	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2289	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2326	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2167	0.000	0	0	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	2299	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2289	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2326	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2167	0.000	0	0	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	2299	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2289	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2326	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2167	0.000	0	0	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	2299	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2289	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2326	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2167	0.000	0	0	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	2299	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2289	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2326	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2167	0.000	0	0	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	2299	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2289	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2326	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2167	0.000	0	0	0.0	0.0	0.000	A

Sensitivity Test 1, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 / West Eynsham SDA / Garden Village	Standard Roundabout		1, 2, 3, 4	7.24	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	12	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D17	Sensitivity Test 1	AM	A40 Sensitivity Test 1	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 (%)
1		ONE HOUR	✓	1229	100.000
2		ONE HOUR	✓	490	100.000
3		ONE HOUR	✓	1419	100.000
4		ONE HOUR	✓	167	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	57	945	227
	2	344	0	54	92
	3	1166	107	0	146
	4	22	11	134	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.63	4.61	1.7	A	1128	1692
2	0.38	4.01	0.6	A	450	674
3	0.83	11.05	4.7	B	1302	1953
4	0.16	3.76	0.2	A	153	230

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	925	231	189	2186	0.423	922	1149	0.0	0.7	2.844	A
2	369	92	980	1708	0.216	368	131	0.0	0.3	2.682	A
3	1068	267	498	2026	0.527	1064	850	0.0	1.1	3.725	A
4	126	31	1213	1469	0.086	125	349	0.0	0.1	2.679	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1105	276	226	2164	0.511	1104	1375	0.7	1.0	3.393	A
2	440	110	1173	1594	0.276	440	157	0.3	0.4	3.119	A
3	1276	319	596	1967	0.649	1273	1017	1.1	1.8	5.163	A
4	150	38	1451	1332	0.113	150	417	0.1	0.1	3.046	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1353	338	276	2134	0.634	1350	1677	1.0	1.7	4.580	A
2	540	135	1435	1439	0.375	539	192	0.4	0.6	3.996	A
3	1562	391	729	1887	0.828	1552	1245	1.8	4.5	10.418	B
4	184	46	1770	1148	0.160	184	510	0.1	0.2	3.733	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1353	338	277	2133	0.634	1353	1686	1.7	1.7	4.614	A
2	540	135	1438	1437	0.375	539	193	0.6	0.6	4.009	A
3	1562	391	730	1886	0.828	1562	1247	4.5	4.7	11.048	B
4	184	46	1780	1142	0.161	184	512	0.2	0.2	3.755	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1105	276	228	2163	0.511	1107	1387	1.7	1.1	3.418	A
2	440	110	1177	1592	0.277	441	158	0.6	0.4	3.130	A
3	1276	319	597	1966	0.649	1287	1021	4.7	1.9	5.386	A
4	150	38	1464	1324	0.113	150	420	0.2	0.1	3.067	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	925	231	190	2185	0.423	926	1156	1.1	0.7	2.862	A
2	369	92	985	1706	0.216	369	132	0.4	0.3	2.694	A
3	1068	267	500	2025	0.528	1071	854	1.9	1.1	3.786	A
4	126	31	1220	1464	0.086	126	351	0.1	0.1	2.691	A

Sensitivity Test 1, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 / West Eynsham SDA / Garden Village	Standard Roundabout		1, 2, 3, 4	4.86	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	37	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D18	Sensitivity Test 1	PM	A40 Sensitivity Test 1	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 (%)
1		ONE HOUR	✓	1271	100.000
2		ONE HOUR	✓	133	100.000
3		ONE HOUR	✓	1383	100.000
4		ONE HOUR	✓	203	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	126	1063	82
	2	92	0	37	4
	3	1117	57	0	209
	4	1	40	162	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.66	4.94	1.9	A	1166	1750
2	0.10	2.79	0.1	A	122	183
3	0.69	5.25	2.2	A	1269	1903
4	0.16	3.15	0.2	A	186	279

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	957	239	194	2183	0.438	954	908	0.0	0.8	2.922	A
2	100	25	981	1708	0.059	100	167	0.0	0.1	2.238	A
3	1041	260	133	2245	0.464	1038	947	0.0	0.9	2.972	A
4	153	38	950	1620	0.094	152	221	0.0	0.1	2.452	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1143	286	232	2160	0.529	1141	1086	0.8	1.1	3.530	A
2	120	30	1174	1594	0.075	119	200	0.1	0.1	2.441	A
3	1243	311	160	2230	0.558	1242	1134	0.9	1.2	3.637	A
4	182	46	1136	1513	0.121	182	265	0.1	0.1	2.705	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1400	350	285	2129	0.657	1397	1329	1.1	1.9	4.895	A
2	146	37	1436	1438	0.102	146	245	0.1	0.1	2.785	A
3	1522	381	195	2208	0.690	1519	1387	1.2	2.2	5.195	A
4	224	56	1390	1367	0.164	223	324	0.1	0.2	3.148	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1400	350	285	2129	0.658	1400	1332	1.9	1.9	4.937	A
2	146	37	1439	1437	0.102	146	246	0.1	0.1	2.789	A
3	1522	381	196	2208	0.690	1522	1390	2.2	2.2	5.250	A
4	224	56	1393	1365	0.164	224	325	0.2	0.2	3.153	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1143	286	233	2160	0.529	1146	1091	1.9	1.1	3.563	A
2	120	30	1178	1591	0.075	120	201	0.1	0.1	2.446	A
3	1243	311	160	2229	0.558	1247	1138	2.2	1.3	3.677	A
4	182	46	1141	1510	0.121	183	266	0.2	0.1	2.713	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	957	239	195	2182	0.439	958	912	1.1	0.8	2.946	A
2	100	25	985	1705	0.059	100	168	0.1	0.1	2.244	A
3	1041	260	134	2245	0.464	1043	952	1.3	0.9	2.997	A
4	153	38	954	1618	0.094	153	222	0.1	0.1	2.459	A

Junctions 9

ARCADY 9 - Roundabout Module

Filename: A40 Proposed Access 80m ICD.j9
Path: \\Leicester12\3501Data\Projects\A117736 - West Eynsham\06 - Calculations\06 - Capacity Assessments\03 - Proposed Junctions
Report generation date: 15/07/2020 20:00:50

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	Option 1a											
Arm 1	D1	2.9	8.01	0.75	A	16 % [Arm 3]	D2	3.0	8.29	0.75	A	23 % [Arm 1]
Arm 2		0.6	3.80	0.36	A			0.1	2.69	0.10	A	
Arm 3		4.0	9.31	0.80	A			2.6	5.77	0.72	A	
Arm 4		0.2	3.16	0.14	A			0.2	2.89	0.15	A	

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

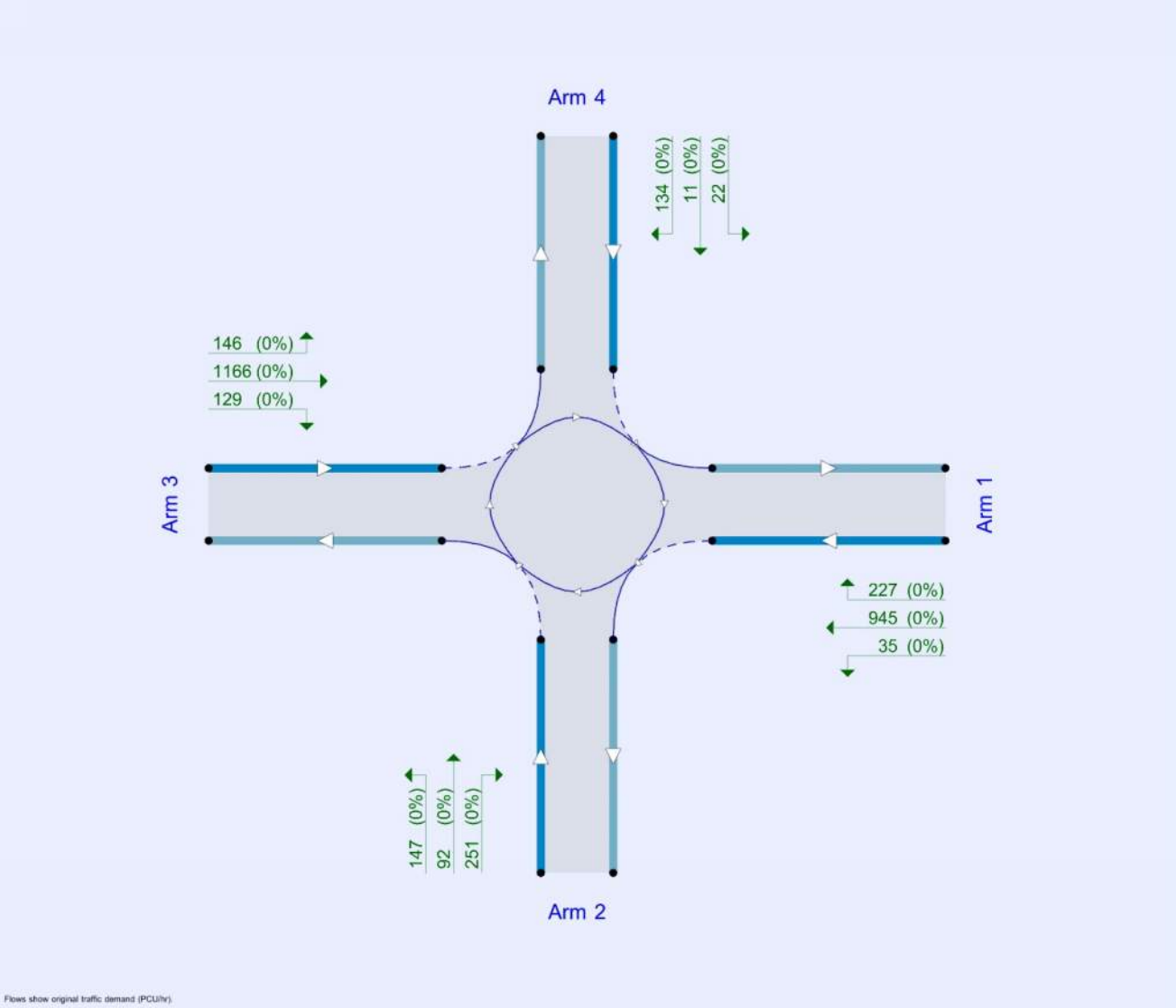
File summary

File Description

Title	A40 Proposed Access 80m ICD
Location	Eynsham
Site number	
Date	02/07/2020
Version	
Status	(new file)
Identifier	
Client	Oxfordshire County Council
Jobnumber	A117736
Enumerator	WYG\petr.jandik
Description	Junction Geometry: \\Leicester12\3501Data\Projects\A117736 - West Eynsham\06 - Calculations\06 - Capacity Assessments\03 - Proposed Junctions\5588.029 - Shared Access from A40 (80m ICD Rbt) Option A - Junction Geometry.dwg

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	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	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	Option 1a	AM	ONE HOUR	07:45	09:15	15	✓
D2	Option 1a	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

Option 1a, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 / West Eynsham SDA / Garden Village	Standard Roundabout		1, 2, 3, 4	7.71	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	16	Arm 3

Arms

Arms

Arm	Name	Description
1	A40 East	
2	Access to West Eynsham SDA	
3	A40 West	
4	Access to Garden Village	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	2.95	7.75	36.3	36.0	80.0	34.0	
2	3.65	9.00	48.5	30.0	80.0	37.0	
3	4.00	8.00	210.0	32.0	80.0	39.0	
4	7.00	7.45	4.8	26.0	80.0	26.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.508	1931
2	0.556	2286
3	0.561	2324
4	0.563	2282

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	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Option 1a	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 (%)
1		ONE HOUR	✓	1207	100.000
2		ONE HOUR	✓	490	100.000
3		ONE HOUR	✓	1441	100.000
4		ONE HOUR	✓	167	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	35	945	227
	2	251	0	147	92
	3	1166	129	0	146
	4	22	11	134	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.75	8.01	2.9	A	1108	1661
2	0.36	3.80	0.6	A	450	674
3	0.80	9.31	4.0	A	1322	1983
4	0.14	3.16	0.2	A	153	230

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	909	227	206	1826	0.498	905	1079	0.0	1.0	3.890	A
2	369	92	979	1741	0.212	368	131	0.0	0.3	2.622	A
3	1085	271	428	2084	0.521	1081	919	0.0	1.1	3.573	A
4	126	31	1159	1629	0.077	125	349	0.0	0.1	2.395	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1085	271	246	1806	0.601	1083	1291	1.0	1.5	4.966	A
2	440	110	1172	1633	0.270	440	157	0.3	0.4	3.016	A
3	1295	324	512	2037	0.636	1293	1100	1.1	1.7	4.822	A
4	150	38	1387	1500	0.100	150	417	0.1	0.1	2.665	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1329	332	301	1778	0.747	1323	1577	1.5	2.9	7.822	A
2	540	135	1432	1489	0.362	539	192	0.4	0.6	3.786	A
3	1587	397	626	1973	0.804	1578	1345	1.7	3.9	8.920	A
4	184	46	1694	1328	0.139	184	510	0.1	0.2	3.146	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1329	332	302	1778	0.748	1329	1584	2.9	2.9	8.009	A
2	540	135	1438	1486	0.363	539	193	0.6	0.6	3.803	A
3	1587	397	628	1972	0.805	1586	1350	3.9	4.0	9.305	A
4	184	46	1702	1323	0.139	184	512	0.2	0.2	3.159	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1085	271	247	1805	0.601	1091	1301	2.9	1.5	5.077	A
2	440	110	1180	1629	0.270	441	158	0.6	0.4	3.034	A
3	1295	324	514	2036	0.636	1304	1107	4.0	1.8	4.982	A
4	150	38	1398	1494	0.100	150	420	0.2	0.1	2.678	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	909	227	207	1826	0.498	911	1086	1.5	1.0	3.944	A
2	369	92	985	1737	0.212	369	132	0.4	0.3	2.633	A
3	1085	271	430	2083	0.521	1088	925	1.8	1.1	3.628	A
4	126	31	1167	1625	0.077	126	351	0.1	0.1	2.403	A

Option 1a, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 / West Eynsham SDA / Garden Village	Standard Roundabout		1, 2, 3, 4	6.44	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	23	Arm 1

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	Option 1a	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 (%)
1		ONE HOUR	✓	1185	100.000
2		ONE HOUR	✓	133	100.000
3		ONE HOUR	✓	1469	100.000
4		ONE HOUR	✓	203	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	40	1063	82
	2	49	0	80	4
	3	1117	143	0	209
	4	1	40	162	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.75	8.29	3.0	A	1087	1631
2	0.10	2.69	0.1	A	122	183
3	0.72	5.77	2.6	A	1348	2022
4	0.15	2.89	0.2	A	186	279

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	892	223	259	1799	0.496	888	876	0.0	1.0	3.935	A
2	100	25	980	1740	0.058	100	167	0.0	0.1	2.194	A
3	1106	276	101	2267	0.488	1102	979	0.0	0.9	3.079	A
4	153	38	982	1728	0.088	152	221	0.0	0.1	2.284	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1065	266	310	1773	0.601	1063	1048	1.0	1.5	5.054	A
2	120	30	1173	1633	0.073	119	200	0.1	0.1	2.378	A
3	1321	330	121	2256	0.585	1319	1171	0.9	1.4	3.834	A
4	182	46	1175	1620	0.113	182	265	0.1	0.1	2.504	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1305	326	379	1738	0.751	1299	1281	1.5	2.9	8.092	A
2	146	37	1433	1488	0.098	146	245	0.1	0.1	2.682	A
3	1617	404	148	2241	0.722	1613	1431	1.4	2.5	5.689	A
4	224	56	1437	1472	0.152	223	324	0.1	0.2	2.882	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1305	326	380	1738	0.751	1305	1285	2.9	3.0	8.294	A
2	146	37	1439	1485	0.099	146	246	0.1	0.1	2.688	A
3	1617	404	149	2241	0.722	1617	1437	2.5	2.6	5.773	A
4	224	56	1441	1470	0.152	224	325	0.2	0.2	2.887	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1065	266	311	1773	0.601	1071	1053	3.0	1.5	5.170	A
2	120	30	1181	1629	0.073	120	201	0.1	0.1	2.385	A
3	1321	330	122	2256	0.585	1325	1179	2.6	1.4	3.888	A
4	182	46	1181	1617	0.113	183	266	0.2	0.1	2.512	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	892	223	260	1799	0.496	894	880	1.5	1.0	3.990	A
2	100	25	986	1737	0.058	100	168	0.1	0.1	2.200	A
3	1106	276	102	2267	0.488	1108	985	1.4	1.0	3.112	A
4	153	38	987	1726	0.089	153	223	0.1	0.1	2.288	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

Filename: A40 Park and Ride.j9
Path: \\Leicester12\3501Data\Projects\A117736 - West Eynsham\06 - Calculations\06 - Capacity Assessments\03 - Proposed Junctions
Report generation date: 15/07/2020 18:20:52

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
Option 1												
Arm 1	D1	0.7	1.93	0.42	A	80 % [Arm 3]	D2	0.7	1.85	0.40	A	133 % [Arm 3]
Arm 2		0.0	0.00	0.00	A			0.0	0.00	0.00	A	
Arm 3		1.2	2.66	0.54	A			0.7	2.09	0.42	A	
Arm 4		0.0	2.34	0.02	A			0.2	2.52	0.15	A	
Option 1a												
Arm 1	D3	0.7	1.93	0.42	A	80 % [Arm 3]	D4	0.7	1.85	0.40	A	133 % [Arm 3]
Arm 2		0.0	0.00	0.00	A			0.0	0.00	0.00	A	
Arm 3		1.2	2.66	0.54	A			0.7	2.09	0.42	A	
Arm 4		0.0	2.34	0.02	A			0.2	2.52	0.15	A	
Option 1b												
Arm 1		0.8	2.05	0.45	A			0.7	1.90	0.41	A	

Arm 2	D5	0.0	0.00	0.00	A	78 %	D6	0.0	0.00	0.00	A	133 %
Arm 3		1.2	2.70	0.55	A	[Arm 3]		0.7	2.09	0.42	A	[Arm 3]
Arm 4		0.0	2.36	0.02	A			0.2	2.52	0.15	A	
	Option 1c											
Arm 1	D7	0.8	2.06	0.45	A	69 %	D8	0.7	1.92	0.42	A	133 %
Arm 2		0.0	0.00	0.00	A			0.0	0.00	0.00	A	
Arm 3		1.4	2.90	0.58	A	[Arm 3]		0.7	2.09	0.42	A	[Arm 3]
Arm 4		0.0	2.44	0.02	A			0.2	2.52	0.15	A	
	Option 2											
Arm 1	D9	0.8	2.06	0.44	A	70 %	D10	0.7	2.01	0.42	A	103 %
Arm 2		0.4	3.25	0.30	A			0.1	2.40	0.08	A	
Arm 3		1.2	2.87	0.54	A	[Arm 3]		0.9	2.35	0.48	A	[Arm 3]
Arm 4		0.0	2.51	0.02	A			0.2	2.76	0.16	A	
	Option 2a											
Arm 1	D11	0.9	2.19	0.47	A	69 %	D12	0.8	2.05	0.43	A	113 %
Arm 2		0.5	3.43	0.31	A			0.1	2.43	0.08	A	
Arm 3		1.2	2.88	0.55	A	[Arm 3]		0.8	2.25	0.45	A	[Arm 3]
Arm 4		0.0	2.52	0.02	A			0.2	2.67	0.16	A	
	Option 2b											
Arm 1	D13	1.0	2.44	0.50	A	41 %	D14	0.8	2.18	0.45	A	87 %
Arm 2		0.9	4.41	0.49	A			0.2	2.64	0.16	A	
Arm 3		1.9	3.94	0.65	A	[Arm 3]		1.1	2.56	0.51	A	[Arm 3]
Arm 4		0.0	3.00	0.02	A			0.2	2.94	0.17	A	
	Option 3											
Arm 1	D15	0.7	1.94	0.42	A	81 %	D16	0.7	1.86	0.40	A	128 %
Arm 2		0.0	2.39	0.05	A			0.0	2.25	0.02	A	
Arm 3		1.1	2.65	0.53	A	[Arm 3]		0.7	2.13	0.43	A	[Arm 3]
Arm 4		0.0	2.35	0.02	A			0.2	2.56	0.15	A	
	Option 4											
Arm 1	D17	0.0	0.00	0.00	A	900 %	D18	0.0	0.00	0.00	A	900 %
Arm 2		0.0	0.00	0.00	A			0.0	0.00	0.00	A	
Arm 3		0.0	0.00	0.00	A	[]		0.0	0.00	0.00	A	[]
Arm 4		0.0	0.00	0.00	A			0.0	0.00	0.00	A	
	Sensitivity Test											
Arm 1	D19	0.8	2.07	0.44	A	65 %	D20	0.8	2.05	0.44	A	112 %
Arm 2		0.4	3.25	0.30	A			0.1	2.40	0.08	A	
Arm 3		1.2	2.97	0.55	A	[Arm 3]		0.8	2.25	0.45	A	[Arm 3]
Arm 4		0.0	2.59	0.02	A			0.2	2.70	0.16	A	

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

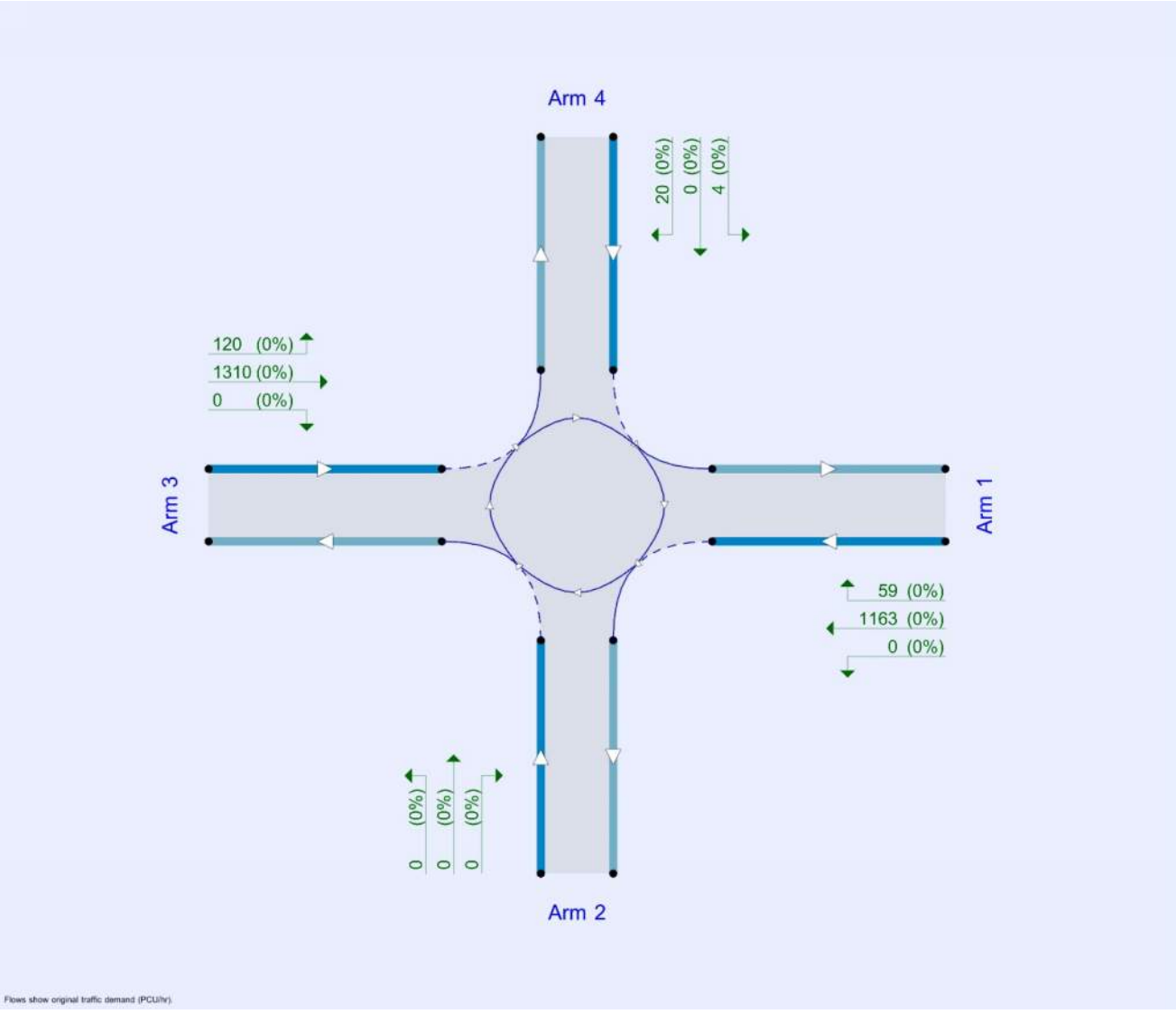
File summary

File Description

Title	c
Location	Eynsham
Site number	
Date	02/07/2020
Version	
Status	Arm 2 is indicative only
Identifier	
Client	Oxfordshire County Council
Jobnumber	A117736
Enumerator	WYG\petr.jandik
Description	Note 'Arm 2' is indicative only Junction Geometry: \\Leicester12\3501Data\Projects\A117736 - West Eynsham\06 - Calculations\06 - Capacity Assessments\03 - Proposed Junctions\60551821-ACM-HGN-PR_ZW_ZZ_ZZ-M2-CH-0004_recirculation_4th-arm_Sketch RevA - Junction Geometry.dwg

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	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Option 1	AM	P&R (no dev.)	ONE HOUR	07:45	09:15	15	✓
D2	Option 1	PM	P&R (no dev.)	ONE HOUR	16:45	18:15	15	✓
D3	Option 1a	AM	P&R (no dev.)	ONE HOUR	07:45	09:15	15	✓
D4	Option 1a	PM	P&R (no dev.)	ONE HOUR	16:45	18:15	15	✓
D5	Option 1b	AM	P&R (no dev.)	ONE HOUR	07:45	09:15	15	✓
D6	Option 1b	PM	P&R (no dev.)	ONE HOUR	16:45	18:15	15	✓
D7	Option 1c	AM	P&R (no dev.)	ONE HOUR	07:45	09:15	15	✓
D8	Option 1c	PM	P&R (no dev.)	ONE HOUR	16:45	18:15	15	✓
D9	Option 2	AM	P&R 4arm (full dev.)	ONE HOUR	07:45	09:15	15	✓
D10	Option 2	PM	P&R 4arm (full dev.)	ONE HOUR	16:45	18:15	15	✓
D11	Option 2a	AM	P&R 4arm (full dev.)	ONE HOUR	07:45	09:15	15	✓
D12	Option 2a	PM	P&R 4arm (full dev.)	ONE HOUR	16:45	18:15	15	✓
D13	Option 2b	AM	P&R 4arm (full dev.)	ONE HOUR	07:45	09:15	15	✓
D14	Option 2b	PM	P&R 4arm (full dev.)	ONE HOUR	16:45	18:15	15	✓
D15	Option 3	AM	P&R 4arm (20% dev.)	ONE HOUR	07:45	09:15	15	✓
D16	Option 3	PM	P&R 4arm (20% dev.)	ONE HOUR	16:45	18:15	15	✓
D17	Option 4	AM	P&R 4arm (bus only)	ONE HOUR	07:45	09:15	15	✓
D18	Option 4	PM	P&R 4arm (bus only)	ONE HOUR	16:45	18:15	15	✓
D19	Sensitivity Test	AM	A40 Sensitivity Test	ONE HOUR	07:45	09:15	15	✓
D20	Sensitivity Test	PM	A40 Sensitivity Test	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

Option 1, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 Park and Ride Access	Standard Roundabout		1, 2, 3, 4	2.32	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	80	Arm 3

Arms

Arms

Arm	Name	Description
1	A40 East	
2	Access to West Eynsham SDA	
3	A40 West	
4	Park and Ride Access	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	4.00	13.70	68.6	35.0	80.0	37.0	
2	7.75	8.40	7.3	20.0	80.0	51.0	
3	3.40	13.00	63.8	38.0	80.0	39.0	
4	7.45	7.85	5.8	35.0	80.0	31.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.695	3225
2	0.547	2319
3	0.657	2969
4	0.579	2398

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Option 1	AM	P&R (no dev.)	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 (%)
1		ONE HOUR	✓	1222	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1430	100.000
4		ONE HOUR	✓	24	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	1163	59
	2	0	0	0	0
	3	1310	0	0	120
	4	4	0	20	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.42	1.93	0.7	A	1121	1682
2	0.00	0.00	0.0	A	0	0
3	0.54	2.66	1.2	A	1312	1968
4	0.02	2.34	0.0	A	22	33

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	920	230	15	3214	0.286	918	987	0.0	0.4	1.568	A
2	0	0	933	1809	0.000	0	0	0.0	0.0	0.000	A
3	1077	269	44	2940	0.366	1074	889	0.0	0.6	1.926	A
4	18	5	984	1828	0.010	18	134	0.0	0.0	1.988	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1099	275	18	3212	0.342	1098	1181	0.4	0.5	1.702	A
2	0	0	1116	1709	0.000	0	0	0.0	0.0	0.000	A
3	1286	321	53	2935	0.438	1285	1063	0.6	0.8	2.180	A
4	22	5	1177	1717	0.013	22	161	0.0	0.0	2.123	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1345	336	22	3209	0.419	1345	1445	0.5	0.7	1.929	A
2	0	0	1367	1572	0.000	0	0	0.0	0.0	0.000	A
3	1574	394	65	2927	0.538	1573	1302	0.8	1.2	2.657	A
4	26	7	1441	1564	0.017	26	197	0.0	0.0	2.340	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1345	336	22	3209	0.419	1345	1447	0.7	0.7	1.931	A
2	0	0	1367	1571	0.000	0	0	0.0	0.0	0.000	A
3	1574	394	65	2927	0.538	1574	1303	1.2	1.2	2.661	A
4	26	7	1442	1563	0.017	26	197	0.0	0.0	2.341	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1099	275	18	3212	0.342	1099	1183	0.7	0.5	1.703	A
2	0	0	1117	1708	0.000	0	0	0.0	0.0	0.000	A
3	1286	321	53	2935	0.438	1287	1064	1.2	0.8	2.186	A
4	22	5	1179	1716	0.013	22	161	0.0	0.0	2.126	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	920	230	15	3214	0.286	920	990	0.5	0.4	1.569	A
2	0	0	936	1808	0.000	0	0	0.0	0.0	0.000	A
3	1077	269	44	2940	0.366	1077	891	0.8	0.6	1.933	A
4	18	5	987	1827	0.010	18	135	0.0	0.0	1.991	A

Option 1, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 Park and Ride Access	Standard Roundabout		1, 2, 3, 4	2.02	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	133	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	Option 1	PM	P&R (no dev.)	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 (%)
1		ONE HOUR	✓	1154	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1132	100.000
4		ONE HOUR	✓	232	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	1149	5
	2	0	0	0	0
	3	1122	0	0	10
	4	221	0	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.40	1.85	0.7	A	1059	1588
2	0.00	0.00	0.0	A	0	0
3	0.42	2.09	0.7	A	1039	1558
4	0.15	2.52	0.2	A	213	319

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	869	217	8	3219	0.270	867	1009	0.0	0.4	1.531	A
2	0	0	876	1840	0.000	0	0	0.0	0.0	0.000	A
3	852	213	4	2967	0.287	851	872	0.0	0.4	1.701	A
4	175	44	843	1910	0.091	174	11	0.0	0.1	2.074	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1037	259	10	3218	0.322	1037	1207	0.4	0.5	1.650	A
2	0	0	1047	1747	0.000	0	0	0.0	0.0	0.000	A
3	1018	254	4	2967	0.343	1017	1042	0.4	0.5	1.846	A
4	209	52	1008	1815	0.115	208	13	0.1	0.1	2.241	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1271	318	12	3216	0.395	1270	1478	0.5	0.7	1.849	A
2	0	0	1282	1618	0.000	0	0	0.0	0.0	0.000	A
3	1246	312	6	2966	0.420	1246	1276	0.5	0.7	2.091	A
4	255	64	1235	1684	0.152	255	17	0.1	0.2	2.520	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1271	318	12	3216	0.395	1271	1479	0.7	0.7	1.849	A
2	0	0	1283	1618	0.000	0	0	0.0	0.0	0.000	A
3	1246	312	6	2966	0.420	1246	1277	0.7	0.7	2.093	A
4	255	64	1235	1683	0.152	255	17	0.2	0.2	2.521	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1037	259	10	3218	0.322	1038	1208	0.7	0.5	1.653	A
2	0	0	1048	1746	0.000	0	0	0.0	0.0	0.000	A
3	1018	254	4	2967	0.343	1018	1044	0.7	0.5	1.847	A
4	209	52	1009	1814	0.115	209	13	0.2	0.1	2.244	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	869	217	8	3219	0.270	869	1012	0.5	0.4	1.534	A
2	0	0	878	1839	0.000	0	0	0.0	0.0	0.000	A
3	852	213	4	2967	0.287	853	874	0.5	0.4	1.702	A
4	175	44	845	1909	0.092	175	11	0.1	0.1	2.075	A

Option 1a, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 Park and Ride Access	Standard Roundabout		1, 2, 3, 4	2.32	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	80	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	Option 1a	AM	P&R (no dev.)	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 (%)
1		ONE HOUR	✓	1222	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1430	100.000
4		ONE HOUR	✓	24	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	1163	59
	2	0	0	0	0
	3	1310	0	0	120
	4	4	0	20	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.42	1.93	0.7	A	1121	1682
2	0.00	0.00	0.0	A	0	0
3	0.54	2.66	1.2	A	1312	1968
4	0.02	2.34	0.0	A	22	33

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	920	230	15	3214	0.286	918	987	0.0	0.4	1.568	A
2	0	0	933	1809	0.000	0	0	0.0	0.0	0.000	A
3	1077	269	44	2940	0.366	1074	889	0.0	0.6	1.926	A
4	18	5	984	1828	0.010	18	134	0.0	0.0	1.988	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1099	275	18	3212	0.342	1098	1181	0.4	0.5	1.702	A
2	0	0	1116	1709	0.000	0	0	0.0	0.0	0.000	A
3	1286	321	53	2935	0.438	1285	1063	0.6	0.8	2.180	A
4	22	5	1177	1717	0.013	22	161	0.0	0.0	2.123	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1345	336	22	3209	0.419	1345	1445	0.5	0.7	1.929	A
2	0	0	1367	1572	0.000	0	0	0.0	0.0	0.000	A
3	1574	394	65	2927	0.538	1573	1302	0.8	1.2	2.657	A
4	26	7	1441	1564	0.017	26	197	0.0	0.0	2.340	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1345	336	22	3209	0.419	1345	1447	0.7	0.7	1.931	A
2	0	0	1367	1571	0.000	0	0	0.0	0.0	0.000	A
3	1574	394	65	2927	0.538	1574	1303	1.2	1.2	2.661	A
4	26	7	1442	1563	0.017	26	197	0.0	0.0	2.341	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1099	275	18	3212	0.342	1099	1183	0.7	0.5	1.703	A
2	0	0	1117	1708	0.000	0	0	0.0	0.0	0.000	A
3	1286	321	53	2935	0.438	1287	1064	1.2	0.8	2.186	A
4	22	5	1179	1716	0.013	22	161	0.0	0.0	2.126	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	920	230	15	3214	0.286	920	990	0.5	0.4	1.569	A
2	0	0	936	1808	0.000	0	0	0.0	0.0	0.000	A
3	1077	269	44	2940	0.366	1077	891	0.8	0.6	1.933	A
4	18	5	987	1827	0.010	18	135	0.0	0.0	1.991	A

Option 1a, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 Park and Ride Access	Standard Roundabout		1, 2, 3, 4	2.02	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	133	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	Option 1a	PM	P&R (no dev.)	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 (%)
1		ONE HOUR	✓	1154	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1132	100.000
4		ONE HOUR	✓	232	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	1149	5
	2	0	0	0	0
	3	1122	0	0	10
	4	221	0	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.40	1.85	0.7	A	1059	1588
2	0.00	0.00	0.0	A	0	0
3	0.42	2.09	0.7	A	1039	1558
4	0.15	2.52	0.2	A	213	319

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	869	217	8	3219	0.270	867	1009	0.0	0.4	1.531	A
2	0	0	876	1840	0.000	0	0	0.0	0.0	0.000	A
3	852	213	4	2967	0.287	851	872	0.0	0.4	1.701	A
4	175	44	843	1910	0.091	174	11	0.0	0.1	2.074	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1037	259	10	3218	0.322	1037	1207	0.4	0.5	1.650	A
2	0	0	1047	1747	0.000	0	0	0.0	0.0	0.000	A
3	1018	254	4	2967	0.343	1017	1042	0.4	0.5	1.846	A
4	209	52	1008	1815	0.115	208	13	0.1	0.1	2.241	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1271	318	12	3216	0.395	1270	1478	0.5	0.7	1.849	A
2	0	0	1282	1618	0.000	0	0	0.0	0.0	0.000	A
3	1246	312	6	2966	0.420	1246	1276	0.5	0.7	2.091	A
4	255	64	1235	1684	0.152	255	17	0.1	0.2	2.520	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1271	318	12	3216	0.395	1271	1479	0.7	0.7	1.849	A
2	0	0	1283	1618	0.000	0	0	0.0	0.0	0.000	A
3	1246	312	6	2966	0.420	1246	1277	0.7	0.7	2.093	A
4	255	64	1235	1683	0.152	255	17	0.2	0.2	2.521	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1037	259	10	3218	0.322	1038	1208	0.7	0.5	1.653	A
2	0	0	1048	1746	0.000	0	0	0.0	0.0	0.000	A
3	1018	254	4	2967	0.343	1018	1044	0.7	0.5	1.847	A
4	209	52	1009	1814	0.115	209	13	0.2	0.1	2.244	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	869	217	8	3219	0.270	869	1012	0.5	0.4	1.534	A
2	0	0	878	1839	0.000	0	0	0.0	0.0	0.000	A
3	852	213	4	2967	0.287	853	874	0.5	0.4	1.702	A
4	175	44	845	1909	0.092	175	11	0.1	0.1	2.075	A

Option 1b, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 Park and Ride Access	Standard Roundabout		1, 2, 3, 4	2.39	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	78	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	Option 1b	AM	P&R (no dev.)	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 (%)
1		ONE HOUR	✓	1319	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1449	100.000
4		ONE HOUR	✓	24	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	1260	59
	2	0	0	0	0
	3	1329	0	0	120
	4	4	0	20	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.45	2.05	0.8	A	1210	1816
2	0.00	0.00	0.0	A	0	0
3	0.55	2.70	1.2	A	1330	1994
4	0.02	2.36	0.0	A	22	33

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	993	248	15	3214	0.309	991	1001	0.0	0.4	1.617	A
2	0	0	1006	1769	0.000	0	0	0.0	0.0	0.000	A
3	1091	273	44	2940	0.371	1089	962	0.0	0.6	1.941	A
4	18	5	998	1820	0.010	18	134	0.0	0.0	1.997	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1186	296	18	3212	0.369	1185	1198	0.4	0.6	1.775	A
2	0	0	1203	1661	0.000	0	0	0.0	0.0	0.000	A
3	1303	326	53	2935	0.444	1302	1150	0.6	0.8	2.203	A
4	22	5	1194	1707	0.013	22	161	0.0	0.0	2.135	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1452	363	22	3209	0.452	1451	1466	0.6	0.8	2.046	A
2	0	0	1473	1513	0.000	0	0	0.0	0.0	0.000	A
3	1595	399	65	2927	0.545	1594	1408	0.8	1.2	2.696	A
4	26	7	1462	1552	0.017	26	197	0.0	0.0	2.359	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1452	363	22	3209	0.453	1452	1468	0.8	0.8	2.048	A
2	0	0	1474	1513	0.000	0	0	0.0	0.0	0.000	A
3	1595	399	65	2927	0.545	1595	1409	1.2	1.2	2.703	A
4	26	7	1463	1551	0.017	26	197	0.0	0.0	2.360	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1186	296	18	3212	0.369	1187	1200	0.8	0.6	1.777	A
2	0	0	1205	1660	0.000	0	0	0.0	0.0	0.000	A
3	1303	326	53	2935	0.444	1304	1152	1.2	0.8	2.211	A
4	22	5	1196	1706	0.013	22	161	0.0	0.0	2.137	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	993	248	15	3214	0.309	994	1004	0.6	0.4	1.620	A
2	0	0	1009	1768	0.000	0	0	0.0	0.0	0.000	A
3	1091	273	44	2940	0.371	1092	964	0.8	0.6	1.949	A
4	18	5	1001	1819	0.010	18	135	0.0	0.0	2.000	A

Option 1b, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 Park and Ride Access	Standard Roundabout		1, 2, 3, 4	2.04	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	133	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	Option 1b	PM	P&R (no dev.)	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 (%)
1		ONE HOUR	✓	1205	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1132	100.000
4		ONE HOUR	✓	232	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	1200	5
	2	0	0	0	0
	3	1122	0	0	10
	4	221	0	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.41	1.90	0.7	A	1106	1659
2	0.00	0.00	0.0	A	0	0
3	0.42	2.09	0.7	A	1039	1558
4	0.15	2.52	0.2	A	213	319

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	907	227	8	3219	0.282	906	1009	0.0	0.4	1.556	A
2	0	0	914	1819	0.000	0	0	0.0	0.0	0.000	A
3	852	213	4	2967	0.287	851	910	0.0	0.4	1.701	A
4	175	44	843	1910	0.091	174	11	0.0	0.1	2.074	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1083	271	10	3218	0.337	1083	1207	0.4	0.5	1.685	A
2	0	0	1093	1722	0.000	0	0	0.0	0.0	0.000	A
3	1018	254	4	2967	0.343	1017	1088	0.4	0.5	1.846	A
4	209	52	1008	1815	0.115	208	13	0.1	0.1	2.241	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1327	332	12	3216	0.413	1326	1478	0.5	0.7	1.904	A
2	0	0	1338	1587	0.000	0	0	0.0	0.0	0.000	A
3	1246	312	6	2966	0.420	1246	1333	0.5	0.7	2.091	A
4	255	64	1235	1684	0.152	255	17	0.1	0.2	2.520	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1327	332	12	3216	0.413	1327	1479	0.7	0.7	1.904	A
2	0	0	1339	1587	0.000	0	0	0.0	0.0	0.000	A
3	1246	312	6	2966	0.420	1246	1333	0.7	0.7	2.093	A
4	255	64	1235	1683	0.152	255	17	0.2	0.2	2.521	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1083	271	10	3218	0.337	1084	1208	0.7	0.5	1.686	A
2	0	0	1094	1721	0.000	0	0	0.0	0.0	0.000	A
3	1018	254	4	2967	0.343	1018	1089	0.7	0.5	1.847	A
4	209	52	1009	1814	0.115	209	13	0.2	0.1	2.244	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	907	227	8	3219	0.282	908	1012	0.5	0.4	1.559	A
2	0	0	916	1818	0.000	0	0	0.0	0.0	0.000	A
3	852	213	4	2967	0.287	853	912	0.5	0.4	1.702	A
4	175	44	845	1909	0.092	175	11	0.1	0.1	2.077	A

Option 1c, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 Park and Ride Access	Standard Roundabout		1, 2, 3, 4	2.51	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	69	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	Option 1c	AM	P&R (no dev.)	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 (%)
1		ONE HOUR	✓	1325	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1530	100.000
4		ONE HOUR	✓	24	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	1266	59
	2	0	0	0	0
	3	1410	0	0	120
	4	4	0	20	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.45	2.06	0.8	A	1216	1824
2	0.00	0.00	0.0	A	0	0
3	0.58	2.90	1.4	A	1404	2106
4	0.02	2.44	0.0	A	22	33

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	998	249	15	3214	0.310	996	1062	0.0	0.4	1.620	A
2	0	0	1011	1766	0.000	0	0	0.0	0.0	0.000	A
3	1152	288	44	2940	0.392	1149	966	0.0	0.6	2.007	A
4	18	5	1059	1785	0.010	18	134	0.0	0.0	2.037	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1191	298	18	3212	0.371	1191	1270	0.4	0.6	1.780	A
2	0	0	1209	1658	0.000	0	0	0.0	0.0	0.000	A
3	1375	344	53	2935	0.469	1374	1156	0.6	0.9	2.306	A
4	22	5	1267	1665	0.013	22	161	0.0	0.0	2.190	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1459	365	22	3209	0.455	1458	1555	0.6	0.8	2.054	A
2	0	0	1480	1510	0.000	0	0	0.0	0.0	0.000	A
3	1685	421	65	2927	0.576	1683	1415	0.9	1.3	2.890	A
4	26	7	1551	1501	0.018	26	197	0.0	0.0	2.441	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1459	365	22	3209	0.455	1459	1557	0.8	0.8	2.056	A
2	0	0	1481	1509	0.000	0	0	0.0	0.0	0.000	A
3	1685	421	65	2927	0.576	1685	1416	1.3	1.4	2.897	A
4	26	7	1552	1500	0.018	26	197	0.0	0.0	2.443	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1191	298	18	3212	0.371	1192	1273	0.8	0.6	1.782	A
2	0	0	1210	1657	0.000	0	0	0.0	0.0	0.000	A
3	1375	344	53	2935	0.469	1377	1157	1.4	0.9	2.315	A
4	22	5	1269	1663	0.013	22	161	0.0	0.0	2.192	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	998	249	15	3214	0.310	998	1065	0.6	0.5	1.624	A
2	0	0	1013	1765	0.000	0	0	0.0	0.0	0.000	A
3	1152	288	44	2940	0.392	1153	969	0.9	0.6	2.014	A
4	18	5	1062	1783	0.010	18	135	0.0	0.0	2.040	A

Option 1c, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 Park and Ride Access	Standard Roundabout		1, 2, 3, 4	2.05	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	133	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	Option 1c	PM	P&R (no dev.)	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 (%)
1		ONE HOUR	✓	1220	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1132	100.000
4		ONE HOUR	✓	232	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	1215	5
	2	0	0	0	0
	3	1122	0	0	10
	4	221	0	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.42	1.92	0.7	A	1119	1679
2	0.00	0.00	0.0	A	0	0
3	0.42	2.09	0.7	A	1039	1558
4	0.15	2.52	0.2	A	213	319

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	918	230	8	3219	0.285	917	1009	0.0	0.4	1.564	A
2	0	0	925	1813	0.000	0	0	0.0	0.0	0.000	A
3	852	213	4	2967	0.287	851	921	0.0	0.4	1.701	A
4	175	44	843	1910	0.091	174	11	0.0	0.1	2.074	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1097	274	10	3218	0.341	1096	1207	0.4	0.5	1.696	A
2	0	0	1106	1714	0.000	0	0	0.0	0.0	0.000	A
3	1018	254	4	2967	0.343	1017	1102	0.4	0.5	1.846	A
4	209	52	1008	1815	0.115	208	13	0.1	0.1	2.241	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1343	336	12	3216	0.418	1342	1478	0.5	0.7	1.920	A
2	0	0	1355	1578	0.000	0	0	0.0	0.0	0.000	A
3	1246	312	6	2966	0.420	1246	1349	0.5	0.7	2.091	A
4	255	64	1235	1684	0.152	255	17	0.1	0.2	2.520	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1343	336	12	3216	0.418	1343	1479	0.7	0.7	1.921	A
2	0	0	1355	1578	0.000	0	0	0.0	0.0	0.000	A
3	1246	312	6	2966	0.420	1246	1350	0.7	0.7	2.093	A
4	255	64	1235	1683	0.152	255	17	0.2	0.2	2.521	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1097	274	10	3218	0.341	1098	1208	0.7	0.5	1.697	A
2	0	0	1107	1714	0.000	0	0	0.0	0.0	0.000	A
3	1018	254	4	2967	0.343	1018	1103	0.7	0.5	1.850	A
4	209	52	1009	1814	0.115	209	13	0.2	0.1	2.242	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	918	230	8	3219	0.285	919	1012	0.5	0.4	1.564	A
2	0	0	927	1812	0.000	0	0	0.0	0.0	0.000	A
3	852	213	4	2967	0.287	853	923	0.5	0.4	1.704	A
4	175	44	845	1909	0.092	175	11	0.1	0.1	2.075	A

Option 2, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 Park and Ride Access	Standard Roundabout		1, 2, 3, 4	2.59	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	70	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	Option 2	AM	P&R 4arm (full dev.)	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 (%)
1		ONE HOUR	✓	1232	100.000
2		ONE HOUR	✓	438	100.000
3		ONE HOUR	✓	1358	100.000
4		ONE HOUR	✓	26	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	21	1152	59
	2	193	0	194	51
	3	1143	135	0	80
	4	4	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.44	2.06	0.8	A	1131	1696
2	0.30	3.25	0.4	A	402	603
3	0.54	2.87	1.2	A	1246	1869
4	0.02	2.51	0.0	A	24	36

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	928	232	118	3143	0.295	926	1007	0.0	0.4	1.624	A
2	330	82	910	1821	0.181	329	134	0.0	0.2	2.410	A
3	1022	256	228	2820	0.363	1020	1011	0.0	0.6	1.997	A
4	20	5	1105	1759	0.011	20	143	0.0	0.0	2.069	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1108	277	141	3127	0.354	1107	1204	0.4	0.5	1.782	A
2	394	98	1088	1724	0.228	393	160	0.2	0.3	2.705	A
3	1221	305	272	2791	0.437	1220	1209	0.6	0.8	2.291	A
4	23	6	1321	1633	0.014	23	171	0.0	0.0	2.235	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1356	339	173	3105	0.437	1356	1474	0.5	0.8	2.057	A
2	482	121	1332	1590	0.303	482	196	0.3	0.4	3.245	A
3	1495	374	333	2751	0.544	1494	1481	0.8	1.2	2.860	A
4	29	7	1618	1462	0.020	29	209	0.0	0.0	2.511	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1356	339	173	3105	0.437	1356	1475	0.8	0.8	2.059	A
2	482	121	1333	1590	0.303	482	196	0.4	0.4	3.249	A
3	1495	374	334	2750	0.544	1495	1482	1.2	1.2	2.867	A
4	29	7	1620	1461	0.020	29	209	0.0	0.0	2.513	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1108	277	141	3126	0.354	1108	1206	0.8	0.6	1.783	A
2	394	98	1090	1723	0.228	394	160	0.4	0.3	2.709	A
3	1221	305	273	2790	0.438	1222	1211	1.2	0.8	2.298	A
4	23	6	1324	1632	0.014	23	171	0.0	0.0	2.239	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	928	232	118	3142	0.295	928	1010	0.6	0.4	1.625	A
2	330	82	912	1820	0.181	330	134	0.3	0.2	2.415	A
3	1022	256	228	2819	0.363	1023	1014	0.8	0.6	2.006	A
4	20	5	1108	1757	0.011	20	143	0.0	0.0	2.073	A

Option 2, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 Park and Ride Access	Standard Roundabout		1, 2, 3, 4	2.24	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	103	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	Option 2	PM	P&R 4arm (full dev.)	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 (%)
1		ONE HOUR	✓	1178	100.000
2		ONE HOUR	✓	119	100.000
3		ONE HOUR	✓	1263	100.000
4		ONE HOUR	✓	233	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	38	1135	5
	2	48	0	61	10
	3	1093	170	0	0
	4	220	11	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.42	2.01	0.7	A	1081	1621
2	0.08	2.40	0.1	A	109	164
3	0.48	2.35	0.9	A	1159	1738
4	0.16	2.76	0.2	A	214	321

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	887	222	137	3129	0.283	885	1022	0.0	0.4	1.604	A
2	90	22	858	1850	0.048	89	165	0.0	0.1	2.044	A
3	951	238	47	2938	0.324	949	900	0.0	0.5	1.807	A
4	175	44	985	1828	0.096	175	11	0.0	0.1	2.178	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1059	265	164	3110	0.340	1059	1223	0.4	0.5	1.754	A
2	107	27	1026	1758	0.061	107	197	0.1	0.1	2.180	A
3	1135	284	57	2932	0.387	1135	1076	0.5	0.6	2.003	A
4	209	52	1178	1716	0.122	209	13	0.1	0.1	2.388	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1297	324	201	3085	0.420	1296	1497	0.5	0.7	2.011	A
2	131	33	1257	1632	0.080	131	241	0.1	0.1	2.398	A
3	1391	348	69	2924	0.476	1389	1318	0.6	0.9	2.345	A
4	257	64	1442	1563	0.164	256	17	0.1	0.2	2.754	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1297	324	201	3085	0.420	1297	1498	0.7	0.7	2.013	A
2	131	33	1257	1632	0.080	131	241	0.1	0.1	2.398	A
3	1391	348	69	2924	0.476	1391	1319	0.9	0.9	2.347	A
4	257	64	1443	1563	0.164	257	17	0.2	0.2	2.755	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1059	265	165	3110	0.340	1060	1225	0.7	0.5	1.758	A
2	107	27	1027	1757	0.061	107	197	0.1	0.1	2.182	A
3	1135	284	57	2932	0.387	1136	1078	0.9	0.6	2.005	A
4	209	52	1180	1715	0.122	210	13	0.2	0.1	2.392	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	887	222	138	3129	0.283	887	1025	0.5	0.4	1.608	A
2	90	22	860	1849	0.048	90	165	0.1	0.1	2.047	A
3	951	238	47	2938	0.324	951	902	0.6	0.5	1.814	A
4	175	44	988	1826	0.096	176	11	0.1	0.1	2.180	A

Option 2a, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 Park and Ride Access	Standard Roundabout		1, 2, 3, 4	2.66	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	69	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	Option 2a	AM	P&R 4arm (full dev.)	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 (%)
1		ONE HOUR	✓	1329	100.000
2		ONE HOUR	✓	438	100.000
3		ONE HOUR	✓	1362	100.000
4		ONE HOUR	✓	26	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	21	1249	59
	2	193	0	194	51
	3	1147	135	0	80
	4	4	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.47	2.19	0.9	A	1220	1829
2	0.31	3.43	0.5	A	402	603
3	0.55	2.88	1.2	A	1250	1875
4	0.02	2.52	0.0	A	24	36

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1001	250	118	3143	0.318	999	1010	0.0	0.5	1.677	A
2	330	82	983	1782	0.185	329	134	0.0	0.2	2.477	A
3	1025	256	228	2820	0.364	1023	1084	0.0	0.6	2.001	A
4	20	5	1108	1757	0.011	20	143	0.0	0.0	2.071	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1195	299	141	3127	0.382	1194	1207	0.5	0.6	1.862	A
2	394	98	1175	1676	0.235	393	160	0.2	0.3	2.806	A
3	1224	306	272	2791	0.439	1224	1297	0.6	0.8	2.296	A
4	23	6	1325	1631	0.014	23	171	0.0	0.0	2.238	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1463	366	173	3105	0.471	1462	1478	0.6	0.9	2.191	A
2	482	121	1439	1532	0.315	482	196	0.3	0.5	3.425	A
3	1500	375	333	2751	0.545	1498	1587	0.8	1.2	2.870	A
4	29	7	1622	1459	0.020	29	209	0.0	0.0	2.515	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1463	366	173	3105	0.471	1463	1480	0.9	0.9	2.193	A
2	482	121	1440	1532	0.315	482	196	0.5	0.5	3.429	A
3	1500	375	334	2750	0.545	1500	1589	1.2	1.2	2.877	A
4	29	7	1624	1458	0.020	29	209	0.0	0.0	2.517	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1195	299	141	3126	0.382	1196	1210	0.9	0.6	1.867	A
2	394	98	1177	1676	0.235	394	160	0.5	0.3	2.810	A
3	1224	306	273	2790	0.439	1226	1299	1.2	0.8	2.305	A
4	23	6	1328	1630	0.014	23	171	0.0	0.0	2.240	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1001	250	118	3142	0.318	1001	1013	0.6	0.5	1.683	A
2	330	82	985	1780	0.185	330	134	0.3	0.2	2.482	A
3	1025	256	228	2819	0.364	1026	1087	0.8	0.6	2.008	A
4	20	5	1111	1755	0.011	20	143	0.0	0.0	2.075	A

Option 2a, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 Park and Ride Access	Standard Roundabout		1, 2, 3, 4	2.21	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	113	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	Option 2a	PM	P&R 4arm (full dev.)	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 (%)
1		ONE HOUR	✓	1211	100.000
2		ONE HOUR	✓	119	100.000
3		ONE HOUR	✓	1200	100.000
4		ONE HOUR	✓	233	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	38	1168	5
	2	48	0	61	10
	3	1030	170	0	0
	4	220	11	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.43	2.05	0.8	A	1111	1667
2	0.08	2.43	0.1	A	109	164
3	0.45	2.25	0.8	A	1101	1652
4	0.16	2.67	0.2	A	214	321

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	912	228	137	3129	0.291	910	975	0.0	0.4	1.622	A
2	90	22	883	1836	0.049	89	165	0.0	0.1	2.060	A
3	903	226	47	2938	0.307	902	925	0.0	0.4	1.765	A
4	175	44	938	1855	0.095	175	11	0.0	0.1	2.142	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1089	272	164	3110	0.350	1088	1166	0.4	0.5	1.779	A
2	107	27	1056	1742	0.061	107	197	0.1	0.1	2.201	A
3	1079	270	57	2932	0.368	1078	1106	0.4	0.6	1.942	A
4	209	52	1121	1749	0.120	209	13	0.1	0.1	2.337	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1333	333	201	3085	0.432	1332	1428	0.5	0.8	2.053	A
2	131	33	1293	1612	0.081	131	241	0.1	0.1	2.430	A
3	1321	330	69	2924	0.452	1320	1354	0.6	0.8	2.244	A
4	257	64	1373	1603	0.160	256	17	0.1	0.2	2.672	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1333	333	201	3085	0.432	1333	1429	0.8	0.8	2.055	A
2	131	33	1294	1612	0.081	131	241	0.1	0.1	2.430	A
3	1321	330	69	2924	0.452	1321	1355	0.8	0.8	2.245	A
4	257	64	1374	1603	0.160	257	17	0.2	0.2	2.673	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1089	272	165	3110	0.350	1090	1168	0.8	0.5	1.781	A
2	107	27	1057	1741	0.061	107	197	0.1	0.1	2.202	A
3	1079	270	57	2932	0.368	1080	1108	0.8	0.6	1.944	A
4	209	52	1123	1748	0.120	210	13	0.2	0.1	2.339	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	912	228	138	3129	0.291	912	978	0.5	0.4	1.626	A
2	90	22	885	1835	0.049	90	165	0.1	0.1	2.063	A
3	903	226	47	2938	0.307	904	927	0.6	0.4	1.769	A
4	175	44	940	1854	0.095	176	11	0.1	0.1	2.144	A

Option 2b, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 Park and Ride Access	Standard Roundabout		1, 2, 3, 4	3.48	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	41	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	Option 2b	AM	P&R 4arm (full dev.)	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 (%)
1		ONE HOUR	✓	1335	100.000
2		ONE HOUR	✓	703	100.000
3		ONE HOUR	✓	1570	100.000
4		ONE HOUR	✓	26	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	124	1152	59
	2	344	0	308	51
	3	1143	347	0	80
	4	4	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.50	2.44	1.0	A	1225	1838
2	0.49	4.41	0.9	A	645	968
3	0.65	3.94	1.9	A	1441	2161
4	0.02	3.00	0.0	A	24	36

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1005	251	277	3032	0.331	1003	1120	0.0	0.5	1.772	A
2	529	132	910	1822	0.291	528	370	0.0	0.4	2.778	A
3	1182	295	341	2746	0.431	1179	1097	0.0	0.8	2.294	A
4	20	5	1377	1601	0.012	20	143	0.0	0.0	2.275	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1200	300	331	2994	0.401	1199	1339	0.5	0.7	2.006	A
2	632	158	1088	1724	0.367	631	443	0.4	0.6	3.292	A
3	1411	353	408	2702	0.522	1410	1312	0.8	1.1	2.785	A
4	23	6	1647	1445	0.016	23	171	0.0	0.0	2.532	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1470	367	406	2943	0.500	1469	1639	0.7	1.0	2.440	A
2	774	194	1332	1591	0.487	773	542	0.6	0.9	4.392	A
3	1729	432	499	2642	0.654	1725	1606	1.1	1.9	3.916	A
4	29	7	2016	1232	0.023	29	209	0.0	0.0	2.991	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1470	367	406	2942	0.500	1470	1642	1.0	1.0	2.444	A
2	774	194	1333	1590	0.487	774	543	0.9	0.9	4.411	A
3	1729	432	500	2641	0.654	1729	1607	1.9	1.9	3.944	A
4	29	7	2019	1230	0.023	29	209	0.0	0.0	2.997	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1200	300	332	2994	0.401	1201	1343	1.0	0.7	2.011	A
2	632	158	1090	1723	0.367	633	444	0.9	0.6	3.309	A
3	1411	353	409	2701	0.523	1415	1314	1.9	1.1	2.807	A
4	23	6	1652	1442	0.016	23	171	0.0	0.0	2.539	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1005	251	278	3031	0.332	1006	1124	0.7	0.5	1.779	A
2	529	132	912	1820	0.291	530	372	0.6	0.4	2.790	A
3	1182	295	342	2745	0.431	1183	1100	1.1	0.8	2.309	A
4	20	5	1382	1598	0.012	20	143	0.0	0.0	2.280	A

Option 2b, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 Park and Ride Access	Standard Roundabout		1, 2, 3, 4	2.44	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	87	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	Option 2b	PM	P&R 4arm (full dev.)	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 (%)
1		ONE HOUR	✓	1242	100.000
2		ONE HOUR	✓	242	100.000
3		ONE HOUR	✓	1348	100.000
4		ONE HOUR	✓	233	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	102	1135	5
	2	92	0	140	10
	3	1093	255	0	0
	4	220	11	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.45	2.18	0.8	A	1140	1710
2	0.16	2.64	0.2	A	222	333
3	0.51	2.56	1.1	A	1237	1855
4	0.17	2.94	0.2	A	214	321

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	935	234	201	3085	0.303	933	1055	0.0	0.4	1.671	A
2	182	46	858	1850	0.098	182	276	0.0	0.1	2.158	A
3	1015	254	80	2917	0.348	1013	960	0.0	0.5	1.888	A
4	175	44	1082	1772	0.099	175	11	0.0	0.1	2.254	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1117	279	241	3057	0.365	1116	1262	0.4	0.6	1.854	A
2	218	54	1026	1758	0.124	217	331	0.1	0.1	2.336	A
3	1212	303	96	2906	0.417	1211	1147	0.5	0.7	2.122	A
4	209	52	1294	1649	0.127	209	13	0.1	0.1	2.499	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1367	342	295	3020	0.453	1366	1546	0.6	0.8	2.176	A
2	266	67	1256	1632	0.163	266	405	0.1	0.2	2.635	A
3	1484	371	118	2892	0.513	1483	1405	0.7	1.0	2.552	A
4	257	64	1584	1481	0.173	256	17	0.1	0.2	2.938	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1367	342	295	3020	0.453	1367	1547	0.8	0.8	2.178	A
2	266	67	1257	1632	0.163	266	405	0.2	0.2	2.636	A
3	1484	371	118	2892	0.513	1484	1406	1.0	1.1	2.556	A
4	257	64	1585	1481	0.173	257	17	0.2	0.2	2.940	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1117	279	241	3057	0.365	1118	1264	0.8	0.6	1.856	A
2	218	54	1028	1757	0.124	218	331	0.2	0.1	2.338	A
3	1212	303	96	2906	0.417	1213	1149	1.1	0.7	2.129	A
4	209	52	1296	1648	0.127	210	13	0.2	0.1	2.504	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	935	234	202	3084	0.303	936	1059	0.6	0.4	1.675	A
2	182	46	860	1849	0.099	182	277	0.1	0.1	2.161	A
3	1015	254	81	2917	0.348	1016	962	0.7	0.5	1.893	A
4	175	44	1085	1770	0.099	176	11	0.1	0.1	2.257	A

Option 3, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 Park and Ride Access	Standard Roundabout		1, 2, 3, 4	2.32	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	81	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D15	Option 3	AM	P&R 4arm (20% dev.)	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 (%)
1		ONE HOUR	✓	1222	100.000
2		ONE HOUR	✓	67	100.000
3		ONE HOUR	✓	1397	100.000
4		ONE HOUR	✓	26	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	9	1154	59
	2	38	0	23	6
	3	1272	5	0	120
	4	4	2	20	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.42	1.94	0.7	A	1121	1682
2	0.05	2.39	0.0	A	61	92
3	0.53	2.65	1.1	A	1282	1923
4	0.02	2.35	0.0	A	24	36

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	920	230	20	3211	0.287	918	987	0.0	0.4	1.570	A
2	50	13	927	1812	0.028	50	12	0.0	0.0	2.042	A
3	1052	263	77	2919	0.360	1049	900	0.0	0.6	1.923	A
4	20	5	988	1826	0.011	20	139	0.0	0.0	1.992	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1099	275	24	3208	0.342	1098	1181	0.4	0.5	1.705	A
2	60	15	1108	1713	0.035	60	14	0.0	0.0	2.177	A
3	1256	314	93	2909	0.432	1255	1076	0.6	0.8	2.176	A
4	23	6	1181	1714	0.014	23	166	0.0	0.0	2.128	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1345	336	30	3204	0.420	1345	1445	0.5	0.7	1.935	A
2	74	18	1357	1577	0.047	74	18	0.0	0.0	2.394	A
3	1538	385	113	2895	0.531	1537	1317	0.8	1.1	2.648	A
4	29	7	1446	1561	0.018	29	204	0.0	0.0	2.348	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1345	336	30	3204	0.420	1345	1447	0.7	0.7	1.936	A
2	74	18	1358	1577	0.047	74	18	0.0	0.0	2.394	A
3	1538	385	113	2895	0.531	1538	1318	1.1	1.1	2.652	A
4	29	7	1448	1560	0.018	29	204	0.0	0.0	2.350	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1099	275	24	3208	0.342	1099	1183	0.7	0.5	1.707	A
2	60	15	1109	1713	0.035	60	14	0.0	0.0	2.180	A
3	1256	314	93	2909	0.432	1257	1077	1.1	0.8	2.181	A
4	23	6	1184	1713	0.014	23	166	0.0	0.0	2.131	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	920	230	20	3211	0.287	920	990	0.5	0.4	1.571	A
2	50	13	929	1811	0.028	50	12	0.0	0.0	2.044	A
3	1052	263	78	2918	0.360	1053	902	0.8	0.6	1.931	A
4	20	5	991	1825	0.011	20	139	0.0	0.0	1.994	A

Option 3, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 Park and Ride Access	Standard Roundabout		1, 2, 3, 4	2.05	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	128	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D16	Option 3	PM	P&R 4arm (20% dev.)	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 (%)
1		ONE HOUR	✓	1154	100.000
2		ONE HOUR	✓	31	100.000
3		ONE HOUR	✓	1152	100.000
4		ONE HOUR	✓	234	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	26	1123	5
	2	10	0	20	1
	3	1122	20	0	10
	4	221	2	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.40	1.86	0.7	A	1059	1588
2	0.02	2.25	0.0	A	28	43
3	0.43	2.13	0.7	A	1057	1586
4	0.15	2.56	0.2	A	215	322

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	869	217	25	3207	0.271	867	1017	0.0	0.4	1.538	A
2	23	6	856	1851	0.013	23	36	0.0	0.0	1.969	A
3	867	217	12	2962	0.293	866	867	0.0	0.4	1.715	A
4	176	44	866	1897	0.093	176	12	0.0	0.1	2.091	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1037	259	30	3204	0.324	1037	1216	0.4	0.5	1.660	A
2	28	7	1024	1759	0.016	28	43	0.0	0.0	2.078	A
3	1036	259	14	2960	0.350	1035	1037	0.4	0.5	1.869	A
4	210	53	1035	1799	0.117	210	14	0.1	0.1	2.265	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1271	318	36	3199	0.397	1270	1489	0.5	0.7	1.865	A
2	34	9	1253	1634	0.021	34	53	0.0	0.0	2.250	A
3	1268	317	18	2958	0.429	1268	1270	0.5	0.7	2.128	A
4	258	64	1268	1664	0.155	257	18	0.1	0.2	2.558	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1271	318	36	3199	0.397	1271	1490	0.7	0.7	1.865	A
2	34	9	1254	1633	0.021	34	53	0.0	0.0	2.250	A
3	1268	317	18	2958	0.429	1268	1271	0.7	0.7	2.130	A
4	258	64	1268	1664	0.155	258	18	0.2	0.2	2.559	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1037	259	30	3204	0.324	1038	1217	0.7	0.5	1.661	A
2	28	7	1025	1759	0.016	28	43	0.0	0.0	2.079	A
3	1036	259	14	2960	0.350	1036	1038	0.7	0.5	1.874	A
4	210	53	1036	1798	0.117	211	14	0.2	0.1	2.269	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	869	217	25	3207	0.271	869	1019	0.5	0.4	1.541	A
2	23	6	858	1850	0.013	23	36	0.0	0.0	1.972	A
3	867	217	12	2962	0.293	868	869	0.5	0.4	1.718	A
4	176	44	868	1896	0.093	176	12	0.1	0.1	2.095	A

Option 4, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 Park and Ride Access	Standard Roundabout		1, 2, 3, 4	0.00	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	900	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D17	Option 4	AM	P&R 4arm (bus only)	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 (%)
1		ONE HOUR	✓	0	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	0	100.000
4		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.00	0.00	0.0	A	0	0
2	0.00	0.00	0.0	A	0	0
3	0.00	0.00	0.0	A	0	0
4	0.00	0.00	0.0	A	0	0

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	3225	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2319	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2969	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2398	0.000	0	0	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	3225	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2319	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2969	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2398	0.000	0	0	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	3225	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2319	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2969	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2398	0.000	0	0	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	3225	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2319	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2969	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2398	0.000	0	0	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	3225	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2319	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2969	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2398	0.000	0	0	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	3225	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2319	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2969	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2398	0.000	0	0	0.0	0.0	0.000	A

Option 4, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 Park and Ride Access	Standard Roundabout		1, 2, 3, 4	0.00	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	900	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D18	Option 4	PM	P&R 4arm (bus only)	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 (%)
1		ONE HOUR	✓	0	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	0	100.000
4		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.00	0.00	0.0	A	0	0
2	0.00	0.00	0.0	A	0	0
3	0.00	0.00	0.0	A	0	0
4	0.00	0.00	0.0	A	0	0

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	3225	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2319	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2969	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2398	0.000	0	0	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	3225	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2319	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2969	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2398	0.000	0	0	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	3225	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2319	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2969	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2398	0.000	0	0	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	3225	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2319	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2969	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2398	0.000	0	0	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	3225	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2319	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2969	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2398	0.000	0	0	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	3225	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	2319	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	2969	0.000	0	0	0.0	0.0	0.000	A
4	0	0	0	2398	0.000	0	0	0.0	0.0	0.000	A

Sensitivity Test, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 Park and Ride Access	Standard Roundabout		1, 2, 3, 4	2.64	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	65	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D19	Sensitivity Test	AM	A40 Sensitivity Test	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 (%)
1		ONE HOUR	✓	1254	100.000
2		ONE HOUR	✓	438	100.000
3		ONE HOUR	✓	1336	100.000
4		ONE HOUR	✓	26	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	43	1152	59
	2	286	0	101	51
	3	1143	113	0	80
	4	4	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.44	2.07	0.8	A	1151	1726
2	0.30	3.25	0.4	A	402	603
3	0.55	2.97	1.2	A	1226	1839
4	0.02	2.59	0.0	A	24	36

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	944	236	101	3154	0.299	942	1076	0.0	0.4	1.628	A
2	330	82	910	1821	0.181	329	134	0.0	0.2	2.410	A
3	1006	251	297	2774	0.363	1004	941	0.0	0.6	2.030	A
4	20	5	1158	1728	0.011	20	143	0.0	0.0	2.107	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1127	282	121	3140	0.359	1127	1287	0.4	0.6	1.787	A
2	394	98	1088	1724	0.228	393	160	0.2	0.3	2.705	A
3	1201	300	356	2736	0.439	1200	1126	0.6	0.8	2.343	A
4	23	6	1385	1596	0.015	23	171	0.0	0.0	2.288	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1381	345	149	3121	0.442	1380	1576	0.6	0.8	2.066	A
2	482	121	1332	1590	0.303	482	196	0.3	0.4	3.245	A
3	1471	368	436	2683	0.548	1469	1378	0.8	1.2	2.961	A
4	29	7	1696	1417	0.020	29	209	0.0	0.0	2.593	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1381	345	149	3121	0.442	1381	1578	0.8	0.8	2.067	A
2	482	121	1333	1590	0.303	482	196	0.4	0.4	3.249	A
3	1471	368	436	2683	0.548	1471	1379	1.2	1.2	2.969	A
4	29	7	1698	1415	0.020	29	209	0.0	0.0	2.595	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1127	282	122	3140	0.359	1128	1290	0.8	0.6	1.789	A
2	394	98	1090	1723	0.228	394	160	0.4	0.3	2.711	A
3	1201	300	357	2735	0.439	1203	1127	1.2	0.8	2.353	A
4	23	6	1388	1595	0.015	23	171	0.0	0.0	2.292	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	944	236	102	3154	0.299	945	1080	0.6	0.4	1.631	A
2	330	82	912	1820	0.181	330	134	0.3	0.2	2.415	A
3	1006	251	298	2773	0.363	1007	944	0.8	0.6	2.039	A
4	20	5	1162	1726	0.011	20	143	0.0	0.0	2.111	A

Sensitivity Test, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A40 Park and Ride Access	Standard Roundabout		1, 2, 3, 4	2.20	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	112	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D20	Sensitivity Test	PM	A40 Sensitivity Test	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 (%)
1		ONE HOUR	✓	1264	100.000
2		ONE HOUR	✓	119	100.000
3		ONE HOUR	✓	1177	100.000
4		ONE HOUR	✓	233	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	124	1135	5
	2	91	0	18	10
	3	1093	84	0	0
	4	220	11	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

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	0.44	2.05	0.8	A	1160	1740
2	0.08	2.40	0.1	A	109	164
3	0.45	2.25	0.8	A	1080	1620
4	0.16	2.70	0.2	A	214	321

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	952	238	73	3174	0.300	950	1055	0.0	0.4	1.619	A
2	90	22	858	1850	0.048	89	165	0.0	0.1	2.044	A
3	886	221	79	2917	0.304	884	868	0.0	0.4	1.768	A
4	175	44	952	1847	0.095	175	11	0.0	0.1	2.153	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1136	284	87	3164	0.359	1136	1261	0.4	0.6	1.774	A
2	107	27	1026	1758	0.061	107	197	0.1	0.1	2.180	A
3	1058	264	95	2907	0.364	1057	1038	0.4	0.6	1.946	A
4	209	52	1139	1739	0.120	209	13	0.1	0.1	2.353	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1392	348	107	3151	0.442	1391	1544	0.6	0.8	2.045	A
2	131	33	1257	1632	0.080	131	241	0.1	0.1	2.398	A
3	1296	324	116	2893	0.448	1295	1271	0.6	0.8	2.251	A
4	257	64	1395	1591	0.161	256	17	0.1	0.2	2.697	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1392	348	107	3151	0.442	1392	1545	0.8	0.8	2.046	A
2	131	33	1257	1632	0.080	131	241	0.1	0.1	2.398	A
3	1296	324	116	2893	0.448	1296	1272	0.8	0.8	2.253	A
4	257	64	1396	1590	0.161	257	17	0.2	0.2	2.698	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1136	284	87	3164	0.359	1137	1263	0.8	0.6	1.778	A
2	107	27	1027	1757	0.061	107	197	0.1	0.1	2.181	A
3	1058	264	95	2907	0.364	1059	1039	0.8	0.6	1.948	A
4	209	52	1140	1738	0.121	210	13	0.2	0.1	2.357	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	952	238	73	3174	0.300	952	1057	0.6	0.4	1.619	A
2	90	22	860	1849	0.048	90	165	0.1	0.1	2.046	A
3	886	221	80	2917	0.304	887	870	0.6	0.4	1.775	A
4	175	44	955	1845	0.095	176	11	0.1	0.1	2.157	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: B4449 Stanton Harcourt Road - Option B.j9
Path: C:\Users\petr.jandik\Desktop
Report generation date: 15/07/2020 20:08:13

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
Option 1												
Arm 1	D1	0.3	2.71	0.20	A	172 %	D2	0.3	2.68	0.21	A	309 %
Arm 2		0.5	3.33	0.32	A			0.1	2.50	0.11	A	
Arm 3		0.2	2.70	0.15	A	[Arm 2]		0.1	2.34	0.08	A	[Arm 1]
Option 1a												
Arm 1	D3	0.3	2.71	0.20	A	172 %	D4	0.3	2.68	0.21	A	309 %
Arm 2		0.5	3.33	0.32	A			0.1	2.50	0.11	A	
Arm 3		0.2	2.70	0.15	A	[Arm 2]		0.1	2.34	0.08	A	[Arm 1]
Option 1b												
Arm 1	D5	0.3	2.71	0.20	A	172 %	D6	0.3	2.68	0.21	A	309 %
Arm 2		0.5	3.33	0.32	A			0.1	2.50	0.11	A	
Arm 3		0.2	2.70	0.15	A	[Arm 2]		0.1	2.34	0.08	A	[Arm 1]
Option 2												
Arm 1	D7	0.3	2.71	0.20	A	172 %	D8	0.3	2.66	0.20	A	321 %
Arm 2		0.5	3.33	0.32	A			0.1	2.50	0.11	A	
Arm 3		0.2	2.81	0.19	A	[Arm 2]		0.1	2.31	0.08	A	[Arm 1]
Option 2a												
Arm 1	D9	0.3	2.71	0.20	A	172 %	D10	0.3	2.66	0.20	A	321 %
Arm 2		0.5	3.33	0.32	A			0.1	2.50	0.11	A	
Arm 3		0.2	2.81	0.19	A	[Arm 2]		0.1	2.31	0.08	A	[Arm 1]
Option 3												
Arm 1	D11	0.3	2.71	0.20	A	172 %	D12	0.3	2.68	0.21	A	309 %
Arm 2		0.5	3.33	0.32	A			0.1	2.50	0.11	A	
Arm 3		0.2	2.70	0.15	A	[Arm 2]		0.1	2.34	0.08	A	[Arm 1]
Option 4												
Arm 1	D13	0.0	0.00	0.00	A	900 %	D14	0.0	0.00	0.00	A	900 %
Arm 2		0.0	0.00	0.00	A			0.0	0.00	0.00	A	
Arm 3		0.0	0.00	0.00	A	[]		0.0	0.00	0.00	A	[]

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

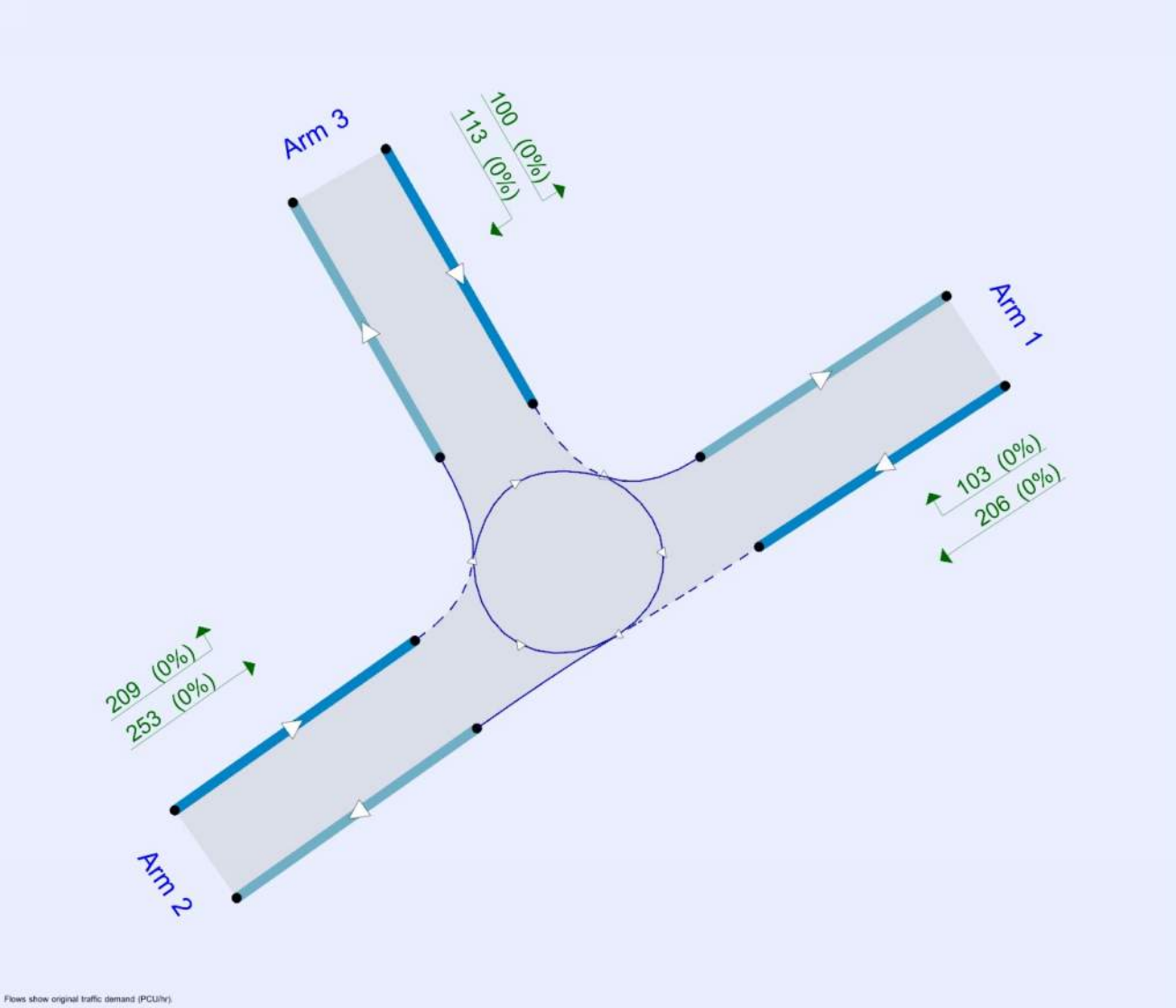
File summary

File Description

Title	B4449 Stanton Harcourt Road - Option B
Location	Eynsham
Site number	
Date	02/07/2020
Version	
Status	(new file)
Identifier	
Client	Oxfordshire County Council
Jobnumber	A117736
Enumerator	WYG\petr.jandik
Description	Junction Geometry: \\Leicester12\3501Data\Projects\A117736 - West Eynsham\06 - Calculations\06 - Capacity Assessments\03 - Proposed Junctions\5588.004 - Stanton Harcourt Road Access Option B - Junction Geometry.dwg

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	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	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	Option 1	AM	ONE HOUR	07:45	09:15	15	✓
D2	Option 1	PM	ONE HOUR	16:45	18:15	15	✓
D3	Option 1a	AM	ONE HOUR	07:45	09:15	15	✓
D4	Option 1a	PM	ONE HOUR	16:45	18:15	15	✓
D5	Option 1b	AM	ONE HOUR	07:45	09:15	15	✓
D6	Option 1b	PM	ONE HOUR	16:45	18:15	15	✓
D7	Option 2	AM	ONE HOUR	07:45	09:15	15	✓
D8	Option 2	PM	ONE HOUR	16:45	18:15	15	✓
D9	Option 2a	AM	ONE HOUR	07:45	09:15	15	✓
D10	Option 2a	PM	ONE HOUR	16:45	18:15	15	✓
D11	Option 3	AM	ONE HOUR	07:45	09:15	15	✓
D12	Option 3	PM	ONE HOUR	16:45	18:15	15	✓
D13	Option 4	AM	ONE HOUR	07:45	09:15	15	✓
D14	Option 4	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

Option 1, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B4449 / Western Relief Road	Standard Roundabout		1, 2, 3	3.00	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	172	Arm 2

Arms

Arms

Arm	Name	Description
1	B4449 North	
2	B4449 South	
3	Western Relief Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.60	8.00	12.0	30.0	40.0	27.0	
2	3.60	8.00	11.6	30.0	40.0	40.0	
3	3.65	8.00	13.9	30.0	40.0	37.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.660	1750
2	0.629	1662
3	0.650	1750

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	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Option 1	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 (%)
1		ONE HOUR	✓	309	100.000
2		ONE HOUR	✓	462	100.000
3		ONE HOUR	✓	213	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	206	103
	2	253	0	209
	3	100	113	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

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	0.20	2.71	0.3	A	284	425
2	0.32	3.33	0.5	A	424	636
3	0.15	2.70	0.2	A	195	293

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	233	58	85	1694	0.137	232	265	0.0	0.2	2.461	A
2	348	87	77	1613	0.216	347	240	0.0	0.3	2.839	A
3	160	40	190	1627	0.099	160	234	0.0	0.1	2.454	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	278	69	102	1683	0.165	278	317	0.2	0.2	2.561	A
2	415	104	93	1604	0.259	415	287	0.3	0.3	3.028	A
3	191	48	227	1603	0.119	191	280	0.1	0.1	2.550	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	340	85	124	1668	0.204	340	388	0.2	0.3	2.711	A
2	509	127	113	1591	0.320	508	351	0.3	0.5	3.323	A
3	235	59	278	1570	0.149	234	343	0.1	0.2	2.695	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	340	85	124	1668	0.204	340	389	0.3	0.3	2.711	A
2	509	127	113	1591	0.320	509	351	0.5	0.5	3.326	A
3	235	59	279	1569	0.149	235	344	0.2	0.2	2.696	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	278	69	102	1683	0.165	278	318	0.3	0.2	2.564	A
2	415	104	93	1604	0.259	416	287	0.5	0.4	3.031	A
3	191	48	228	1603	0.119	192	281	0.2	0.1	2.553	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	233	58	85	1694	0.137	233	266	0.2	0.2	2.466	A
2	348	87	78	1613	0.216	348	240	0.4	0.3	2.848	A
3	160	40	191	1627	0.099	160	235	0.1	0.1	2.455	A

Option 1, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B4449 / Western Relief Road	Standard Roundabout		1, 2, 3	2.56	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	309	Arm 1

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	Option 1	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 (%)
1		ONE HOUR	✓	315	100.000
2		ONE HOUR	✓	162	100.000
3		ONE HOUR	✓	127	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	249	66
	2	102	0	60
	3	43	84	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

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	0.21	2.68	0.3	A	289	434
2	0.11	2.50	0.1	A	149	223
3	0.08	2.34	0.1	A	117	175

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	237	59	63	1708	0.139	237	109	0.0	0.2	2.444	A
2	122	30	50	1631	0.075	122	250	0.0	0.1	2.385	A
3	96	24	77	1701	0.056	95	95	0.0	0.1	2.242	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	283	71	75	1700	0.167	283	130	0.2	0.2	2.540	A
2	146	36	59	1625	0.090	146	299	0.1	0.1	2.433	A
3	114	29	92	1691	0.068	114	113	0.1	0.1	2.282	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	347	87	92	1689	0.205	347	160	0.2	0.3	2.682	A
2	178	45	73	1616	0.110	178	366	0.1	0.1	2.503	A
3	140	35	112	1677	0.083	140	139	0.1	0.1	2.340	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	347	87	92	1689	0.205	347	160	0.3	0.3	2.682	A
2	178	45	73	1616	0.110	178	367	0.1	0.1	2.503	A
3	140	35	112	1677	0.083	140	139	0.1	0.1	2.340	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	283	71	76	1700	0.167	283	130	0.3	0.2	2.543	A
2	146	36	59	1625	0.090	146	300	0.1	0.1	2.434	A
3	114	29	92	1691	0.068	114	113	0.1	0.1	2.283	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	237	59	63	1708	0.139	237	109	0.2	0.2	2.449	A
2	122	30	50	1631	0.075	122	251	0.1	0.1	2.387	A
3	96	24	77	1700	0.056	96	95	0.1	0.1	2.244	A

Option 1a, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B4449 / Western Relief Road	Standard Roundabout		1, 2, 3	3.00	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	172	Arm 2

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
D3	Option 1a	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 (%)
1		ONE HOUR	✓	309	100.000
2		ONE HOUR	✓	462	100.000
3		ONE HOUR	✓	213	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	206	103
	2	253	0	209
	3	100	113	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

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	0.20	2.71	0.3	A	284	425
2	0.32	3.33	0.5	A	424	636
3	0.15	2.70	0.2	A	195	293

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	233	58	85	1694	0.137	232	265	0.0	0.2	2.461	A
2	348	87	77	1613	0.216	347	240	0.0	0.3	2.839	A
3	160	40	190	1627	0.099	160	234	0.0	0.1	2.454	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	278	69	102	1683	0.165	278	317	0.2	0.2	2.561	A
2	415	104	93	1604	0.259	415	287	0.3	0.3	3.028	A
3	191	48	227	1603	0.119	191	280	0.1	0.1	2.550	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	340	85	124	1668	0.204	340	388	0.2	0.3	2.711	A
2	509	127	113	1591	0.320	508	351	0.3	0.5	3.323	A
3	235	59	278	1570	0.149	234	343	0.1	0.2	2.695	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	340	85	124	1668	0.204	340	389	0.3	0.3	2.711	A
2	509	127	113	1591	0.320	509	351	0.5	0.5	3.326	A
3	235	59	279	1569	0.149	235	344	0.2	0.2	2.696	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	278	69	102	1683	0.165	278	318	0.3	0.2	2.564	A
2	415	104	93	1604	0.259	416	287	0.5	0.4	3.031	A
3	191	48	228	1603	0.119	192	281	0.2	0.1	2.553	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	233	58	85	1694	0.137	233	266	0.2	0.2	2.466	A
2	348	87	78	1613	0.216	348	240	0.4	0.3	2.848	A
3	160	40	191	1627	0.099	160	235	0.1	0.1	2.455	A

Option 1a, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B4449 / Western Relief Road	Standard Roundabout		1, 2, 3	2.56	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	309	Arm 1

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
D4	Option 1a	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 (%)
1		ONE HOUR	✓	315	100.000
2		ONE HOUR	✓	162	100.000
3		ONE HOUR	✓	127	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	249	66
	2	102	0	60
	3	43	84	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

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	0.21	2.68	0.3	A	289	434
2	0.11	2.50	0.1	A	149	223
3	0.08	2.34	0.1	A	117	175

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	237	59	63	1708	0.139	237	109	0.0	0.2	2.444	A
2	122	30	50	1631	0.075	122	250	0.0	0.1	2.385	A
3	96	24	77	1701	0.056	95	95	0.0	0.1	2.242	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	283	71	75	1700	0.167	283	130	0.2	0.2	2.540	A
2	146	36	59	1625	0.090	146	299	0.1	0.1	2.433	A
3	114	29	92	1691	0.068	114	113	0.1	0.1	2.282	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	347	87	92	1689	0.205	347	160	0.2	0.3	2.682	A
2	178	45	73	1616	0.110	178	366	0.1	0.1	2.503	A
3	140	35	112	1677	0.083	140	139	0.1	0.1	2.340	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	347	87	92	1689	0.205	347	160	0.3	0.3	2.682	A
2	178	45	73	1616	0.110	178	367	0.1	0.1	2.503	A
3	140	35	112	1677	0.083	140	139	0.1	0.1	2.340	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	283	71	76	1700	0.167	283	130	0.3	0.2	2.543	A
2	146	36	59	1625	0.090	146	300	0.1	0.1	2.434	A
3	114	29	92	1691	0.068	114	113	0.1	0.1	2.283	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	237	59	63	1708	0.139	237	109	0.2	0.2	2.449	A
2	122	30	50	1631	0.075	122	251	0.1	0.1	2.387	A
3	96	24	77	1700	0.056	96	95	0.1	0.1	2.244	A

Option 1b, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B4449 / Western Relief Road	Standard Roundabout		1, 2, 3	3.00	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	172	Arm 2

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
D5	Option 1b	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 (%)
1		ONE HOUR	✓	309	100.000
2		ONE HOUR	✓	462	100.000
3		ONE HOUR	✓	213	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	206	103
	2	253	0	209
	3	100	113	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

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	0.20	2.71	0.3	A	284	425
2	0.32	3.33	0.5	A	424	636
3	0.15	2.70	0.2	A	195	293

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	233	58	85	1694	0.137	232	265	0.0	0.2	2.461	A
2	348	87	77	1613	0.216	347	240	0.0	0.3	2.839	A
3	160	40	190	1627	0.099	160	234	0.0	0.1	2.454	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	278	69	102	1683	0.165	278	317	0.2	0.2	2.561	A
2	415	104	93	1604	0.259	415	287	0.3	0.3	3.028	A
3	191	48	227	1603	0.119	191	280	0.1	0.1	2.550	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	340	85	124	1668	0.204	340	388	0.2	0.3	2.711	A
2	509	127	113	1591	0.320	508	351	0.3	0.5	3.323	A
3	235	59	278	1570	0.149	234	343	0.1	0.2	2.695	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	340	85	124	1668	0.204	340	389	0.3	0.3	2.711	A
2	509	127	113	1591	0.320	509	351	0.5	0.5	3.326	A
3	235	59	279	1569	0.149	235	344	0.2	0.2	2.696	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	278	69	102	1683	0.165	278	318	0.3	0.2	2.564	A
2	415	104	93	1604	0.259	416	287	0.5	0.4	3.031	A
3	191	48	228	1603	0.119	192	281	0.2	0.1	2.553	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	233	58	85	1694	0.137	233	266	0.2	0.2	2.466	A
2	348	87	78	1613	0.216	348	240	0.4	0.3	2.848	A
3	160	40	191	1627	0.099	160	235	0.1	0.1	2.455	A

Option 1b, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B4449 / Western Relief Road	Standard Roundabout		1, 2, 3	2.56	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	309	Arm 1

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
D6	Option 1b	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 (%)
1		ONE HOUR	✓	315	100.000
2		ONE HOUR	✓	162	100.000
3		ONE HOUR	✓	127	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	249	66
	2	102	0	60
	3	43	84	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

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	0.21	2.68	0.3	A	289	434
2	0.11	2.50	0.1	A	149	223
3	0.08	2.34	0.1	A	117	175

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	237	59	63	1708	0.139	237	109	0.0	0.2	2.444	A
2	122	30	50	1631	0.075	122	250	0.0	0.1	2.385	A
3	96	24	77	1701	0.056	95	95	0.0	0.1	2.242	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	283	71	75	1700	0.167	283	130	0.2	0.2	2.540	A
2	146	36	59	1625	0.090	146	299	0.1	0.1	2.433	A
3	114	29	92	1691	0.068	114	113	0.1	0.1	2.282	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	347	87	92	1689	0.205	347	160	0.2	0.3	2.682	A
2	178	45	73	1616	0.110	178	366	0.1	0.1	2.503	A
3	140	35	112	1677	0.083	140	139	0.1	0.1	2.340	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	347	87	92	1689	0.205	347	160	0.3	0.3	2.682	A
2	178	45	73	1616	0.110	178	367	0.1	0.1	2.503	A
3	140	35	112	1677	0.083	140	139	0.1	0.1	2.340	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	283	71	76	1700	0.167	283	130	0.3	0.2	2.543	A
2	146	36	59	1625	0.090	146	300	0.1	0.1	2.434	A
3	114	29	92	1691	0.068	114	113	0.1	0.1	2.283	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	237	59	63	1708	0.139	237	109	0.2	0.2	2.449	A
2	122	30	50	1631	0.075	122	251	0.1	0.1	2.387	A
3	96	24	77	1700	0.056	96	95	0.1	0.1	2.244	A

Option 2, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B4449 / Western Relief Road	Standard Roundabout		1, 2, 3	3.01	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	172	Arm 2

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
D7	Option 2	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 (%)
1		ONE HOUR	✓	309	100.000
2		ONE HOUR	✓	462	100.000
3		ONE HOUR	✓	265	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	206	103
	2	250	0	212
	3	151	114	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

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	0.20	2.71	0.3	A	284	425
2	0.32	3.33	0.5	A	424	636
3	0.19	2.81	0.2	A	243	365

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	233	58	86	1693	0.137	232	301	0.0	0.2	2.462	A
2	348	87	77	1613	0.216	347	240	0.0	0.3	2.839	A
3	200	50	188	1629	0.123	199	236	0.0	0.1	2.518	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	278	69	102	1682	0.165	278	360	0.2	0.2	2.562	A
2	415	104	93	1604	0.259	415	288	0.3	0.3	3.028	A
3	238	60	225	1605	0.148	238	283	0.1	0.2	2.634	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	340	85	125	1667	0.204	340	441	0.2	0.3	2.712	A
2	509	127	113	1591	0.320	508	352	0.3	0.5	3.323	A
3	292	73	275	1572	0.186	292	347	0.2	0.2	2.811	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	340	85	126	1667	0.204	340	442	0.3	0.3	2.712	A
2	509	127	113	1591	0.320	509	352	0.5	0.5	3.326	A
3	292	73	275	1572	0.186	292	347	0.2	0.2	2.812	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	278	69	103	1682	0.165	278	361	0.3	0.2	2.565	A
2	415	104	93	1604	0.259	416	288	0.5	0.4	3.033	A
3	238	60	225	1604	0.149	238	283	0.2	0.2	2.637	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	233	58	86	1693	0.137	233	302	0.2	0.2	2.465	A
2	348	87	78	1613	0.216	348	241	0.4	0.3	2.848	A
3	200	50	188	1628	0.123	200	237	0.2	0.1	2.522	A

Option 2, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B4449 / Western Relief Road	Standard Roundabout		1, 2, 3	2.54	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	321	Arm 1

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
D8	Option 2	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 (%)
1		ONE HOUR	✓	308	100.000
2		ONE HOUR	✓	162	100.000
3		ONE HOUR	✓	123	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	244	64
	2	77	0	85
	3	44	79	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

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	0.20	2.66	0.3	A	283	424
2	0.11	2.50	0.1	A	149	223
3	0.08	2.31	0.1	A	113	169

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	232	58	59	1711	0.136	231	91	0.0	0.2	2.432	A
2	122	30	48	1632	0.075	122	243	0.0	0.1	2.384	A
3	93	23	58	1713	0.054	92	112	0.0	0.1	2.221	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	277	69	71	1703	0.163	277	109	0.2	0.2	2.524	A
2	146	36	58	1626	0.090	146	290	0.1	0.1	2.431	A
3	111	28	69	1705	0.065	111	134	0.1	0.1	2.256	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	339	85	87	1692	0.200	339	133	0.2	0.2	2.659	A
2	178	45	70	1618	0.110	178	355	0.1	0.1	2.500	A
3	135	34	85	1695	0.080	135	164	0.1	0.1	2.307	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	339	85	87	1692	0.200	339	133	0.2	0.3	2.659	A
2	178	45	70	1618	0.110	178	356	0.1	0.1	2.500	A
3	135	34	85	1695	0.080	135	164	0.1	0.1	2.307	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	277	69	71	1703	0.163	277	109	0.3	0.2	2.526	A
2	146	36	58	1626	0.090	146	291	0.1	0.1	2.434	A
3	111	28	69	1705	0.065	111	134	0.1	0.1	2.258	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	232	58	60	1710	0.136	232	91	0.2	0.2	2.436	A
2	122	30	48	1632	0.075	122	243	0.1	0.1	2.386	A
3	93	23	58	1713	0.054	93	112	0.1	0.1	2.221	A

Option 2a, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B4449 / Western Relief Road	Standard Roundabout		1, 2, 3	3.01	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	172	Arm 2

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
D9	Option 2a	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 (%)
1		ONE HOUR	✓	309	100.000
2		ONE HOUR	✓	462	100.000
3		ONE HOUR	✓	265	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	206	103
	2	250	0	212
	3	151	114	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

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	0.20	2.71	0.3	A	284	425
2	0.32	3.33	0.5	A	424	636
3	0.19	2.81	0.2	A	243	365

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	233	58	86	1693	0.137	232	301	0.0	0.2	2.462	A
2	348	87	77	1613	0.216	347	240	0.0	0.3	2.839	A
3	200	50	188	1629	0.123	199	236	0.0	0.1	2.518	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	278	69	102	1682	0.165	278	360	0.2	0.2	2.562	A
2	415	104	93	1604	0.259	415	288	0.3	0.3	3.028	A
3	238	60	225	1605	0.148	238	283	0.1	0.2	2.634	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	340	85	125	1667	0.204	340	441	0.2	0.3	2.712	A
2	509	127	113	1591	0.320	508	352	0.3	0.5	3.323	A
3	292	73	275	1572	0.186	292	347	0.2	0.2	2.811	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	340	85	126	1667	0.204	340	442	0.3	0.3	2.712	A
2	509	127	113	1591	0.320	509	352	0.5	0.5	3.326	A
3	292	73	275	1572	0.186	292	347	0.2	0.2	2.812	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	278	69	103	1682	0.165	278	361	0.3	0.2	2.565	A
2	415	104	93	1604	0.259	416	288	0.5	0.4	3.033	A
3	238	60	225	1604	0.149	238	283	0.2	0.2	2.637	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	233	58	86	1693	0.137	233	302	0.2	0.2	2.465	A
2	348	87	78	1613	0.216	348	241	0.4	0.3	2.848	A
3	200	50	188	1628	0.123	200	237	0.2	0.1	2.522	A

Option 2a, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B4449 / Western Relief Road	Standard Roundabout		1, 2, 3	2.54	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	321	Arm 1

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
D10	Option 2a	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 (%)
1		ONE HOUR	✓	308	100.000
2		ONE HOUR	✓	162	100.000
3		ONE HOUR	✓	123	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	244	64
	2	77	0	85
	3	44	79	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

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	0.20	2.66	0.3	A	283	424
2	0.11	2.50	0.1	A	149	223
3	0.08	2.31	0.1	A	113	169

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	232	58	59	1711	0.136	231	91	0.0	0.2	2.432	A
2	122	30	48	1632	0.075	122	243	0.0	0.1	2.384	A
3	93	23	58	1713	0.054	92	112	0.0	0.1	2.221	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	277	69	71	1703	0.163	277	109	0.2	0.2	2.524	A
2	146	36	58	1626	0.090	146	290	0.1	0.1	2.431	A
3	111	28	69	1705	0.065	111	134	0.1	0.1	2.256	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	339	85	87	1692	0.200	339	133	0.2	0.2	2.659	A
2	178	45	70	1618	0.110	178	355	0.1	0.1	2.500	A
3	135	34	85	1695	0.080	135	164	0.1	0.1	2.307	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	339	85	87	1692	0.200	339	133	0.2	0.3	2.659	A
2	178	45	70	1618	0.110	178	356	0.1	0.1	2.500	A
3	135	34	85	1695	0.080	135	164	0.1	0.1	2.307	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	277	69	71	1703	0.163	277	109	0.3	0.2	2.526	A
2	146	36	58	1626	0.090	146	291	0.1	0.1	2.434	A
3	111	28	69	1705	0.065	111	134	0.1	0.1	2.258	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	232	58	60	1710	0.136	232	91	0.2	0.2	2.436	A
2	122	30	48	1632	0.075	122	243	0.1	0.1	2.386	A
3	93	23	58	1713	0.054	93	112	0.1	0.1	2.221	A

Option 3, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B4449 / Western Relief Road	Standard Roundabout		1, 2, 3	3.00	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	172	Arm 2

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
D11	Option 3	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 (%)
1		ONE HOUR	✓	309	100.000
2		ONE HOUR	✓	462	100.000
3		ONE HOUR	✓	213	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	206	103
	2	253	0	209
	3	100	113	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

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	0.20	2.71	0.3	A	284	425
2	0.32	3.33	0.5	A	424	636
3	0.15	2.70	0.2	A	195	293

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	233	58	85	1694	0.137	232	265	0.0	0.2	2.461	A
2	348	87	77	1613	0.216	347	240	0.0	0.3	2.839	A
3	160	40	190	1627	0.099	160	234	0.0	0.1	2.454	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	278	69	102	1683	0.165	278	317	0.2	0.2	2.561	A
2	415	104	93	1604	0.259	415	287	0.3	0.3	3.028	A
3	191	48	227	1603	0.119	191	280	0.1	0.1	2.550	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	340	85	124	1668	0.204	340	388	0.2	0.3	2.711	A
2	509	127	113	1591	0.320	508	351	0.3	0.5	3.323	A
3	235	59	278	1570	0.149	234	343	0.1	0.2	2.695	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	340	85	124	1668	0.204	340	389	0.3	0.3	2.711	A
2	509	127	113	1591	0.320	509	351	0.5	0.5	3.326	A
3	235	59	279	1569	0.149	235	344	0.2	0.2	2.696	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	278	69	102	1683	0.165	278	318	0.3	0.2	2.564	A
2	415	104	93	1604	0.259	416	287	0.5	0.4	3.031	A
3	191	48	228	1603	0.119	192	281	0.2	0.1	2.553	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	233	58	85	1694	0.137	233	266	0.2	0.2	2.466	A
2	348	87	78	1613	0.216	348	240	0.4	0.3	2.848	A
3	160	40	191	1627	0.099	160	235	0.1	0.1	2.455	A

Option 3, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B4449 / Western Relief Road	Standard Roundabout		1, 2, 3	2.56	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	309	Arm 1

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
D12	Option 3	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 (%)
1		ONE HOUR	✓	315	100.000
2		ONE HOUR	✓	162	100.000
3		ONE HOUR	✓	127	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	249	66
	2	102	0	60
	3	43	84	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

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	0.21	2.68	0.3	A	289	434
2	0.11	2.50	0.1	A	149	223
3	0.08	2.34	0.1	A	117	175

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	237	59	63	1708	0.139	237	109	0.0	0.2	2.444	A
2	122	30	50	1631	0.075	122	250	0.0	0.1	2.385	A
3	96	24	77	1701	0.056	95	95	0.0	0.1	2.242	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	283	71	75	1700	0.167	283	130	0.2	0.2	2.540	A
2	146	36	59	1625	0.090	146	299	0.1	0.1	2.433	A
3	114	29	92	1691	0.068	114	113	0.1	0.1	2.282	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	347	87	92	1689	0.205	347	160	0.2	0.3	2.682	A
2	178	45	73	1616	0.110	178	366	0.1	0.1	2.503	A
3	140	35	112	1677	0.083	140	139	0.1	0.1	2.340	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	347	87	92	1689	0.205	347	160	0.3	0.3	2.682	A
2	178	45	73	1616	0.110	178	367	0.1	0.1	2.503	A
3	140	35	112	1677	0.083	140	139	0.1	0.1	2.340	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	283	71	76	1700	0.167	283	130	0.3	0.2	2.543	A
2	146	36	59	1625	0.090	146	300	0.1	0.1	2.434	A
3	114	29	92	1691	0.068	114	113	0.1	0.1	2.283	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	237	59	63	1708	0.139	237	109	0.2	0.2	2.449	A
2	122	30	50	1631	0.075	122	251	0.1	0.1	2.387	A
3	96	24	77	1700	0.056	96	95	0.1	0.1	2.244	A

Option 4, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B4449 / Western Relief Road	Standard Roundabout		1, 2, 3	0.00	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	900	

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
D13	Option 4	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 (%)
1		ONE HOUR	✓	0	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

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	0.00	0.00	0.0	A	0	0
2	0.00	0.00	0.0	A	0	0
3	0.00	0.00	0.0	A	0	0

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	1662	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	1662	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	1662	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	1662	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	1662	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	1662	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A

Option 4, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B4449 / Western Relief Road	Standard Roundabout		1, 2, 3	0.00	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	900	

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
D14	Option 4	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 (%)
1		ONE HOUR	✓	0	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

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	0.00	0.00	0.0	A	0	0
2	0.00	0.00	0.0	A	0	0
3	0.00	0.00	0.0	A	0	0

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	1662	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	1662	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	1662	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	1662	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A

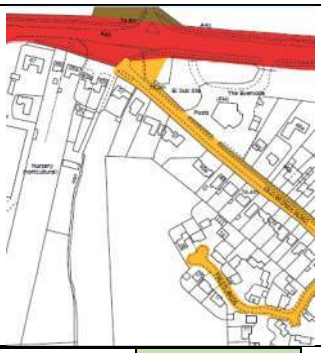
17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	1662	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A

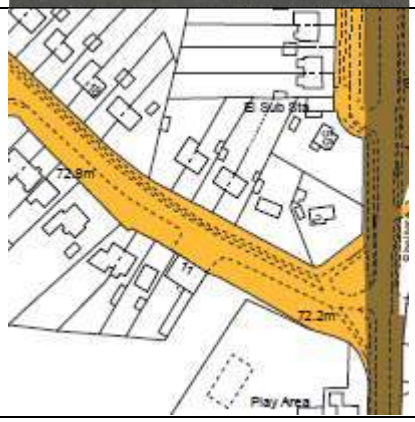
18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A
2	0	0	0	1662	0.000	0	0	0.0	0.0	0.000	A
3	0	0	0	1750	0.000	0	0	0.0	0.0	0.000	A

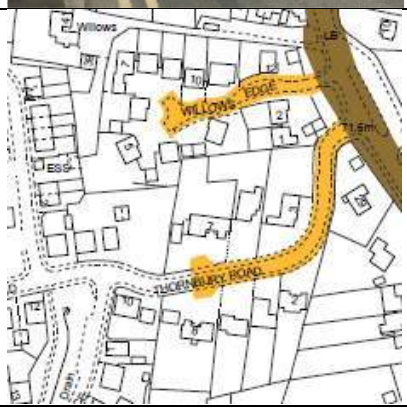
Appendix D – Secondary Access Option Summary Sheets

<table>
<tr><td>Access Option</td><td colspan="2">Old Witney Road (western end)</td></tr>
<tr><td>Location</td><td>Located to the western end of Old Witney Road. Access would be via an existing (or upgraded) access on the southern side of the road.
This would also be influenced by the access proposals associated with the Abbey Green (Thomas Homes) development, providing 77 dwellings under planning reference 15/00761/FUL.</td><td> 
</td></tr>
<tr><td>Existing Conditions</td><td>The western end of Old Witney Road has a varying width carriageway (generally between 4.8m and 5.0m), with a 1.0m footway and 1.2m verge on the northern side and verge only to the southern side of the carriageway. There are also parking controls in place in the form of double yellow lines. At the westernmost end of the road there is an existing pedestrian link to the bus stops on the A40. The turning head at the end of the road would be removed as part of the access arrangements currently proposed for the Abbey Green development.</td><td>  </td></tr>
<tr><td>Highway Boundary</td><td>Based upon the extent of public highway in the vicinity of the potential access location there may be a gap between the highway and the current extent of the West Eynsham SDA.</td><td>  </td></tr>
<tr><td>Access to services

(Metres from access to the named facility)</td><td colspan="2"><table>
<tr><td>Bartholomew Secondary School</td><td>820m</td></tr>
<tr><td>Bartholomew Sports Centre</td><td>1088m</td></tr>
<tr><td>Eynsham Medical Centre</td><td>1182m</td></tr>
<tr><td>Village Centre</td><td>1314m</td></tr>
<tr><td>Nearest Bus Stop</td><td>74m</td></tr>
</table></td></tr>
<tr><td>Potential Secondary Access Function</td><td colspan="2">The Western Old Witney Road Access has the potential to provide a valuable connection for pedestrians to existing bus services on the A40 and could be of particular benefit during early phases of development. The route is not considered appropriate for additional vehicular traffic (with the exception of a potential emergency link), due to sections of limited carriageway width and existing residential frontages.</td></tr>
</table>

<table>
<tr><td>Access Option</td><td colspan="2">Old Witney Road (eastern end)</td></tr>
<tr><td>Location</td><td>Located to the eastern end of Old Witney Road. Access would be in the general location of the current gated access into the adjacent playing field.</td><td> 
</td></tr>
<tr><td>Existing Conditions</td><td>The eastern end of Old Witney Road has a varying width carriageway (generally between 4.8m and 5.0m), with a varying width footway and wide verge on the northern side and verge only to the southern side of the carriageway.</td><td>  </td></tr>
<tr><td>Highway Boundary</td><td>Based upon the extent of public highway in the vicinity of the potential access location there appears to be the scope to provide a direct connection to the SDA.</td><td> 
</td></tr>
<tr><td>Access to services

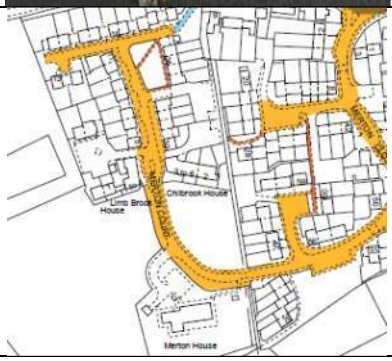
(Metres from access to the named facility)</td><td colspan="2"><table>
<tr><td>Bartholomew Secondary School</td><td>395m</td></tr>
<tr><td>Bartholomew Sports Centre</td><td>663m</td></tr>
<tr><td>Eynsham Medical Centre</td><td>757m</td></tr>
<tr><td>Village Centre</td><td>889m</td></tr>
<tr><td>Nearest Bus Stop</td><td>136m</td></tr>
</table></td></tr>
<tr><td>Potential Secondary Access Function</td><td colspan="2">The eastern Old Witney Road access has the potential to provide a connection for pedestrians to existing bus services on Witney Road and would also provide for pedestrian and cycle access to local facilities. Whilst there may be scope to physically improve the eastern end of the road to allow for a vehicular connection, this would largely replicate the function of the main site access onto the A40 and put more traffic through the existing local road network. As such it is not recommended as a full vehicular link.</td></tr>
</table>

<table>
<tr><td>Access Option</td><td colspan="2">Thornbury Road</td></tr>
<tr><td>Location</td><td>Located to the western end of Thornbury Road, connecting through the new Taylor Wimpey development. Planning application reference 15/03148 for the construction of 160 dwellings, with vehicle access off the end of Thornbury Road.</td><td> 
</td></tr>
<tr><td>Existing Conditions</td><td>Thornbury Road has a 5.5m width carriageway, with 2 x 1.8m footways and parking controls on the eastern end of the road, covering the existing residential area.</td><td>  </td></tr>
<tr><td>Highway Boundary</td><td>Based upon the extent of public highway in the vicinity of the potential access location there is currently a gap between the site and existing public highway. However, this would be addressed via the future adoption of the Taylor Wimpey site (subject to the extent of Section 38 agreement leaving no gap).</td><td> 
</td></tr>
<tr><td>Access to services

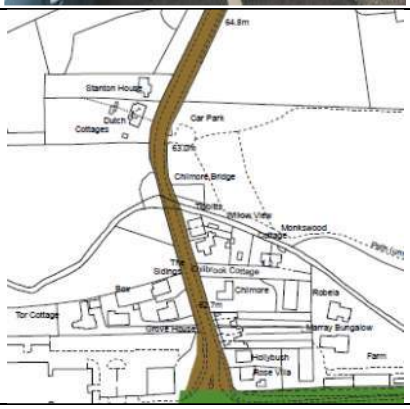
(Metres from access to the named facility)</td><td colspan="2"><table>
<tr><td>Bartholomew Secondary School</td><td>280m</td></tr>
<tr><td>Bartholomew Sports Centre</td><td>548m</td></tr>
<tr><td>Eynsham Medical Centre</td><td>634m</td></tr>
<tr><td>Town Centre</td><td>766m</td></tr>
<tr><td>Nearest Bus Stop</td><td>182m</td></tr>
</table></td></tr>
<tr><td>Potential Secondary Access Function</td><td colspan="2">The Thornbury Road access has the potential to provide a good standard of link from the site for pedestrian and cycle access to local facilities via Witney Road. The route is one of the higher standard carriageways considered but may be constrained due to the number of units already served, the resulting length of cul-de-sac, and the standard of the junction onto Witney Road. Thornbury Road could potentially serve as a public transport and / or emergency link.</td></tr>
</table>

<table>
<tr><td>Access Option</td><td colspan="2">Chilbridge Road</td></tr>
<tr><td>Location</td><td>Located part way along Chilbridge Road, approximately 200m from the western arm of the Chilbridge Road / Witney Road / Acre End Street / Merton Close mini-roundabout.</td><td> 
</td></tr>
<tr><td>Existing Conditions</td><td>Chilbridge Road is an unadopted highway, which varies in width between 3.4m and 4.0m with no segregated footway or cycle provision.</td><td>  </td></tr>
<tr><td>Highway Boundary</td><td>Based upon the extent of public highway in the vicinity of the potential access location, there is currently a gap between the site and existing public highway due to the unadopted status of Chilbridge Lane (although it is classed as bridleway). The eastern length of the road also falls outside of the current SDA site boundary. As such the mechanism for improving the lane (should works be required) may need to be explored further.</td><td>  </td></tr>
<tr><td>Access to services

(Metres from access to the named facility)</td><td colspan="2"><table>
<tr><td>Bartholomew Secondary School</td><td>506m</td></tr>
<tr><td>Bartholomew Sports Centre</td><td>665m</td></tr>
<tr><td>Eynsham Medical Centre</td><td>632m</td></tr>
<tr><td>Village Centre</td><td>617m</td></tr>
<tr><td>Nearest Bus Stop</td><td>264m</td></tr>
</table></td></tr>
<tr><td>Potential Secondary Access Function</td><td colspan="2">The Chilbridge Road access has the potential to provide a good standard of pedestrian link from the site for pedestrian and cycle access to local facilities. In addition, the route is expected to continue to provide an important leisure and recreation function. Chilbridge Road is not considered suitable for additional vehicular traffic due to limited carriageway widths and heavy use by pedestrians and equestrians.</td></tr>
</table>

<table>
<tr><td>Access Option</td><td colspan="2">Merton Close</td></tr>
<tr><td>Location</td><td>Located to the south of the Chilbridge Road / Witney Road / Acre End Street junction. The access would be located approximately 300m into the Close.</td><td> 
</td></tr>
<tr><td>Existing Conditions</td><td>The section of Merton Close adjacent to the potential access location consists of a 4.8m carriageway with a 1.5m footway to one side. Between the access location and the junction with Chilbridge Road / Witney Road / Acre End Street the road serves existing residential properties and has sections of traffic calming.</td><td>  </td></tr>
<tr><td>Highway Boundary</td><td>Based upon the extent of public highway in the vicinity of the potential access location there should be the scope to provide a direct connection to the existing highway via a new link either utilising, or adjacent to, the existing Merton House access.</td><td>  </td></tr>
<tr><td>Access to services

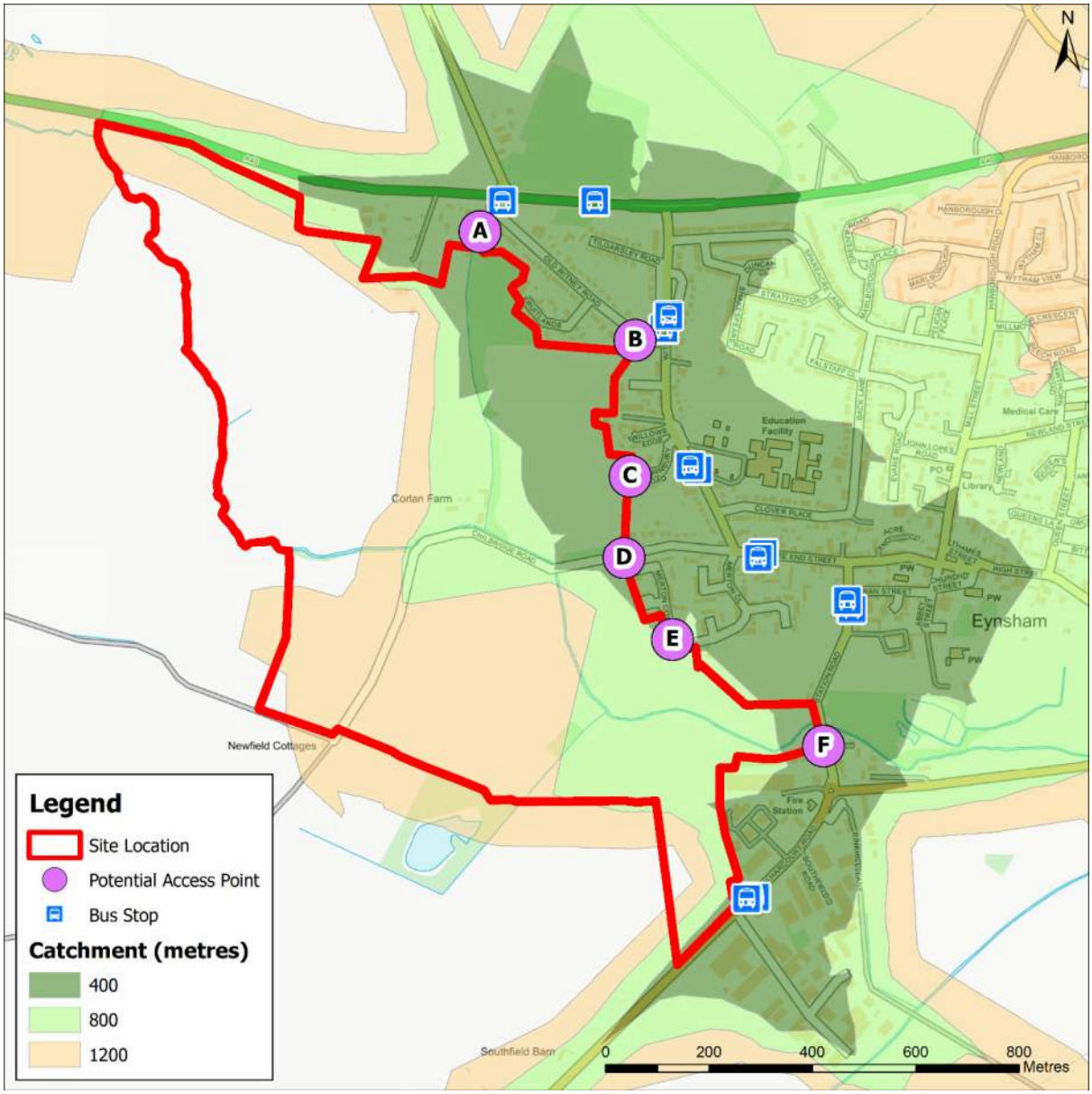
(Metres from access to the named facility)</td><td colspan="2"><table>
<tr><td>Bartholomew Secondary School</td><td>627m</td></tr>
<tr><td>Bartholomew Sports Centre</td><td>786m</td></tr>
<tr><td>Eynsham Medical Centre</td><td>753m</td></tr>
<tr><td>Village Centre</td><td>738m</td></tr>
<tr><td>Nearest Bus Stop</td><td>385m</td></tr>
</table></td></tr>
<tr><td>Potential Secondary Access Function</td><td colspan="2">The Merton Close access has the potential to provide a pedestrian link from the site for pedestrian and cycle access, although the subsequent route through Merton Close is not particularly direct. Due to the existing number of units served and the nature of the surrounding roads, Merton Close is not considered appropriate for any significant increase in vehicular traffic, although it could potentially provide access for emergency vehicles or serve a very limited number of dwellings.</td></tr>
</table>

<table>
<tr><td>Access Option</td><td colspan="2">Station Road</td></tr>
<tr><td>Location</td><td>The southernmost of the secondary access options. The Station Road access would connect into the SDA via a new junction directly onto Station Road itself.</td><td> 
</td></tr>
<tr><td>Existing Conditions</td><td>Station Road consists of a 5.5m carriageway, with a varying width footway on its eastern side. Parking associated with residential properties at the southern end of the road limit the usable carriageway widths for the section between the potential access location and the junction with the B4449.</td><td>  </td></tr>
<tr><td>Highway Boundary</td><td>Based upon the extent of public highway in the vicinity of the potential access location there should be the scope to provide a direct connection to the existing highway.</td><td> 
</td></tr>
<tr><td>Access to services

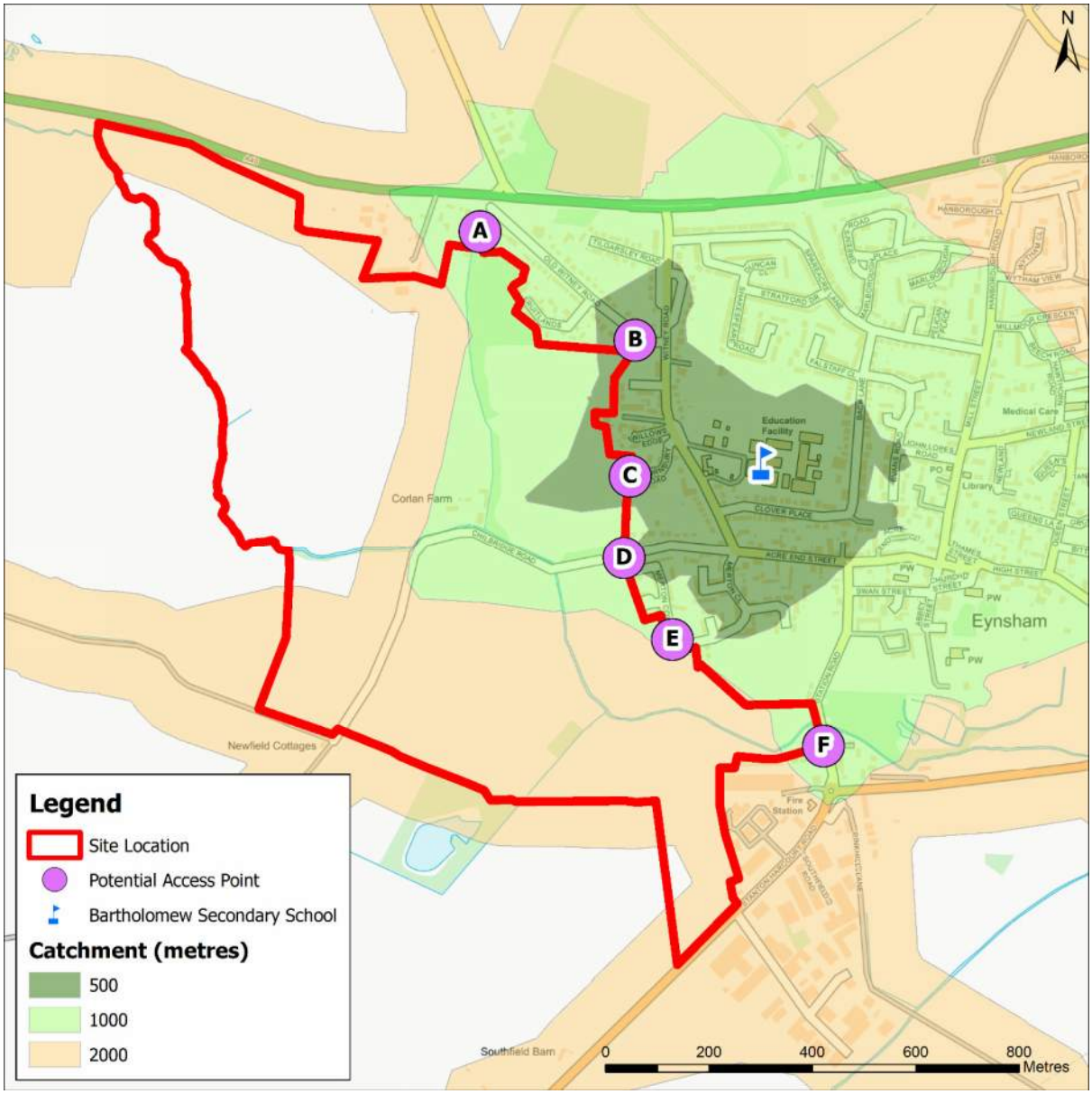
(Metres from access to the named facility)</td><td colspan="2"><table>
<tr><td>Bartholomew Secondary School</td><td>872m</td></tr>
<tr><td>Bartholomew Sports Centre</td><td>650m</td></tr>
<tr><td>Eynsham Medical Centre</td><td>617m</td></tr>
<tr><td>Village Centre</td><td>513m</td></tr>
<tr><td>Nearest Bus Stop</td><td>280m</td></tr>
</table></td></tr>
<tr><td>Potential Secondary Access Function</td><td colspan="2">The Station Road access has the potential to provide a link from the site for pedestrian and cycle access. The proximity of the access to the B4449 and the reasonable standard of the road also makes this suitable for consideration as an emergency access, however this may be constrained by other factors within the SDA, particularly the flood zones surrounding the Chil Brook.</td></tr>
</table>

Appendix E – Accessibility Plans

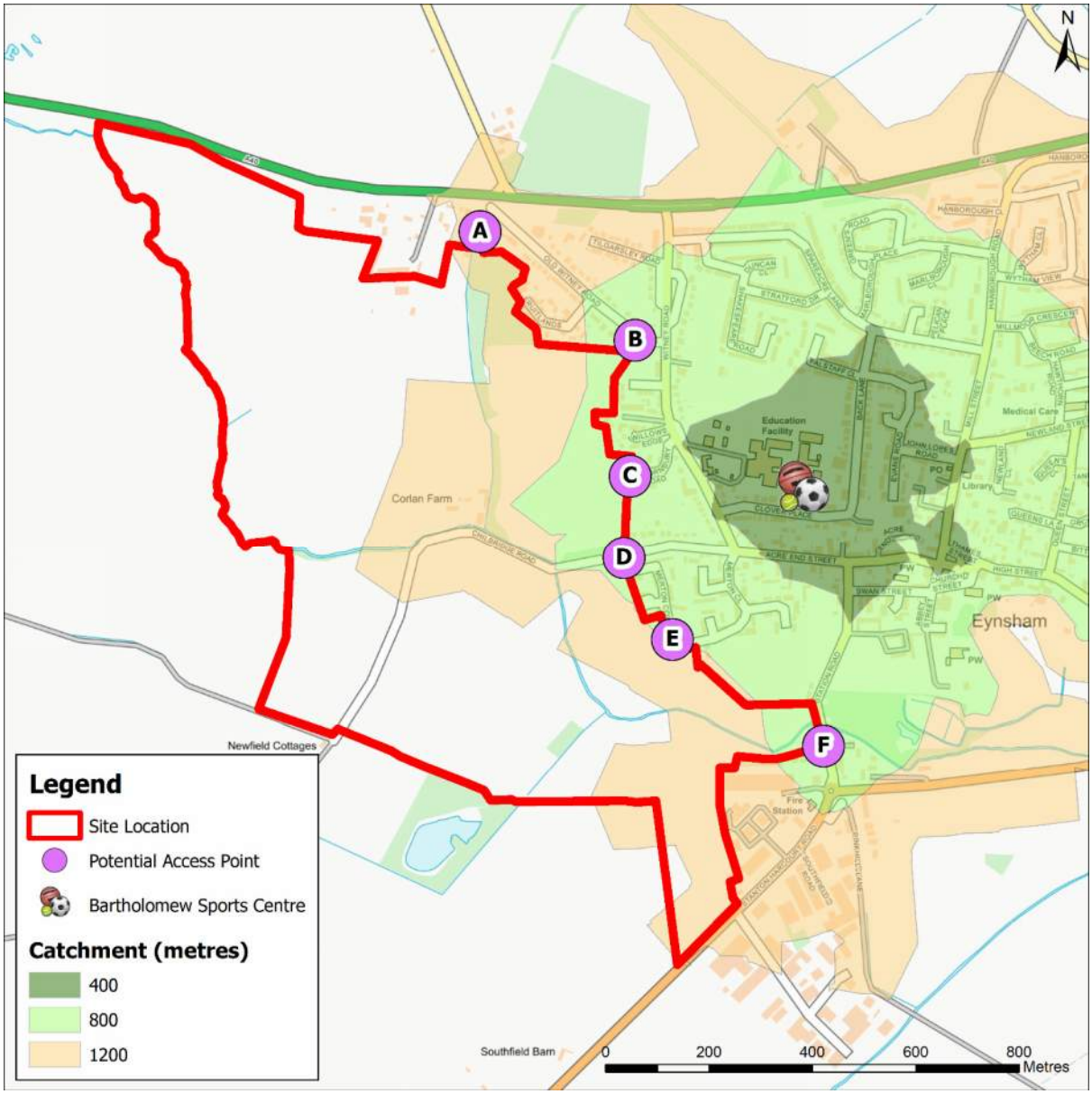
Access to Bus Stops



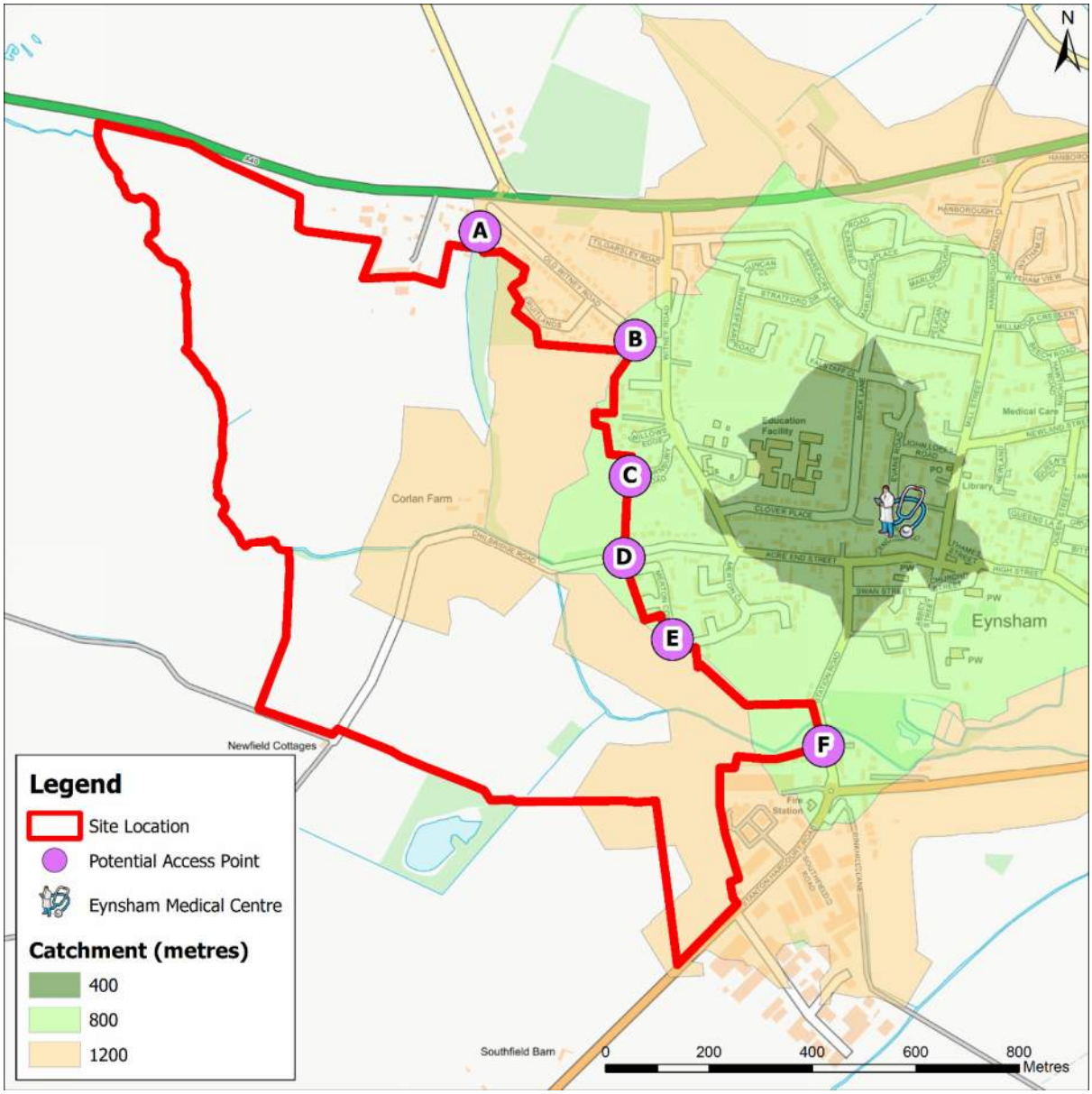
Access to Bartholomew Secondary



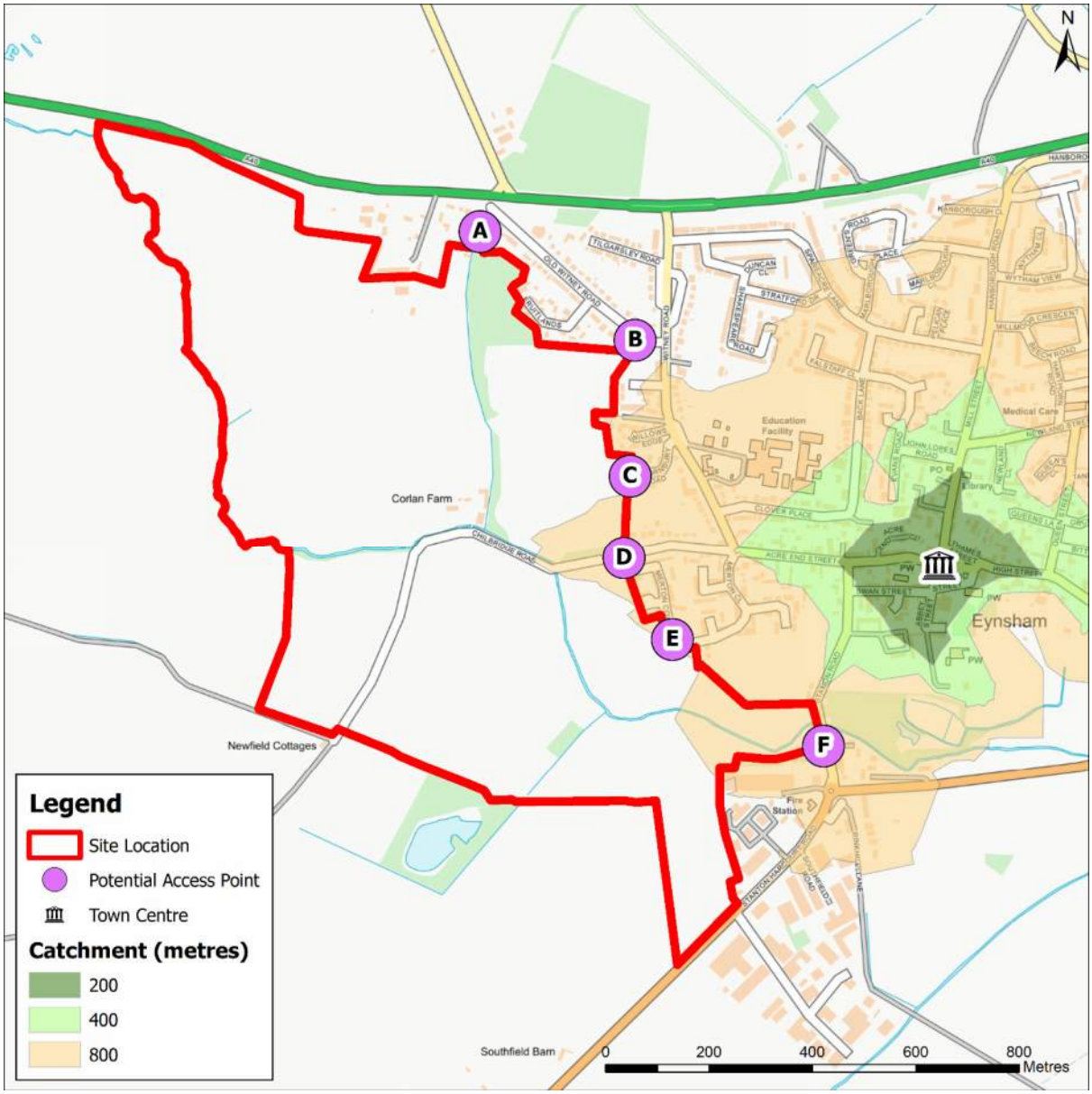
Access to Bartholomew Sports Centre



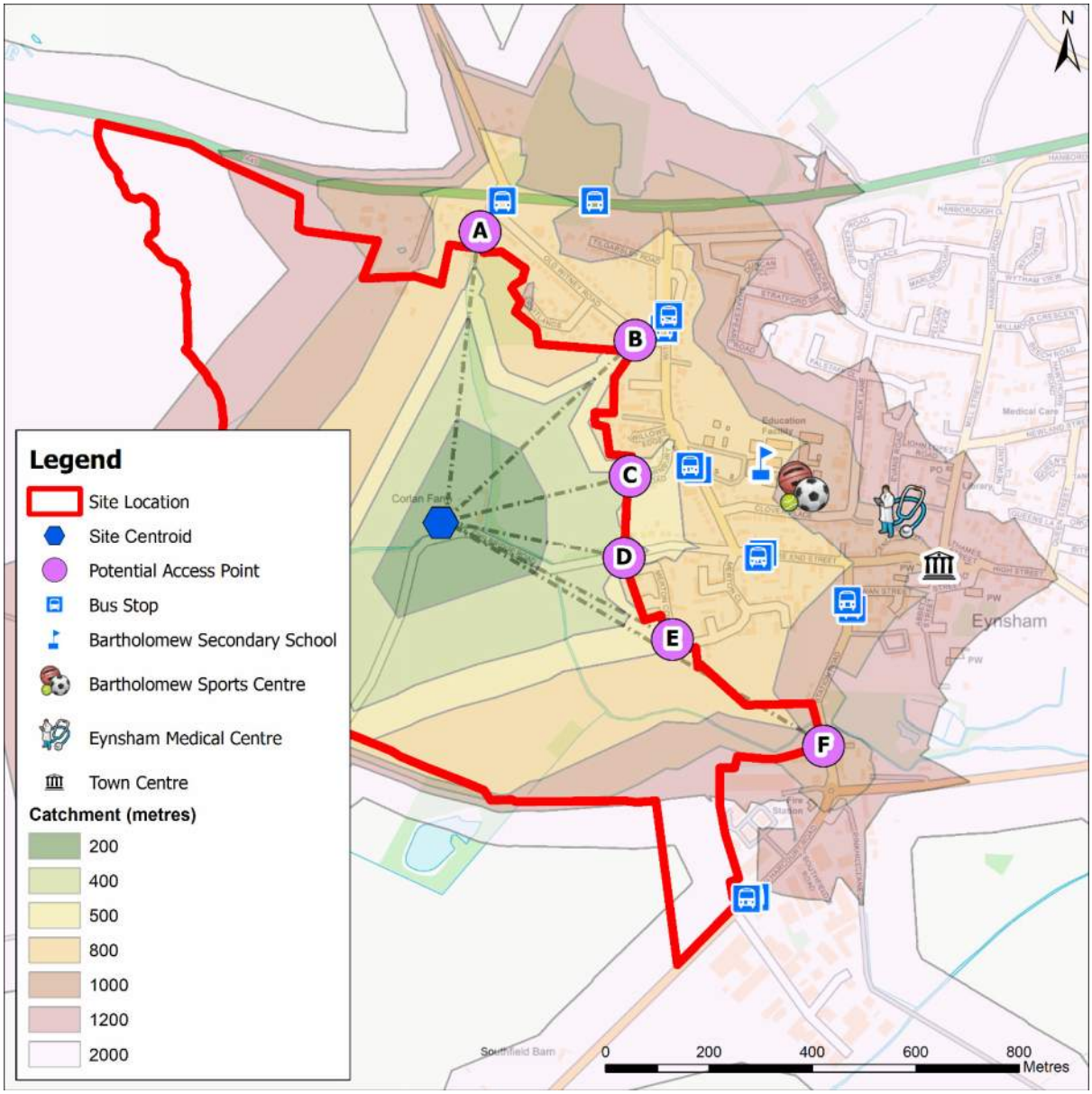
Access to Eynsham Medical Centre



Access to Eynsham Village Centre



Travel Distances from Site Centroid



Appendix F – Constraints Mapping

N

Legend

- Site Location
- Nursery Site
- Thornbury Road
- Footpath
- Bridleway
- Unregistered Ditch
- Chil Bridge (Listed Building)
- Scheduled Ancient Monument
- Flood Zone 2
- Flood Zone 3

0 100 200 300 400 Metres

REV	DESCRIPTION	BY	CHK	APP	DATE

Client:
West Oxfordshire District Council and Oxfordshire County Council

EXECUTIVE PARK
AVALON WAY
ANSTEY
LEICESTER
LE7 7GR
TEL: +44 (0)116 234 8000
FAX: +44 (0)116 234 8001
e-mail: leicester@wyg.com

Project:
West Eynsham SDA

Drawing Title:
Constraints Plan
(Highway Boundary Overlay)

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
NTS	JJC	22/06/20	JP	22/06/20	XXX	xx/xx/xx

Project No.	Office	Type	Drawing No.	Revision
A117736	35	18	007	-

Appendix G – Option Appraisal Summary Table

Option Appraisal Summary Sheet

			Option 1	Option 2	Option 3	Option 4
			A40 (W) only	A40 (E) only	Access from both	Bus only link to P&R
Objective	**Sub-objective**	**Assessment criteria**				
Manage impacts on the wider highway network	Objective H1: Minimise adverse impacts on A40 journey times	1. VISSM Model and Junction Modelling Results (comparison between scenarios, delay on A40 approaches).	-1	1	0	-1
		2. Impact upon bus priority, including access to / from the Park and Ride.	1	-1	0	1
	Objective H2: Accommodate existing and forecast freight movements on the strategic road network	1. Need to relocate lorry parking / layby areas.	0	-2	-2	-2
		2. Delay on A40 Approaches.	-1	1	0	-1
Objective	**Sub-objective**	**Assessment criteria**	-1	-1	-2	-3
Encourage and enable safe Sustainable Travel	Objective S1: Enable improved access to, and use of, public transport	1. Allowance for bus connections / services.	0	0	0	2
		2. Link to Park and Ride	0	1	0	1
		3. Links to bus stops on the A40	0	1	0	0
		4. Links to bus stops within Eynsham	0	0	0	0
	Objective S2: Maximise permeability through the site for pedestrians and cyclists	1. Allowance for pedestrian and cycle routes along spine road.	2	2	2	2
		2. Protection of pedestrian east - west corridors within site.	-1	-1	-1	-1
		3. Allowance for connections north-south to the Garden Village and Science Park	2	0	2	2
	Objective S3: Maintain and enhance safety for all highway users	1. Allowance for appropriate crossing points at A40 junction.	0	1	0	0
		2. Allowance for safe crossing of the Spine Road.	1	1	1	1
Objective	**Sub-objective**	**Assessment criteria**	4	5	4	7
Protect and enhance the local environment	Objective E1: Protect the natural environmental and heritage assets of the West Eynsham SDA site	1. Impact on Floodplain.	-2	0	-2	-2
		2. Impact on Chilbrook.	0	0	0	0
		3. Impact on Scheduled Ancient Monument.	-1	-1	-1	-1
		4. Impact on Chil Bridge.	0	0	0	0
		5. Number of North-South Crossings.	0	0	0	0
	Objective E2: Maintain access to the surrounding Countryside	1. Protection of east - west corridors within the site.	-1	-1	-1	-1
	Objective E3: Protect and enhance the environment within Eynsham	1. Scope to remove traffic from Eynsham Village.	1	1	1	1
		2. Number of vehicular connections into Eynsham.	0	0	0	0
Objective	**Sub-objective**	**Assessment criteria**	-3	-1	-3	-3
Support positive placemaking	Objective P1: Provide a route which effectively serves the needs of residents of the West Eynsham SDA	1. Nature of the Spine Road (i.e. development frontage / side friction / relationship with School Site).	-1	1	-1	-1
		2. Standard / Speed of spine road.	1	1	1	1
		3. Provision of pedestrian / cycle facilities.	2	2	2	2
		4. Ability for east - west links to be maintained or provided.	0	0	-1	0
	Objective P2: Enable delivery of comprehensive development	1. Positive relationship with the Garden Village Development.	2	0	2	2
		2. Positive relationship with Park and Ride site.	0	2	0	2
		3. Ability to deliver the full route.	2	1	2	2
	Objective P3: Positively integrate the West Eynsham SDA with the existing community, providing access to and from local facilities	1. Number and quality of links to the west of Eynsham.	2	2	2	2
		2. Walking and cycling distances to existing facilities with Eynsham using secondary access points.	0	1	0	0
Objective	**Sub-objective**	**Assessment criteria**	8	10	7	10
Total			8	13	6	11

2	Major Benefit
1	Minor Benefit
0	Neutral
-1	Minor Disbenefit
	Major Disbenefit

Option 1: Western Roundabout Access Onto A40

			Score	Rationale for Scoring
Objective	**Sub-objective**	**Assessment criteria**		
Manage impacts on the wider highway network	Objective H1: Minimise adverse impacts on A40 journey times	1. VISSM Model and Junction Modelling Results (comparison between scenarios, delay on A40 approaches).	-1	Greatest level of delay on A40
		2. Impact upon bus priority, including access to / from the Park and Ride.	1	Least delay on P&R exit
	Objective H2: Accommodate existing and forecast freight movements on the strategic road network	1. Need to relocate lorry parking / layby areas.	0	No requirement to relocate westbound lay-by
		2. Delay on A40 Approaches.	-1	Greatest level of delay on A40
Objective	**Sub-objective**	**Assessment criteria**		
Encourage and enable safe Sustainable Travel	Objective S1: Enable improved access to, and use of, public transport	1. Allowance for bus connections / services.	0	No major benefit or disbenefit
		2. Link to Park and Ride	0	Slightly more remote from P&R
		3. Links to bus stops on the A40	0	No major benefit or disbenefit
		4. Links to bus stops within Eynsham	0	Slightly more remote from bus stops within Eynsham
	Objective S2: Maximise permeability through the site for pedestrians and cyclists	1. Allowance for pedestrian and cycle routes along spine road.	2	Alowance made for walking / cycling
		2. Protection of pedestrian east - west corridors within site.	-1	Crossing Chilbridge Road
		3. Allowance for connections north-south to the Garden Village and Science Park	2	Good connectivity to Garden Village and Science Park, however pedestrian and cycle provision is more remote.
	Objective S3: Maintain and enhance safety for all highway users	1. Allowance for appropriate crossing points at A40 junction.	0	No specific provision
		2. Allowance for safe crossing of the Spine Road.	1	Allowance for crossing facilities
Objective	**Sub-objective**	**Assessment criteria**		
Protect and enhance the local environment	Objective E1: Protect the natural environmental and heritage assets of the West Eynsham SDA site	1. Impact on Floodplain.	-2	Impacts on Floodzone 2 & 3
		2. Impact on Chilbrook.	0	Bridges Chilbrook
		3. Impact on Scheduled Ancient Monument.	-1	Impacts on boundary of the SAM
		4. Impact on Chil Bridge.	0	Remote from Chilbridge
		5. Number of North-South Crossings.	0	One road crossing proposed
	Objective E2: Maintain access to the surrounding Countryside	1. Protection of east - west corridors within the site.	-1	Impact on Chilbridge Road
	Objective E3: Protect and enhance the environment within Eynsham	1. Scope to remove traffic from Eynsham Village.	1	40.1% of traffic using the Spine Road is non-development.
		2. Number of vehicular connections into Eynsham.	0	No direct vehicle connections
Objective	**Sub-objective**	**Assessment criteria**		
Support positive placemaking	Objective P1: Provide a route which effectively serves the needs of residents of the West Eynsham SDA	1. Nature of the Spine Road (i.e. development frontage / side friction / relationship with School Site).	-1	1 sided development to the north
		2. Standard / Speed of spine road.	1	30mph
		3. Provision of pedestrian / cycle facilities.	2	Alowance made for walking / cycling
		4. Ability for east - west links to be maintained or provided.	0	No major benefit or disbenefit
	Objective P2: Enable delivery of comprehensive development	1. Positive relationship with the Garden Village Development.	2	Good connectivity to Garden Village and Science Park, however pedestrian and cycle provision is more remote.
		2. Positive relationship with Park and Ride site.	0	No major benefit or disbenefit
		3. Ability to deliver the full route.	2	Within control of two landowners
	Objective P3: Positively integrate the West Eynsham SDA with the existing community, providing access to and from local facilities	1. Number and quality of links to the west of Eynsham.	2	Subject to achieving links through other development parcels
		2. Walking and cycling distances to existing facilities with Eynsham using secondary access points.	0	Spine Road is more remote from secondary access locations

2	Major Benefit
1	Minor Benefit
0	Neutral
-1	Minor Disbenefit
-2	Major Disbenefit

Option 2: Eastern Roundabout Access onto A40

			Score	Rationale for Scoring
Objective	**Sub-objective**	**Assessment criteria**		
Manage impacts on the wider highway network	Objective H1: Minimise adverse impacts on A40 journey times	1. VISSM Model and Junction Modelling Results (comparison between scenarios, delay on A40 approaches).	1	Lowest level of delay on A40 approaches
		2. Impact upon bus priority, including access to / from the Park and Ride.	-1	Greatest delay on P&R exit
	Objective H2: Accommodate existing and forecast freight movements on the strategic road network	1. Need to relocate lorry parking / layby areas.	-2	Requirment to relocate lay-by, not currently accounted for
		2. Delay on A40 Approaches.	1	Lowest level of delay on A40 approaches
Objective	**Sub-objective**	**Assessment criteria**		
Encourage and enable safe Sustainable Travel	Objective S1: Enable improved access to, and use of, public transport	1. Allowance for bus connections / services.	0	No major benefits or disbenefits
		2. Link to Park and Ride	1	Direct link to P&R
		3. Links to bus stops on the A40	1	Slightly closer to bus stops on A40
		4. Links to bus stops within Eynsham	0	No major benefits or disbenefits
	Objective S2: Maximise permeability through the site for pedestrians and cyclists	1. Allowance for pedestrian and cycle routes along spine road.	2	Allowance made for walking and cycling
		2. Protection of pedestrian east - west corridors within site.	-1	Crossing Chilbridge Road
		3. Allowance for connections north-south to the Garden Village and Science Park	0	Connection possible via P&R site and pedestrian crossing to the east
	Objective S3: Maintain and enhance safety for all highway users	1. Allowance for appropriate crossing points at A40 junction.	1	No specific provision, but well located for grade seperated crossing of A40
		2. Allowance for safe crossing of the Spine Road.	1	Allowance for crossing facilities
Objective	**Sub-objective**	**Assessment criteria**		
Protect and enhance the local environment	Objective E1: Protect the natural environmental and heritage assets of the West Eynsham SDA site	1. Impact on Floodplain.	0	No major benefits or disbenefits
		2. Impact on Chilbrook.	0	Bridges Chilbrook
		3. Impact on Scheduled Ancient Monument.	-1	Impacts on boundary of the SAM
		4. Impact on Chil Bridge.	0	Remote from Chilbridge
		5. Number of North-South Crossings.	0	One road crossing proposed
	Objective E2: Maintain access to the surrounding Countryside	1. Protection of east - west corridors within the site.	-1	Impact on Childbridge Road
	Objective E3: Protect and enhance the environment within Eynsham	1. Scope to remove traffic from Eynsham Village.	1	42.5% of traffic using the Spine Road is non development
		2. Number of vehicular connections into Eynsham.	0	No direct vehicle connections
Objective	**Sub-objective**	**Assessment criteria**		
Support positive placemaking	Objective P1: Provide a route which effectively serves the needs of residents of the West Eynsham SDA	1. Nature of the Spine Road (i.e. development frontage / side friction / relationship with School Site).	1	Centre of the site, with two active frontages
		2. Standard / Speed of spine road.	1	30mph
		3. Provision of pedestrian / cycle facilities.	2	Alowance made for walking / cycling
		4. Ability for east - west links to be maintained or provided.	0	No major benefit or disbenefit
	Objective P2: Enable delivery of comprehensive development	1. Positive relationship with the Garden Village Development.	0	Connection possible via P&R site and pedestrian crossing to the east
		2. Positive relationship with Park and Ride site.	2	Good level of connectivitiy to the P&R
		3. Ability to deliver the full route.	1	Route falls across several ownerships
	Objective P3: Positively integrate the West Eynsham SDA with the existing community, providing access to and	1. Number and quality of links to the west of Eynsham.	2	Subject to achieving links through other development parcels
		2. Walking and cycling distances to existing facilities with Eynsham using secondary access points.	1	Spine Road is closer to secondary access locations

2	Major Benefit
1	Minor Benefit
0	Neutral
-1	Minor Disbenefit
-2	Major Disbenefit

Option 3: Access via both Western and Eastern Junctions onto A40

			Score	Rationale for Scoring
Objective	**Sub-objective**	**Assessment criteria**		
Manage impacts on the wider highway network	Objective H1: Minimise adverse impacts on A40 journey times	1. VISSM Model and Junction Modelling Results (comparison between scenarios, delay on A40 approaches).	0	Levels of delay between those of the other two options
		2. Impact upon bus priority, including access to / from the Park and Ride.	0	Levels of delay between those of the other two options
	Objective H2: Accommodate existing and forecast freight movements on the strategic road network	1. Need to relocate lorry parking / layby areas.	-2	Requirment to relocate lay-by, not currently accounted for
		2. Delay on A40 Approaches.	0	Levels of delay between those of the other two options
Objective	**Sub-objective**	**Assessment criteria**		
Encourage and enable safe Sustainable Travel	Objective S1: Enable improved access to, and use of, public transport	1. Allowance for bus connections / services.	0	No major benefit or disbenefit
		2. Link to Park and Ride	0	Main spine road is slightly more remote from P&R
		3. Links to bus stops on the A40	0	Main Spine Road is slightly more remote from bus stops on A40
		4. Links to bus stops within Eynsham	0	Main Spine Road is slightly more remote from bus stops within Eynsham
	Objective S2: Maximise permeability through the site for pedestrians and cyclists	1. Allowance for pedestrian and cycle routes along spine road.	2	Alowance made for walking / cycling
		2. Protection of pedestrian east - west corridors within site.	-1	Crossing Chilbridge Road
		3. Allowance for connections north-south to the Garden Village and Science Park	2	Good connectivity to Garden Village and Science Park, however pedestrian and cycle provision is more remote.
	Objective S3: Maintain and enhance safety for all highway users	1. Allowance for appropriate crossing points at A40 junction.	0	No specific provision
		2. Allowance for safe crossing of the Spine Road.	1	Allowance for crossing facilities
Objective	**Sub-objective**	**Assessment criteria**		
Protect and enhance the local environment	Objective E1: Protect the natural environmental and heritage assets of the West Eynsham SDA site	1. Impact on Floodplain.	-2	Main Spine Road impacts on Floodzone 2 & 3
		2. Impact on Chilbrook.	0	Bridges Chilbrook
		3. Impact on Scheduled Ancient Monument.	-1	Impacts on boundary of the SAM
		4. Impact on Chil Bridge.	0	Remote from Chilbridge
		5. Number of North-South Crossings.	0	One road crossing proposed
	Objective E2: Maintain access to the surrounding Countryside	1. Protection of east - west corridors within the site.	-1	Impact on Chilbridge Road
	Objective E3: Protect and enhance the environment within Eynsham	1. Scope to remove traffic from Eynsham Village.	1	40.1% of traffic using the Spine Road is non-development.
		2. Number of vehicular connections into Eynsham.	0	No direct vehicle connections
Objective	**Sub-objective**	**Assessment criteria**		
Support positive placemaking	Objective P1: Provide a route which effectively serves the needs of residents of the West Eynsham SDA	1. Nature of the Spine Road (i.e. development frontage / side friction / relationship with School Site).	-1	1 sided development to the north
		2. Standard / Speed of spine road.	1	30mph
		3. Provision of pedestrian / cycle facilities.	2	Alowance made for walking / cycling
		4. Ability for east - west links to be maintained or provided.	-1	Will require the crossing of further development parcels to the east
	Objective P2: Enable delivery of comprehensive development	1. Positive relationship with the Garden Village Development.	2	Good connectivity to Garden Village and Science Park, however pedestrian and cycle provision is more remote.
		2. Positive relationship with Park and Ride site.	0	No major benefit or disbenefit
		3. Ability to deliver the full route.	2	Main spine road within control of two landowners
	Objective P3: Positively integrate the West Eynsham SDA with the existing community, providing access to and from local facilities	1. Number and quality of links to the west of Eynsham.	2	Subject to achieving links through other development parcels
		2. Walking and cycling distances to existing facilities with Eynsham using secondary access points.	0	Spine Road is more remote from secondary access locations

2	Major Benefit
1	Minor Benefit
0	Neutral
-1	Minor Disbenefit
-2	Major Disbenefit

Option 4: Bus only link on P&R southern arm

			Score	Rationale for Scoring
Objective	**Sub-objective**	**Assessment criteria**		
Manage impacts on the wider highway network	Objective H1: Minimise adverse impacts on A40 journey times	1. VISSM Model and Junction Modelling Results (comparison between scenarios, delay on A40 approaches).	-1	Greatest level of delay on A40
		2. Impact upon bus priority, including access to / from the Park and Ride.	1	Least delay on P&R exit
	Objective H2: Accommodate existing and forecast freight movements on the strategic road network	1. Need to relocate lorry parking / layby areas.	-2	Requirment to relocate lay-by, not currently accounted for
		2. Delay on A40 Approaches.	-1	Greatest level of delay on A40
Objective	**Sub-objective**	**Assessment criteria**		
Encourage and enable safe Sustainable Travel	Objective S1: Enable improved access to, and use of, public transport	1. Allowance for bus connections / services.	2	Direct access to / from P&R for services
		2. Link to Park and Ride	1	Direct link, although Spine Road remains more remote from P&R
		3. Links to bus stops on the A40	0	Slightly more remote from bus stops on A40
		4. Links to bus stops within Eynsham	0	Eynsham
	Objective S2: Maximise permeability through the site for pedestrians and cyclists	1. Allowance for pedestrian and cycle routes along spine road.	2	Alowance made for walking / cycling
		2. Protection of pedestrian east - west corridors within site.	-1	Crossing Chilbridge Road
		3. Allowance for connections north-south to the Garden Village and Science Park	2	Good connectivity to Garden Village and Science Park, however pedestrian and cycle provision is more remote.
	Objective S3: Maintain and enhance safety for all highway users	1. Allowance for appropriate crossing points at A40 junction.	0	No specific provision
		2. Allowance for safe crossing of the Spine Road.	1	Allowance for crossing facilities
Objective	**Sub-objective**	**Assessment criteria**		
Protect and enhance the local environment	Objective E1: Protect the natural environmental and heritage assets of the West Eynsham SDA site	1. Impact on Floodplain.	-2	Impacts on Floodzone 2 & 3
		2. Impact on Chilbrook.	0	Bridges Chilbrook
		3. Impact on Scheduled Ancient Monument.	-1	Impacts on boundary of the SAM
		4. Impact on Chil Bridge.	0	Remote from Chilbridge
		5. Number of North-South Crossings.	0	One road crossing proposed
	Objective E2: Maintain access to the surrounding Countryside	1. Protection of east - west corridors within the site.	-1	Impact on Chilbridge Road
	Objective E3: Protect and enhance the environment within Eynsham	1. Scope to remove traffic from Eynsham Village.	1	40.1% of traffic using the Spine Road is non-development.
		2. Number of vehicular connections into Eynsham.	0	No direct vehicle connections
Objective	**Sub-objective**	**Assessment criteria**		
Support positive placemaking	Objective P1: Provide a route which effectively serves the needs of residents of the West Eynsham SDA	1. Nature of the Spine Road (i.e. development frontage / side friction / relationship with School Site).	-1	1 sided development to the north
		2. Standard / Speed of spine road.	1	30mph
		3. Provision of pedestrian / cycle facilities.	2	Alowance made for walking / cycling
		4. Ability for east - west links to be maintained or provided.	0	No major benefit or disbenefit
	Objective P2: Enable delivery of comprehensive development	1. Positive relationship with the Garden Village Development.	2	Good connectivity to Garden Village and Science Park, however pedestrian and cycle provision is more remote.
		2. Positive relationship with Park and Ride site.	2	Positive sustainable link with P&R
		3. Ability to deliver the full route.	2	Main Spine Road is within control of two landowners
	Objective P3: Positively integrate the West Eynsham SDA with the existing community, providing access to and from local facilities	1. Number and quality of links to the west of Eynsham.	2	Subject to achieving links through other development parcels
		2. Walking and cycling distances to existing facilities with Eynsham using secondary access points.	0	Spine Road is more remote from secondary access locations

2	Major Benefit
1	Minor Benefit
0	Neutral
-1	Minor Disbenefit
-2	Major Disbenefit

Option Assessment Metrics

Network Statistics

Scenario		Average Network Speeds (mph)	Average Network Delay (s)
1	AM	20	250.1
	PM	23.9	186.4
2	AM	19.9	251.4
	PM	23.7	190.2

Delay on A40 (Western Roundabout) (s)

		A40E	A40W	Average
AM	Option 1	4.58	9.92	7.25
	Option 2	4.95	7.08	6.02
	Option 3	4.48	9.06	6.77
PM	Option 1	4.69	5.81	5.25
	Option 2	4.14	5.31	4.73
	Option 3	4.45	5.55	5.00

Delay on A40 (P&R) (s)

		A40E	A40W	Average
AM	Option 1	1.93	2.66	2.30
	Option 2	2.06	2.01	2.04
	Option 3	1.94	2.65	2.30
PM	Option 1	1.85	2.09	1.97
	Option 2	2.01	2.35	2.18
	Option 3	1.86	2.13	2.00

Delay on exit from P&R site (s)

AM	Option 1	2.34
	Option 2	2.51
	Option 3	2.35
PM	Option 1	2.52
	Option 2	2.76
	Option 3	2.56

Distance to Bus Stops on A40 (m)

Option 1	700m
Option 2	500m
Option 3	600m

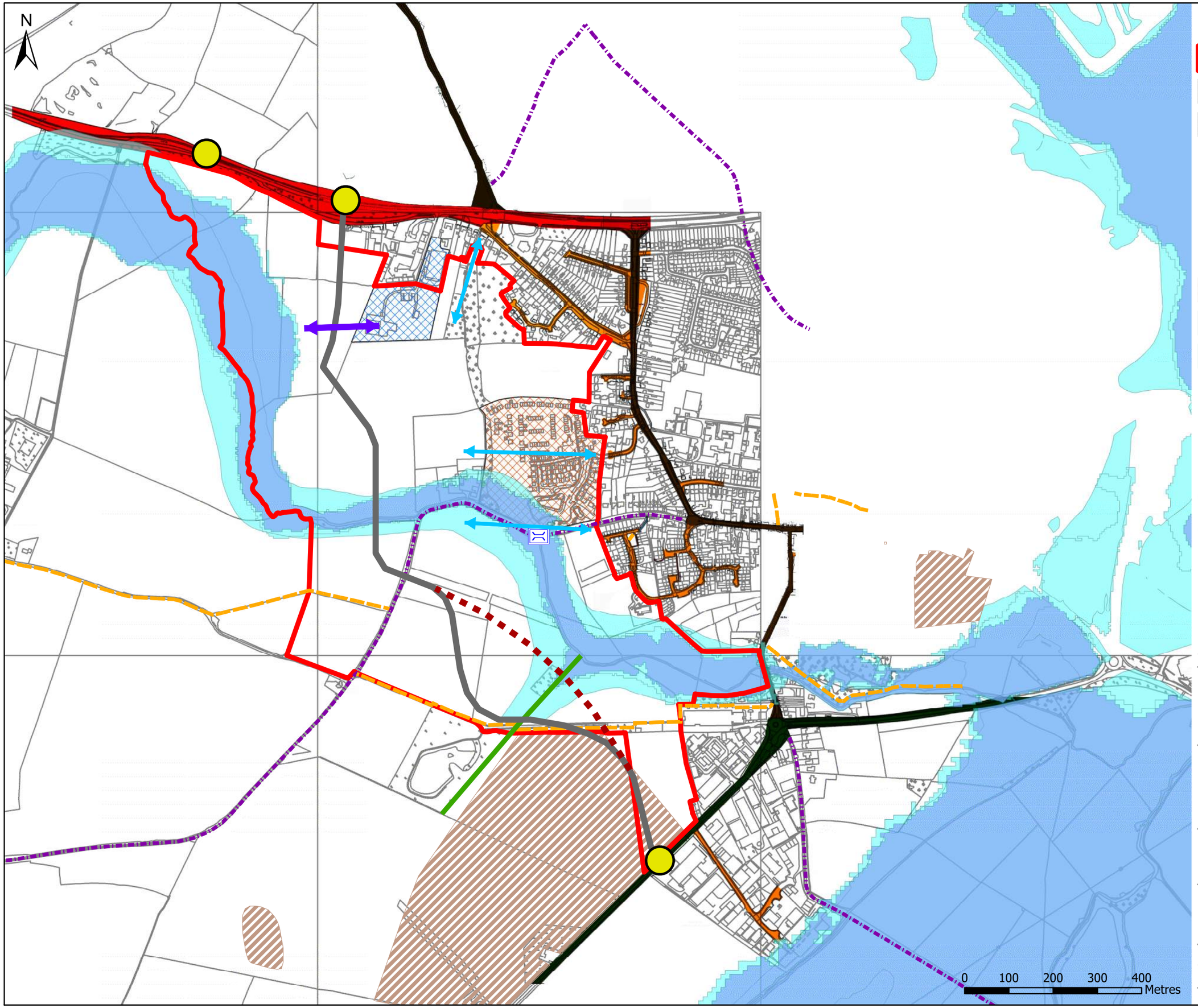
Distance to Bus Stops on Witney Road (m)

Option 1	800m
Option 2	600m
Option 3	700m

Proportion of non-development traffic using spine road

	AM peak	PM peak	Average
Option 1	58.30%	23.60%	40.95%
Option 2	61.60%	23.40%	42.50%
Option 3	59.95%	23.50%	41.73%

Appendix H – Preferred Option Summary Plan



Legend

- Site Location
- Nursery Site
- Thornbury Road
- Footpath
- Bridleway
- Unregistered Ditch
- Chil Bridge (Listed Building)
- Scheduled Ancient Monument
- Flood Zone 2
- Flood Zone 3
- Proposed Roundabout
- Indicative Link Road Alignment
- Alternative Alignment
- New Vehicular Link
- Priority Secondary Access

REV	DESCRIPTION	BY	CHK	APP	DATE

Client:

West Oxfordshire District Council and Oxfordshire County Council

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Drawing Title:

Indicative Link Road Allignment

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
NTS	BG	21/07/20	JP	21/07/20	XXX	xx/xx/xx

Project No.	Office	Type	Drawing No.	Revision
A117736	35	18	008	-