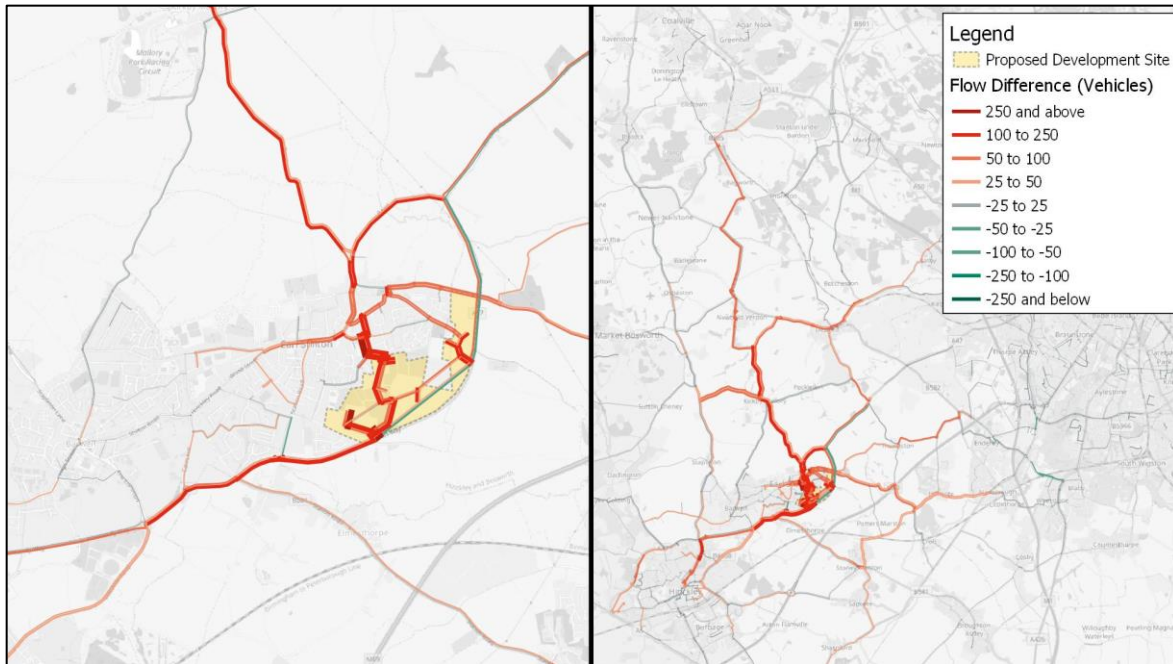
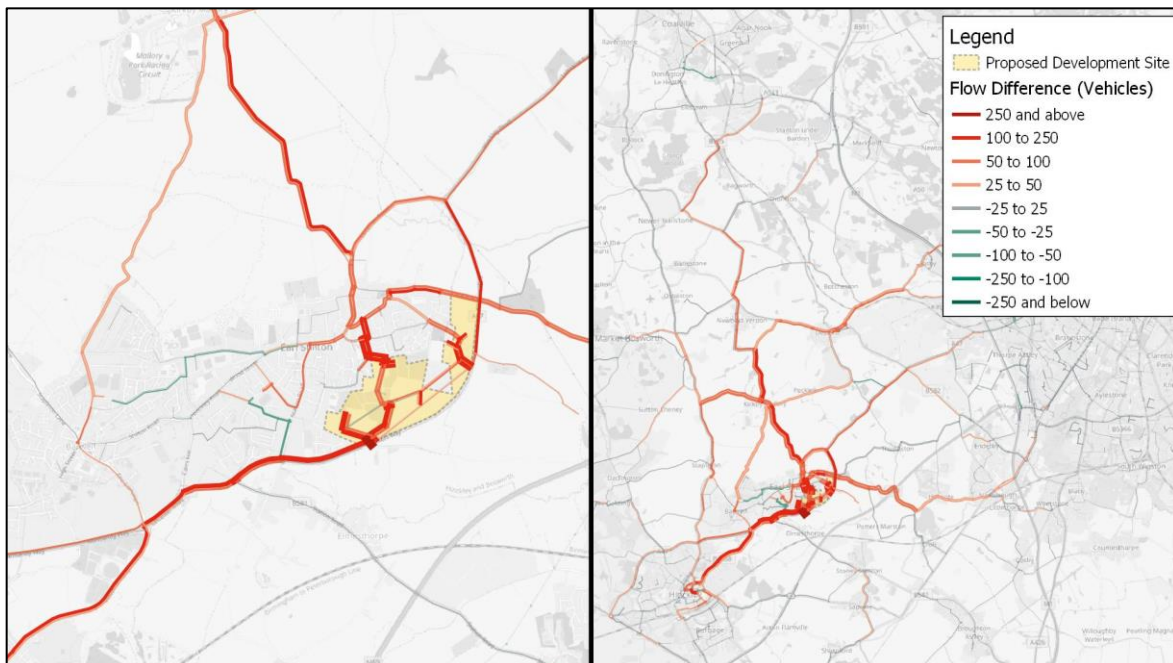


Figure 3.2: Forecast Flow Change for 2036 'With Development' minus 'Without Development' Scenarios**AM Peak hour**

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PM Peak hour

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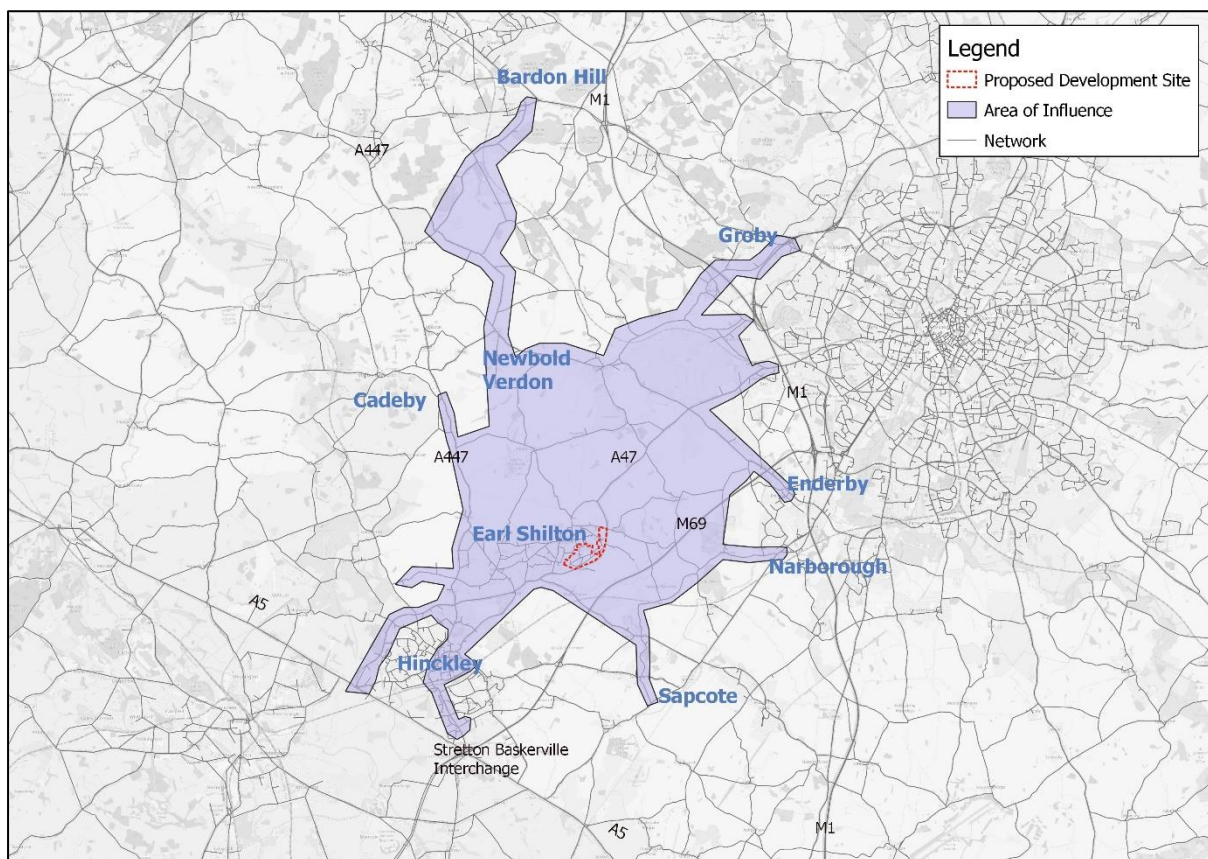
3.4 Area of Influence

3.4.1 Using the forecast flow changes between the 'With Development' and 'Without Development' scenarios, an indication of the Area of Influence has been defined. Figure 3.3 shows the Area of Influence for the proposed development (i.e. 1,600 dwellings, education and employment).

3.4.2 For the proposed development, the Area of Influence has been defined by considering the links which are forecast to change by more than $\pm 5\%$ and ± 30 PCUs between the 2026 and 2036 'With Development' and 'Without Development' scenarios in either the AM Peak or PM Peak hours. The links which are forecast to meet these criteria are included in the Area of Influence are shown in Figure 3.3, and contains the following areas / links:

- the urban centre of Earl Shilton;
- the A47 between the A5 and the M1;
- the A447 Ashby Road between Hinckley's urban centre and Cadeby;
- the B585 between Bardon Hill and Newbold Verdon;
- local Roads between Sapcote and Narborough; Sapcote Road, Long Street, Huncote Road; and
- local roads between Desford and Groby; Station Road, Desford Lane, Groby Road and Sacheverell Way.

Figure 3.3: Area of Influence



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3.5 Forecast Delay Change

- 3.5.1 As a result of forecast flow changes in the 'With Development' scenario, there are also changes to the forecast delays on the highway network. These changes in delay can be generated from two sources: link delay based on the speed-flow curve applied to the link; and junction delay due to capacity constraints for individual turning movements. The analysis in this section combines the link and junction delays (taking a flow-weighted average of junction delays) to assess the changes in forecast delays with the proposed development traffic.
- 3.5.2 Figure 3.4 and Figure 3.5 show the forecast delay changes in 2026 and 2036 between the 'With Development' and 'Without Development' scenarios for the AM and PM Peak hours. The largest increases in delay are forecast on the A47 within the immediate vicinity of the proposed development.
- 3.5.3 In both 2026 and 2036 'With Development' scenarios delay is forecast to increase compared with the 'Without Development' by over 10 seconds between the A47 / Wilkinson Lane junction and the proposed Northern A47 Roundabout (Access 2) in both AM and PM Peak hours. The largest increase in delay is forecast in the 2036 AM Peak hour, with an approximate increase of 30 seconds for westbound movements, west of the proposed Southern A47 Roundabout (Access 1).
- 3.5.4 There is a forecast increase in delay of over 2 minutes in the 2026 AM Peak hour at the B582 Hall Walk / Leicester Lane signalised junction to the west of the M1. This junction is sensitive to changes in flow and the increase in delay not a direct effect of the proposed development.

Figure 3.4: Forecast Delay Change for 2026 'With Development' minus 'Without Development' Scenarios**AM Peak hour**

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PM Peak hour

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Figure 3.5: Forecast Delay Change for 2036 'With Development' minus 'Without Development' Scenarios**AM Peak hour**

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PM Peak hour

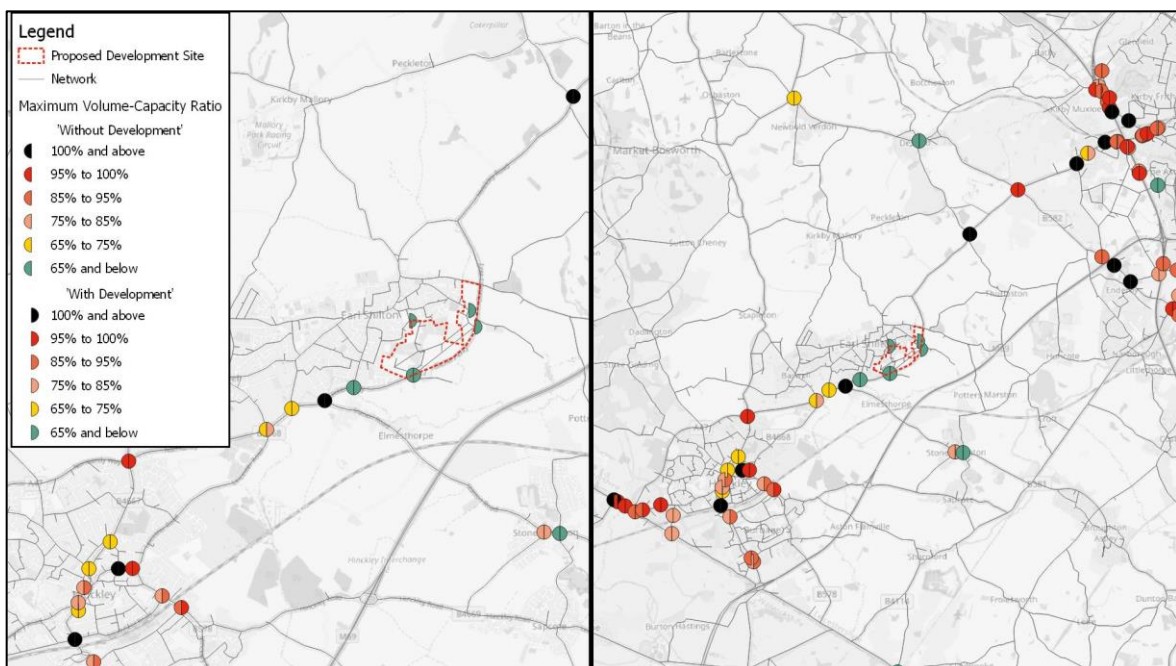
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3.6 Forecast Node Volume-Capacity Ratios

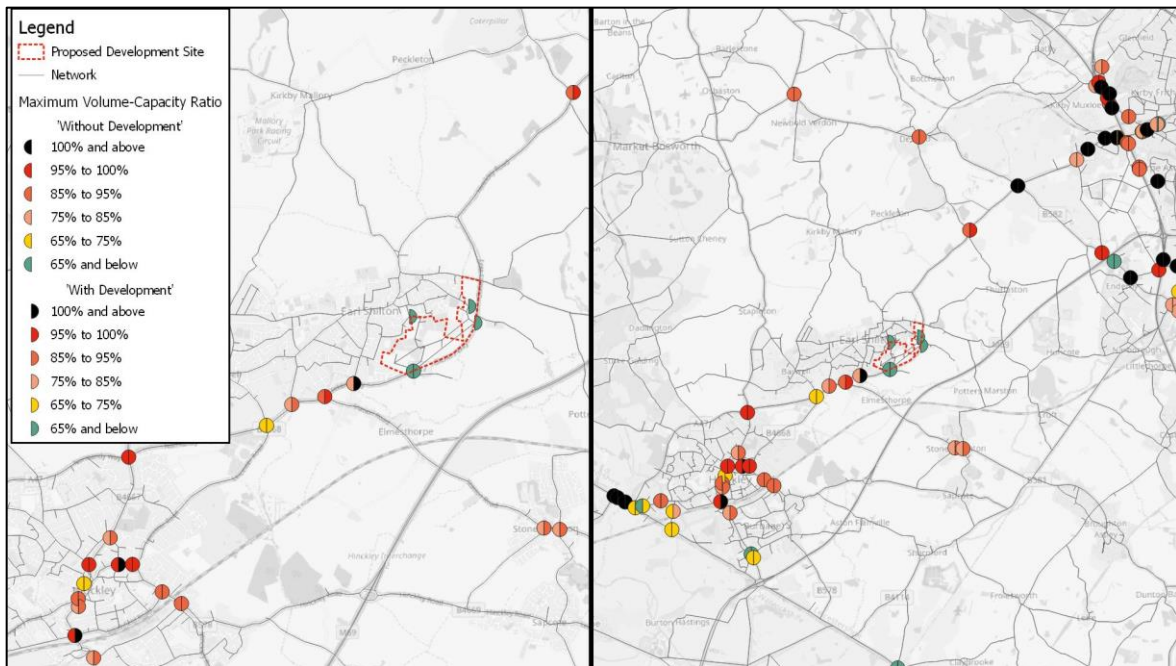
- 3.6.1 As part of the forecast modelling, node / junction capacities are estimated for individual turning movements based on several factors including the priority of the turn (for example, give-way or merge), the level of green-time at signalised junctions, and the amount of opposing traffic at the junction. Using these calculated capacities and the forecast traffic volumes, node volume-capacity ratios are estimated to identify locations where the forecast flows are approaching or exceeding the forecast capacity.
- 3.6.2 To summarise the forecast volume-capacity ratios for the individual turning movements at a node, there are two approaches. These are to calculate the flow-weighted average volume-capacity of the node, or to calculate the maximum volume-capacity ratio for all turns within a node. The average volume-capacity ratio provides an overview of how the individual node is performing but may not highlight locations where a limited number of movements at a node are approaching or exceeding capacity. To highlight these locations, the maximum volume-capacity ratio at each node has been used. Node volume-capacity ratios exceeding 85% indicate that the highway network is under stress, and there is likely to be a reduction in speed and an increase in delay.
- 3.6.3 Figure 3.6 to Figure 3.7 show the forecast maximum junction volume-capacity ratios for 2026 and 2036 'Without Development' and 'With Development' scenarios. For ease of comparison, the symbology has been designed to show the data for 'Without Development' and 'With Development' scenarios on the same plot.
- 3.6.4 The reader should note that Figure 3.6 and Figure 3.7 show a subset of all nodes within the PRTM to reduce the number of data points within the plots. The nodes with maximum volume-capacity ratios below 85% in all forecast scenarios are not shown.
- 3.6.5 The maximum node volume-capacity ratio plots show that, as expected, the junctions forecast to be the most affected by the development are on the A47 within the immediate vicinity of the proposed development. For 2026 and 2036, the proposed development increases the node volume-capacity ratios at the junctions listed below:
- 3.6.6 South of the development:
- A47 / Wilkinson Lane;
 - A47 / Station Road;
 - A47 / Leicester Road roundabout; and
 - A47 / The Common / B4668, Leicester Road roundabout.
- 3.6.7 North of the development:
- A47 Leicester Road / Dan's Lane / Desford Road; and
 - Desford Crossroads (A47 Hinckley Road / B582 Leicester Lane / B582 Desford Road).
- 3.6.8 There are also some increases (and decreases) in node volume-capacity ratios forecast for junctions within central Hinckley, along the B590 for all modelled scenarios and some increases in Stoney Stanton on the B581 in the 2036 AM and PM Peak hours. These changes in volume-capacity ratios are directly related to the forecast flow changes as shown in Figure 3.1 and Figure 3.2.
- 3.6.9 It should be noted that the A47 / Station Road, the A47 / Dan's Lane / Desford Road and the A47 / Beggars Lane junctions are already forecast to be operating above 100% in 2026 and 2036 for the PM Peak hour. Similarly, it should be noted that Desford Crossroads (A47 Hinckley Road / B582 Leicester Lane / B582 Desford Road) is already forecast to be operating above 85% in 2026 and 2036 and in both the AM and PM Peak hours.

Figure 3.6: Forecast Node Volume-Capacity Ratio for 2026 'Without Development' and 'With Development' Scenarios**AM Peak hour**

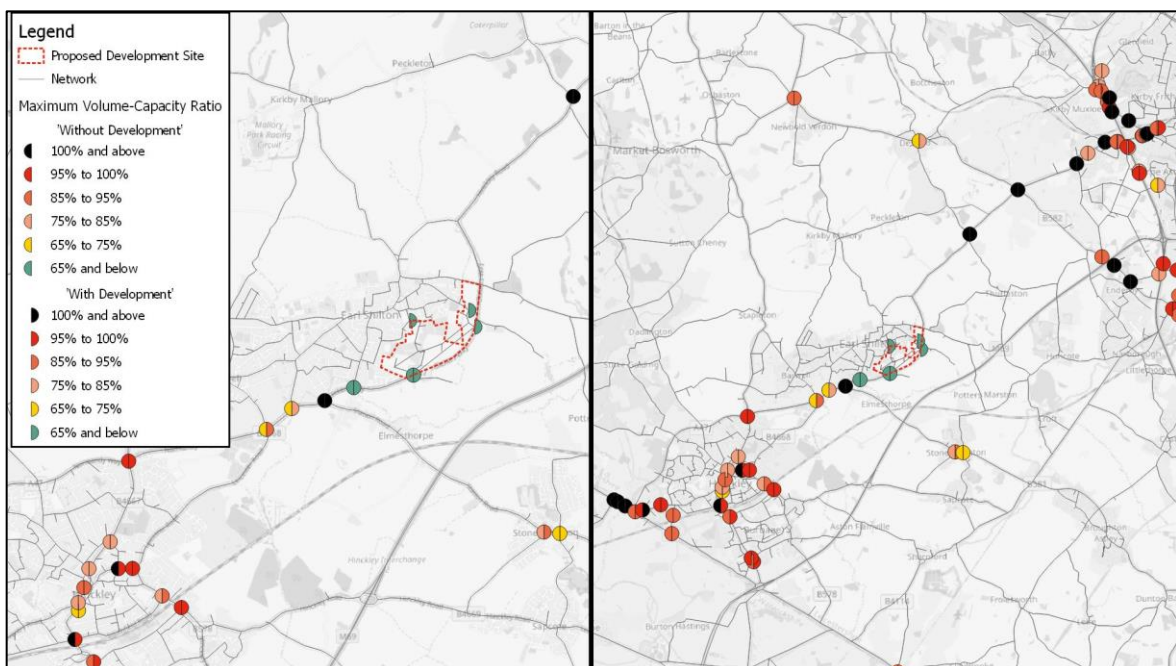
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PM Peak hour

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Figure 3.7: Forecast Node Volume-Capacity Ratio for 2036 'Without Development' and 'With Development' Scenarios**AM Peak hour**

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PM Peak hour

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3.7 Forecast Junction Turning Flows

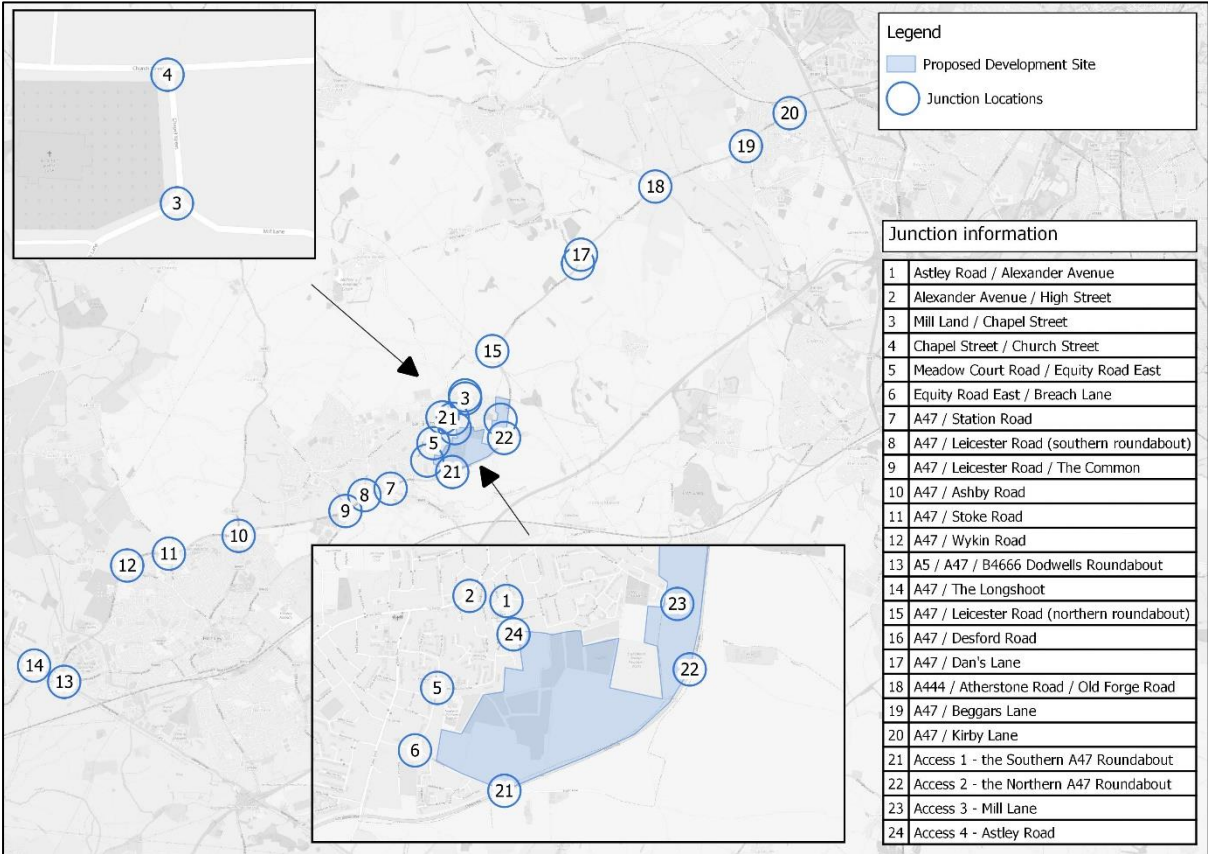
3.7.1 Forecast turning flows have been extracted for the following 22 junctions (also shown in Figure 3.8) in the vicinity of the proposed development:

- Earl Shilton junctions:
 - Astley Road / Alexander Avenue ;
 - Alexander Avenue / High Street;
 - Mill Lane / Chapel Street;
 - Chapel Street / Church Street; and
 - Meadow Court Road / Equity Road East.
- A47 junctions to the south of the site:
 - A47 / Station Road;
 - A47 / Leicester Road / The Common;
 - A47 / Ashby Road;
 - A47 / Stoke Road;
 - A47 / Wykin Road;
 - A47 / A5 / B4666 - Dodwells roundabout; and
 - A47 / The Longshoot.
- A47 junctions to the north of the site:
 - A47 / Leicester Road (northern roundabout);
 - A46 / Desford Road;
 - A47 / Ban's Lane;
 - A47 / B582 (Desford Crossroads);
 - A47 / Beggars Lane; and
 - A47 / Kirby Lane.
- Site access junctions:
 - Access 1 - the Southern A47 Roundabout;
 - Access 2 - the Northern A47 Roundabout;
 - Access 3 - Mill Lane; and
 - Access 4 - Astley Road.
 - A47 / Breach Lane;
 - A47 access roundabout south of Mill Lane;
 - Mill Lane; and
 - Astley Road.

3.7.2 The forecast turning flows for AM and PM Peak hours for light and heavy vehicles have been provided as a supplementary spreadsheet: *Junction Turning Flows - For Issue.xlsx*. Data are provided for 2026 and 2036 'Without Development' and 2026 and 2036 'With Development' scenarios. In addition to the turning flows, turn volume-capacity ratios have also been provided where available.

3.7.3 By design, the PRTM highway model has not been calibrated or validated for individual turning movements, so care should be taken when using forecasts of flows and volume-capacity ratios at this level.

Figure 3.8: Location of Forecast Turning Flow Data



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Section 4 – Summary of the PRTM Assessment

4.1 Summary of Assessment

- 4.1.1 Using the PRTM, forecasts have been undertaken to produce the 2026 and 2036 'Without Development', and the 2026 and 2036 'With Development' scenarios for both AM and PM Peak hours.
- 4.1.2 Based on these model forecasts, the following is a summary of the key findings for the assessment of the proposed development:
- Development traffic has been forecast to route via the following roads:
 - the A47 to and from Hinckley and the A5 in the west;
 - the A47 towards Leicester in the east; and
 - Astley Road and Shilton Road towards Kirkby Mallory and Newbold Verdon in the north.
 - The forecast flow changes in 2026 and 2036 between the 'With Development' and 'Without Development' scenarios show that the largest increases in flows are forecast along road in the immediate vicinity of the proposed development such as the A47 (either side of the proposed access roundabouts), Astley Road, Mill Lane, Leicester Road, Shilton Road and Thurlaston Lane.
 - In the 2026 'With Development' scenario, the A47 west of the proposed Southern A47 Roundabout (Access 1) has a forecast increase in two-way traffic of approximately 280 vehicles and 260 vehicles for the AM Peak hour and PM Peak hour respectively. Two-way traffic on the A47 to the north of the proposed Northern A47 Roundabout (Access 2) is forecast to increase by 40 vehicles and 90 vehicles in the AM and PM Peak hours respectively. Traffic on Astley Road (Access 4) and Vicarage Road is forecast to increase by approximately 420 vehicles and 250 vehicles, respectively in the AM Peak hour. In the PM Peak hour, two-way traffic flow on these two roads is forecast to increase by 360 vehicles and 250 vehicles respectively.
 - An area of Influence (Aol) for the proposed development has been defined by identifying links which are forecast to change by more than $\pm 5\%$ and ± 30 PCUs between the 'With Development' and 'Without Development' scenarios for 2026 and 2036 in either the AM Peak or PM Peak hours. The forecast Aol includes:
 - the urban centre of Earl Shilton;
 - the A47 between the A5 and the M1;
 - the A47 Ashby Road between Hinckley's urban centre and Cadeby;
 - the B585 between Bardon Hill and Newbold Verdon;
 - local Roads between Sapcote and Narborough; Sapcote Road, Long Street, Huncote Road; and
 - local roads between Desford and Groby; Station Road, Desford Lane, Groby Road and Sacheverell Way.
 - The forecast delay changes in 2026 and 2036 between the 'With Development' and 'Without Development' scenarios show the proposed development is forecast to increase delay by 10-30 seconds between the proposed Southern A47 Roundabout (Access 1) and the proposed Northern A47 Roundabout (Access 2).
- 4.1.3 The forecasts undertaken reflect the forecast impact of the proposed development at Earl Shilton. It should be noted that the results provided in this report are at a high-level. Due to the strategic nature of the PRTM, not all roads are modelled, and the results should be interpreted with that in mind.
- 4.1.4 Although the PRTM modelling provides the strategic impact and form part of the proposed Earl Shilton development assessment evidence packs, the overall assessment should be complemented by local operational assessment and analysis.

Appendix A Planning Data Assumptions

Residential Development Assumptions (Sites with more than 500 dwellings) (Hinckley and Bosworth)

District	Location	Quantum	Timescale	Include
Hinckley & Bosworth	Land North-East of Triumph Motorcycles	850	2021-2035	Y
Hinckley & Bosworth	Earl Shilton SUE	1,500	2029-2045	N
Hinckley & Bosworth	Barwell SUE	2,500	2028-2051	Y

Employment Development Assumptions (Sites with more than 750 jobs) (Hinckley and Bosworth)

District	Location	Quantum	Timescale	Include
Hinckley & Bosworth	Land East of Hinckley Island Hotel Watling Street	121,032 sqm	2019-2023	Y
Hinckley & Bosworth	Nailstone Colliery, Wood Road	121,520 sqm	2022	Y
Hinckley & Bosworth	MIRA	1,788 jobs	2026-2035	Y

Appendix B Network Assumptions

Highway Network Scheme Assumptions

Location	Scheme Name	Certainty	Timescale	First Forecast Year	Include
Hinckley & Bosworth	RGF/MIRA, A5 Redgate Junction at A444 to Higham Lane Junction	Complete	Jan-2015	2015	Y
Catthorpe	M1 J19	Complete	2016-2017	2017	Y
Nottingham	A453 upgrade - including removal of temporary 40mph speed limit	Complete	Sep-2015	2016	Y
Kegworth	M1 J24	Complete	Oct-2014	2015	Y
Hinckley & Bosworth	A5 Dodwells and Longshoot junctions	Complete	2016	2016	Y
Nottingham	M1 J23a-J25 SMART motorway	Complete	2018	2019	Y
Warwickshire	M6 J2-J4 SMART motorway	Complete	2017-2020	2021	Y
Various	M1 J16-J19	Complete	2019	2019	Y
Leicestershire	A5 widening to dual carriageway near Hinckley	Hypothetical	2020-2023	2026	N
Daventry	DIRFT III - Daventry International Rail Freight Terminal	Complete	2016	2016	Y
Loughborough	Loughborough Integrated Transport Scheme – not including LIRR	Complete	2013	2014	Y
Cotes	A60 Nottingham Road/Loughborough reduction of speed limit traffic calming features	Complete	2016	2016	Y
Earl Shilton	Access arrangements for SUE/Highway improvements for SUE	Near Certain	2023-2035	2026	N
Barwell	Access arrangements for SUE/Highway improvements for SUE	Near Certain	2023-2035	2026	Y
Lubbesthorpe	Access arrangements for SUE including strategic traffic link to the A563 Lubbesthorpe Way	Near Certain	2017-2026	2021	Y
SRFI	Southern access for new development	Complete	2016-2018	2019	Y
Loughborough	A512 widening B591 to M1 J23, improvements to J23 and completion of dualling thereafter to either Snell's Nook Lane or Epinal Way junction	Complete	2017-2020	2021	Y
Castle Donnington	Western Link Road from Back Lane to Tops Hill, NWLDC package of measures to help mitigate planned growth	Complete	2020	2021	Y
Lubbesthorpe	Link across M69 to join north and south of the Lubbesthorpe development	More than Likely	2026-2031	2031	Y
Earl Shilton & Barwell	Highway improvements for SUE (Ashby Road/ Normandy Way)	More than Likely	2023-2035	2026	N
Lubbesthorpe	Highway improvements for SUE (Mill Hill/ Warren Park, Meridian South/ A563, A47/A563)	Near Certain	2017-2023	2026	Y
Kegworth	Kegworth Bypass	Complete	2017-2019	2019	Y
SRFI	Highway improvements for new development	Complete	2016-2019	2021	Y
Loughborough	West of Loughborough SUE (access from the north via the A6 roundabout)	More than Likely	2022	2022	Y
Loughborough	Access connection for the Science Park via the A512 roundabout	Near Certain	2031	2031	Y
Loughborough	West of Loughborough SUE (connection to the northern arm of the A512 roundabout)	More than Likely	2036	2036	Y
North-West Leicestershire	M1 J22	Complete	2016	2016	Y
North-West Leicestershire	A42 J13	Complete	2017	2018	Y
Blaby	Leicester North-West Project Phase 1	Complete	2015-2016	2016	Y
Blaby	Desford Crossroads	Reasonably Foreseeable	2026	2026	N
Harborough	Harborough Strategic Development Area	Complete	up to 2021	2021	Y
Charnwood	North of Birstall SUE (Broadnook SUE)	Near Certain	2021-2026	2026	Y
Charnwood	Mountsorrel Lane, Rothley Link Road	Complete	up to 2021	2021	Y
Charnwood	A512 junction improvements	Complete	2016-2021	2021	Y
Hinckley	Hinckley Area Project Phase 1-3	Complete	2014-2017	2018	Y
Blaby	Glenfield Park/Optimus Point S278 works	Complete	2014-2016	2016	Y

Location	Scheme Name	Certainty	Timescale	First Forecast Year	Include
North of East Leicester	North of East Leicester Development Network – Thorpebury SUE	Near Certain	2025	2026	Y
Charnwood	A6 Loughborough Road Bus Lane and Parking Controls	Complete	2016	2016	Y
Leicester City	Removal of Belgrave Flyover	Complete	2014-2015	2016	Y
Leicester City	Saffron Lane - Old Velodrome Improvements	Complete	2016	2016	Y
Leicester City	Traffic Calming Schemes	Complete	2016-2021	2016	Y
Leicester City	East of Hamilton Development Improvements	Complete	2016	2017	Y
Leicester City	Pedestrianisation of Hotel Street, Pedestrianisation of St Martins	Complete	2016	2016	Y
Leicester City	Haymarket/Charles Street Bus Station development	Complete	2016	2016	Y
Leicester City	Existing & proposed 20mph zones	Complete	2012-2016	2016	Y
Leicester City	St Nicholas Circle	Complete	2015	2016	Y
Leicester City	Welford Road	Complete	2018	2021	Y
Leicester City	Waterside Development	More than Likely	mid-2020s	2026	Y
Leicester City	Belgrave Gate South	Complete	2019	2020	Y
Leicester City	Belvoir Street	Complete	2017	2018	Y
Leicester City	York Road/Bonnors Lane/Grange Road	Complete	2019	2019	Y
Leicester City	King St	Complete	2018	2018	Y
Leicester City	Lancaster Road	Complete	2019	2020	Y
Leicester City	Mansfield Street & Church Gate	Complete	2020	2021	Y
Leicester City	SMBS Access to Burleys Way	Complete	2019	2021	Y
Leicester City	Vaughan Way	Complete	2019	2020	Y
Leicester City	Ashton Green	Near Certain	2021-2031	2021	Y
Leicester City	London Road	Complete	2019	2020	Y
Leicester City	LNW2 Ravensbridge Drive / Blackbird Road	Complete	2019	2020	Y
Melton	Melton Mowbray Distributor Road (Northern Section) (Nottingham Road to A607)	Near Certain	2024-2026	2026	Y
Melton	Melton Mowbray Distributor Road (Eastern Section) (A607 to Burton Road)	Near Certain	2024-2026	2026	Y
Melton	Melton Mowbray Southern Link Road (Burton Road to Leicester Road)	More than Likely	2025	2026	Y
Melton	Gladman's Site Access (Leicester Road and Kirby Lane)	Complete	2018-2020	2021	Y
Leicester City	Beaumont Leys Anstey Lane Improvements	Complete	2019	2021	Y
Hinckley	Rugby Road Corridor Improvements – Phase 4	Complete	2022	2023	Y
Leicester City	Putney Road West Improvements	Complete	2021-2022	2022	Y
Lutterworth	Frank Whittle Roundabout approaches (Magna Park)	Complete	2018-2020	2021	Y
Lutterworth	Lutterworth East Development (Development Access (A4304, Gilmorton Road and A426))	More than Likely	2021-2026	2026	Y
Lutterworth	Lutterworth East Development Associated Mitigations	Near Certain	2031	2031	Y
Lutterworth	Lutterworth East Development (Link Road between A4304 and A426)	More than Likely	2021-2026	2031	Y
Lutterworth	Lutterworth East Development (Gilmorton Road bridge bus restriction)	More than Likely	2021-2026	2026	Y
Bardon Hill	Interlink Way East junction	Complete	2016	2016	Y
Bardon Hill	Bardon Hill Link Road North Section	Near Certain	2021-2026	2026	Y
Coalville	Hoo Ash Roundabout	More than Likely	2021-2026	2025	Y
Coalville	Thornborough Road Roundabout	More than Likely	2021-2026	2025	Y
Coalville	Dual Carriageway from Thornborough Rd to Whitwick Road	More than Likely	2021-2026	2025	Y
Coalville	Whitwick Road Roundabout	More than Likely	2021-2026	2025	Y

Location	Scheme Name	Certainty	Timescale	First Forecast Year	Include
Coalville	Broom Leys Road Junction	More than Likely	2021-2026	2025	Y
Coalville	Bardon Link Road Junction	More than Likely	2021-2026	2025	Y
Coalville	Bardon Link Road Southern Section	Near Certain	2024-2026	2026	Y
Coalville	Birch Tree Roundabout	More than Likely	2019-2024	2025	Y
Coalville	Flying Horse Roundabout	More than Likely	2021-2026	2025	Y
Coalville	Fieldhead Roundabout	More than Likely	2021-2026	2025	Y
Granby Street	Granby Street/Halford Street Improvements	Complete	2017	2018	Y
Loughborough	Alan Moss Road	Complete	2017	2018	Y
Hinckley	DPD A5 Access	Complete	2017	2021	Y
Leicester Forest East	Ratby Lane/Wembley Road junction	Complete	2017/18	2019	Y
Leicester City	Abbey Park Road Cycle Provision	Complete	2020	2021	Y
Blaby	A47/Kirby Lane Tesco Express	Complete	2020	2021	Y
Leicester City	Abbey Street	Complete	2021	2021	Y
Leicester City	A50 Groby Road Bus Lane	Complete	2022	2022	Y
Harborough	Magna Park Extension Access - Mere Lane, Lutterworth	Complete	2021	2021	Y
Harborough	Magna Park Extension Access - A5, Lutterworth	Near Certain	2026	2026	Y
Blaby	Highway improvements for Lubbethorpe SUE (A47/Braunstone Lane/Ratby Lane, A5460/M1 J21)	Complete	2017-2021	2021	Y
Blaby	Foxhunter Roundabout Eastbound Approach	Complete	2019	2021	Y
Harborough	B4114/B581 Signalisation Improvement, Broughton Astley	Complete	2023	2026	Y
Blaby	Everards Meadow Access	Complete	2018	2021	Y
Blaby	Hastings Fields Blaby DPD Site Access	More than likely	2022	2026	Y
Blaby	West of St Johns (Blaby DPD) Site Access	More than likely	2026	2026	Y
Harborough	Wigston Direction for Growth Site Access	Near certain	2026	2026	Y
Blaby	Everard Way Closure, Fosse Park	Near certain	2020	2020	Y
NWL	Money Hill Site Access A511	More than likely	2025	2026	Y
Derbyshire	Wragley Way (South Derbyshire) SUE Access A50	More than likely	2030	2031	Y
Derbyshire	Boulton Moor (South Derbyshire) SUE Access	Complete	2014	2014	Y
Derbyshire	Clifton (Rushcliffe) SUE Access	Complete	2022	2022	Y
Derbyshire	EMIP A50 (Freeport)	Reasonably Foreseeable	2030	2030	N
Derbyshire	West Derbyshire SUE Access A38	Complete	2014	2014	Y
Derbyshire	Toton Innovation Hub (HS2)	More than likely	2030	2031	Y
Nottinghamshire	Ratcliffe Power Station A453 (Freeport)	Reasonably foreseeable	2030	2030	N
Rugby	Rugby Radio Station - A5 Access	Complete	2022	2022	Y
Rugby	Rugby Radio Station - A423 Access	Complete	2016-2019	2016	Y
Leicester City	Buckminster Rd/Brading Rd Safer Streets	Complete	2022	2022	Y
Blaby	A50 Groby Road bus gate	Complete	2015	2015	Y
North West Leicestershire	Mercia Park	Complete	2020	2020	Y
Leicester City	Western Park Golf Course	More than Likely	2029	2029	Y
Harborough	Kettering Road Signalisation	Complete	2020	2021	Y
M6 J10-13	M6 J10-13, M54-Stafford ALR	Complete	2021	2021	Y
M54-M6 Toll	M54-M6 Toll, link road min 2 lane motorway	More than Likely	2024	2024	Y
M1 J28-31	M1 J28-31, Mansfield to Sheffield ALR	Complete	2016	2016	Y
M6 J13-J15	M6 J13-15, Stafford South to Stoke South ALR	Complete	2022	2022	Y
M1 J13-16	M1 J13-16, Milton Keynes South to J16 ALR	Complete	2022	2022	Y

Location	Scheme Name	Certainty	Timescale	First Forecast Year	Include
M40 M42	M40-M42, M40 J16-M42 J3 ALR	More than Likely	2026	2026	Y
A46 Coventry	A46 Coventry, remove Binley and Walsgrove roundabouts & upgrade	More than Likely	2026	2026	Y
M6 J10-13	Walsall M6 Junction 10 issues	Complete	2014	2014	Y
A46 Toll Bar End	A46 Toll Bar End, grade separated junction and 3 lane highway	Complete	2021	2021	Y
Newark N	A46 Newark, dualling Newark North bypass	More than Likely	2026	2031	Y
Newark S	South of Newark, A1-A46 link S of Newark; part completed	More than Likely	2031	2031	Y
Lincoln E	East of Lincoln, A15-A158 link; part completed	Complete	2020	2021	Y
Lincoln S	South of Lincoln, A158-A46 link	More than Likely	2027	2031	Y
Grantham S	South of Grantham, A1-A52 link; part completed	Near Certain	2016-2023	2023	Y
Nottingham	Dualling A453	Complete	2016	2016	Y
Nuneaton and Bedworth Borough	Coton Arches	Complete	2021	2021	Y
Nuneaton and Bedworth Borough	A4254b Eastboro Way P1	Complete	2024	2024	Y
Nuneaton and Bedworth Borough	College Street / A444	Complete	2023	2023	Y
Nuneaton and Bedworth Borough	Transforming Nuneaton	Complete	2026	2026	Y
Nuneaton and Bedworth Borough	Croft Road/Greenmoor Road Priority	Complete	2023	2023	Y
Nuneaton and Bedworth Borough	A47 Old Hinckley Road	Near Certain	2023-2024	2024	Y
Nuneaton and Bedworth Borough	Coventry Road / Gipsy Lane	More than Likely	2026	2026	Y
Nuneaton and Bedworth Borough	A4254 / B4114/Eastboro Way	Near Certain	2026	2026	Y
Nuneaton and Bedworth Borough	Nuneaton Northern Sites Link Road	Near Certain	2026	2026	Y
North Warwickshire	B5000 Market Street/Bridge St Signals	Reasonably Foreseeable	2026	2026	N
North Warwickshire	A5 Dualling between Grendon and Dordon and Dordon junction	Near Certain	2026	2033	Y
North Warwickshire	A5 Dualling, Grendon to Atherstone	Reasonably Foreseeable	2031	2031	N
Rugby Borough	A426/A4071 Avon Mill Roundabout/Newbold Road/Hunters Lane Priority Junction	Near Certain	2026	2026	Y
Rugby Borough	Ashlawn Road/Hillmorton Road	Complete	2021	2021	Y
Rugby Borough	A5 Northern Access to DIRFT III	Complete	2021	2021	Y
Rugby Borough	A5/A428 Halfway House Roundabout	Complete	2026	2026	Y
Rugby Borough	M1 Junction 18	Reasonably Foreseeable	2031	2031	N
Rugby Borough	M6 to Coton House	Complete	2021	2021	Y
Rugby Borough	A5 Southern Access to DIRFT III	Complete	2021	2021	Y
M6 J2	Update coding of M6 J2 Ansty interchange to include signalised roundabout	Complete	2020	2021	Y
Nuneaton and Bedworth Borough	Callendar Farm Phase 2	Near Certain	2031	2031	Y
Nuneaton and Bedworth Borough	Bermuda Connectivity Project	Complete	2022	2026	Y
Charnwood	Shuttle signals at the old railway bridge on Tickow Lane	Complete	2022	2022	Y
Charnwood	Buttercup Lane	Complete	2021-2022	2022	Y
Hinckley & Bosworth	A47 roundabout between Wykin Road and Outlands Drive	Complete	2020-2021	2021	Y
Hinckley & Bosworth	A47/Dan's Lane	Complete	2023	2023	Y
Hinckley & Bosworth	A47 speed limit reduction	Complete	2020	2020	Y

Location	Scheme Name	Certainty	Timescale	First Forecast Year	Include
Newbold Verdon	B582 Barlestone Road / B585 Bosworth Lane signalisation	Complete	2023	2023	Y

About AECOM

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TECHNICAL NOTE 2

DATE:	14 November 2023	CONFIDENTIALITY:	Public
SUBJECT:	Proposed Study Area for Junction Assessment		
PROJECT:	Earl Shilton Sustainable Urban Extension	AUTHOR:	Bev Coupe
CHECKED:	Grace Smith	APPROVED:	Neil Hall

Appendix D

STUDY AREA IDENTIFICATION

2036 AM Peak Hour

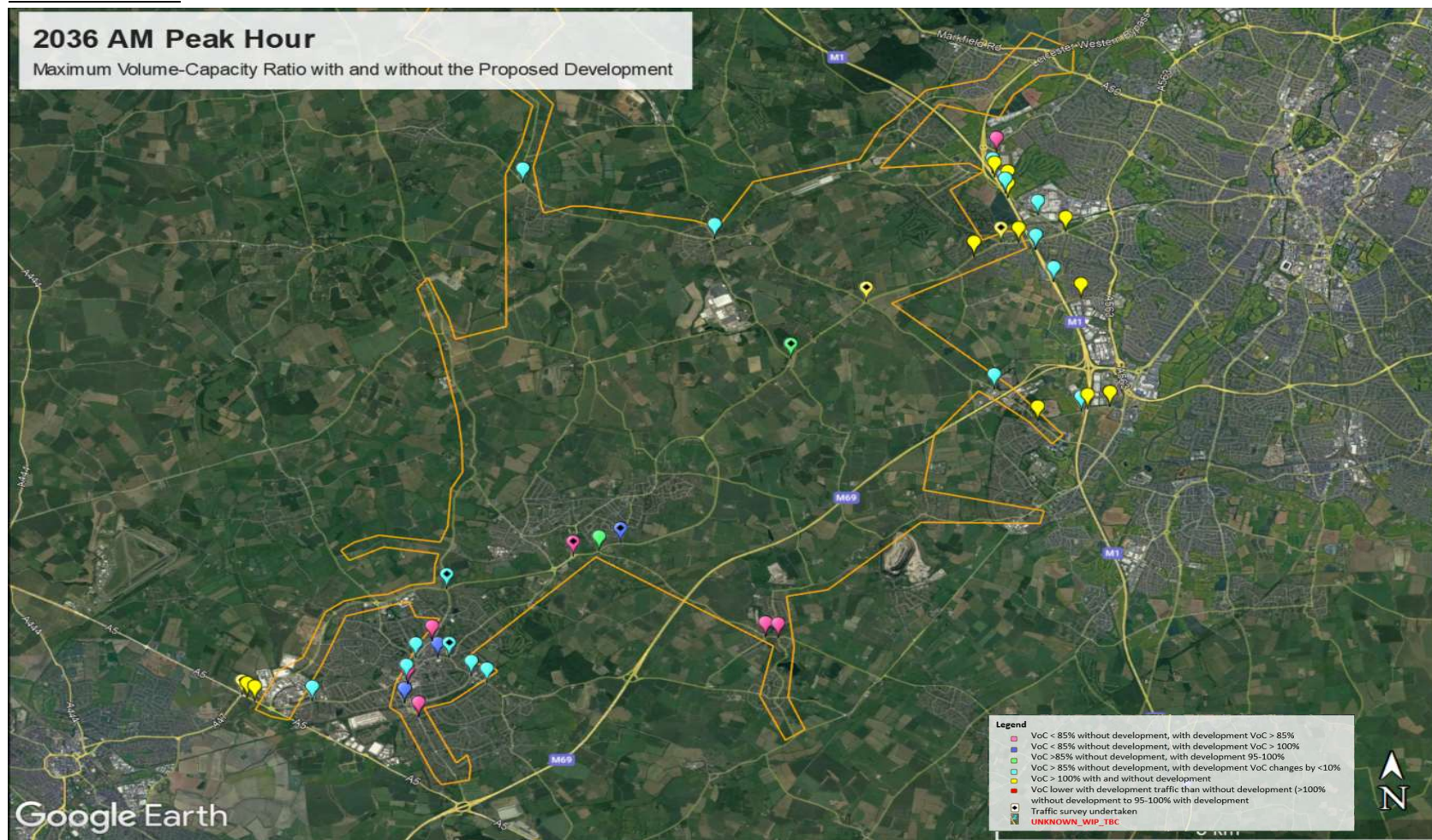
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Junction	Location	Junction Type	Road Type	Within PRTM Aol boundary?	VCR without development	VCR with development	VCR over 85% in any scenario?	VCR Change Category (without/with development)*	Commentary on route	Appropriate/ Strategic Route	Commentary on Junction	Include in Study Area
B4109/Brookside/Dudley Rise	Hinckley	Signalised	Urban road - limited direct access, set back housing either side	✓	75-85%	85-95%	✓	Worse	Route option to M69 - not desirable as via Hinckley town centre	X		X
Westfield Road/B590/Rugby Road	Hinckley	Signalised	Urban road in town centre	✓	95%-100%	100% and above	✓	Worse		X		X
B590/Rugby Road	Hinckley	Signalised	Urban road in town centre	✓	75-85%	85-95%	✓	Worse		X		X
B590/B4667/Coventry Road	Hinckley	Signalised	Urban road in town centre	✓	85-95%	85-95%	✓	No Change		X		X
Upper Bond Street/Hollycroft/Trinity Lane	Hinckley	Signalised	Urban road on edge of town centre	✓	95-100%	95-100%	✓	No Change		X		X
B4669/Park Road	Hinckley	Signalised	Urban road - limited direct access, set back housing either side	✓	85-95%	85-95%	✓	No Change		X		X
Leicester Road/B590	Hinckley	Signalised	Urban road on edge of town centre	✓	95-100%	95-100%	✓	No Change		X		X
Hollier's Walk/New Buildings/Derby Road/Leicester Road	Hinckley	Signalised	Urban road on edge of town centre	✓	95-100%	100% and above	✓	Worse		X		X
B4667/Derby Road	Hinckley	Signalised	Urban road on edge of town centre	✓	75-85%	85-95%	✓	Worse		X		X
A47/A447 Ashby Road	Edge of Hinckley	Signalised	Strategic route	✓	95-100%	95-100%	✓	No Change	Strategic Route to A5 and M69 in the south	✓	Key junction on A47 north of Hinckley and west of Barwell and Earl Shilton. A447 is a strategic corridor to north Leicestershire and A42.	✓
A47/Leicester Road	South of Barwell and Earl Shilton	Roundabout	Strategic route	✓	75-85%	85-95%	✓	Worse		✓	Key junction on A47 between Barwell and Earl Shilton. Leicester Road is distributor road to both towns.	✓
A47/Station Road B581	Edge of Earl Shilton	Signalised	Strategic route	✓	85-95%	95-100%	✓	Worse		✓	Key junction on A47 south of Earl Shilton and identified as impacted by the Proposed Development within the Forecasting Report.	✓
A47/Wilkinson Road	Edge of Earl Shilton	Signalised	Strategic route	✓	75-85%	100% and above	✓	Worse		✓	Key junction on A47 south of Earl Shilton and identified as impacted by the Proposed Development within the Forecasting Report. Station Road is distributor road to central Earl Shilton	✓
B581/New Road/Hinckley Road	Stoney Stanton Village	Mini roundabout	Road through village	✓	75-85%	85-95%	✓	Worse	Rural route to A5 south	X		X
New Road/B581/Long Street	Stoney Stanton Village	Mini roundabout	Road through village	✓	75-85%	85-95%	✓	Worse		X		X
A47/Dans Lane	Rural	Priority	Strategic route	✓	85-95%	95-100%	✓	Worse	Strategic route to Leicester M1, M69 and A46 to the north	✓	Junction on A47 north and east of Earl Shilton with capacity issues. Due to be upgraded to signal T junction, which was included in the Uncertainty Log, as part of committed development. Uncertain if Earl Shilton SUE was included in committed development assessment.	✓
A47/B582 - Desford Crossroads	Rural	Signalised	Strategic route	✓	100% and above	100% and above	✓	No Change	Strategic route to Leicester M1, M69 and A46 to the north	✓	Key junction on A47 north and east of Earl Shilton with historic capacity issues. LCC has an improvement scheme and expectation of developer contribution to help fund it. On this basis, exclude from the study area.	X
High Street/B582/Main Street	Desford	Roundabout	Road through village	✓	85-95%	85-95%	✓	No Change	Rural route to Ashby-de-la Zouch and Burton upon Trent	X		X
B585/B582	Newbold Verdon	Priority	Road through village	✓	85-95%	85-95%	✓	No Change		X		X
B582/Beggars Lane	Access to retail park north of Enderby	Signalised	Road through village	✓	95-100%	95-100%	✓	No Change	Rural route to M69 J3 and south Leicester	X		X
B582/High Street/Leicester Lane	Enderby	Signalised	Road through village	✓	100% and above	100% and above	✓	No Change		X		X
A47/Warren Lane	Leicester Forest East	Signalised	Strategic route	✓	100% and above	100% and above	✓	No Change	Strategic route to Leicester M1, M69 and A46 to the north	✓	Connector to existing and new Lubbesthorpe housing estates. Scheme proposed at junction not yet built out. Noted not included in uncertainty log.	✓
A47/Kirby Lane	Leicester Forest East	Signalised	Strategic route	✓	100% and above	100% and above	✓	No Change		✓	Improvement scheme identified as part of Lubbesthorpe - not yet built out. Noted not included in uncertainty log.	✓
A47/ Kings Drive	Leicester Forest East	Priority	Strategic route	✓	100% and above	100% and above	✓	No Change	Strategic route to Leicester M1, M69 and A46 to the north	✓	Access to housing estate with limited option for improvement, except to signalise, which would not be desirable as would increase the number of signal junctions on short stretch	X

* note that 'No Change' refers to no change to **VCR % band** e.g. with and without development with 85-95% category = no change despite VCR potentially increasing e.g. from 87% to 91%

2036 AM Peak Hour

Maximum Volume-Capacity Ratio with and without the Proposed Development



2036 PM Peak Hour

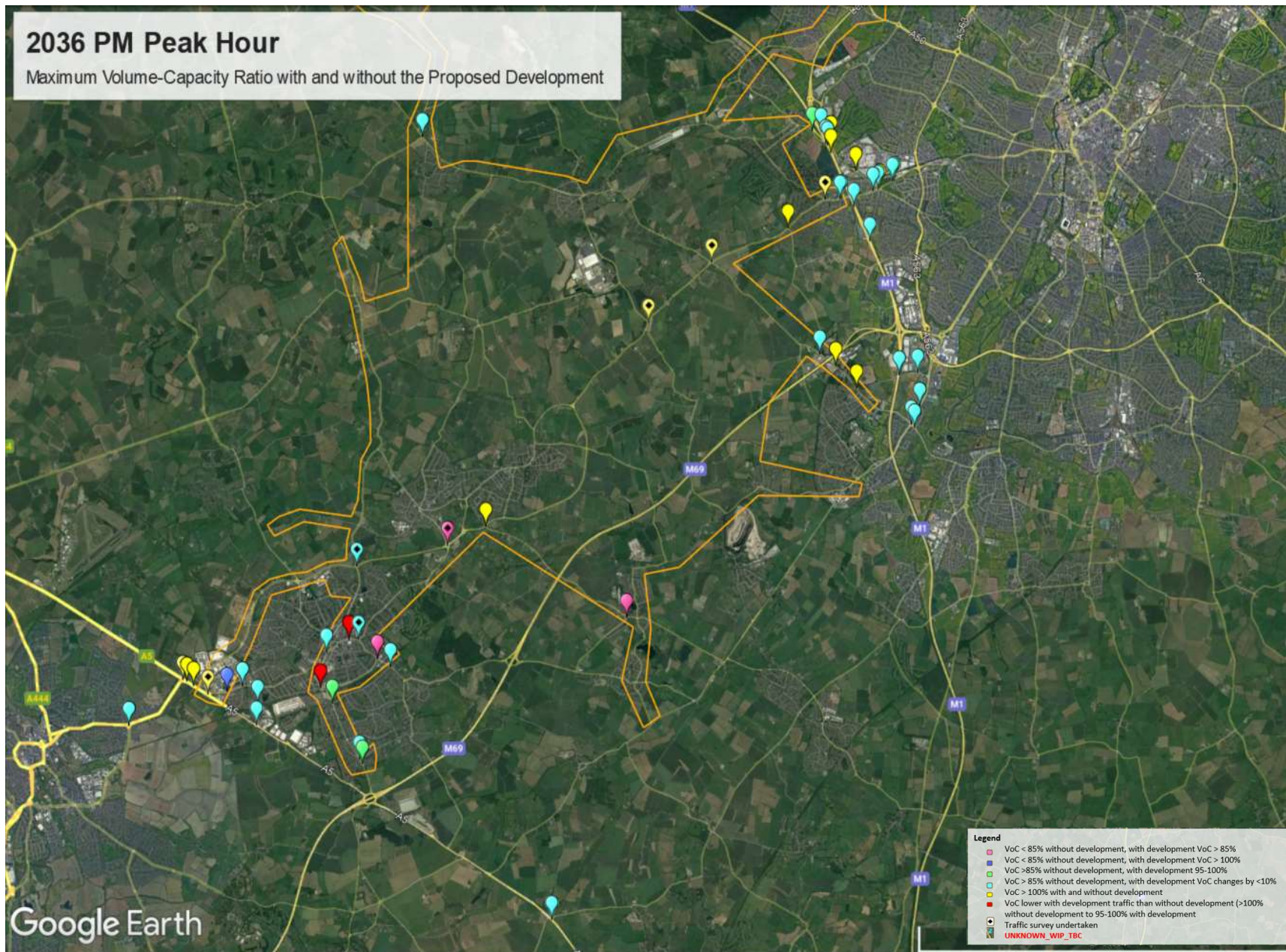
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Junction	Location	Junction Type	Road Type	Within PRTM Aol boundary?	VCR without development	VCR with development	VCR over 85% in any scenario?	VCR Change Category (without/with development)*	Commentary on route	Appropriate/Strategic Route	Commentary on Junction	Include in Study Area
A5/A47 - Dodwells Roundabout	Edge of Hinckley	Signalised Roundabout	Strategic	✓	85-95%	85-95%	✓	No Change	Strategic route to A5 and M69 in the south and Coventry and West Midlands in the north	✓	Strategic junction on SRN with capacity issues	✓
Paddock Way/B4666	Hinckley	Priority	Urban road - route to Dodwells Roundabout from Hinckley	✓	95-100%	100% and above	✓	Worse	Route option to M69 - not desirable as via Hinckley town centre	X		x
Rugby Road/Coventry Road	Hinckley	Priority	Urban road - limited direct access, set back housing either side	✓	95-100%	95-100%	✓	No Change		X		x
Rugby Road/Three Pots Road/Canberra Way	Edge of Hinckley	Roundabout	Urban road - limited direct access, set back housing either side	✓	85-95%	95-100%	✓	Worse		X		x
B4109/Brookside/Dudley Rise	Hinckley	Signalised	Urban road - limited direct access, set back housing either side	✓	85-95%	95-100%	✓	Worse		X		x
Westfield Road/B590/Rugby Road	Hinckley	Signalised	Urban road - limited direct access, set back housing either side	✓	100% and above	95-100%	✓	Improvement		X		x
Mansion Street/Trinity Lane	Hinckley	Signalised	Edge of town centre	✓	85-95%	85-95%	✓	No Change		X		x
B4669/Park Road	Hinckley	Signalised	Urban road - limited direct access, set back housing either side	✓	75-85%	85-95%	✓	Worse		X		x
Leicester Road/B590	Hinckley	Signalised	Urban road on edge of town centre	✓	95-100%	95-100%	✓	No Change		X		x
Hollier's Walk/New Buildings/Derby Road/Leicester Road	Hinckley	Signalised	Urban road on edge of town centre	✓	100% and above	95-100%	✓	Improvement		X		x
A47/A447 Ashby Road	Edge of Hinckley	Signalised	Strategic route	✓	95-100%	95-100%	✓	No Change	Strategic Route to A5 and M69 in the south	✓	Key junction on A47 north of Hinckley and west of Barwell and Earl Shilton. A447 is a strategic corridor to north Leicestershire and A42.	✓
A47/The Common/B4688	South of Barwell	Roundabout	Strategic route	✓	65-75%	85-95%	✓	Worse		✓	Key junction on A47 between Barwell and Earl Shilton. Leicester Road is distributor road to both towns.	✓
A47/Station Road B581	Edge of Earl Shilton	Signalised	Strategic route	✓	100% and above	100% and above	✓	No Change		✓	Key junction on A47 south of Earl Shilton and identified as impacted by the Proposed Development within the Forecasting Report.	✓
B581/New Road/Hinckley Road	Stoney Stanton Village	Mini roundabout	Road through village	✓	75-85%	85-95%	✓	Worse	Rural route to A5 south	X		x
A47/Dans Lane	Rural	Priority	Strategic route	✓	100% and above	100% and above	✓	No Change	Strategic route to Leicester M1, M69 and A46 to the north	✓	Junction on A47 north and east of Earl Shilton with capacity issues. Due to be upgraded to signal T junction, which was included in the Uncertainty Log, as part of committed development. Uncertain if Earl Shilton SUE was included in committed development assessment.	✓
A47/B582 - Desford Crossroads	Rural	Signalised	Strategic route	✓	100% and above	100% and above	✓	No Change	Strategic route to Leicester M1, M69 and A46 to the north	✓	Key junction on A47 north and east of Earl Shilton with historic capacity issues. LCC has an improvement scheme and expectation of developer contribution to help fund it. On this basis, exclude from the study area.	x
B585/B582	Newbold Verdon	Priority	Road through village	✓	85-95%	85-95%	✓	No Change	Rural route to Ashby-de-la Zouch and Burton upon Trent	X		x
B582/Beggars Lane	Access to retail park north of Enderby	Signalised	Road through village	✓	85-95%	85-95%	✓	No Change		X		x
B582/Warren Park Way	Access to industrial estate	Priority	Road through village	✓	100% and above	100% and above	✓	No Change	Rural route to M69 J3 and south Leicester	X		x
B582/High Street/Leicester Lane	Enderby	Signalised	Road through village	✓	100% and above	100% and above	✓	No Change		X		x
A47/Beggars Lane	Leicester Forest East	Signalised	Strategic route	✓	100% and above	100% and above	✓	No Change	Strategic route to Leicester M1, M69 and A46 to the north	✓	Connector to existing and new Lubbesthorpe housing estates. Scheme proposed at junction not yet built out. Noted not included in uncertainty log.	✓
A47/Kirby Lane	Leicester Forest East	Signalised	Strategic route	✓	100% and above	100% and above	✓	No Change		✓	Improvement scheme identified as part of Lubbesthorpe - not yet built out. Noted not included in uncertainty log.	✓
A47/ Kings Drive	Leicester Forest East	Priority	Strategic route	✓	85-95%	85-95%	✓	No Change	Strategic route to Leicester M1, M69 and A46 to the north	✓	Accesses to housing estates with limited option	x
A47/Charnwood Drive	Leicester Forest East	Priority	Strategic route	✓	85-95%	85-95%	✓	No Change		✓	for improvement, except to signalise, which	x

* note that 'No Change' refers to no change to **VCR % band** e.g. with and without development with 85-95% category = no change despite VCR potentially increasing e.g. from 87% to 91%

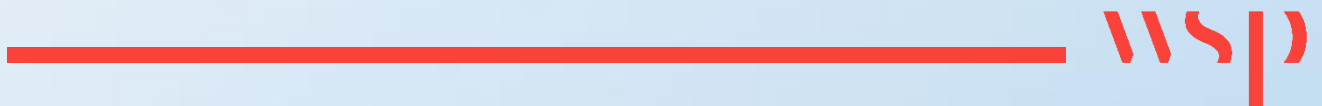
2036 PM Peak Hour

Maximum Volume-Capacity Ratio with and without the Proposed Development



Appendix J

**FURNESS FLOWS TECHNICAL NOTE
(DOC REF: 42523-WSPE-XX-XX-TN-
OT-00008_S2_P01)**





TECHNICAL NOTE: Furnessed Flows

DATE:	14 December 2023	CONFIDENTIALITY:	Confidential
SUBJECT:	Furness Flows Technical Note		
PROJECT:	Earl Shilton SUE	AUTHOR:	Guarav Pandey / Sachin Elango / Bev Coupe
CHECKED:	Bev Coupe	APPROVED:	Neil Hall

INTRODUCTION

Overview

WSP UK Limited (WSP), formerly Wood E&IS UK Limited, has been commissioned by Bloor Homes Ltd, Jelson Limited and Barwood Strategic Land II LLP (the ‘Applicants’) to submit two outline planning applications (OPA) for a comprehensive residential led mixed-use development known as the Earl Shilton Sustainable Urban Extension (SUE). The Earl Shilton SUE is an allocated site for up to 1,600 dwellings, employment, primary school, local centre and associated infrastructure within the Hinckley and Bosworth District Council (HBBC) Local Plan. The two separate, but aligned, OPAs are referred to as Application A and B. Application B for Bloor Homes and Jelson was submitted in December 2021 and Application A for Barwood Strategic Land was submitted in March 2023.

Both applications have been prepared to work in combination to deliver the majority of the overall allocation requirements, providing up to 1,500 new dwellings, up to 5.3 hectares of employment land, a new community hub that will comprise a two-form entry primary school and local retail facilities as well as improved sports provision, new play areas, public open space, landscaping, access and drainage. This is referred to herein as ‘the Proposed Development’.

One Transport Assessment (TA) and Framework Travel Plan (FTP) were produced to support both Applications and was submitted in December 2021. Comments from the Leicestershire County Council (LCC) Highways Development Management (HDM) team and National Highways identified the need for agreements on the traffic modelling and transport assessment approach and for further testing using the Pan Regional Traffic Model (PRTM). Further PRTM modelling has been undertaken in consultation with LCC HDM, National Highways and Warwickshire County Council (WCC) Highways, collectively referred to herein as the ‘highway authorities’. The Applicants have commissioned AECOM to carry out the PRTM modelling which has been based on the full allocation of 1,600 dwellings.

LCC HDM has requested that furnessing of the PRTM outputs against observed counts which were undertaken in June 2023 to derive future forecast traffic flow matrices for the junctions to be assessed.

Purpose of the Technical Note

The purpose of this technical note (TN) is to present the furnessing methodology and results.

METHODOLOGY

Three options have been considered for deriving the junction modelling flows as set out below:

- Option 1: Use flows directly extracted from PRTM;
- Option 2: Process based on linear interpolation to obtain 2023 flows from PRTM to compare with the 2023 observed counts and to derive growth factors to apply to the observed flows;
- Option 3: Process based on linear interpolation to obtain 2023 flows from PRTM to compare with the 2023 observed counts and to calculate the absolute differences between the 2023 PRTM and the 2036 forecast link flows for the DM and DS scenarios.

TECHNICAL NOTE: Furnessed Flows

DATE:	14 December 2023	CONFIDENTIALITY:	Confidential
SUBJECT:	Furness Flows Technical Note		
PROJECT:	Earl Shilton SUE	AUTHOR:	Guarav Pandey / Sachin Elango / Bev Coupe
CHECKED:	Bev Coupe	APPROVED:	Neil Hall

Option 1 is not acceptable to LCC HDM as it doesn't incorporate 'validation' against recent observed traffic flows counts. Consideration was given to the multiplicative (Option 2) and additive (Option 3) approaches. Option 2, the multiplicative approach resulted in a magnitude of change which produced an unrealistic growth factor and inflation of traffic flows at some junctions. Option 3 based on the application of absolute growth is considered more realistic and appropriate and is the approach that has been taken forward.

The Option 3 methodology proposed uses a '3 step approach' for growing observed counts using PRTM outputs that has been accepted by LCC HDM on other projects.

The approach is based on:

- observed counts undertaken on Wednesday 28th June 2023,
- PRTM modelling output, which includes:
 - 2014 base flows,
 - 2026 DM Reference and 2026 DS Reference + Earl Shilton Flows
 - 2036 DM Reference and 2036 DS Reference + Earl Shilton Flows
- Area of Influence (AoI)/study area identified in the WSP Proposed Study Area for Junction Assessment Technical Note (doc ref: 42523-WSPE-XX-XX-TN-OT-00001_S0_P02).

The approach comprises the following with regards to existing junctions:

- Step 1. Use linear interpolation to obtain 2023 PRTM base to compare with 2023 observed counts. Linear interpolation is based on 2014 traffic flows from PRTM base model and 2026 DM PRTM scenario (from Earl Shilton SUE PRTM runs).
- Step 2. Calculate absolute differences in link flows between calculated 2023 PRTM and the 2036 forecast link flows for the DM and DS scenarios.
- Step 3. The base 2023 observed turning counts are then used to furnish the future forecast matrices. With regards to the access junctions, a different approach has been undertaken as these are new links for which there are no observed flow counts.

For the access junctions, the PRTM turning flows from the 2036 DS output have been used.

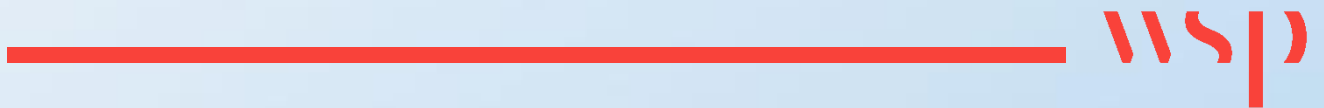
SUMMARY

The methodology uses interpolation of 2014 and 2026 PRTM flows to derive a common base year of 2023 with the 2023 observed data to calculate the absolute differences in flows and the percentage change differences have been applied to observed turning movements to provide forecast flows.

For the access junctions, the PRTM turning flows from the Reference + Earl Shilton SUE output have been used.

Appendix K

JUNCTION MODELLING OUTPUTS: ACCESS JUNCTIONS - CAPACITY ASSESSMENT



Junctions 10									
ARCADY 10 - Roundabout Module									
Version: 10.0.4.1693									
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Filename: Southern_Rbt_2036+Dev_inc_phf.j10

Path: X:\UK\GBWWK300-WAR\shared\Projects\42523 Earl Shilton\Post Submission\Transport\Modelling\Junction
Modelling\Southern_Rbt

Report generation date: 16/01/2024 16:16:18

«2036+PD, PM

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (min)	RFC	LOS	Set ID	Queue (PCU)	Delay (min)	RFC	LOS
2036+PD										
1 - A47 Clickers Way (E)	D1	0.5	0.05	0.32	A	D2	0.5	0.05	0.31	A
2 - Breach Lane		0.0	0.09	0.03	A		0.0	0.08	0.02	A
3 - A47 Clickers Way (W)		0.5	0.05	0.34	A		0.7	0.06	0.41	A
4 - Site Access		0.8	0.11	0.44	A		0.2	0.07	0.18	A

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

File summary

File Description

Title	
Location	
Site number	
Date	31/10/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CORP\UKSFG775
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (min)	Queue threshold (PCU)
		0.85	0.60	20.00

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2036+PD	PM	ONE HOUR	16:45	18:15	15

2036+PD, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (min)	Junction LOS
1	Southern Roundabout	Standard Roundabout		1, 2, 3, 4	0.06	A

Junction Network

Driving side	Lighting	Network delay (min)	Network LOS
Left	Normal/unknown	0.06	A

Arms

Arms

Arm	Name	Description	No give-way line
1	A47 Clickers Way (E)		
2	Breach Lane		
3	A47 Clickers Way (W)		
4	Site Access		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - A47 Clickers Way (E)	3.65	7.60	21.5	40.0	40.0	20.5		
2 - Breach Lane	3.00	4.50	5.7	20.0	40.0	21.0		
3 - A47 Clickers Way (W)	3.65	7.00	19.6	40.0	40.0	20.5		
4 - Site Access	3.38	4.50	6.6	20.0	40.0	21.5		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A47 Clickers Way (E)	0.713	1967
2 - Breach Lane	0.550	1191
3 - A47 Clickers Way (W)	0.692	1864
4 - Site Access	0.567	1280

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

Traffic Demand

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A47 Clickers Way (E)		✓	524	100.000
2 - Breach Lane		✓	12	100.000
3 - A47 Clickers Way (W)		✓	660	100.000
4 - Site Access		✓	170	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	1 - A47 Clickers Way (E)	2 - Breach Lane	3 - A47 Clickers Way (W)	4 - Site Access
From 1 - A47 Clickers Way (E)	0	5	391	128
2 - Breach Lane	3	0	8	1
3 - A47 Clickers Way (W)	361	14	0	285
4 - Site Access	61	2	107	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	1 - A47 Clickers Way (E)	2 - Breach Lane	3 - A47 Clickers Way (W)	4 - Site Access
From 1 - A47 Clickers Way (E)	0	0	10	0
2 - Breach Lane	0	0	0	0
3 - A47 Clickers Way (W)	9	0	0	0
4 - Site Access	0	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (PCU)	Max LOS
1 - A47 Clickers Way (E)	0.31	0.05	0.5	A
2 - Breach Lane	0.02	0.08	0.0	A
3 - A47 Clickers Way (W)	0.41	0.06	0.7	A
4 - Site Access	0.18	0.07	0.2	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (min)	Unsignalised level of service
1 - A47 Clickers Way (E)	394	92	1901	0.208	393	0.3	0.043	A
2 - Breach Lane	9	470	933	0.010	9	0.0	0.065	A
3 - A47 Clickers Way (W)	497	99	1795	0.277	495	0.4	0.048	A
4 - Site Access	128	284	1119	0.114	127	0.1	0.061	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (min)	Unsignalised level of service
1 - A47 Clickers Way (E)	471	110	1888	0.250	471	0.4	0.045	A
2 - Breach Lane	11	562	882	0.012	11	0.0	0.069	A
3 - A47 Clickers Way (W)	593	119	1782	0.333	593	0.5	0.053	A
4 - Site Access	153	340	1087	0.141	153	0.2	0.065	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (min)	Unsignalised level of service
1 - A47 Clickers Way (E)	577	135	1870	0.308	576	0.5	0.050	A
2 - Breach Lane	13	689	812	0.016	13	0.0	0.075	A
3 - A47 Clickers Way (W)	727	145	1763	0.412	726	0.7	0.061	A
4 - Site Access	187	416	1044	0.179	187	0.2	0.070	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (min)	Unsignalised level of service
1 - A47 Clickers Way (E)	577	135	1870	0.309	577	0.5	0.050	A
2 - Breach Lane	13	689	812	0.016	13	0.0	0.075	A
3 - A47 Clickers Way (W)	727	145	1763	0.412	727	0.7	0.061	A
4 - Site Access	187	416	1044	0.179	187	0.2	0.070	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (min)	Unsignalised level of service
1 - A47 Clickers Way (E)	471	111	1888	0.250	472	0.4	0.045	A
2 - Breach Lane	11	563	881	0.012	11	0.0	0.069	A
3 - A47 Clickers Way (W)	593	119	1781	0.333	594	0.5	0.053	A
4 - Site Access	153	340	1087	0.141	153	0.2	0.065	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (min)	Unsignalised level of service
1 - A47 Clickers Way (E)	394	93	1901	0.208	395	0.3	0.043	A
2 - Breach Lane	9	472	932	0.010	9	0.0	0.065	A
3 - A47 Clickers Way (W)	497	99	1795	0.277	497	0.4	0.048	A
4 - Site Access	128	285	1118	0.114	128	0.1	0.061	A

Junctions 10					
ARCADY 10 - Roundabout Module					
Version: 10.0.4.1693					
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Filename: A47 Earl Shilton - Northern Access.j10
Path: C:\Users\UKKMB003\Desktop
Report generation date: 23/01/2024 09:59:57

»2036 with Development, AM
»2036 with Development, PM

Summary of junction performance

	AM						PM					
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Network Residual Capacity
2036 with Development												
1 - A47 South	D1	0.4	2.60	0.28	A	78 % [2 - Site Access]	D2	0.4	2.68	0.31	A	118 % [2 - Site Access]
2 - Site Access		1.0	6.13	0.50	A			0.6	5.28	0.39	A	
3 - A47 North		0.2	4.86	0.19	A			0.2	4.32	0.17	A	

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	North Access
Location	A47 Earl Shilton
Site number	
Date	22/01/2024
Version	1
Status	(new file)
Identifier	
Client	Jelson Homes, Bloor Homes
Jobnumber	
Enumerator	CORP\UKKMB003
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
	✓	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)
D1	2038 with Development	AM	ONE HOUR	07:45	09:15	15
D2	2038 with Development	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2036 with Development, 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	untitled	Standard Roundabout		1, 2, 3	4.50	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	78	2 - Site Access	4.50	A

Arms

Arms

Arm	Name	Description	No give-way line
1	A47 South		
2	Site Access		
3	A47 North		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - A47 South	3.65	8.30	23.2	40.0	45.0	17.0		
2 - Site Access	3.65	4.50	2.7	20.0	45.0	20.5		
3 - A47 North	3.65	4.50	4.9	40.0	45.0	31.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A47 South	0.727	2101
2 - Site Access	0.555	1275
3 - A47 North	0.556	1299

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)
D1	2036 with Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Source: TIRL Junctions 10 (10.0.4.1693) - 23/01/2024

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A47 South		✓	483	100.000
2 - Site Access		✓	540	100.000
3 - A47 North		✓	158	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1 - A47 South	2 - Site Access	3 - A47 North
From	1 - A47 South	0	408	75
	2 - Site Access	488	0	52
	3 - A47 North	89	67	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - A47 South	2 - Site Access	3 - A47 North
From	1 - A47 South	0	7	4
	2 - Site Access	3	0	12
	3 - A47 North	6	12	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
07:45-08:00	1 - A47 South	364	387
	2 - Site Access	407	422
	3 - A47 North	117	128
08:00-08:15	1 - A47 South	434	463
	2 - Site Access	485	504
	3 - A47 North	140	152
08:15-08:30	1 - A47 South	532	567
	2 - Site Access	595	618
	3 - A47 North	172	186
08:30-08:45	1 - A47 South	532	567
	2 - Site Access	595	618
	3 - A47 North	172	186
08:45-09:00	1 - A47 South	434	463
	2 - Site Access	485	504
	3 - A47 North	140	152
09:00-09:15	1 - A47 South	364	387
	2 - Site Access	407	422
	3 - A47 North	117	128

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A47 South	0.28	2.60	0.4	A
2 - Site Access	0.50	6.13	1.0	A
3 - A47 North	0.19	4.88	0.2	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A47 South	364	50	1934	0.188	363	0.2	2.290	A
2 - Site Access	407	56	1197	0.340	404	0.5	4.532	A
3 - A47 North	117	366	1003	0.117	117	0.1	4.058	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A47 South	434	60	1926	0.225	434	0.3	2.412	A
2 - Site Access	485	67	1191	0.408	485	0.7	5.095	A
3 - A47 North	140	438	965	0.145	140	0.2	4.363	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A47 South	532	74	1916	0.278	531	0.4	2.600	A
2 - Site Access	595	83	1182	0.503	593	1.0	6.099	A
3 - A47 North	172	536	914	0.188	172	0.2	4.850	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A47 South	532	74	1916	0.278	532	0.4	2.600	A
2 - Site Access	595	83	1182	0.503	595	1.0	6.128	A
3 - A47 North	172	537	913	0.188	172	0.2	4.858	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A47 South	434	60	1926	0.225	435	0.3	2.413	A
2 - Site Access	485	67	1190	0.408	487	0.7	5.125	A
3 - A47 North	140	440	964	0.145	140	0.2	4.370	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A47 South	364	51	1934	0.188	364	0.2	2.293	A
2 - Site Access	407	57	1197	0.340	407	0.5	4.564	A
3 - A47 North	117	368	1002	0.117	118	0.1	4.071	A

2036 with Development, 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	untitled	Standard Roundabout		1, 2, 3	3.87	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	118	2 - Site Access	3.87	A

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)
D2	2036 with Development	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A47 South		✓	538	100.000
2 - Site Access		✓	395	100.000
3 - A47 North		✓	157	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1 - A47 South	2 - Site Access	3 - A47 North
From	1 - A47 South	0	426	112
	2 - Site Access	313	0	82
	3 - A47 North	94	63	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - A47 South	2 - Site Access	3 - A47 North
From	1 - A47 South	0	6	4
	2 - Site Access	7	0	11
	3 - A47 North	4	16	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	1 - A47 South	405	428
	2 - Site Access	297	321
	3 - A47 North	118	129
17:00-17:15	1 - A47 South	484	511
	2 - Site Access	355	383
	3 - A47 North	141	154
17:15-17:30	1 - A47 South	592	625
	2 - Site Access	435	469
	3 - A47 North	173	188
17:30-17:45	1 - A47 South	592	625
	2 - Site Access	435	469
	3 - A47 North	173	188
17:45-18:00	1 - A47 South	484	511
	2 - Site Access	355	383
	3 - A47 North	141	154
18:00-18:15	1 - A47 South	405	428
	2 - Site Access	297	321
	3 - A47 North	118	129

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A47 South	0.31	2.68	0.4	A
2 - Site Access	0.39	5.28	0.6	A
3 - A47 North	0.17	4.32	0.2	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A47 South	405	47	1952	0.207	404	0.3	2.324	A
2 - Site Access	297	84	1138	0.261	296	0.4	4.269	A
3 - A47 North	118	235	1085	0.111	118	0.1	3.796	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A47 South	484	57	1945	0.249	483	0.3	2.463	A
2 - Site Access	355	101	1129	0.315	355	0.5	4.647	A
3 - A47 North	141	281	1040	0.136	141	0.2	4.004	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A47 South	592	69	1935	0.306	592	0.4	2.681	A
2 - Site Access	435	123	1117	0.389	434	0.6	5.267	A
3 - A47 North	173	344	1006	0.172	173	0.2	4.321	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A47 South	592	69	1935	0.306	592	0.4	2.681	A
2 - Site Access	435	123	1117	0.389	435	0.6	5.278	A
3 - A47 North	173	345	1005	0.172	173	0.2	4.324	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A47 South	484	57	1945	0.249	484	0.3	2.466	A
2 - Site Access	355	101	1129	0.315	355	0.5	4.680	A
3 - A47 North	141	282	1039	0.136	141	0.2	4.008	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A47 South	405	47	1952	0.207	405	0.3	2.327	A
2 - Site Access	297	84	1138	0.261	298	0.4	4.288	A
3 - A47 North	118	236	1065	0.111	118	0.1	3.808	A

Junctions 10						
ARCADY 10 - Roundabout Module						
Version: 10.0.4.1693						
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Filename: Mill_Lane_Site_Accesses_2036withPHF_option_2_v2.j10
 Path: \\corp.pbwan.net\glb-e&i\UK\GBWWK300-WAR\shared\Projects\42523 Earl Shilton\Deliver Stage\D
 Design_Technical\Transport\Junction Assessment\2023\2024
 Report generation date: 26/02/2024 15:31:09

»2036 + Devel, AM
 »2036 + Devel, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2036 + Devel						
1 - Site Access North	0.1	4.64	0.13	0.1	4.21	0.05
2 - Site Access South	0.1	4.72	0.05	0.2	5.16	0.16
3 - Mill Lane	0.1	4.34	0.07	0.1	4.54	0.08

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

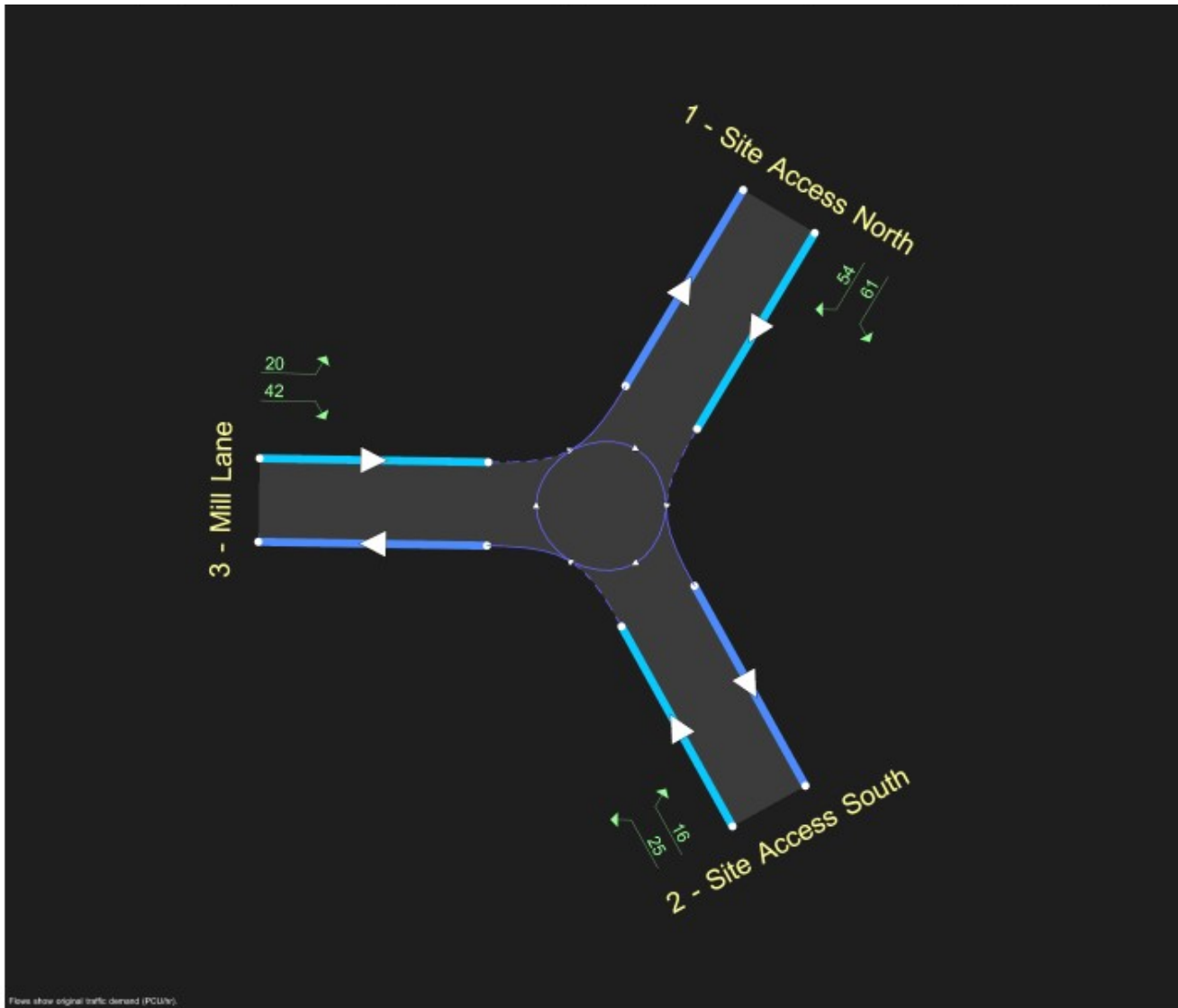
File summary

File Description

Title	
Location	
Site number	
Date	16/10/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CORP\UKSFG775
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Mini-roundabout model	Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9			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 period length (min)	Time segment length (min)
D1	2036 + Devel	AM	FLAT	07:45	09:15	90	15
D2	2036 + Devel	PM	FLAT	16:45	18:15	90	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2036 + Devel, 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	Mill Lane/Site Accesses	Mini-roundabout		1, 2, 3	4.57	A

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		4.57	A

Arms

Arms

Arm	Name	Description
1	Site Access North	
2	Site Access South	
3	Mill Lane	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - Site Access North	2.75	2.75	3.23	3.8	14.78	15.41	0.0	
2 - Site Access South	3.00	3.00	3.23	0.9	11.66	9.38	0.0	
3 - Mill Lane	2.75	2.75	4.21	8.7	12.21	9.43	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Site Access North	0.624	918
2 - Site Access South	0.596	848
3 - Mill Lane	0.618	915

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 period length (min)	Time segment length (min)
D1	2036 + Devel	AM	FLAT	07:45	09:15	90	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Site Access North		✓	115	100.000
2 - Site Access South		✓	41	100.000
3 - Mill Lane		✓	62	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - Site Access North	2 - Site Access South	3 - Mill Lane
From	1 - Site Access North	0	61	54
	2 - Site Access South	16	0	25
	3 - Mill Lane	20	42	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - Site Access North	2 - Site Access South	3 - Mill Lane
From	1 - Site Access North	0	0	0
	2 - Site Access South	0	0	3
	3 - Mill Lane	0	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Site Access North	0.13	4.64	0.1	A
2 - Site Access South	0.05	4.72	0.1	A
3 - Mill Lane	0.07	4.34	0.1	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site Access North	115	42	892	0.129	114	0.1	4.630	A
2 - Site Access South	41	54	816	0.050	41	0.1	4.714	A
3 - Mill Lane	62	16	905	0.069	62	0.1	4.336	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site Access North	115	42	891	0.129	115	0.1	4.636	A
2 - Site Access South	41	54	816	0.050	41	0.1	4.717	A
3 - Mill Lane	62	16	905	0.069	62	0.1	4.338	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site Access North	115	42	891	0.129	115	0.1	4.636	A
2 - Site Access South	41	54	816	0.050	41	0.1	4.717	A
3 - Mill Lane	62	16	905	0.069	62	0.1	4.338	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site Access North	115	42	891	0.129	115	0.1	4.636	A
2 - Site Access South	41	54	816	0.050	41	0.1	4.717	A
3 - Mill Lane	62	16	905	0.069	62	0.1	4.338	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site Access North	115	42	891	0.129	115	0.1	4.636	A
2 - Site Access South	41	54	816	0.050	41	0.1	4.717	A
3 - Mill Lane	62	16	905	0.069	62	0.1	4.338	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site Access North	115	42	891	0.129	115	0.1	4.636	A
2 - Site Access South	41	54	816	0.050	41	0.1	4.717	A
3 - Mill Lane	62	16	905	0.069	62	0.1	4.338	A

2036 + Devel, 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	Mill Lane/Site Accesses	Mini-roundabout		1, 2, 3	4.82	A

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		4.82	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D2	2036 + Devel	PM	FLAT	16:45	18:15	90	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Site Access North		✓	45	100.000
2 - Site Access South		✓	135	100.000
3 - Mill Lane		✓	70	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - Site Access North	2 - Site Access South	3 - Mill Lane
From	1 - Site Access North	0	25	20
	2 - Site Access South	67	0	68
	3 - Mill Lane	43	27	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - Site Access North	2 - Site Access South	3 - Mill Lane
From	1 - Site Access North	0	0	0
	2 - Site Access South	0	0	1
	3 - Mill Lane	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Site Access North	0.05	4.21	0.1	A
2 - Site Access South	0.16	5.16	0.2	A
3 - Mill Lane	0.08	4.54	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site Access North	45	27	901	0.050	45	0.1	4.204	A
2 - Site Access South	135	20	836	0.162	134	0.2	5.151	A
3 - Mill Lane	70	67	874	0.080	70	0.1	4.534	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site Access North	45	27	901	0.050	45	0.1	4.206	A
2 - Site Access South	135	20	836	0.162	135	0.2	5.162	A
3 - Mill Lane	70	67	874	0.080	70	0.1	4.538	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site Access North	45	27	901	0.050	45	0.1	4.206	A
2 - Site Access South	135	20	836	0.162	135	0.2	5.162	A
3 - Mill Lane	70	67	874	0.080	70	0.1	4.538	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site Access North	45	27	901	0.050	45	0.1	4.206	A
2 - Site Access South	135	20	836	0.162	135	0.2	5.162	A
3 - Mill Lane	70	67	874	0.080	70	0.1	4.538	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site Access North	45	27	901	0.050	45	0.1	4.206	A
2 - Site Access South	135	20	836	0.162	135	0.2	5.162	A
3 - Mill Lane	70	67	874	0.080	70	0.1	4.538	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site Access North	45	27	901	0.050	45	0.1	4.208	A
2 - Site Access South	135	20	836	0.162	135	0.2	5.162	A
3 - Mill Lane	70	67	874	0.080	70	0.1	4.538	A

Junctions 10							
PICADY 10 - Priority Intersection Module							
Version: 10.0.4.1693							
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Filename: Astley_Rd_Access_withPHF_24update_r_turnlane.j10
 Path: \\corp.pbwan.net\glb-e&i\UK\GBWWK300-WAR\shared\Projects\42523 Earl Shilton\Deliver Stage\D
 Design_Technical\Transport\Junction Assessment\2021\Proposed\Astley Rd Site
 Access\Astley_Rd_access_update2024_withPHF
 Report generation date: 26/02/2024 17:11:36

»2036+Dev, AM
 »2036+Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
2036+Dev								
Stream B-C	0.1	8.87	0.05	5.40	0.0	8.04	0.03	3.62
Stream B-A	0.7	12.22	0.42		0.4	9.85	0.29	
Stream C-AB	0.0	5.96	0.03		0.0	5.96	0.02	

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. Junction LOS and Junction Delay are demand-weighted averages.

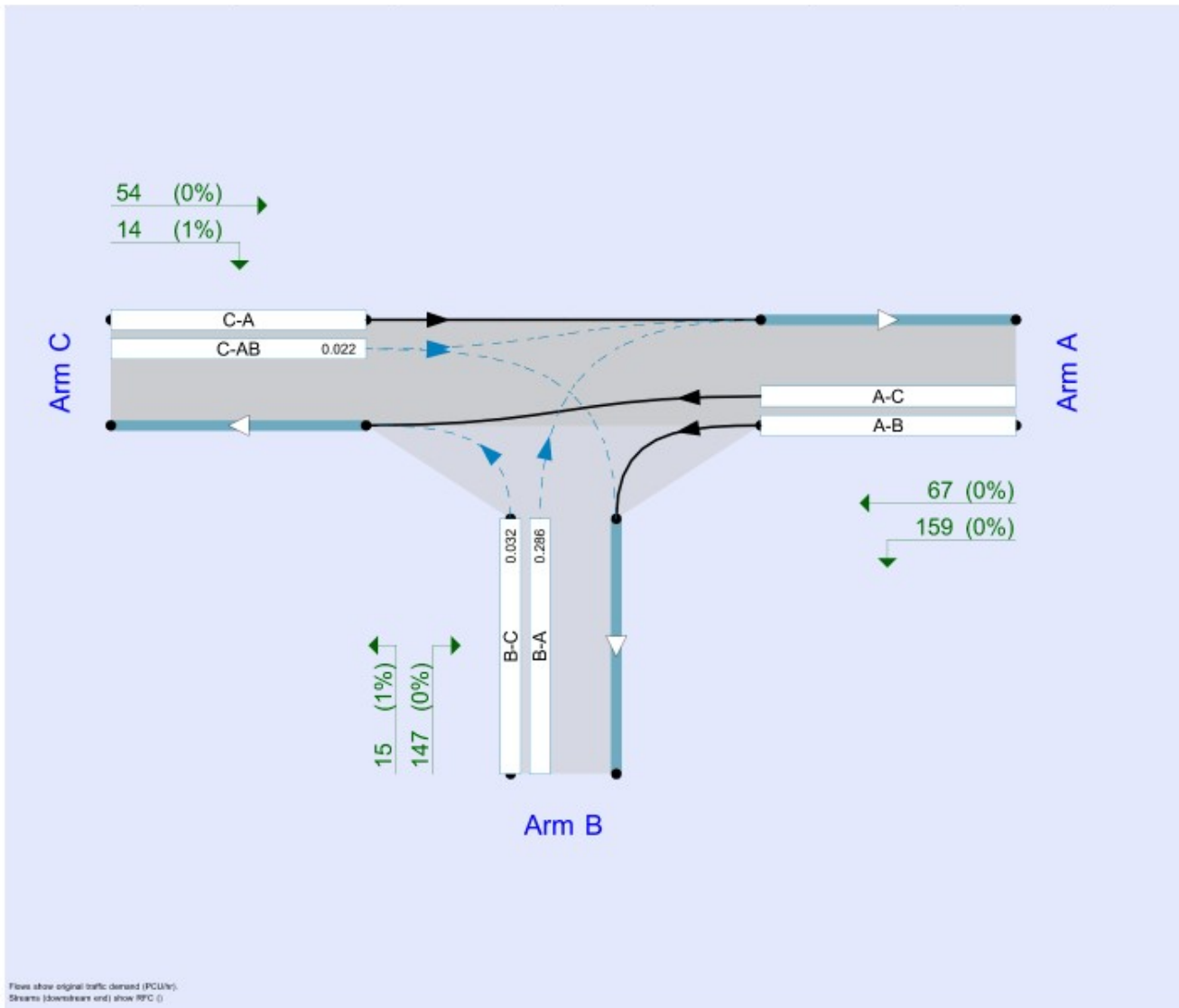
File summary

File Description

Title	Site Access/Astley Road
Location	Earl Shilton
Site number	
Date	28/07/2014
Version	
Status	On-going
Identifier	
Client	
Jobnumber	30433
Enumerator	adam.guy [DG723643]
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2036+Dev	AM	FLAT	07:45	09:15	90	15	✓
D4	2036+Dev	PM	FLAT	16:45	18:15	90	15	✓

Analysis Set Details

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

2036+Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	Arm B - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		5.40	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.40	A

Arms

Arms

Arm	Name	Description	Arm type
A	Astley Road (N)		Major
B	Site Access		Minor
C	Astley Road (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.19		✓	2.50	155.0	✓	2.00

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	6.33	3.50	3.13	2.98	2.84		1.00	100	47

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	560	0.099	0.251	0.158	0.358
B-C	544	0.084	0.213	-	-
C-B	685	0.263	0.263	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2036+Dev	AM	FLAT	07:45	09:15	90	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		FLAT	✓	222	100.000
B		FLAT	✓	238	100.000
C		FLAT	✓	83	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	153	69
	B	215	0	23
	C	66	17	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	0	0
	B	0	1	0
	C	0	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.05	8.87	0.1	A	23	35
B-A	0.42	12.22	0.7	B	215	323
C-AB	0.03	5.96	0.0	A	17	26
C-A					66	99
A-B					153	230
A-C					69	104

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	431	0.053	23	0.0	0.1	8.821	A
B-A	215	54	510	0.421	212	0.0	0.7	11.992	B
C-AB	17	4	627	0.027	17	0.0	0.0	5.980	A
C-A	66	16			66				
A-B	153	38			153				
A-C	69	17			69				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	429	0.054	23	0.1	0.1	8.873	A
B-A	215	54	510	0.421	215	0.7	0.7	12.217	B
C-AB	17	4	627	0.027	17	0.0	0.0	5.980	A
C-A	66	16			66				
A-B	153	38			153				
A-C	69	17			69				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	429	0.054	23	0.1	0.1	8.873	A
B-A	215	54	510	0.421	215	0.7	0.7	12.219	B
C-AB	17	4	627	0.027	17	0.0	0.0	5.980	A
C-A	66	16			66				
A-B	153	38			153				
A-C	69	17			69				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	429	0.054	23	0.1	0.1	8.873	A
B-A	215	54	510	0.421	215	0.7	0.7	12.222	B
C-AB	17	4	627	0.027	17	0.0	0.0	5.980	A
C-A	66	16			66				
A-B	153	38			153				
A-C	69	17			69				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	429	0.054	23	0.1	0.1	8.873	A
B-A	215	54	510	0.421	215	0.7	0.7	12.222	B
C-AB	17	4	627	0.027	17	0.0	0.0	5.980	A
C-A	66	16			66				
A-B	153	38			153				
A-C	69	17			69				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	429	0.054	23	0.1	0.1	8.873	A
B-A	215	54	510	0.421	215	0.7	0.7	12.222	B
C-AB	17	4	627	0.027	17	0.0	0.0	5.960	A
C-A	66	16			66				
A-B	153	38			153				
A-C	69	17			69				

2036+Dev , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	Arm B - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		3.62	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.62	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2036+Dev	PM	FLAT	16:45	18:15	90	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		FLAT	✓	228	100.000
B		FLAT	✓	182	100.000
C		FLAT	✓	68	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A	B	C
	A	0	159	67
	B	147	0	15
	C	54	14	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A	B	C
	A	0	0	0
	B	0	0	1
	C	0	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.03	8.04	0.0	A	15	23
B-A	0.29	9.85	0.4	A	147	221
C-AB	0.02	5.96	0.0	A	14	21
C-A					54	81
A-B					159	239
A-C					67	101

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	15	4	469	0.032	15	0.0	0.0	8.019	A
B-A	147	37	513	0.286	145	0.0	0.4	9.771	A
C-AB	14	4	626	0.022	14	0.0	0.0	5.959	A
C-A	54	13			54				
A-B	159	40			159				
A-C	67	17			67				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	15	4	468	0.032	15	0.0	0.0	8.035	A
B-A	147	37	513	0.286	147	0.4	0.4	9.855	A
C-AB	14	4	626	0.022	14	0.0	0.0	5.959	A
C-A	54	13			54				
A-B	159	40			159				
A-C	67	17			67				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	15	4	468	0.032	15	0.0	0.0	8.035	A
B-A	147	37	513	0.286	147	0.4	0.4	9.855	A
C-AB	14	4	626	0.022	14	0.0	0.0	5.959	A
C-A	54	13			54				
A-B	159	40			159				
A-C	67	17			67				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	15	4	468	0.032	15	0.0	0.0	8.035	A
B-A	147	37	513	0.286	147	0.4	0.4	9.855	A
C-AB	14	4	626	0.022	14	0.0	0.0	5.959	A
C-A	54	13			54				
A-B	159	40			159				
A-C	67	17			67				

17:45 - 18:00

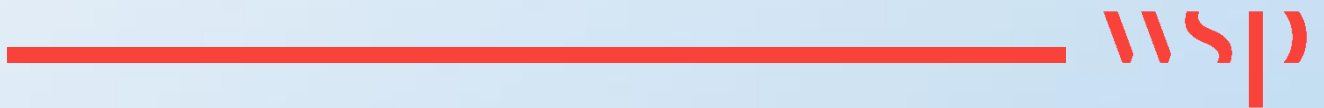
Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	15	4	468	0.032	15	0.0	0.0	8.035	A
B-A	147	37	513	0.286	147	0.4	0.4	9.855	A
C-AB	14	4	626	0.022	14	0.0	0.0	5.959	A
C-A	54	13			54				
A-B	159	40			159				
A-C	67	17			67				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	15	4	468	0.032	15	0.0	0.0	8.035	A
B-A	147	37	513	0.286	147	0.4	0.4	9.855	A
C-AB	14	4	626	0.022	14	0.0	0.0	5.959	A
C-A	54	13			54				
A-B	159	40			159				
A-C	67	17			67				

Appendix L

JUNCTION MODELLING OUTPUTS: OFF-SITE STRATEGIC JUNCTIONS - CAPACITY ASSESSMENT



Basic Results Summary
Basic Results Summary

User and Project Details

Project:	
Title:	A47/Ashby Road
Location:	
Model Assumptions:	The model was supplied to WSP by LCC and WSP has used the same model and then updated the Traffic Flows.
Additional detail:	
File name:	52281 Ashby Road_Normandy Way LCC Model.lsg3x
Author:	
Company:	
Address:	

Scenario 1: '2023 AM' (FG1: '2023 AM Peak', Plan 1: 'All Stages')

Scenario 2: '2023 PM' (FG2: '2023 PM Peak', Plan 1: 'All Stages')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A47/Ashby Road	-	-	-		-	-	-	-	-	-	75.0%	416	57	21	25.1	-	-
A47/A447/B4668	-	-	-		-	-	-	-	-	-	75.0%	416	57	21	25.1	-	-
1/1	Normandy Way Eastbound Ahead Left	U	A		1	33	-	459	1816	686	66.9%	-	-	-	4.0	31.2	10.4
1/2	Normandy Way Eastbound Ahead Right	O	A		1	33	-	446	1899	659	67.7%	80	0	9	4.2	34.2	10.1
2/1	Normandy Way Westbound Left	U	B		1	33	-	177	1777	671	26.4%	-	-	-	1.1	23.0	3.2
2/2	Normandy Way Westbound Ahead Right	O	B		1	33	-	537	1911	717	74.9%	41	0	0	5.2	34.7	13.0
3/1+3/2	Ashby Road Southbound Right Left Ahead	U+O	C	D	1	40	4:4	642	1883:1783	621+317	68.4 : 68.4%	148	57	12	5.0	27.9	10.5
4/1+4/2	Ashby Road Northbound Left Right Ahead	U+O	E		1	32	-	566	1870:1783	559+196	75.0 : 75.0%	147	0	0	5.6	35.7	11.3
C1		PRC for Signalled Lanes (%):		20.1		20.1		Total Delay for Signalled Lanes (pcuHr):		25.12		25.12		Cycle Time (s):		90	

Scenario 3: '2036 DM AM' (FG3: '2036 DM AM Peak', Plan 1: 'All Stages')

Basic Results Summary

Scenario 4: '2036 DM PM' (FG4: '2036 DM PM Peak', Plan 1: 'All Stages')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network: A47/Ashby Road	-	-	-		-	-	-	-	-	-	84.7%	315	119	72	34.1	-	-	
A47/A447/B4668	-	-	-		-	-	-	-	-	-	84.7%	315	119	72	34.1	-	-	
1/1	Normandy Way Eastbound Ahead Left	U	A		1	31	-	496	1797	639	77.6%	-	-	-	5.3	38.1	12.7	
1/2	Normandy Way Eastbound Ahead Right	O	A		1	31	-	508	1911	646	78.6%	41	0	27	5.7	40.4	12.9	
2/1	Normandy Way Westbound Left	U	B		1	31	-	187	1777	632	29.6%	-	-	-	1.3	24.9	3.5	
2/2	Normandy Way Westbound Ahead Right	O	B		1	31	-	557	1909	671	83.0%	42	0	8	6.6	42.9	15.0	
3/1+3/2	Ashby Road Southbound Right Left Ahead	U+O	C	D	1	42	4:4	789	1873:1783	668+297	81.7 : 81.7%	87	119	37	7.4	33.6	16.2	
4/1+4/2	Ashby Road Northbound Left Right Ahead	U+O	E		1	34	-	681	1896:1783	633+171	84.7 : 84.7%	145	0	0	7.9	41.8	16.2	
C1		PRC for Signalled Lanes (%):					6.2	Total Delay for Signalled Lanes (pcuHr):					34.14	Cycle Time (s): 90				
		PRC Over All Lanes (%):					6.2	Total Delay Over All Lanes(pcuHr):					34.14					

Basic Results Summary

Scenario 5: '2036 DS AM' (FG5: '2036 DS AM Peak', Plan 1: 'All Stages')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network: A47/Ashby Road	-	-	-		-	-	-	-	-	-	95.4%	332	63	109	41.4	-	-	
A47/A447/B4668	-	-	-		-	-	-	-	-	-	95.4%	332	63	109	41.4	-	-	
1/1	Normandy Way Eastbound Ahead Left	U	A		1	26	-	403	1801	540	74.6%	-	-	-	4.6	41.3	10.5	
1/2	Normandy Way Eastbound Ahead Right	O	A		1	26	-	437	1920	576	75.9%	0	0	36	5.2	42.5	11.4	
2/1	Normandy Way Westbound Left	U	B		1	26	-	275	1777	533	51.6%	-	-	-	2.5	33.0	6.2	
2/2	Normandy Way Westbound Ahead Right	O	B		1	26	-	541	1916	575	94.1%	28	0	0	10.6	70.6	19.0	
3/1+3/2	Ashby Road Southbound Right Left Ahead	U+O	C	D	1	47	4:4	1022	1876:1783	735+336	95.4 : 95.4%	240	63	18	13.8	48.7	29.5	
4/1+4/2	Ashby Road Northbound Left Right Ahead	U+O	E		1	39	-	559	1864:1783	692+181	63.6 : 65.8%	64	0	55	4.7	30.0	9.7	
C1		PRC for Signalled Lanes (%):					-6.0	Total Delay for Signalled Lanes (pcuHr):					41.38	Cycle Time (s): 90				
		PRC Over All Lanes (%):					-6.0	Total Delay Over All Lanes(pcuHr):					41.38					

Scenario 6: '2036 DS PM' (FG6: '2036 DS PM Peak', Plan 1: 'All Stages')