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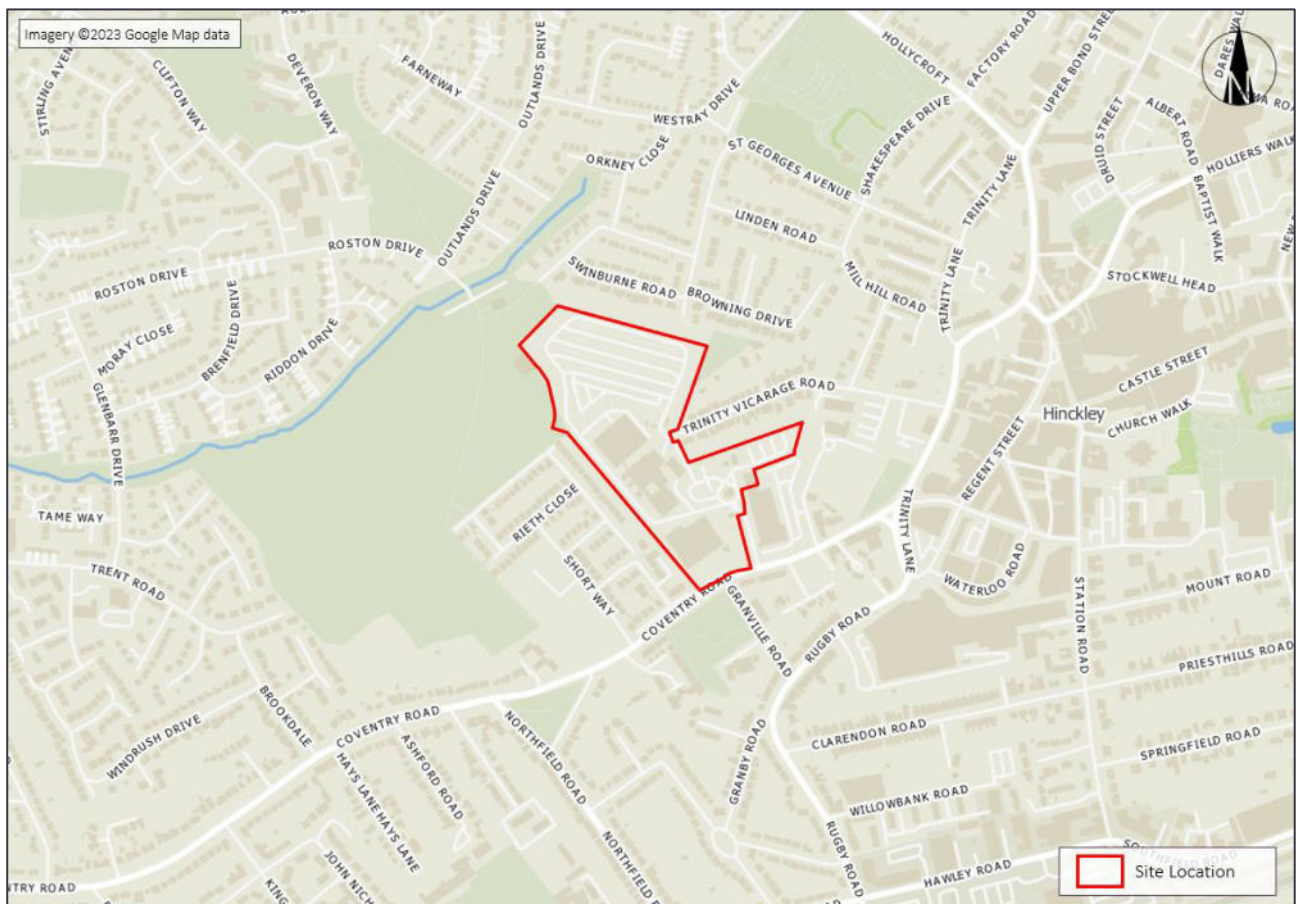
1. Introduction

1.1 Overview

The Transportation Consultancy ('ttc') have been commissioned by Cadent Gas to produce an Addendum Report to support a planning application for a residential development on the former Cadent Gas employment site off Brick Kiln Street, Hinckley.

The proposed development site is located c.530m to the west of Hinckley Town Centre, to the north of the B4666 (Coventry Road). **Figure 1.1** below illustrates the location of the proposed development in the local context.

Figure 1.1 Site Location in Local Context



The proposed development comprises of up to 195no. residential dwellings with vehicular access off Brick Kiln Street. An illustrative masterplan of the site is provided in **Appendix A**.

A planning application for the development (ref. 24/00610/OUT) was submitted in July 2024 and was supported by a Transport Assessment and Travel Plan. Following submission, a consultation response was received from Leicestershire County Council (LCC) as Local Highway Authority and is included in full in **Appendix B**. The consultation response stated 'given the scale and location of the proposed development, LHA would advise the use of LCC's Pan Regional Transport Model (PRTM) to assess the impact of the development on the surrounding highway network as opposed to Census data'.

As a result, detailed scoping discussions have been carried out with LCC and National Highways (NH) to agree the scope of the assessment. Following agreement by all parties, the results of the PRTM assessment are presented in this report.

1.2 Purpose of Report

The purpose of this report is to provide a summary of the PRTM assessment carried out to assess the impacts of the proposed development on the local highway network. This addendum report presents a summary of the strategic model outputs and the standalone junction models that have been carried out based on traffic flows extracted from the model. The report also considers the impact of the development on the strategic highway network. Following this introduction the report is structured as follows:

- Chapter 2 reviews the site access proposals
- Chapter 3 provides a summary of the PRTM results
- Chapter 4 presents the results of the standalone junction assessments
- Chapter 5 considers the impact on the strategic highway network
- Chapter 6 considers the former Cadent Gas Office use
- Chapter 7 provides a summary and conclusions.

2. Site Access Proposals

2.1 Site Access Junction

The proposed access strategy for the development was presented in the TA report that accompanied the planning application (ref. 24/00610/OUT). In LCC's consultation response dated August 2024, comments were received regarding the proposed junction layout. As a result, minor amendments have been made to the proposed layout of the Brick Kiln Street/Coventry Road junction.

Drawing 210891-01 rev B included in **Appendix C** indicates the proposed access arrangements. The updates include relocating the splitter island on Coventry Road, approximately 2m further west to provide better manoeuvrability for large vehicles leaving the site. The swept path analysis has also been updated based on a vehicle speed of 15kph and this is presented in **Drawing 210891-02 rev A** included in **Appendix C**.

Based on the revised access drawings it is considered that safe and suitable access to the site can be provided.

3. PRTM Summary

3.1 Background

In order to determine if the PRTM was a suitable tool to provide a strategic assessment of the development impacts on the local area, a Base Year Model Review (BYMR) was carried out and the full report is provided in **Appendix D**. This includes the uncertainty logs which detail committed development and infrastructure schemes in the area. These were agreed with LCC and NH during scoping discussions.

The BYMR concluded that the model validated well in the area and meets Transport Analysis Guidance (TAG) criterion. At an inception meeting dated 6th February 2025, it was agreed between LCC and the applicant that the PRTM is considered suitable to provide a strategic assessment of the development.

Following this, a full PRTM Forecasting Report was provided by LCC's Environment and Transport Modelling Services team, setting out the forecast modelling results. A summary of this report is provided in this chapter of the report, with a full copy of the report provided in **Appendix E**.

3.2 PRTM Modelling Scenarios

As part of the PRTM assessment, the model accounts for committed development traffic and background traffic growth. The PRTM Forecasting Report produced by LCC assessed the following scenarios:

- 2024 'Do Nothing'.
- 2024 'with Cadent Gas'.
- 2030 'Do Nothing'.
- 2030 'Do Something' (100% Development);

To produce the 'Do Nothing' and 'with Cadent Gas' scenarios, the forecasts have been run through the wider PRTM modelling suite, which includes a highway, public transport and variable demand model. As a result, the scenario incorporates the response of travel demand to forecasted changes in travel cost and development of transport infrastructure over time.

In producing the 2030 'Do Something' scenario, the predicted trips generated by the proposed development have been added to the 2030 'Do Nothing' highway demand matrices using the agreed parent-zone distribution and assigned in the PRTM highway model.

It should be noted that the 2024 'with Cadent Gas' scenario has been considered to indicate how the trips generated by the former office use would have distributed around the network. This enables a comparison to be carried out between the existing and proposed uses and is considered in more detail in Chapter 6. However, it should be noted that this has only been presented for information purposes and the true test of the development impact is by comparing the 2030 'Do Nothing' scenario with the 2030 'Do Something' scenario.

3.3 Modelling Assumptions

'Do Nothing' Assumptions

The 'Do Nothing' scenarios have been forecasted using planning data and information on infrastructure schemes, which has been agreed between the project team in the format of an uncertainty log.

The trip forecasting in the 'Do Nothing' scenarios used forecasts of population, households, and employment to generate future estimates of travel demand.

Proposed Development Access Assumptions

In order to represent the proposed development in the 2030 forecast year, a new development zone has been used in the PRTM assessment. This development zone will access the local highway network via the B4666 (Coventry Road) via Brick Kiln Street.

To create the 2030 'Do Something' scenario network, the 2030 'Do Nothing' network was amended to reflect the proposed development access at the B4666 (Coventry Road) off Brick Kiln Street, with ghost island provision.

Trip Generation

In order to inform the 'Do Something' scenario, trip rates and traffic generation for the proposed development have been agreed with LCC.

Tables 3.1 outlines the agreed trip rates and traffic generation.

Table 3.1 Residential Trip Rates and Traffic Generation

Time Range	Arrive	Depart	Two-way
Trip Rates (per dwellings)			
AM Peak Period (08:00 – 09:00)	0.12	0.375	0.495
PM Peak Period (17:00 – 18:00)	0.336	0.196	0.532
Daily (07:00 – 19:00)	2.036	2.199	4.235
Trips (195no. dwellings)			
AM Peak Period (08:00 – 09:00)	23	73	97
PM Peak Period (17:00 – 18:00)	66	38	104
Daily (07:00 – 19:00)	397	429	826

Trip Distribution

The existing parent-zone 6042, which loads onto the B4666 (Coventry Road) to the west of Brick Kiln Street, has been used for the trip distribution of the proposed development trips as this provides a good proxy for the proposed scheme.

Figures 3.1 and 3.2 below illustrate the forecasted development trip distribution on the highway network for the 2030 'Do Something' scenario in the AM and PM Peak hours.

The trip distribution for the proposed development traffic indicates that a large proportion of traffic stays within Hinckley Town Centre. Approximately one third of the traffic routes to/from the M69 Junction 1, along Rugby Road. Approximately 10% of traffic is expected to route to/from the north along the B4667, with a similar amount heading east through Hinckley Town Centre. Between 5% - 10% of traffic is expected to/from the west along the B4666.

3.4 Forecast Flow Change

Development Traffic

The PRTM assessment provided a forecast of the flow changes between the 2030 'Do Nothing' and 'Do Something' scenarios for the AM and PM peak hours. An extract of the flow change diagrams is presented in Figures 3.3 and 3.4 below.

Figure 3.3 Flow Change 2030 – 'Do Something' – 'Do Nothing' – AM Peak

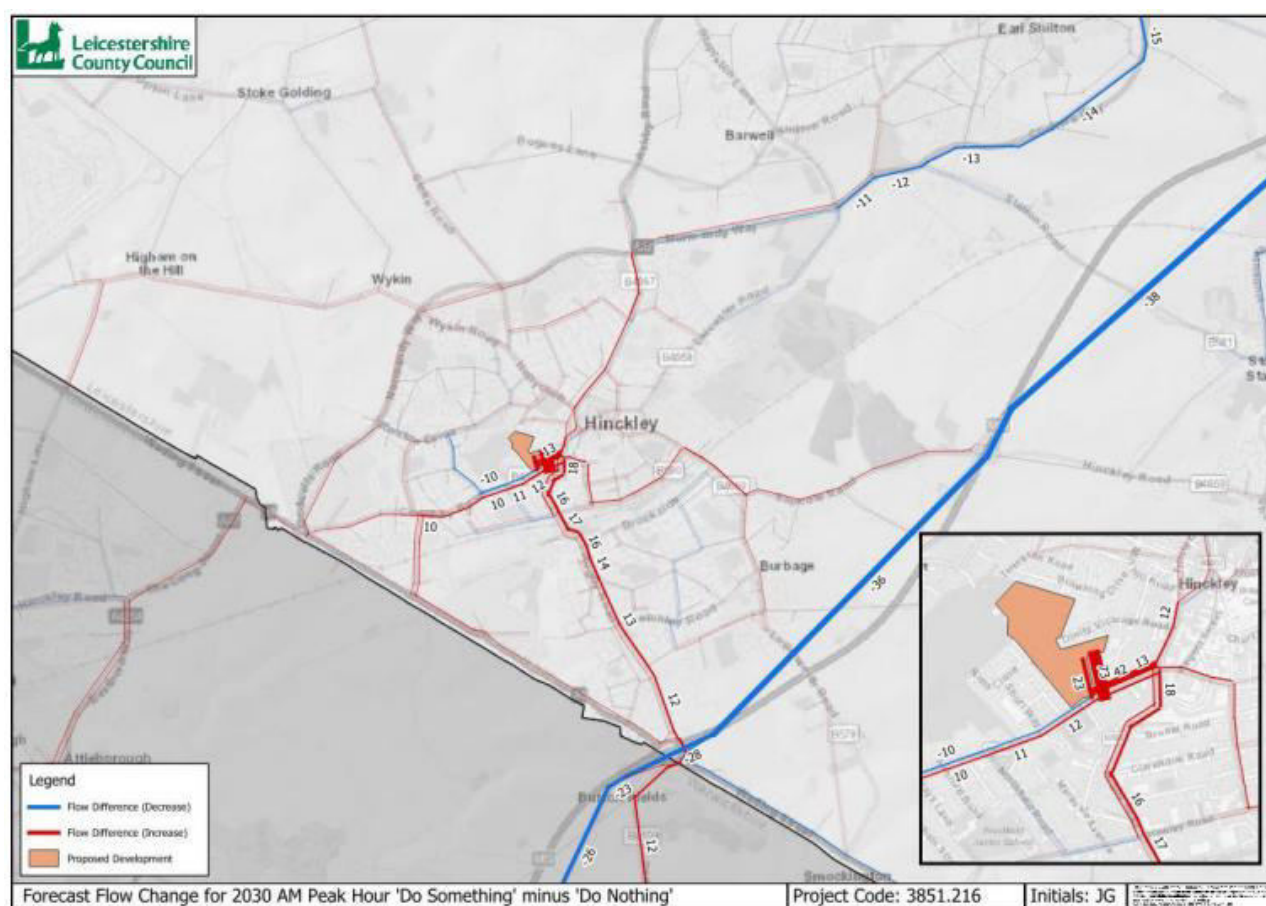
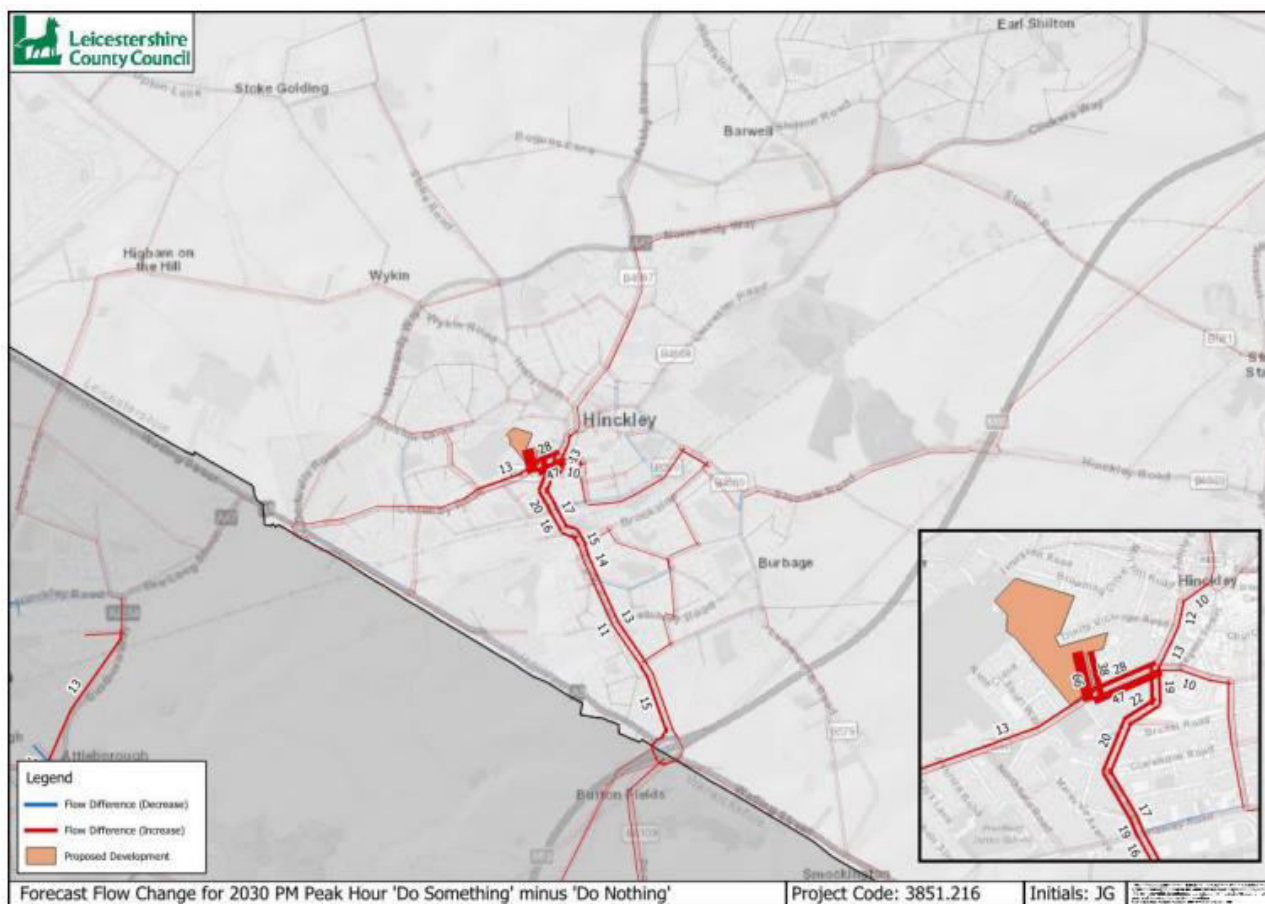


Figure 3.3 Flow Change 2030 – ‘Do Something’ – ‘Do Nothing’ – PM Peak



Source: Leicestershire County Council EDT Department

The model results indicated that, when comparing the 2030 ‘Do Nothing’ and 2030 ‘Do Something’ scenarios, the largest increase in flow is forecasted along the B4666 (Coventry Road) between the proposed development site off Brick Kiln Street and the B4667 (Trinity Lane) / Coventry Road / B590 (Trintiy Lane) / B4666 (Coventry Road) junction to the east.

In the AM peak hour, the flow between the proposed development site and the B4667 (Trinity Lane) / Coventry Road / B590 (Trintiy Lane) / B4666 (Coventry Road) junction is forecasted to increase by 42 Passenger Car Units (PCUs) eastbound. Whilst in the PM peak hour, the increase in flow between the proposed development site and the B4667 (Trinity Lane) / Coventry Road / B590 (Trintiy Lane) / B4666 (Coventry Road) junction is forecasted to be 47 PCUs westbound and 28 PCUs eastbound.

Comparatively, during the AM peak hour, the PRTM indicated that eastbound flows on the B4666 (Coventry Road) between the proposed development site off Brick Kiln Street and Brookdale is forecasted to decrease by 10 PCUs. This is likely due to trips rerouting because of the proposed development traffic in the 2030 ‘Do Something’ scenario.

It should be noted that the majority of the forecasted increases in flows during the AM and PM peak hours between the 2030 ‘Do Nothing’ and 2030 ‘Do Something’ scenarios are routing towards the M69 Junction 1 to the southeast, via the B4109 (Rugby Road), although increases in flow along this link are relatively modest and below 30 two-way trips.

Changes in flow at the Dodwells Roundabout to the west of the proposed development site is forecasted to result in a minimal increase in flows (below 10 PCUs) between the 2030 ‘Do Nothing’ and 2030 ‘Do Something’ scenarios in both peak periods. This is considered further in Chapter 5.

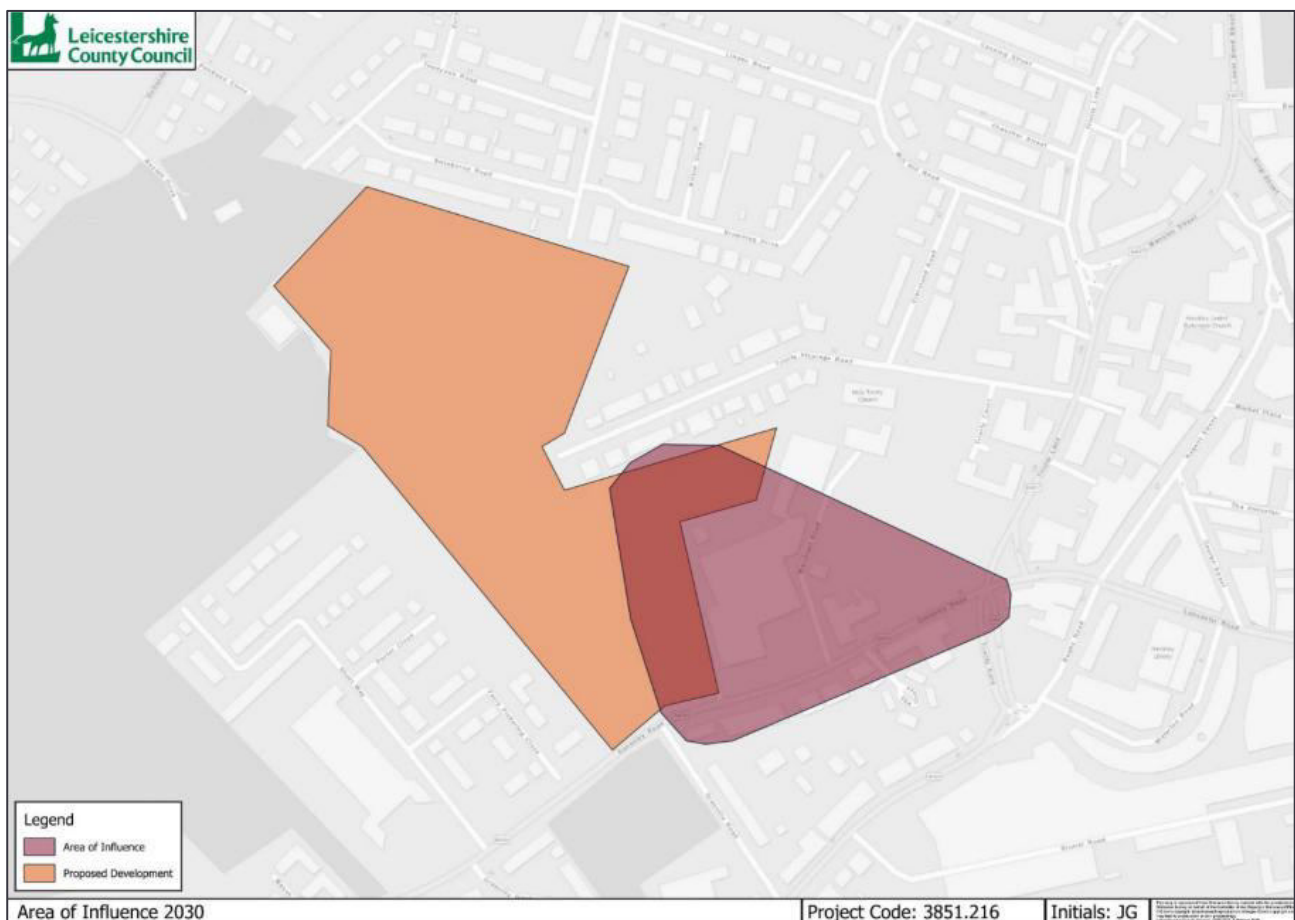
3.5 Area of Influence

The geographic scope of the PRTM assessment has been determined by the Area of Influence (AoI) plots provided by LCC's Environment and Transport Modelling Services team. The AoI is defined by comparing the change in forecast traffic flows between the 2030 'Do Nothing' and 2030 'Do Something' scenarios. The AoI has been defined by considering the links where traffic flows are forecast to change by more than $\pm 5\%$ and ± 30 PCUs, in either the AM or PM peak hour.

It should be noted that the forecasted AoI for the 2030 'Do Something' scenario includes Brick Kiln Street and the B4666 (Coventry Road).

The AoI in relation to the proposed development site is illustrated in **Figure 3.5** below.

Figure 3.5 Proposed Development Site PRTM Area of Influence



Source: Leicestershire County Council EDT Department

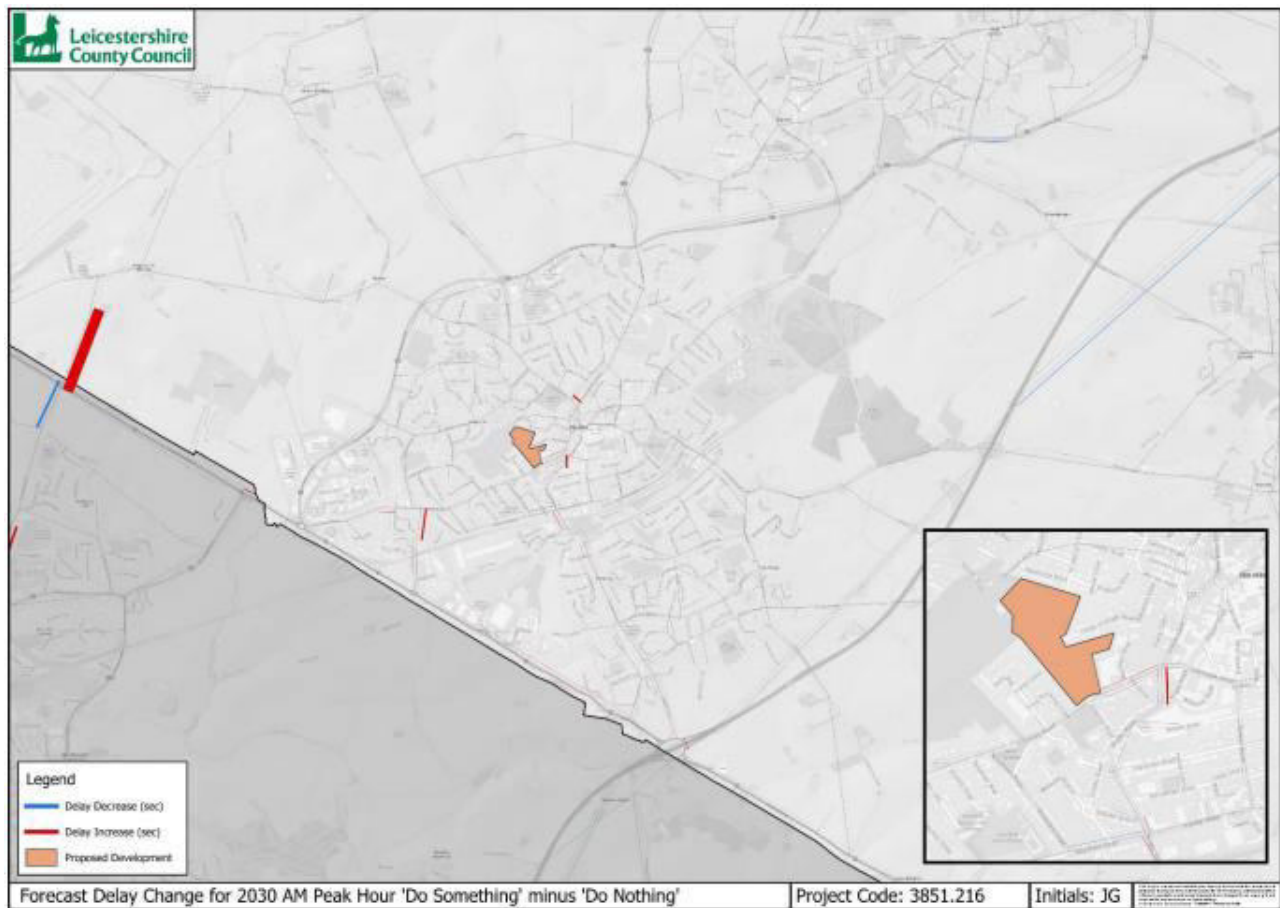
Figure 3.5 indicates that the AoI is relatively local to the site and does not extend beyond the B4666 (Coventry Road) and its junction with Trinity Lane.

3.6 Forecast Delay Change

The forecast delay change indicates where increases in delay could be expected once development traffic has been added to the network.

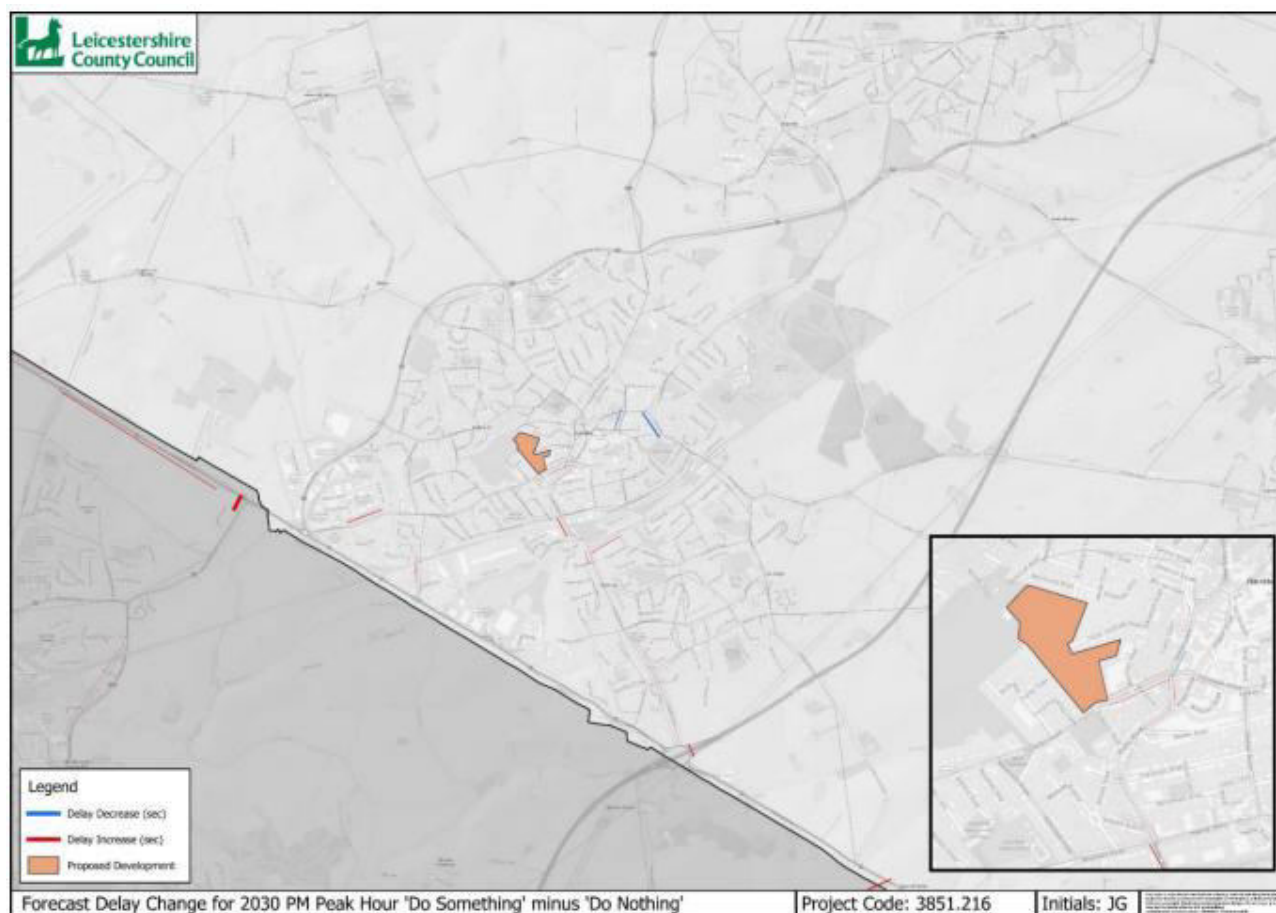
The PRTM assessment provides the forecast of the delay changes between the 2030 'Do Nothing' and 2030 'Do Something' scenarios. The results are presented in **Figures 3.6** and **3.7**.

Figure 3.6 Forecast Delay Change 2030 – ‘Do Something’ – ‘Do Nothing’ – AM Peak



Source: Leicestershire County Council EDT Department

Figure 3.7 Forecast Delay Change 2030 – ‘Do Something’ – ‘Do Nothing’ – PM Peak



Source: Leicestershire County Council EDT Department

The model indicated that there is minimal impact on delays as a result of the development, for both the AM and PM Peak hours. The greatest change in delay forecasted for the AM peak is a 16 second increase at the Higham Lane Roundabout towards the northwest of the proposed development site. However, this forecasted change is not considered consequential as the flow difference at Higham Roundabout is only 1 PCU.

Similarly, the largest change in delay forecasted for the PM peak is at the Longshoot Junction towards the west of the proposed development site (6 second increase). This is also not considered consequential due to a flow difference of only 1 PCU at the junction.

Overall, the forecasts indicate that any increases in delay are generally less than 2 seconds across the network indicating that the development proposals would not have a material impact on the local highway network.

3.7 Forecast Volume & Capacity Ratios

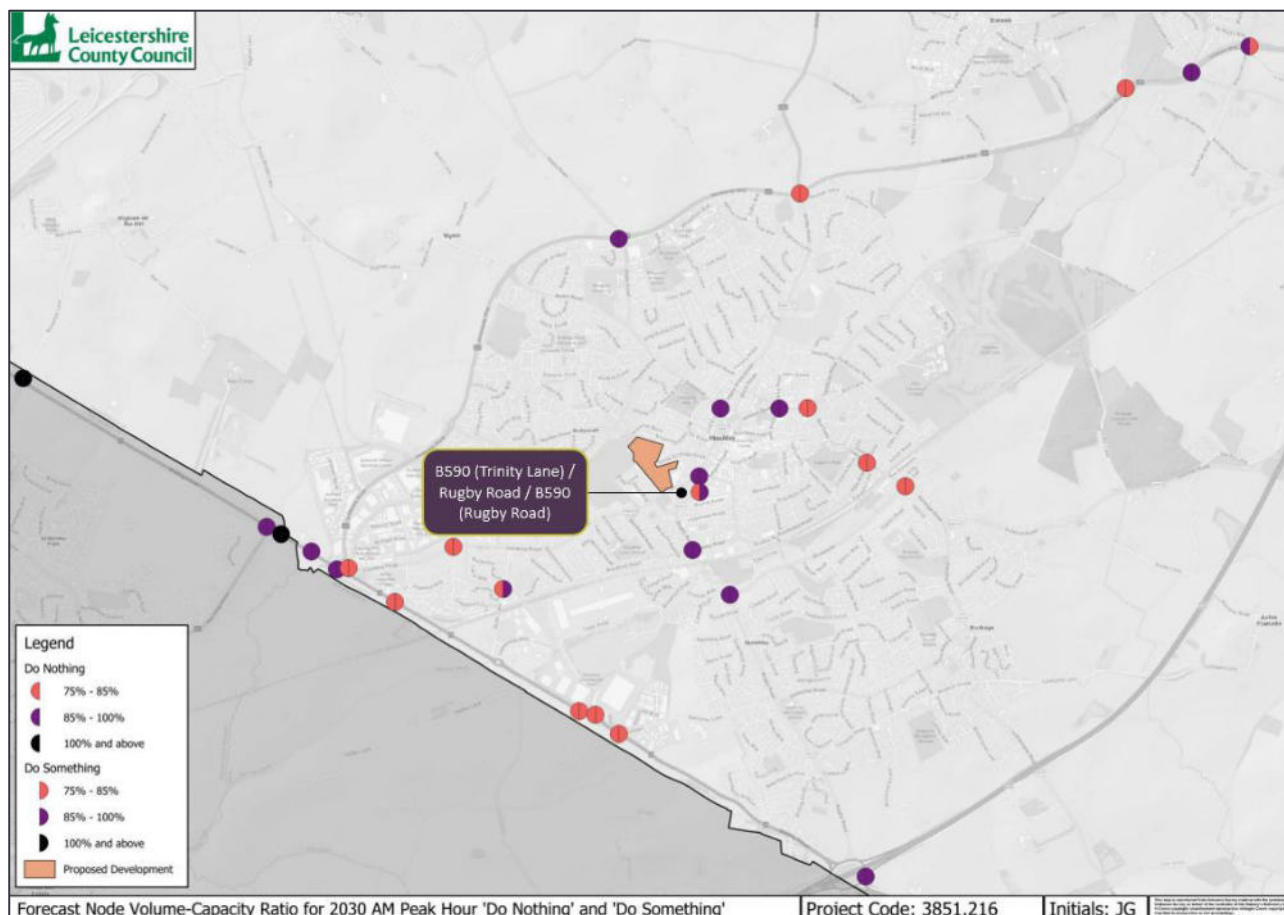
Within the PRTM, junction capacities have been estimated for individual junctions. In locations where the junctions are approaching or exceeding capacity, maximum node-volume capacity ratios (V/C's) have been presented. The V/C threshold for judging forecast capacity has been tabulated as ratios exceeding 85%, which would indicate that the highway network is under stress and there is likely to be increased delays.

Development Traffic

The PRTM assessment provides a forecast of the maximum V/C's in the 2030 'Do Nothing' and 2030 'Do Something' scenarios across the AM and PM network peak hours.

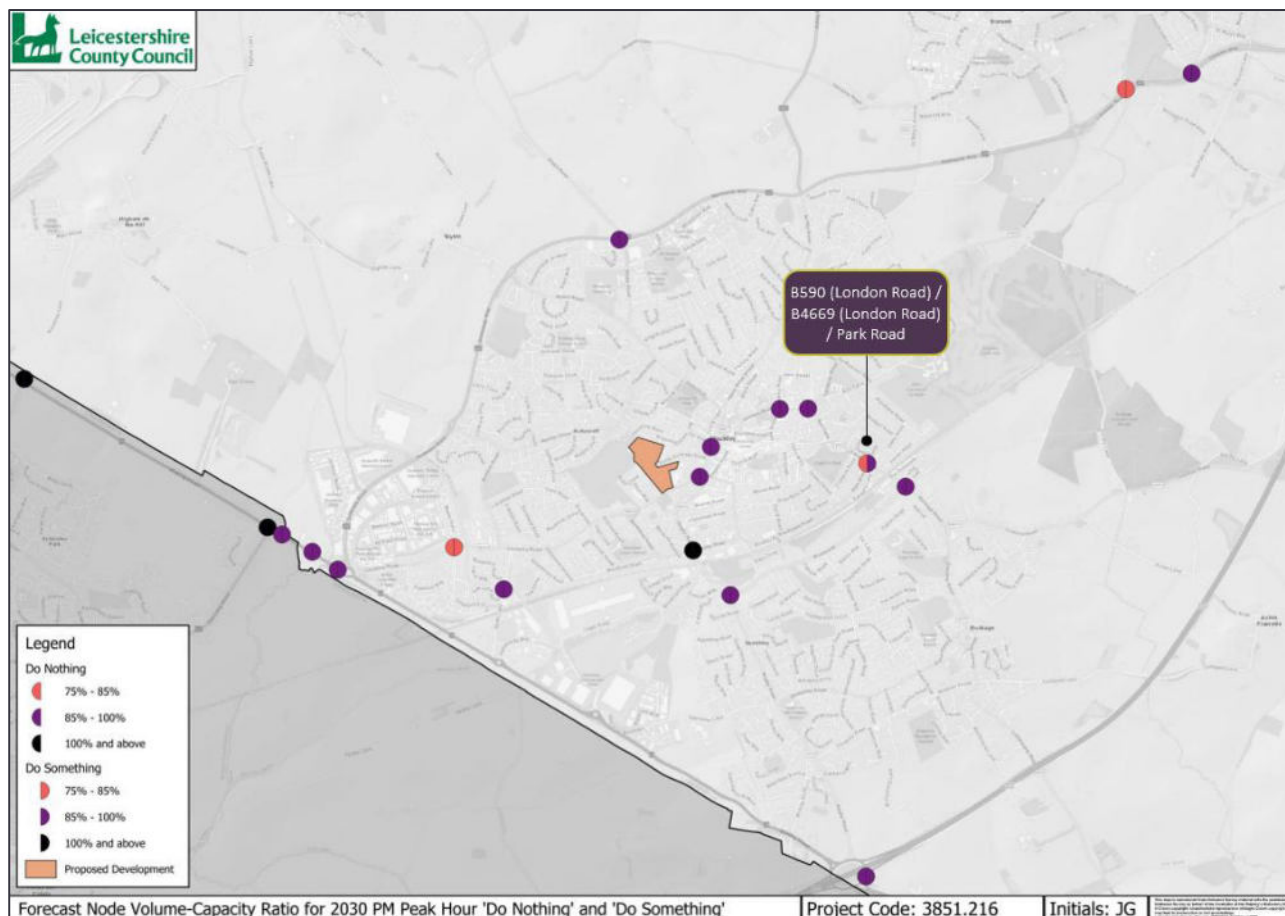
Figures 3.8 and 3.9 illustrate the forecast maximum V/C's in both scenarios across the AM and PM network peak hours, with only junctions exceeding a 75% ratio being displayed.

Figure 3.8 Forecast Node Volume/Capacity Ratios – 2030 'Do Nothing' & 2030 'Do Something' AM



Source: Leicestershire County Council EDT Department

Figure 3.9 Forecast Node Volume/Capacity Ratios – 2030 ‘Do Nothing’ & 2030 ‘Do Something’ PM



Source: Leicestershire County Council EDT Department

It is apparent from the PRTM assessment that in the vicinity of the proposed development site, the majority of junction V/C's remain unchanged between the 2030 'Do Nothing' and 2030 'Do Something' scenarios across the AM and PM network peak hours. In the AM peak hour, the V/C of the B590 (Trinity Lane) / Rugby Road / B590 (Rugby Road) junction to the southeast of the proposed development site is forecasted to increase from 75-85% in the 'Do Nothing' scenario to exceeding 85% in the 'Do Something' scenario as a result of the PRTM forecast showing significant development flows passing through the B590 (Trinity Lane) / Rugby Road / B590 (Rugby Road) junction. In order to consider the likely development impacts at this junction in more detail, a standalone junction assessment has been undertaken and is presented in the following chapter. An increase in V/C is also predicted on Nutts Lane although the change in flow along this link as a result of the development proposals is negligible.

In the PM peak, the B590 (London Road) / B4669 (London Road) / Park Road junction V/C is similarly forecasted to increase from 75-85% in the 'Do Nothing' scenario, to exceed 85% in the 'Do Something' scenario. However, the PRTM forecast showed limited development traffic heading through the B590 (London Road) / B4669 (London Road) / Park Road junction and therefore it cannot be considered to be directly impacted by the proposals, and it is assumed that no further capacity assessment would be required. This junction also falls outside the Aol.

Nevertheless, the outlined junctions are the only ones in the vicinity of the development site that are forecasted to undergo an increase in V/C when comparing the 2030 'Do Nothing' and 2030 'Do Something' scenarios in both the AM and PM peak hours. This suggests that the traffic generated by the proposals will have a limited impact on the operation of the majority of the local highway network and any increases are

isolated to the immediate vicinity of the development site at the B590 (Trintiy Lane) / Rugby Road / B590 (Rugby Road) junction.

4. Stand Alone Junction Assessments

4.1 Introduction

The PRTM assessment summarised in chapter 3 provided a strategic assessment of the local highway network. However, given the strategic nature of the PRTM, it is considered necessary to undertake standalone junction models at key locations on the network to understand the likely impact of the development in more detail. These standalone assessments use outputs from the PRTM assessment.

Ordinarily, standalone junction assessments would be limited to junctions included within the Aol. However, in the interests of robustness, standalone junction assessments have been undertaken at all junctions considered within the original TA report. The junctions considered are as follows.

- Site Access (Brick Kiln Street)/B4666 (Coventry Road) Priority T-junction.
- Granville Road/B4666 (Coventry Road) Priority T-junction.
- Granville Road/Rugby Road (B590) Priority T-junction.
- B590/ B4666 (Coventry Road)/B4667 Signal Junction.
- B590/Rugby Road Signal Junction.
- B590/Brunel Road West Signal Junction.
- Westfield Road/Hawley Road (B590)/Rugby Road Signal Junction.

4.2 Assessment Scenarios and Furnessing

The junctions outlined in **Section 4.1** have been assessed during the AM and PM peak periods for the following scenarios, as agreed with LCC:

- 2024 'Do Nothing'.
- 2030 'Do Nothing'.
- 2030 'Do Something' (100% Development).

As the PRTM is a strategic model it is not validated at a junction turning flow level, the stand alone models have been based on observed traffic flows using the data collected in April 2024 and November 2023. Further details are provided within the original TA report.

Outputs from the PRTM have then been used to growth up observed counts to the future 2030 'Do Nothing' and 2030 'Do Something' scenarios. In order to do this the base flows were provided to LCC's Environment and Transport Modelling Services team, to enable them to undertake the furnessing process.

The methodology used to furnish the traffic flows is set out below:

1. Define the prior matrix using the counts provided. Calculate the 'total' in / out flows for each arm of the junction.
2. For each in / out at a junction, determine the flow difference between the PRTM count year and forecast year. Add this to the observed prior matrix 'total' to create a 'target' (i.e. the 'additive' methodology for determining link targets).

3. Divide the 'target' by the 'total' for each row and column to get 'row factors' and 'column factors'.
4. Multiply the prior matrix by the row factors to produce an 'interim' matrix.
5. Calculate the convergence, using Relative Absolute Difference (R.A.D), on the 'interim' matrix (i.e. non-factored columns)
6. Multiply the updated matrix by the column factors to produce the 'final' matrix for that iteration.
7. Sum rows and columns, to create new totals.
8. Repeat steps 3 through 7 until convergence is achieved in step 5 of the final iteration. Terminating convergence is when the R.A.D is below 2%, unless there is a narrative why a junction does not converge.

The furnished traffic flow matrices are provided in **Appendix F**, with the corresponding traffic flow diagrams for all scenarios listed provided in **Appendix G**.

4.3 Junction Analysis

The analysis of priority junctions has been conducted using Junctions 10 (PICADY Module) software. Signalised junctions have been assessed using LinSig Version 3 software. Both of these software packages are industry standard.

For priority junctions (T-junction/roundabout) an Ratio of Flow to Capacity (RfC) of 0.85 suggests a particular arm of a junction is approaching theoretical capacity, and if additional traffic is added to the junction queues and delays will increase disproportionately. Geometrical inputs to inform the models have been based on on-site measurements and satellite imagery.

For signalised junctions, a Degree of Saturation (DoS) of 90% suggests that a particular arm is approaching theoretical capacity and the junction as a whole does not have any Practical Reserve Capacity (PRC). The signal timings to inform the junction models have been based on the traffic signal specifications provided by LCC.

The junction capacity assessment results are summarised below.

Site Access Junction

This proposed site access junction (Brick Kiln Street/B4666) has been assessed using the PICADY module of Junctions 10. A summary of the Site Access junction capacity modelling results is presented in **Table 4.1** below, with full results included within **Appendix H**.

Table 4.1 Proposed Site Access Junction Modelling Summary

Arm	Queue	Delay	RFC	Queue	Delay	RFC
	AM Peak			PM Peak		
2030 'Do Something'						
Brick Kiln Street - All Movements	0.2	9.68	0.18	0.1	8.86	0.10
Coventry Road (B4666) - Right Turn	0.0	7.09	0.04	0.1	7.66	0.11

In the future year scenario of 2030 'Do Something', the junction is predicted to operate within capacity with minimal queues and delays predicted. As a result, the development proposals will not result in material delays on the B4666 (Coventry Road) and will provide safe and suitable access to the development.

Granville Road / B4666 (Coventry Road) Priority Junction

This junction has been assessed using the PICADY module of Junctions 10. The geometrical parameters to inform the model have been taken from on-site measurements. A summary of the capacity modelling results is presented in **Table 4.2** below, with full results included within **Appendix I**.

Table 4.2 Granville Road / B4666 (Coventry Road) Modelling Summary

Arm	Queue	Delay	RFC	Queue	Delay	RFC
	AM Peak			PM Peak		
2024 'Do Nothing'						
Granville Road – All Movements	0.1	7.9	0.09	0.2	9.41	0.18
B4666 (Coventry Road) – Right Turn	0.2	4.87	0.11	0.4	4.85	0.14
2030 'Do Nothing'						
Granville Road – All Movements	0.1	8.25	0.10	0.2	9.62	0.19
B4666 (Coventry Road) – Right Turn	0.3	4.63	0.14	0.4	4.74	0.15
2030 'Do Something'						
Granville Road – All Movements	0.1	8.29	0.10	0.2	9.79	0.19
B4666 (Coventry Road) – Right Turn	0.3	4.67	0.14	0.4	4.72	0.16

Table 4.2 indicates that the Granville Road/B4666 (Coventry Road) junction currently operates within capacity under current traffic conditions. This aligns with on-site observations and is considered an accurate indication of the current operation of the junction.

In the future year scenario of 2030 'Do Nothing', the junction is predicted to continue to operate within capacity. Once development traffic is added to the network in the 2030 'Do Something' scenario, the junction is predicted to operate within capacity with no increases in queues predicted.

Granville Road / Rugby Road (B590) Priority Junction

This junction has been assessed using the PICADY module of Junctions 10. The geometrical parameters to inform the model have been taken from on-site measurements. A summary of the capacity modelling results is presented in **Table 4.3** below, with full results included within **Appendix J**.

Table 4.3 Granville Road / Rugby Road (B590) Modelling Summary

Arm	Queue	Delay	RFC	Queue	Delay	RFC
	AM Peak			PM Peak		
2024 ‘Do Nothing’						
Granville Road - All Movements	0.2	11.92	0.16	0.3	15.01	0.26
Rugby Road (B4666) – Right turn	0	4.50	0.03	0.4	4.91	0.16
2030 “Do Nothing’						
Granville Road - All Movements	0.2	12.99	0.19	0.4	16.50	0.29
Rugby Road (B4666) – Right turn	0.1	4.30	0.04			
2030 ‘Do Something’						
Granville Road - All Movements	0.2	13.30	0.20	0.4	17.33	0.31
Rugby Road (B4666) – Right turn	0.1	4.27	0.05			

Table 3.3 indicates that the Granville Road/Rugby Road(B590) junction currently operates within capacity under current traffic conditions. This aligns with on-site observations and is considered an accurate indication of the current operation of the junction.

In the future year scenario of 2030 'Do Nothing', the junction is predicted to continue to operate within capacity. Once development traffic is added to the network in the 2030 'Do Something' scenario, the junction is predicted to operate within capacity without significant increases in queues or delays.

B590 / B4666 (Coventry Road)/B4667; B590/Rugby Road; B590/Brunel Road West Linked Signal Junction

These junctions have been modelled as a linked traffic signal junction using LinSig version 3. The signal arrangement has been based on the signal specification provided by LCC. A summary of the capacity modelling results is presented in **Table 4.4** below, with full results included within **Appendix K**.

Table 4.4 B590/B4666 (Coventry Road)/B4667; B590/Rugby Road; B590/Brunel Road West Linked Signal Junction Summary Results

ARM	AM Peak Hour			PM Peak Hour		
	DoS (%)	Mean Queue (PCU)	Max Delay (sec/PCU)	DoS (%)	Mean Queue (PCU)	Max Delay (sec/PCU)
2024 'Do Nothing'						
B4666 Coventry Road (W) Left Ahead Right	63.0	5	28	68.7	8	29
B590 Ahead Left	61.9	6	31	67.7	9	27
B590 Ahead	54.2	5	31	63.7	6	33
B4667 Left Ahead	62.9	11	24	68.1	11	29
B4667 Right	36.4	5	19	37.9	5	23
B4666 Coventry Road (E) Ahead Left	43.0	3	46	49.1	4	44
B590 (N) Left Ahead	32.9	1	3	32.9	2	4
B590 (S) Ahead Right	32.8	11	6	51.4	13	9
Rigby Road Left	34.1	3	43	40.9	3	42
Rugby Road Right	25.2	2	42	37.3	3	41
B590 (NE) Left Ahead	45.4	9	6	50.8	8	9
B590 (SW) Ahead Right	42.2	6	11	57.6	10	18
Brunel Road W Right Left	21.8	1	49	50.5	3	40
Cycle Time (s)	90s (Peds run every other cycle at B590/Brunel Road West Jct)			90s (Peds run every other cycle at B590/Brunel Road West Jct)		
Practical Reserve Capacity (%)	42.8%			31.0%		
Junction Delay (pcuHr)	21.05			30.81		
2030 'Do Nothing'						
B4666 Coventry Road (W) Left Ahead Right	70.2	7	29	71.8	8	29
B590 Ahead Left	70.7	7	34	73.2	8	28
B590 Ahead	65.6	6	36	70.6	10	35
B4667 Left Ahead	70.5	13	27	72.2	13	32
B4667 Right	34.8	5	20	36.1	5	24

ARM	AM Peak Hour			PM Peak Hour		
	DoS (%)	Mean Queue (PCU)	Max Delay (sec/PCU)	DoS (%)	Mean Queue (PCU)	Max Delay (sec/PCU)
B4666 Coventry Road (E) Ahead Left	33.3	3	38	45.8	4	41
B590 (N) Left Ahead	38.5	3	4	33.4	3	4
B590 (S) Ahead Right	37.7	12	4	56.0	12	8
Rigby Road Left	42.1	3	50	44.0	4	45
Rugby Road Right	28.3	2	47	42.1	3	45
B590 (NE) Left Ahead	53.3	10	7	51.4	8	9
B590 (SW) Ahead Right	52.6	9	19	65.5	13	21
Brunel Road W Right Left	27.1	1	50	57.3	4	44
Cycle Time (s)	90s (Peds run every other cycle at B590/Brunel Road West Jct)			90s (Peds run every other cycle at B590/Brunel Road West Jct)		
Practical Reserve Capacity (%)	27.3%			22.9%		
Junction Delay (pcuHr)	25.10			33.79		
2030 'Do Something'						
B4666 Coventry Road (W) Left Ahead Right	71.6	8	29	75.9	9	31
B590 Ahead Left	73.0	7	36	75.2	8	26
B590 Ahead	67.1	7	37	65.1	8	32
B4667 Left Ahead	72.4	14	29	76.0	13	36
B4667 Right	35.7	5	21	41.1	6	27
B4666 Coventry Road (E) Ahead Left	31.1	3	36	45.8	5	40
B590 (N) Left Ahead	39.5	3	4	34.5	3	4
B590 (S) Ahead Right	38.0	12	6	59.6	12	10
Rigby Road Left	43.9	3	51	45.9	4	46
Rugby Road Right	29.5	2	48	43.6	3	46
B590 (NE) Left Ahead	54.8	15	7	56.3	8	9
B590 (SW) Ahead Right	51.0	9	17	70.5	15	24
Brunel Road W Right Left	27.8	1	50	57.1	4	42
Cycle Time (s)	90s (Peds run every other cycle at B590/Brunel Road West Jct)			90s (Peds run every other cycle at B590/Brunel Road West Jct)		

ARM	AM Peak Hour			PM Peak Hour		
	DoS (%)	Mean Queue (PCU)	Max Delay (sec/PCU)	DoS (%)	Mean Queue (PCU)	Max Delay (sec/PCU)
Practical Capacity (%)	23.2%			18.4%		
Junction Delay (pcuHr)	26.10			36.10		

Table 4.4 indicates that the linked signal junction operates within capacity under current traffic conditions. The predicted operation of the junction in the 2024 Base scenario is considered to be reflective of observed conditions.

In the future years of 2030 the junction is still predicted to operate within capacity. Once development traffic is added to the network in the do something scenario a slight increase in queues and delays is predicted but the junction still operates with a positive PRC. Overall, the development is not predicted to have a material impact on the linked signal junction.

Westfield Road/Hawley Road (B590)/Rugby Road Signal Junction

This junction has been modelled using LinSig Version 3. The model has been based on the traffic signal specifications obtained from LCC. A summary of the capacity modelling results is presented in **Table 4.5** below, with full results included within **Appendix L**.

It should be noted that the signal staging included a dummy all red phase, however this is only called overnight, therefore this has been removed from the signal staging.

Table 4.5 Westfield Road/Hawley Road (B590)/Rugby Road Signal Junction Summary Results

ARM	AM Peak Hour			PM Peak Hour		
	DoS (%)	Mean Queue (veh)	Max Delay (sec/PCU)	DoS (%)	Mean Queue (veh)	Max Delay (sec/PCU)
2024 'Do Nothing'						
B590 Rugby Road Left Ahead Right	56.8	12	28	56.2	11	24
B590 Hawley Road Left	50.1	5	57	66.8	9	58
B590 Hawley Road Ahead Right	86.4	9	93	85.1	9	83
Rugby Road Right Left Ahead	87.2	26	38	88.0	28	35
Westfield Road Ahead Right	85.5	12	62	88.2	10	75
Cycle Time (s)		120			120	
PRC (%)		3.3%			2.1%	
Junction Delay (pcuHr)		30.37			33.17	
2030 'Do Nothing'						

ARM	AM Peak Hour			PM Peak Hour		
	DoS (%)	Mean Queue (veh)	Max Delay (sec/PCU)	DoS (%)	Mean Queue (veh)	Max Delay (sec/PCU)
B590 Rugby Road Left Ahead Right	66.7	15	31	59.9	12	25
B590 Hawley Road Left	50.7	6	57	66.1	9	57
B590 Hawley Road Ahead Right	89.8	10	103	94.8	12	120
Rugby Road Right Left Ahead	91.6	31	46	94.5	38	46
Westfield Road Ahead Right	91.0	15	73	93.9	14	92
Cycle Time (s)		120			120	
PRC (%)		-1.8%			-5.4%	
Junction Delay (pcuHr)		36.81			43.75	
2030 'Do Something'						
B590 Rugby Road Left Ahead Right	68.5	16	31	61.8	13	26
B590 Hawley Road Left	51.4	7	57	66.3	9	57
B590 Hawley Road Ahead Right	88.9	9	99	94.4	12	117
Rugby Road Right Left Ahead	91.9	31	47	96.0	40	52
Westfield Road Ahead Right	91.2	16	74	94.6	14	95
Cycle Time (s)		120			120	
Practical Reserve Capacity (%)		-2.1%			-6.6%	
Junction Delay (pcuHr)		37.22			46.08	

Table 4.5 indicates that under current conditions the junction is operating close to capacity with degrees of saturation approaching 90% on Hawley Road, Rugby Road and Westfield Road. This reflects on-site observations.

In the 2030 'Do Nothing' scenario the junction is predicted to operate at capacity with a number of arms operating with degrees of saturation marginally above 90% in both the AM and PM peak periods.

In the 2030 'Do Something' scenario, when development traffic is added to the network the junction is predicted to continue to operate at capacity, however the increase in queues and delays at the junction is minimal. During the AM peak, the overall PRC decreases from -1.8% to -2.1%. The largest increase in queue is one vehicle on any one arm. Furthermore the increase in delay is negligible.

During the PM peak, the overall PRC is predicted to decrease from -5.4% to -6.4%. The largest increase in queue is two vehicles with delays of six seconds, both of which occur on the Rugby Road arm of the junction. Such increases in queue and delay are unlikely to be perceptible to existing uses of the junction.

It is noted that the junction was recently upgraded, therefore, opportunities to provide further improvements are limited due to land constraints surrounding the junction. Nevertheless, NPPF paragraph 116 states, *'Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network, following mitigation, would be severe, taking into account all reasonable future scenarios.'*

The demonstrated increase in PRC value, and predicted increase in queues and delays, indicates that the proposed development traffic will not result in a material impact on the operation of the junction and certainly could not be classed as severe. As a result, the impact at this junction is considered acceptable and is in line with NPPF.

5. Strategic Highway Network

5.1 Introduction

This sections considers the impact on the strategic highway network, with a focus on the A47/A5/B4666 Dodwells Roundabout and A5/A47 Longshoot junction. The analysis focuses on the strategic modelling outputs included within the PRTM forecast report.

5.2 Dodwells and Longshoot

The PRTM forecast report indicates that the Dodwells and Longshoot junctions are not within the AoI meaning that the development does not result in a change in flow of ± 30 PCUs and $\pm 5\%$. A more in depth look at the forecast flow change between the 2030 'Do Nothing' and 'Do Something' scenarios has been undertaken based on outputs from the PRTM. The predicted change in flows on the individual approach arms is set out in **Table 5.1**.

Table 5.1 Dodwells and Longshoot Flow Changes – 2030 'Do Something' – 'Do Nothing'

Approach Arm	Flow Difference AM Peak	Flow Difference PM Peak
Dodwells Roundabout		
B4666	+4	+2
A5 East	-2	+4
A47 West	0	0
A47 North	+4	0
Total	+6	+6
Longshoot Signal Junction		
A5 East	+2	0
A47 South	+4	+1
A5 West	-1	0
Total	+5	+1

Table 5.1 indicates that the highest increase on any one arm of the Dodwells or Longshoot junctions would be 4 PCUs. This equates to one additional vehicle every 15-minutes during the peak periods.

Across Dodwells junction as a whole, the development is predicted to add 6 additional PCUs in both the AM and PM peak periods, whilst at the Longshoot junction it is predicted to add 5 PCUs during the AM peak and 1 during the PM peak.

Such changes in flow would not result in a material change in the operation of these junctions, and certainly could not be classed as severe.

The PRTM forecast report does not predict any significant increases in delay at either of these junctions when comparing the 2030 'Do Nothing' and 'Do Something' scenarios. The longest increase in delay is predicted on the A47 southern arm of the Longshoot junction in the PM peak and relates to an increase of 6-seconds, however, **Table 5.1** indicates that during this period the development would only increase flows by 1 PCU on this arm.

It is noteworthy that recent appeal decisions have also considered traffic impacts at the Dodwells and Longshoot junctions. For example, an appeal decision for a site for 700 dwellings off Weddington Road in Nuneaton (application number: 039369, Appeal Ref. APP/W3710/W/23/3330615) it was stated that the development would add '1no. additional vehicle a minute' or 60no. vehicles to the Dodwells Roundabout in the peak hours. However, it was concluded by the planning inspectorate that:

'Even in disregarding that view there is an impact from this residual traffic but I do not consider any traffic generated by the proposal would result in severe impacts.'

The PRTM assessment carried out shows that the impact of the proposed Brick Kiln Street development would be significantly less, and therefore could not be classed as severe or justify mitigation at this location.

Overall, the analysis undertaken has demonstrated that the proposed development would have a negligible impact on the strategic highway network and no further assessment of the Dodwells or Longshoot junctions is required.

6. Former Cadent Gas Offices

6.1 Introduction

As stated earlier in this report, for information purposes, the PRTM assessment also considered the trip generation and distribution of the former Cadent Gas office development that operated on the site and has now been demolished. Whilst it is accepted that the former use could not be re-built without planning permission, it is important to recognise that the former office use generated a significant level of traffic that would have been on the network as recently as 2022.

6.2 Former Office Development Comparison

The 2024 base year included within the PRTM did not include the former office development, therefore as part of the 2024 'With Cadent Gas' scenario traffic associated with the former office use was added back onto the network using the trip rates agreed with LCC and NH.

The distribution analysis indicates that the former office use would have had a wider distribution compared to the proposed residential use with more journeys from outside Hinckley. For example, in the AM peak up to 23% of the office traffic was predicted to route via Dodwells and Longshoot compared to just 10% of the proposed residential traffic.

The forecast changes in flow indicates the 2024 'With Cadent Gas' Scenario would have generated significantly more traffic on routes towards the M69 and through the Dodwells and Longshoot junctions compared to the predicted flow changes when comparing the 2030 'Do Nothing' with the 2030 'Do Something' scenarios.

For example, Figure 12 of the PRTM forecast report included in **Appendix E** indicates that during the AM peak, if the office development was still operational, it would have resulted in between 32-42 additional inbound trips routing through Dodwells and Longshoot. However, the previous section indicated that the forecast flow change as a result of the development would be minimal, resulting in an increase of 6 PCUs across the junction as a whole.

This suggests that the proposed residential development is generally resulting in less traffic on the network compared to what would have been the case if the Cadent Gas offices had remained operational.

7. Summary and Conclusion

7.1 Summary

This Addendum Report has been produced to support a planning application (ref. 24/00610/OUT) for up to 195no. residential dwellings on the former Cadent Gas employment site off Brick Kiln Street, Hinckley.

The purpose of the report was to report the findings of the additional traffic modelling that was undertaken using LCC's Pan Regional Transport Model (PRTM).

The report has indicated that the Area of Influence of the development is limited to the B4666 (Coventry Road). It also showed that the change in flow on the network would be relatively modest. No significant increases in delay or junction operation have been predicted.

Outputs from the PRTM were also used to inform more detailed standalone junction models. These junction model outputs demonstrated that the proposals would not result in material increase in queues or delays on the local network.

It has also been demonstrated that the development will not have a material impact on the strategic highway network, including the Dodwells and Longshoot junctions. It is therefore concluded that no additional assessment work is required at these locations.

7.2 Conclusion

On the basis of the information presented in this report it is considered that the proposed development would not result in a severe impact on the safe operation of the local highway network.

It is therefore considered that the proposed development is acceptable from a highway perspective, and is compliant with Paragraph 116 of the NPPF, which states that *'Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network, following mitigation, would be severe, taking into account all reasonable future scenarios'*.

Appendix A

Indicative Masterplan

Land Off Brick Kiln St, Hinckley

ILLUSTRATIVE
MASTERPLAN



0 | 10 | 20 | 30 | 40 | 50m

LEGEND

Site Allocation Boundary

Primary Movement Routes

Secondary Movement Routes

Shared/Private Drives

Proposed Attenuation

Indicative position of new tree planting

Proposed POS

Potential Site Access off Brick Kiln St

Potential Highway Emergency Link

Easement

Existing Mast

Proposed Development Structure

Existing Trees

Potential footpath connections

- LEGEND
- Site Allocation Boundary
 - Primary Movement Routes
 - Secondary Movement Routes
 - Shared/Private Drives
 - Proposed Attenuation
 - Proposed Pedestrian/Cycle Route
 - Indicative position of new tree planting
 - Proposed Development Structure
 - Existing Trees
 - Proposed POS

- Potential Highway Emergency Link
- Easement
- Existing Mast

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Client	CADENT
Project	LAND OFF BRICK KILN ST, HINCKLEY
Drawing Title	ILLUSTRATIVE MASTERPLAN
Drawing No.	DGL_230929_5830.001





Appendix B

LCC Consultation Response

Substantive response of the Local Highway Authority to a planning consultation received under The Development Management Order.



Response provided under the delegated authority of the Director of Environment & Transport.

APPLICATION DETAILS

Planning Application Number: 24/00610/OUT

Highway Reference Number: 2024/0610/04/H/R1

Application Address: Cadent Brick Kiln Street Hinckley Leicestershire LE10 0NA

Application Type: Outline (with access)

Description of Application: Re-consultation. The erection of up to 195 dwellings (including affordable housing). All matters are reserved except access together with landscaping and other infrastructure.

GENERAL DETAILS

Planning Case Officer: Sullivan Archer

Applicant: Kerry Andrews

County Councillor: Cllr Stuart Bray

Parish:

Road Classification: Adopted Unclassified

Substantive Response provided in accordance with article 22(5) of The Town and Country Planning (Development Management Procedure) (England) Order 2015:

The Local Highway Authority does not consider that the application as submitted fully assesses the highway impact of the proposed development and further information is required as set out in this response. Without this information the Local Highway Authority is unable to provide final highway advice on this application.

Advice to Local Planning Authority

Background

The Local Highway Authority (LHA) have been consulted by Hinckley & Bosworth Borough Council as the Local Planning Authority (LPA) on an outline application for the erection of up to 195 dwellings. The proposals are located at Cadent, Brick Kiln Street, Hinckley. All matters other than access are reserved at this stage.

The LHA have reviewed the following documents which have been submitted by the Applicant in support of the proposals:

- Transport Assessment authored by TTC (reference 210891-01 dated 31st May 2024)
- Framework Travel Plan authored by TTC (reference 210891-02 dated 31st May 2024)

The LHA is aware of application reference 21/00875/HYB, which was a hybrid planning application comprising of outline permission for the demolition of the existing buildings and erection of up to 110 dwellings accessed from St George's Avenue and associated infrastructure (access only) and

full planning permission for the demolition of existing buildings and provision of 73 car parking bays for the retained office buildings. That application was withdrawn by the Applicant on 15th March 2023. The LHA advised further information was required in respect of the proposals within its observations dated 30th September 2021, however it was stated:

'While the LHA currently has no major concerns with the proposals, additional information is requested in respect of the parking arrangements within the site and how a situation whereby the redundant offices could remain in occupation while car parking spaces are removed could be avoided....'

The LHA are aware the office blocks have since been demolished and the site has been cleared.

Site Access

Vehicular access to the site would be off Brick Kiln Street, an adopted, unclassified road subject to a 30mph speed limit. Brick Kiln Street connects to Coventry Road, a B classified road (B4666) subject to a 30mph speed limit. The proposed site access arrangements are shown in TTC drawing number 210891-01 Rev. A contained in Appendix E.

The Applicant intends to upgrade Brick Kiln Street to a 6.75m wide carriageway with 2.0m footways on either side. To accommodate the widening of the carriageway and footway the, Brick Kiln Street/Coventry Road junction would be realigned approximately 4.0m to the west of the existing access. This would also enable a 10.0m radii to be provided at the junction.

In order to ascertain visibility at the access is appropriate, a speed survey has been undertaken to the west of the site access, which indicates 85th percentile speeds of 30.6mph eastbound and 31.2mph westbound. This was undertaken as part of an Automatic Traffic Count to the west of the site access between Tuesday 7th November – Monday 13th November 2023 and the LHA can confirm a permit was obtained from Leicestershire County Council (LCC) to undertake the survey. The Applicant has calculated speeds based on off peak hours between 10:00 – 12:00 and 14:00 – 16:00, however as these are higher than the 24-hour average, the LHA is satisfied visibility splays are measured on robust vehicle speeds.

Visibility splays have been based Manual for Streets 2 guidance, with 2.4 x 43.8m available in a westerly direction and 2.4 x 45.1m in an easterly direction. The LHA advises these are considered to be acceptable.

An independent Stage 1 Road Safety Audit (RSA1) has also been undertaken of the site access proposals. This is included within Appendix B of the Applicants TA. The RSA1 raised two problems, one in respect of drainage and one in respect of swept path analysis. The Applicant has subsequently stated within a Designer's Response that drainage will be considered at detailed design and provided swept path analysis of a refuse collection vehicle using the access.

The LHA accepts that drainage can be considered at detailed design. In respect of the swept path analysis, the LHA requests that this is undertaken at a 15kph vehicle speed and that the speed used is confirmed on the drawing, the LHA also request further consideration is given to the pedestrian refuge on Coventry Road as it appears there is very little room for driver error when turning right out of Brick Kiln Street onto Coventry Road as the vehicle appears very close to the refuge.

The LHA is aware of an existing access to the Lidl store, which would meet the re-aligned Brick Kiln Street at an unusual angle. The Applicant has stated that it should be noted the access is not

for general deliveries to the store, rather access would only be required for servicing and maintenance. The existing access to the compound also measures 2.5m in width so has not been designed to accommodate large HGVs as the gate would need to be wider. In addition, the Applicant states that the angle the service area meets the access road is slightly less acute compared to the existing arrangement and provided swept path analysis of a small van undertaking most manoeuvres at the access. The left in manoeuvre has not been shown, which the LHA considers could be the most difficult.

Under the site-specific circumstances, the LHA accepts that the retention of the existing Lidl access and the angle at which it meets the highway to be acceptable. This is on the basis that vehicles would not be likely to turn right out of or left into the access at present due to the Cadent site being private. In addition the proposals would not form a vehicular through route, so there is unlikely to be any need for vehicles to turn right out of, or left into, the Aldi access in the future.

Currently there is a secondary vehicular access to the site via Trinity Vicarage Road. The Applicant has stated within the TA that the access is gated and prior to the Covid-19 pandemic, was used for two 15 minute periods between 16:00 – 16:15 and 17:00 – 17:15 by approximately 30 vehicles per day. The Applicant understands there are no existing planning conditions which would prevent more regular use of this access if required. The submitted masterplan drawing (DGL Ltd drawing number DGL_230929_5830.001) details that this access would potentially be used as an emergency access. It is also detailed within the TA that a pedestrian/ cycle link would be provided. The LHA advises that an emergency access would not be required under the site-specific circumstances, however a pedestrian/ cycle link to the site would be welcomed and encouraged to provide improved permeability to the proposed development/ surrounding area. The Applicant would need to ensure that this was designed to prevent vehicular access to the site. Pedestrian/ cycle links to St George's Avenue and Clarendon Park would also be welcomed to improve permeability between the site and the surrounding area.

Highway Safety

The Applicant has obtained Personal Injury Collision data from LCC for between 1st January 2019 and 2nd January 2024. A table detailing the Applicants study junctions and links, along with the number of PIC's which have occurred at each is provided within Table 2.6 of the Applicants TA.

Further to the PICs identified by the Applicant, the LHA is aware of an additional three PICs which have occurred since January 2024. These were all recorded as slight. The PIC's occurred on Coventry Road, east of Maple Drive, Rugby Road to the north of the Granby Road junction and Regent Street to the north of the Coventry Road junction. These involved a rear end shunt, a collision between a vehicle and a pedestrian and an incident involving a parked vehicle and a pedestrian.

The LHA note the greatest number of PIC's occurred at the Dodwell's Roundabout (A5 Watling Street/ A47 Dodwell's Road/ B4666 Coventry Road) with a total of five slight and two serious PIC's within the last five years. This roundabout falls under the jurisdiction of National Highways. Six PICs occurred at the B4666 Coventry Road/ B4667 Trinity Lane/ B590 junction. This included five slight and one serious PIC. In respect of this junction, the Applicant has advised that three of these involved pedestrians and all PIC's occurred on different arms of the junction. The Applicant considers that the proposed development would be a low trip generator and is unlikely to result in a material impact on the PIC statistics at this junction.

After reviewing the Applicants PIC analysis, as well as consideration of the level of trips the proposals could generate in comparison to the former use, whilst all PICs are regrettable, the LHA accept the proposals are unlikely to exacerbate an existing highway safety concern.

Trip Generation and Distribution

The Applicant has advised the former office blocks were demolished to make way for the residential development. It is stated that whilst it is recognised that the traffic associated with the former employment use is no longer on the network, the trips historically generated by the site were successfully accommodated on the local network until relatively recently. The site also has a designation as employment use within the LPA's local plan. Therefore, to provide an indication as to how the proposed development compares to the previous use, a trips comparison has been undertaken. This includes consideration of how the former and proposed trips are distributed and assigned across the local and strategic highway network.

Former Employment Use

The Applicant has stated that the former employment use of the site covered approximately 16,258 sqm and there were approximately 900 car parking spaces. Traffic surveys were not undertaken at the site when it was fully operational and the Applicant has therefore used the TRICs database in order to estimate the level of traffic the former use of the site could generate.

The TRICs trip rates accepted by the LHA as part of application 21/00875/HYB and shown in Table 5.1 of the TA have been used by the Applicant in order to consider the level of traffic the former employment site could have generated. This is accepted by the LHA.

Proposed Residential Use

The Applicant has also used the same TRICs trip rates accepted by the LHA as part of the previous application for the proposed residential use, which are shown in table 5.2 of the TA. This is accepted by the LHA.

Trip Comparison

The Applicant has then undertaken a comparison of the proposed development and the former employment use as shown in Table 1 below.

Time Range	Use	Arrive	Depart	Two-way
Trips				
AM Peak Period (08:00 – 09:00)	Former Employment	230	35	264
	Proposed Residential	23	73	97
	Difference (Resi – Empl)	-207	+38	-167
PM Peak Period (17:00 – 18:00)	Former Employment	27	150	177
	Proposed Residential	66	38	104
	Difference (Resi – Empl)	+39	-112	-73
Daily (07:00-19:00)	Former Employment	778	791	1569
	Proposed Residential	397	429	826
	Difference (Resi – Empl)	-381	-362	-743

Table 1: Trip comparison.

As shown, the proposed development would result in a reduction in the level of traffic which could be generated by the former employment use in both peak hours and throughout the day.

Trip Distribution

The Applicant has based the residential trip distribution on 2011 Census data for the Hinckley & Bosworth 012 Middle Super Output Area. However, given the scale and location of the proposed development, LHA would advise the use of LCC's Pan Regional Transport Model (PRTM) to assess the impact of the development on the surrounding highway network as opposed to Census data. This could, for example, provide trip distribution / assignment as well as having committed developments already taken into account within extracted flows. Therefore the LHA would advise the applicant to contact ETCF@leics.gov.uk and liaise with the Highway Development Management Team to discuss the potential modelling requirements for the proposed development and timescales for obtaining the information.

PRTM will also take into account the sensitivity of the local highway network in this location which experiences delays/congestion and will assist with the impact on journey times and help to identify the redistribution of existing traffic due to the proposed development.

Junction Capacity Assessments

As per the above, the former employment use of the site would have generated a higher level of traffic than the proposed residential use. The Applicant has however acknowledged that the traffic associated with the former employment use is no longer on the network. In addition, the former employment use would have a different traffic profile to the proposed residential use, with the residential use generating more departures from the site in the AM peak, and more arrivals during the PM peak. As a result, capacity assessments have been undertaken by the Applicant on the basis that all of the proposed residential traffic is new to the network, with no allowance being made for the former office use. This is welcomed by the LHA, given the office blocks have been demolished and the LHA would not now consider to be a fallback position for the site.

The Applicant has identified that 30 or more additional two-way trips (e.g. 15 arrivals and 15 departures) would occur at the following junctions:

- Site Access (Brick Kiln Street)/B4666 (Coventry Road) Priority T-junction;
- Granville Road/B4666 (Coventry Road) Priority T-junction;
- Granville Road/Rugby Road (B590) Priority T-junction;
- B590/ B4666 (Coventry Road)/B4667 Signal Junction;
- B590/Rugby Road Signal Junction;
- B590/Brunel Road West Signal Junction; and
- Westfield Road/Hawley Road (B590)/Rugby Road Signal Junction.

Traffic counts were undertaken at all junctions as follows on either Tuesday 7th November 2023 or Tuesday 23rd April 2024. The Applicant applied to LCC for survey permits at all junctions. The Applicant has factored up all 2023 traffic flows to a 2024 base year using TEMPro traffic growth factors. These have then been factored up to a 2029 base scenario. The LHA accepts the traffic growth factors used. While the flows have also been factored up to the year 2034, this is not considered necessary by the LHA unless the Applicant believes construction would not be completed until 2034.

Further consideration will be given to junction capacity assessments following additional work by the Applicant on the developments trip distribution.

Off-Site Implications

The LHA will give further consideration to any off-site implications resulting from the development traffic following revised junction capacity assessments.

Internal Layout

The internal layout of the development is not for consideration at this stage, therefore the LHA has not reviewed this in detail. It is advised that given the scale of the proposed development, the internal roads should be designed in accordance with the LHDG and put forward for adoption by LCC, should the LPA grant planning permission for the proposals.

Transport Sustainability

The LHA has reviewed the submitted Framework Travel Plan and advise that although the travel plan provides a good overview on existing infrastructure and services, the action plan (table 8.1) is lacking in detail and commitment to how the travel plan coordinator is going to encourage behaviour change. The LHA therefore would request the applicant to review the action plan and commit to a programme of initiatives/incentives that can be delivered over the course of the travel plan. This can include a set programme. An example has been provided below, which may be of benefit for the Applicant:

Type of Transport	Intervention	Responsibility	Trigger for introduction / Frequency
Active Travel	Provision of a shared ped/cycle footpath within the estate to connect the entrance of the development to the external road network	Developer	During the site build
	Provision of covered, secure cycle parking in a prominent location close to the entrance of the unit	Developer	During the site fit-out
	Personalized Travel Plan Clinic	Travel Plan Coordinator	Within 1 month of occupation and twice per year
	Free Dr. Bike cycle maintenance sessions for employees cycling to work.	Occupier's Travel Plan Coordinator	From first occupation. Twice per year (Spring/Summer)

In addition, the plan has been titled as a *Framework* Travel Plan, however as this is for a residential development, a *Full* Travel Plan should be submitted.

As detailed further above, the LHA welcome the proposals to provide pedestrian/ cycle links to Trinity Vicarage Road, St George's Avenue and Clarendon Park as this would enhance the permeability of the site and surrounding area. The LHA also welcomes the review of sustainable travel options within the TA.

The LHA would require 1 x travel pack (currently £52.85 per pack if supplied by LCC) and 2 x application forms for six month bus passes (currently £510 per pass for an Arriva service) per dwelling to inform new residents of sustainable travel options in the area and encourage modal shift.

Closing

The LHA advise that the following additional information is required to be submitted to the LPA by the Applicant for further consideration by the LHA. Notably, but not limited to:

- Swept path analysis confirming a 15kph design speed;
- Further consideration of the pedestrian refuge location on Coventry Road; and
- Analysis of the developments trip distribution using PRTM, along with detailed junction capacity assessments.

Date Received
18 July 2024

Case Officer
Ben Dutton

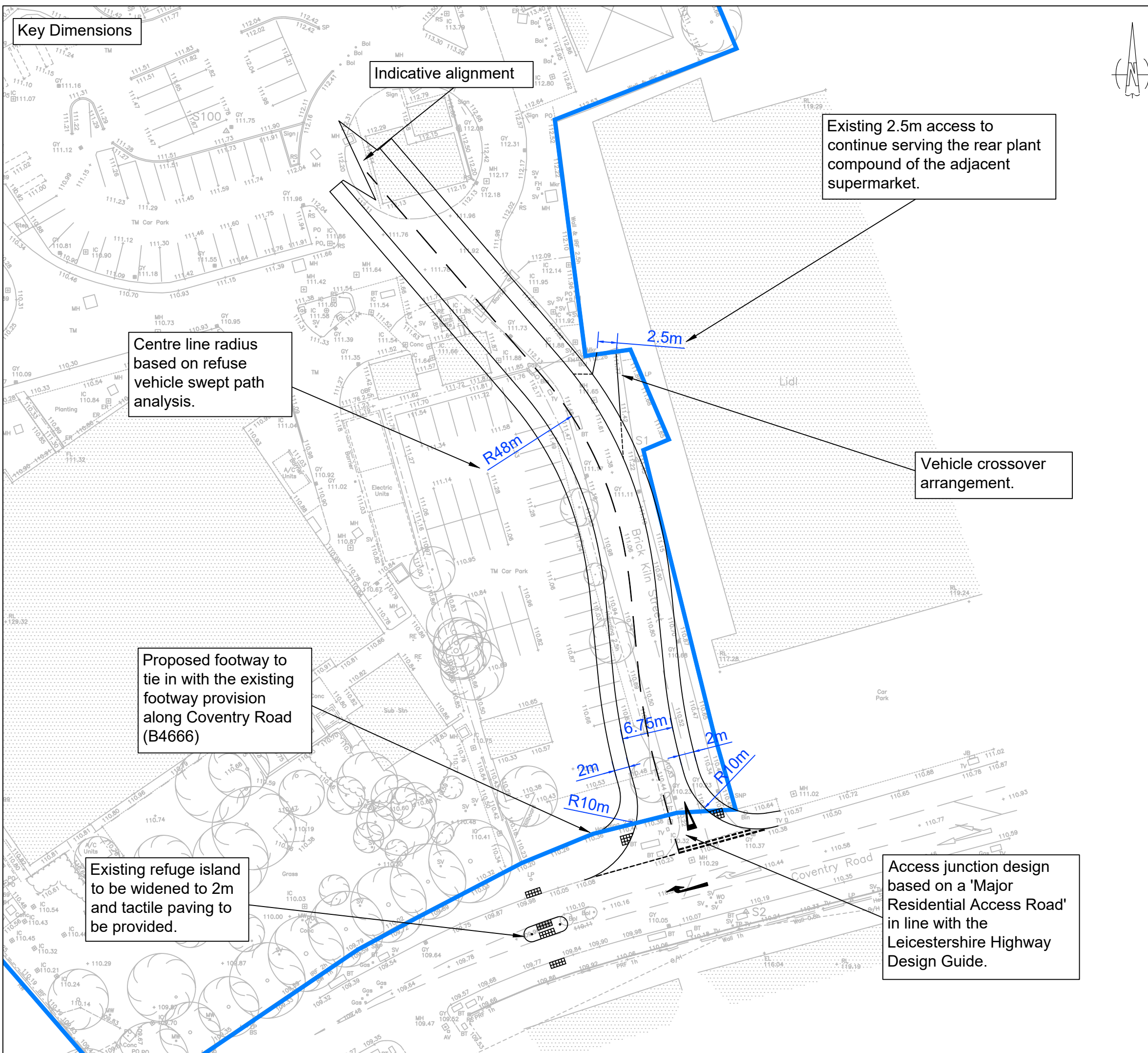
Reviewer
RD

Date issued
15 August 2024

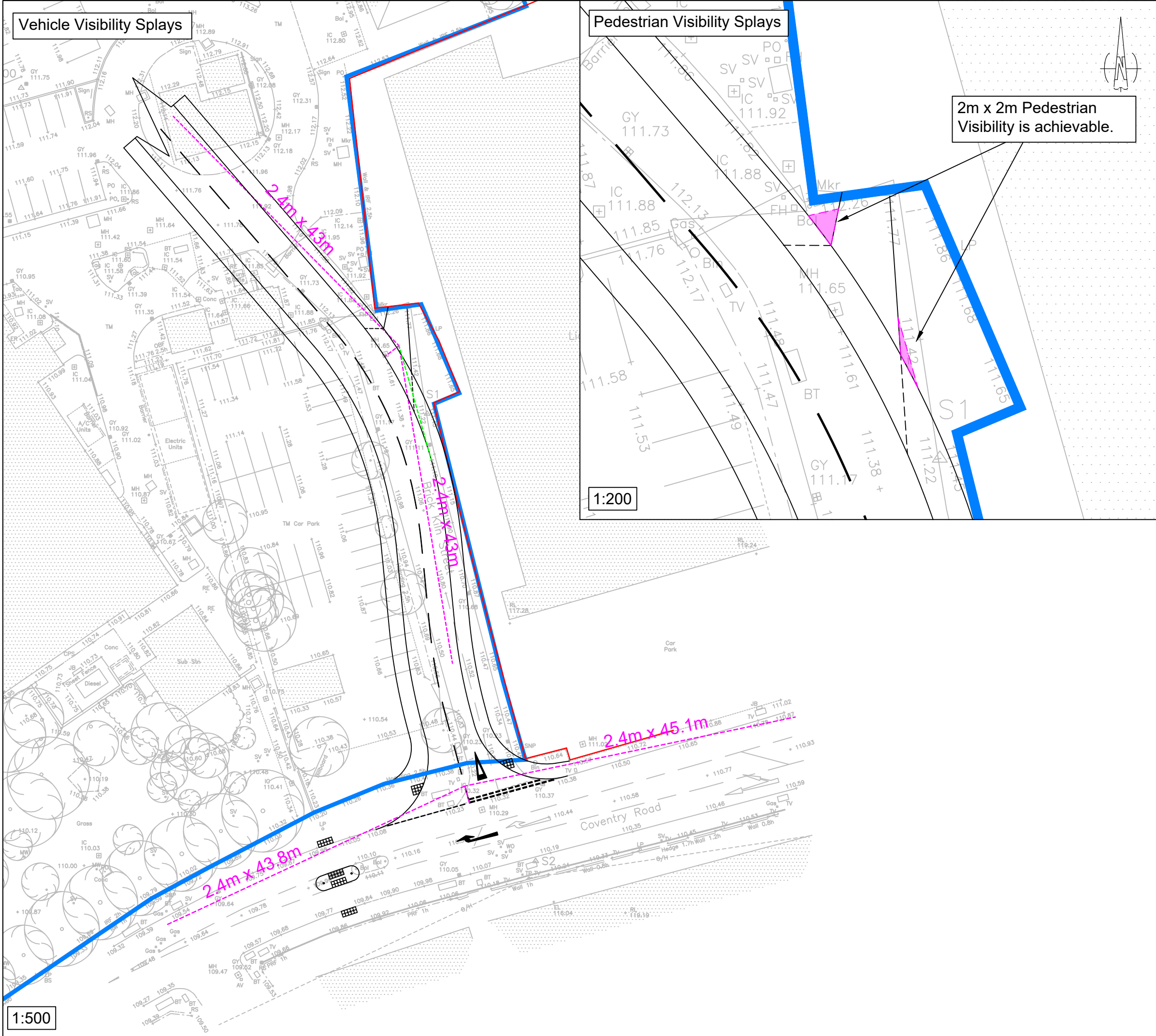


Appendix C

Site Access Drawings



Date of 1st Issue 06/10/23		Description First Issue		Drawn by BH		Checked by JC	
REVISIONS							
Mark	Revision			Drawn	Date	Chkd	
A	Response to LHA Comments			BH	22/01/24	JC	
B	Minor adjustment to location of splitter island.			SB	11/10/24	JC	
Key:							
		Topographical Survey					
		Proposed					
		Land within Applicant's Ownership					
		Highway Boundary Extent					
		Key Dimensions					
Notes:							
1. Drawing based on topographical survey.							
2. Junction designed in accordance with the Leicestershire Highway Design Guide.							
3. The Highway Boundary has been drawn based on data received from Leicestershire County Council as the operating Local Highway Authority.							
A3 SCALE 1:500		 Scale 1:500 @ A3					
Drawing Title							
Brick Kiln Street, Leicestershire Proposed Access Arrangements Sheet 1 of 3							
Architect							
Drawing Status							
Planning							
27 Park Street Leamington Spa CV32 4QN E: info@ttc-transportplanning.com							
Drawing Number						Revision	
210891-01						B	



Date of 1st Issue	Description	Drawn by	Checked by
06/10/23	First Issue	BH	JC

REVISIONS				
Mark	Revision	Drawn	Date	Chkd
A	Response to LHA Comments	BH	22/01/24	JC
B	Minor adjustment to location of splitter island.	SB	11/10/24	JC

Key:

- Topographical Survey
- Proposed
- Land within Applicant's Ownership
- Highway Boundary Extent
- Vehicle Visibility Splays
- Tangential Visibility Splays
- Pedestrian Visibility

Notes:

- Drawing based on topographical survey.
- Junction designed in accordance with the Leicestershire Highway Design Guide.
- The Highway Boundary has been drawn based on data received from Leicestershire County Council as the operating Local Highway Authority.
- Coventry Road vehicle visibility splays have been based on the recorded 85th percentile speeds in either direction along the carriageway.

0 m 10 m
Scale 1:200 @ A3

0 m 30 m
Scale 1:500 @ A3

A3 SCALE
As Shown

Drawing Title

Brick Kiln Street, Leicestershire
Visibility Splays
Sheet 2 of 3

Architect

Drawing Status

Planning

27 Park Street
Leamington Spa
CV32 4QN
E: info@ttc-transportplanning.com

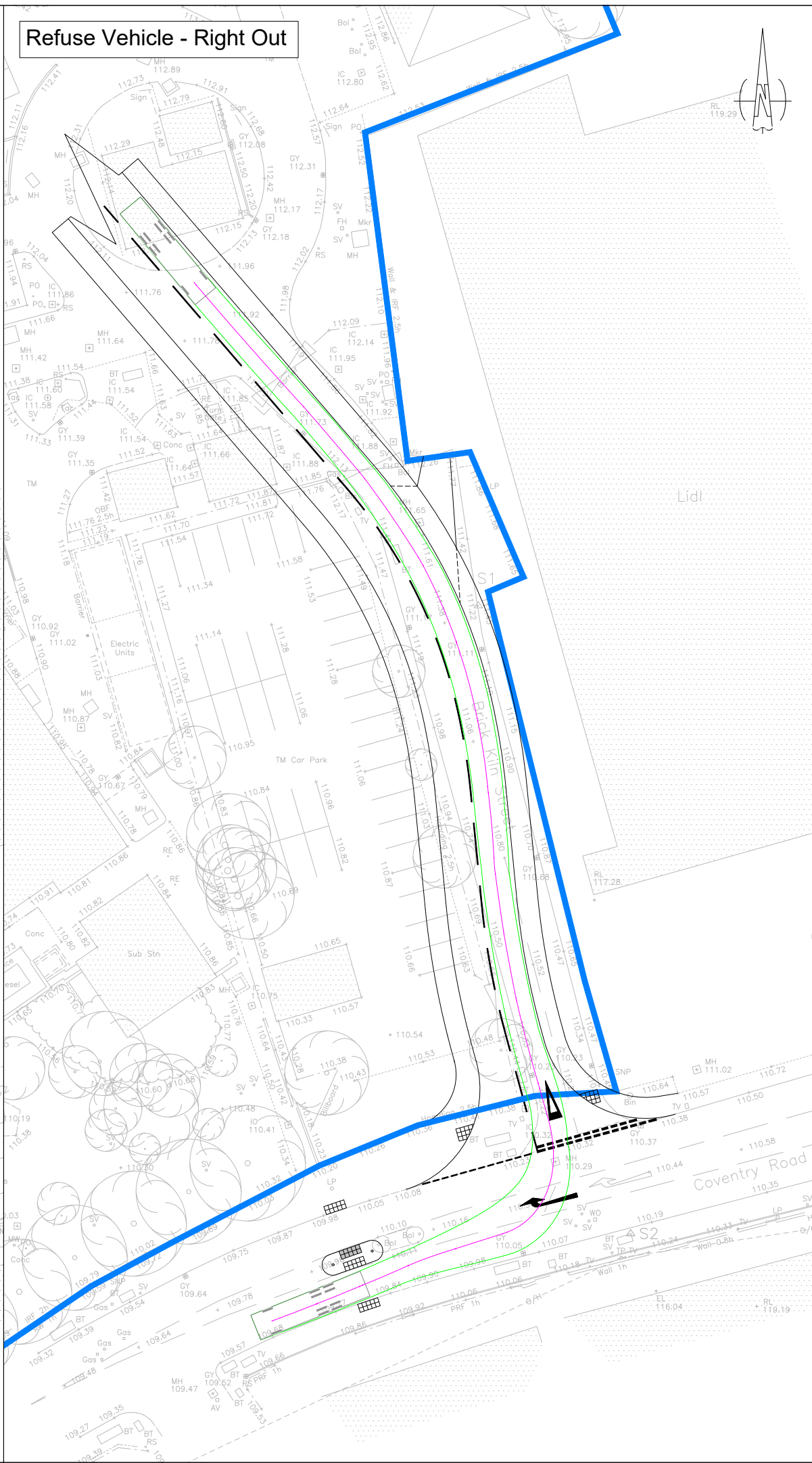
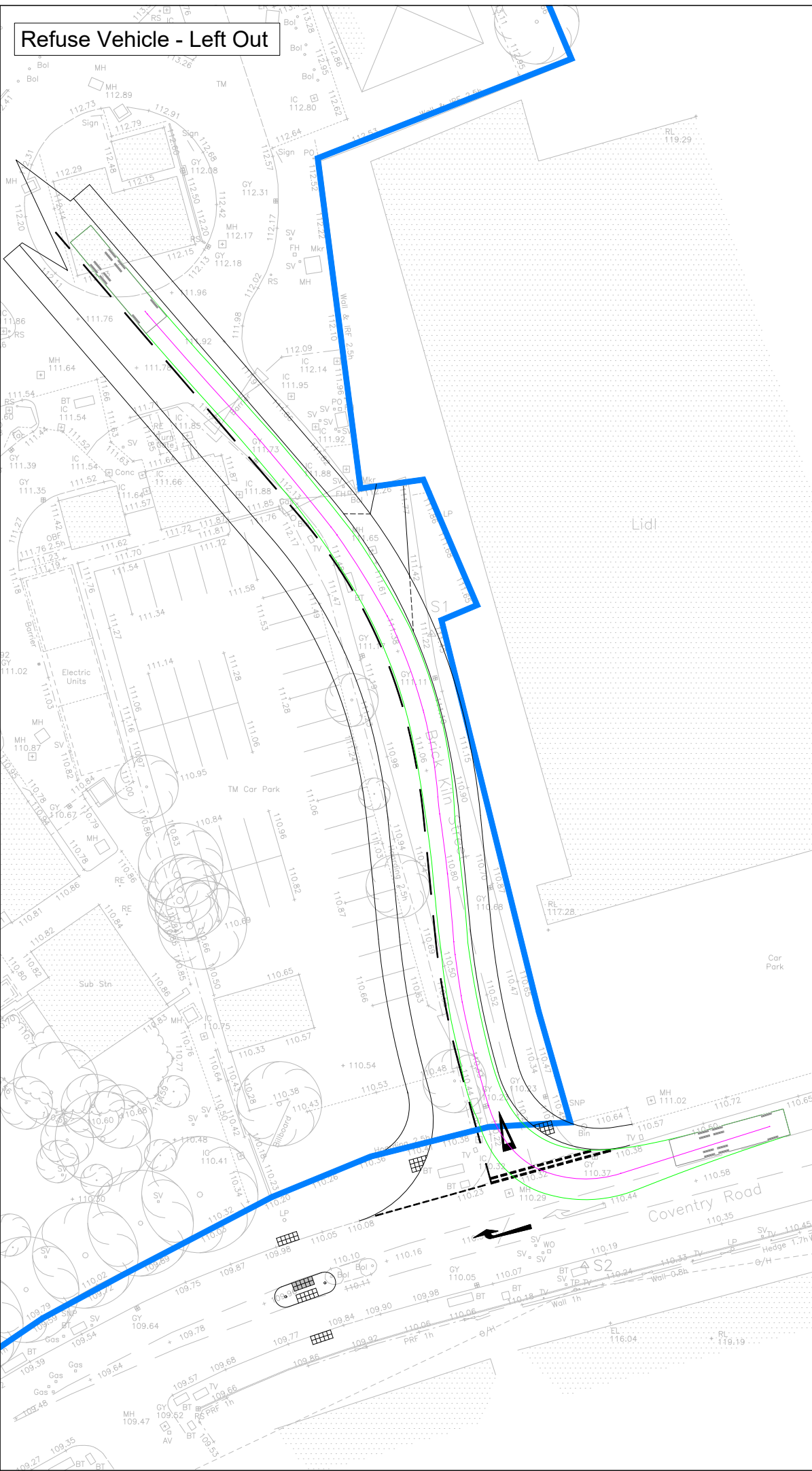
ttc the transportation consultancy

Drawing Number

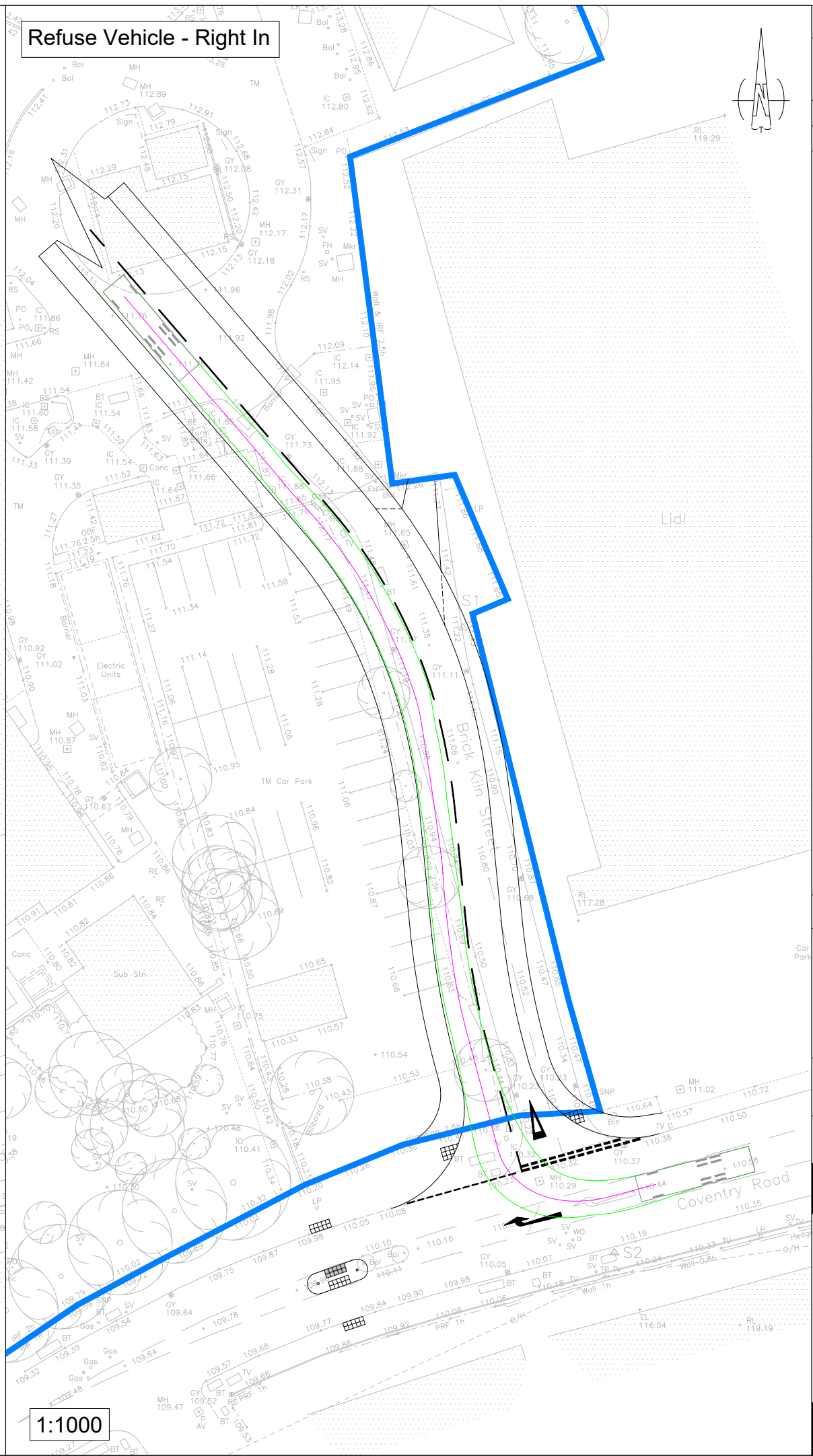
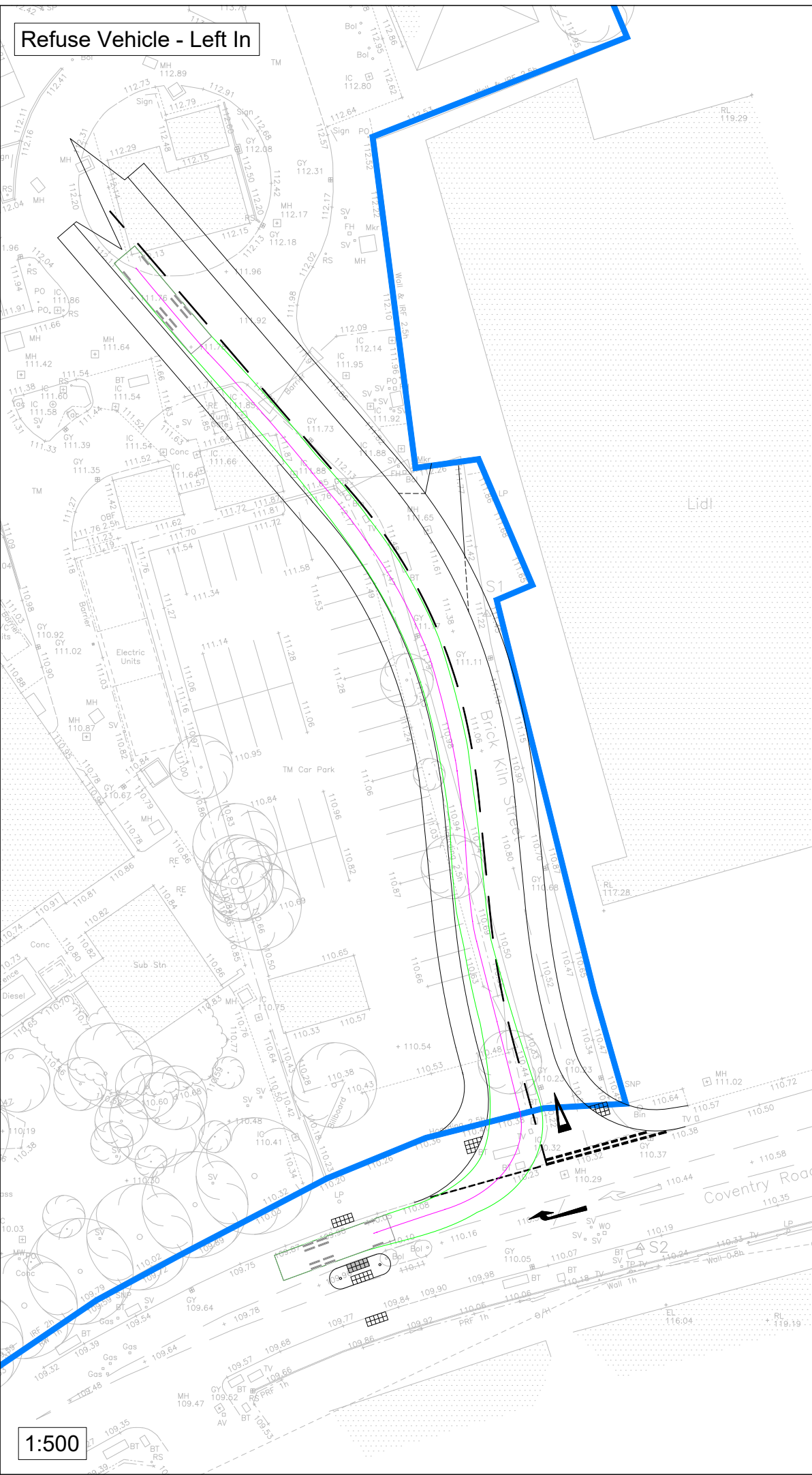
210891-01

Revision

B



Date of 1st Issue 22/05/24	Description First Issue	Drawn by SB	Checked by JC	
REVISIONS				
Mark	Revision	Drawn	Date	Chkd
A	Vehicle tracking updated.	SB	11/10/24	JC
Key: - Topographical Survey - Proposed - Land within Applicant's Ownership - Vehicle Body Notes: - Drawing based on topographical survey. - Junction designed in accordance with the Leicestershire Highway Design Guide. Refuse 11.2m Width : 2.53 Track : 2.53 Lock to Lock Time : 6.0 Steering Angle : 40.4 0 m 30 m				
A3 SCALE 1:500 Scale 1:500 @ A3				
Drawing Title Brick Kiln Street, Leicestershire Swept Path Analysis Sheet 2 of 2				
Architect				
Drawing Status Planning				
27 Park Street Leamington Spa CV32 4QN E: info@ttc-transportplanning.com				
ttc the transportation consultancy				
Drawing Number 210891-02			Revision A	



Date of 1st Issue
22/05/24

Description
First Issue

Drawn by
SB

Checked by
JC

REVISIONS

Mark	Revision	Drawn	Date	Chkd
A	Vehicle tracking updated.	SB	11/10/24	JC

Key:

Topographical Survey

Proposed

Land within Applicant's Ownership

Vehicle Body

Notes:

1. Drawing based on topographical survey.

2. Junction designed in accordance with the Leicestershire Highway Design Guide.

11.20

Refuse 11.2m

Width : 2.53

Track : 2.53

Lock to Lock Time : 6.0

Steering Angle : 40.4

0 m

50 m

0 m

30 m

Scale 1:1000 @ A3

Scale 1:500 @ A3

A3 SCALE
As Shown

Drawing Title

Brick Kiln Street, Leicestershire
Swept Path Analysis
Sheet 1 of 2

Architect

Drawing Status
Planning

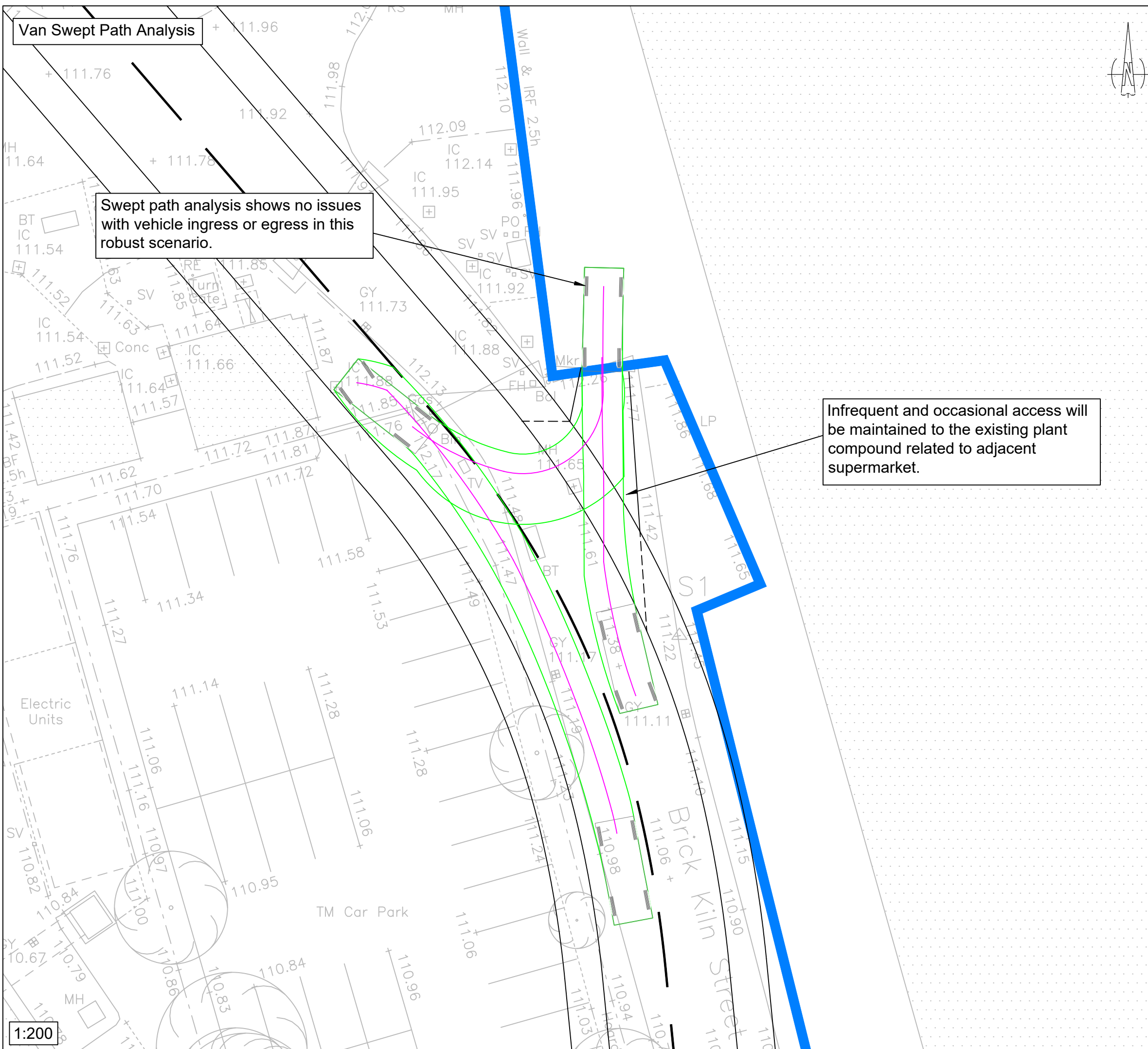
27 Park Street
Leamington Spa
CV32 4QN
E: info@ttc-transportplanning.com

ttc

the
transportation
consultancy

Drawing Number
210891-02

Revision
A



1:200

Date of 1st Issue 06/10/23	Description First Issue	Drawn by BH	Checked by JC
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REVISIONS

Mark	Revision	Drawn	Date	Chkd
A	Response to LHA Comments	BH	22/01/24	JC
B	Vehicle tracking updated.	SB	11/10/24	JC

Key:

Topographical Survey

Proposed

Land within Applicant's Ownership

Vehicle Body

- Notes:
- Drawing based on topographical survey.
 - Junction designed in accordance with the Leicestershire Highway Design Guide.

VAN 35T

Width	: 2.08
Track	: 2.08
Lock to Lock Time	: 6.0
Steering Angle	: 41.5

meters

: 2.08

: 2.08

: 6.0

: 41.5

A3 SCALE

1:200

0 m 10 m

Scale 1:200 @ A3

Drawing Title

Brick Kiln Street, Leicestershire
Proposed Access Arrangements
Sheet 3 of 3

Architect

Drawing Status

Planning

27 Park Street
Leamington Spa
CV32 4QN
E: info@ttc-transportplanning.com



Drawing Number

210891-01

Revision

B



Appendix D

PRTM Base Year Model Review

Environment and Transport Modelling Services Contract

Brick Kiln Street, Hinckley

Base Year Model Review

January 2025
3851.216

Document Sign-off

Control Details

Model:	PRTM 2019
Version:	1.2
Highway/PT Network:	Highway v1.4, PT v1.1
Planning Data:	HH154 Emp1541
Document Location:	X:\TMODELLING\05. 3851 (External)\MF3851.216 Brick Kiln Street, Hinckley\12. Deliverables\01. Reports\3851.216 Brick Kiln Street_BYMR v1.0.docx
Production Software:	Microsoft Word 2010
Author:	JG
Owner:	Alex Gray, Network Data and Intelligence Team

Document history and status

Ver	Date	Description	Author	Review	Approved	Released
0.1	17/01/25	Draft for internal review	JG	PB		
0.2	20/01/25	Second draft for internal review	JG	PB		
1.0	21/01/25	Final version for release to the client	JG	PB	PB	ETCF

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1. Introduction

1.1. Background

- 1.1.1. The proposed site is located to the north of the B4666 Coventry Road in Hinckley, Leicestershire, on the now-demolished Cadent Gas head office site. It is a residential development for up to 195 dwellings, which are expected to be built out by either 2029 or 2030. Figure 1 shows the indicative location of the proposed development.

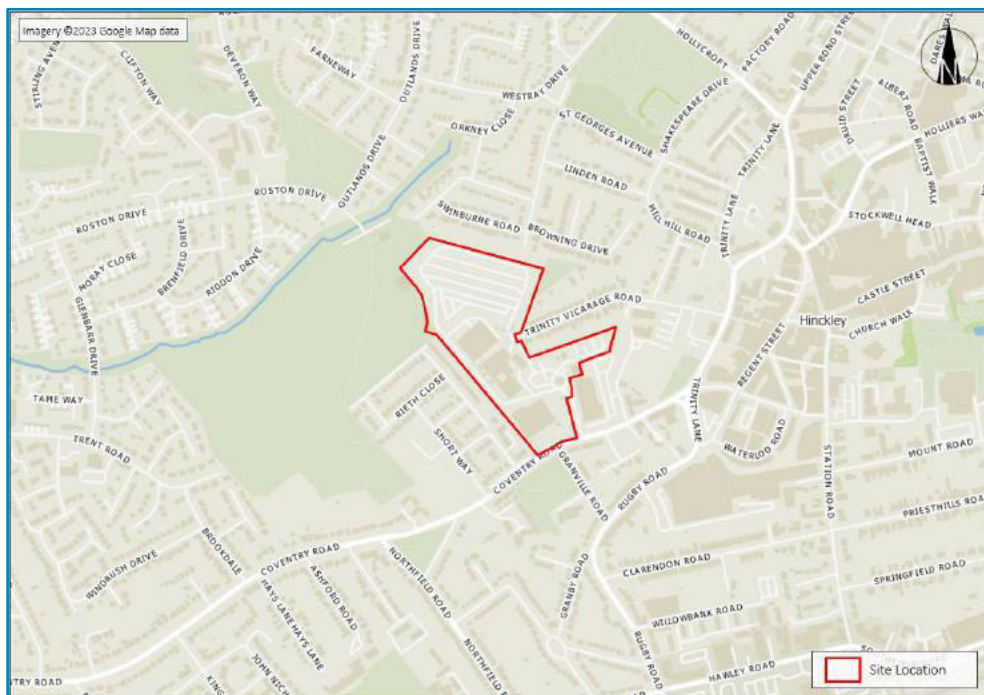


Figure 1. Location of Proposed Development

- 1.1.2. The proposed development will be accessed via the existing priority T-junction off the B4666 Coventry Road (Brick Kiln Street), with ghost island provision, as shown in Figure 2.

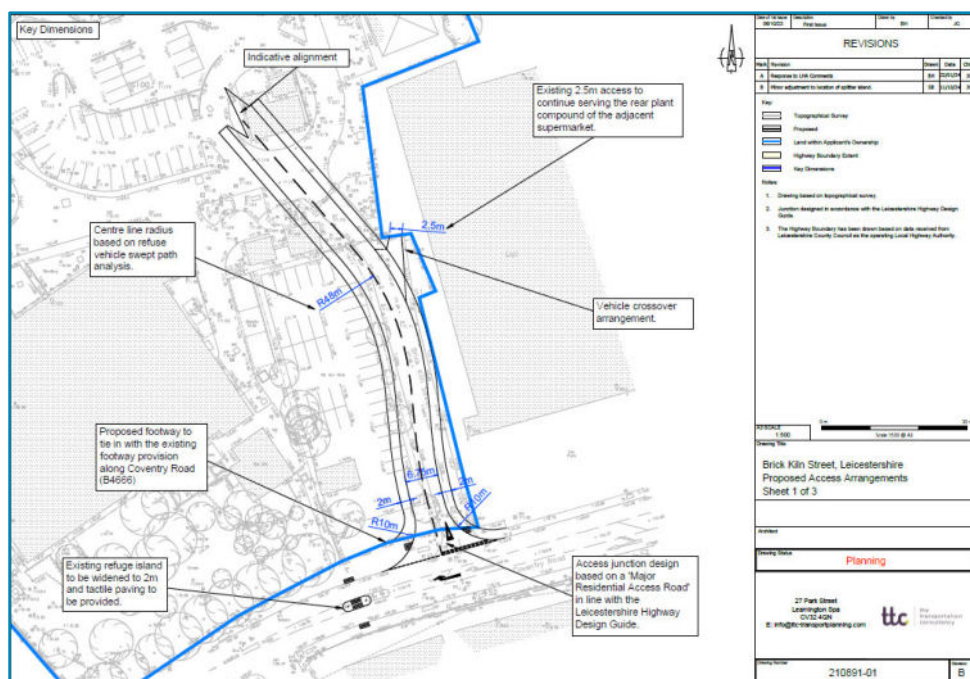


Figure 2. B4666 Coventry Road Access

- 1.1.3. Leicestershire County Council (Network and Data Intelligence Team) have been commissioned to undertake a strategic assessment of the development using the latest version of the Pan Regional Transport Model (PRTM2019 v1.2).
- 1.1.4. PRTM2019 is a strategic model which validates well to Government Transport Analysis Guidance (TAG) over the wider area. Despite this, and as TAG makes clear, it is necessary to review model validation in the context of the specific project being undertaken to ensure its suitability.
- 1.1.5. This document is the Base Year Model Review of the PRTM2019's base year of 2019. It presents the results of the base year calibration and validation performance in the vicinity of the proposed development.

2. PRTM Base Year Model Structure

2.1. Zone System

- 2.1.1. The PRTM2019 v1.2 zoning system is based on existing land-use and 2011 Census Geography.
- 2.1.2. Figure 3 and Figure 4 show the PRTM2019 zoning system and the location of the proposed Brick Kiln Street development site. The zones moving away from Hinckley are larger than those in the town centre due to their rural nature.
- 2.1.3. The existing zone network in the vicinity of the proposed development is deemed suitable for this application of the PRTM2019. However, it is suggested that the development is contained in its own development zone to allow for detailed analysis and reporting of development trips.
- 2.1.4. Development zone 9001 will be used to represent the former employment use (Cadent Gas) in 2024 and for the residential development in 2030.

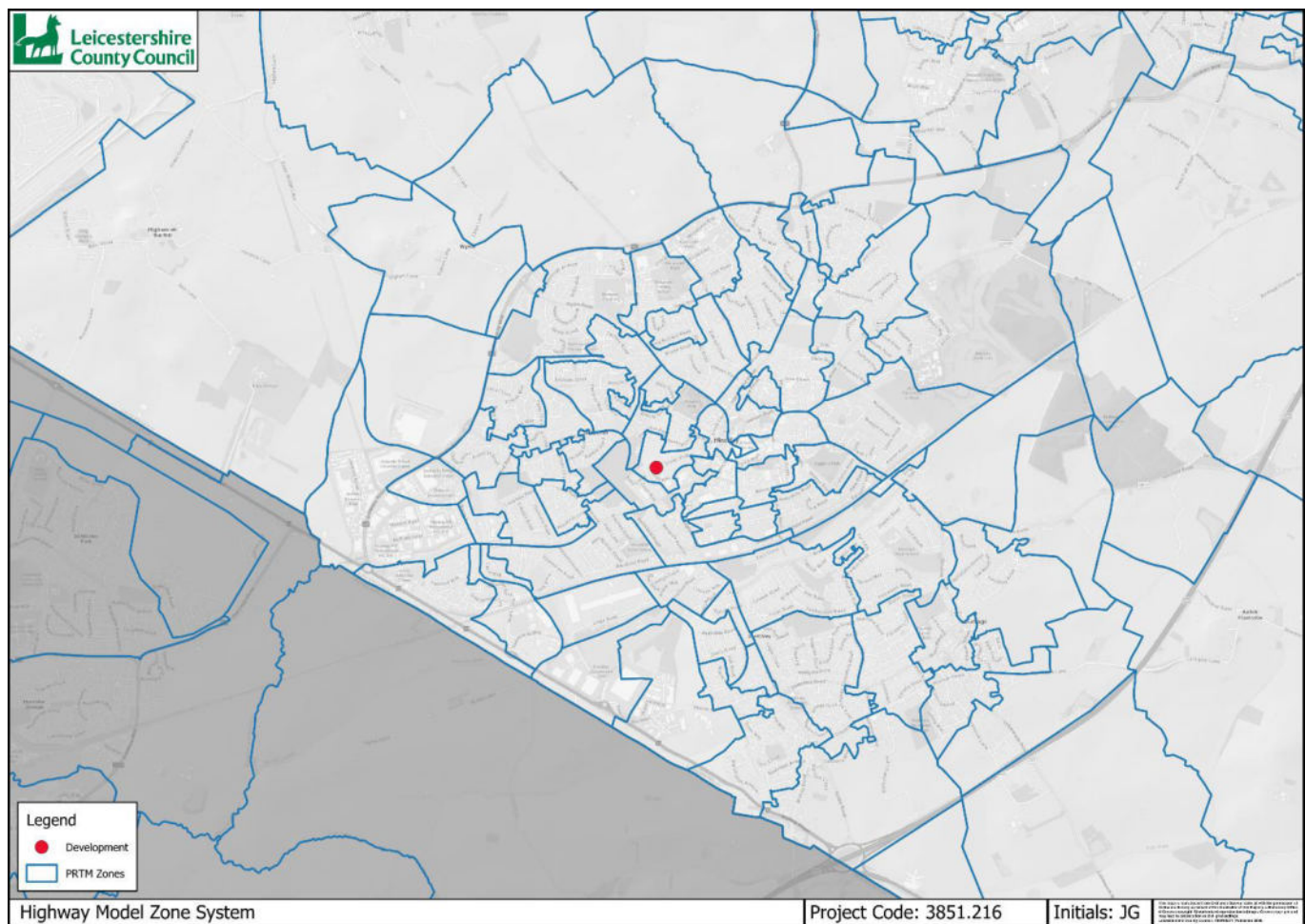


Figure 3. Highway Model Zone System

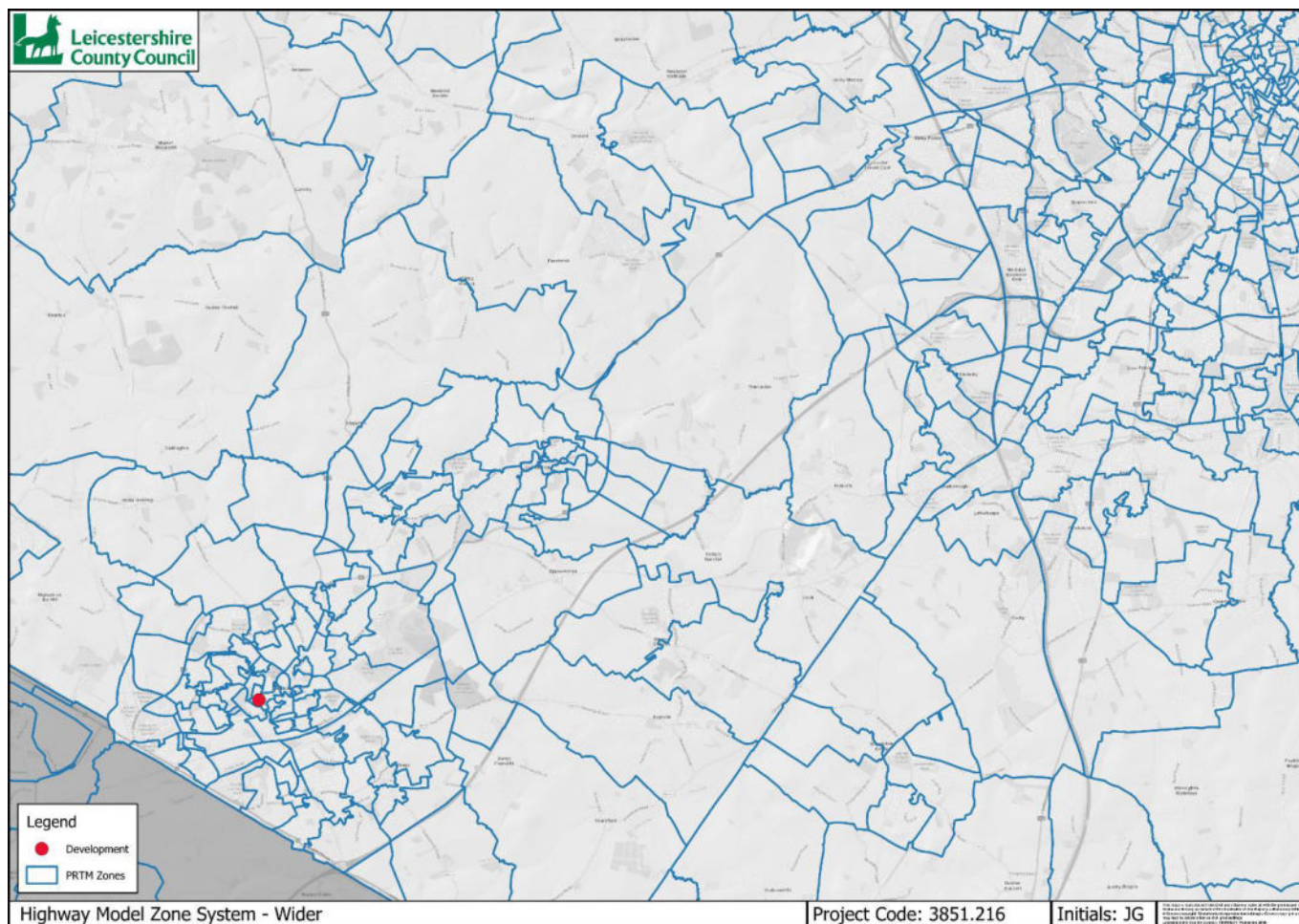


Figure 4. Highway Model Zone System – Wider

2.2. Network Structure

- 2.2.1. The highway network has been reviewed within the vicinity of the proposed Brick Kiln Street development.
- 2.2.2. Figure 5 shows the extent of the highway network close to the proposed development. As the PRTM is a strategic transport model not all links are included, with the more minor residential and rural links omitted.
- 2.2.3. It is considered that the highway network in the base year model is a good representation with all important and significant links included.

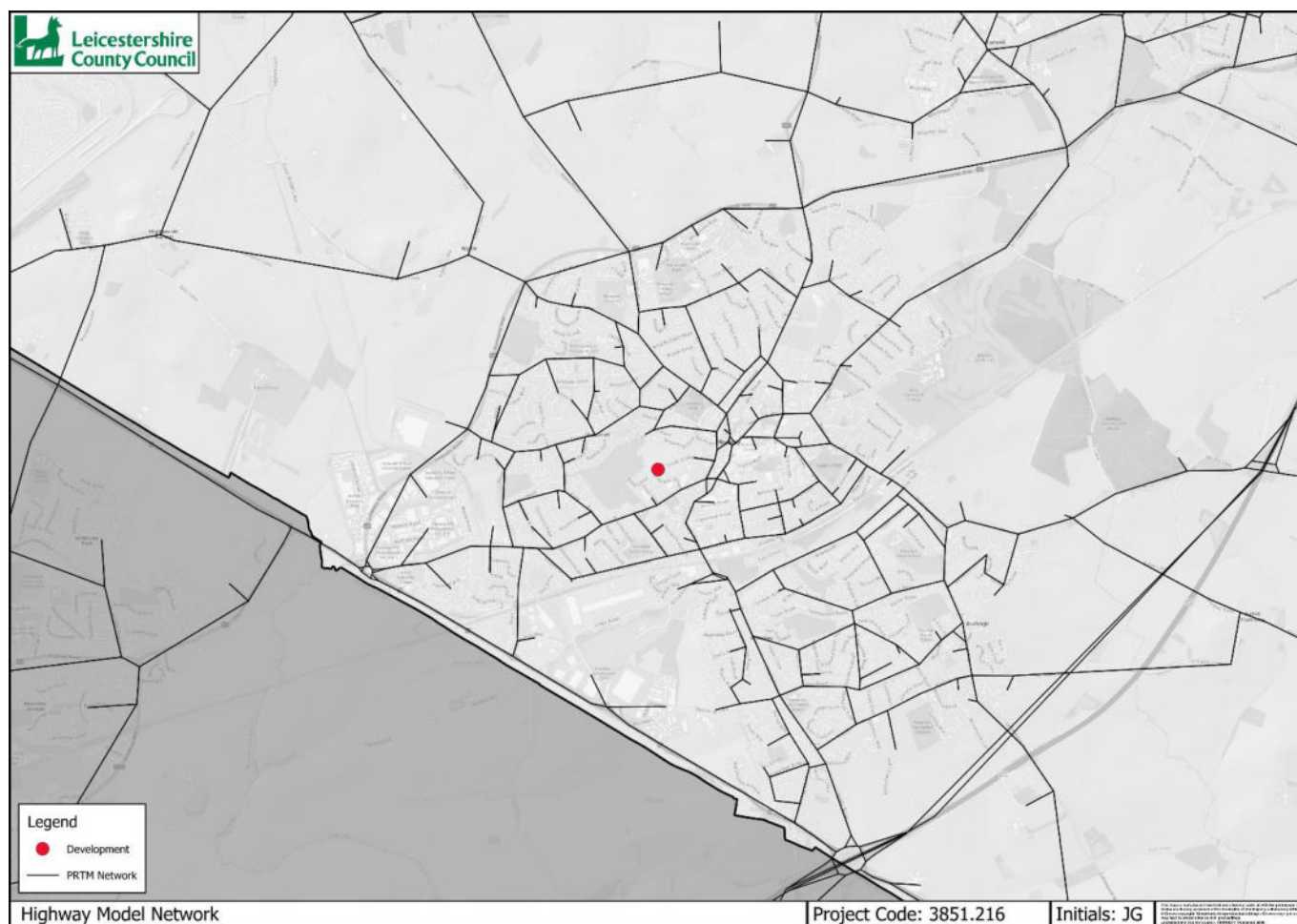


Figure 5. Highway Model Network

- 2.2.4. Key roads and junctions close to the development have been reviewed in detail and compared to the PRTM Highway Coding Manual¹. The link review included the coded distances, saturation flows and speed-flow curves (determining the speed and response to congestion on a link for a given traffic volume). The junction review included the number of lanes, turning movements, flare length (where appropriate) and saturation flows for the key junctions in the vicinity of the proposed development.
- 2.2.5. Table 1 and Table 2 show the outcome of the link review and key junction review. It was found that the Coventry Road / Short Way junction is missing a flare. A sensitivity test was performed in the AM and PM Peak hour model, with the right-hand flare included on Coventry Road westbound, and this alteration made no material difference (less than 25 passenger car units (PCUs)).
- 2.2.6. The above change can be corrected within the base year model. However, we do not believe this is essential as, in our professional opinion, it won't influence the assessment of this development.
- 2.2.7. Overall, the coding of the network was found to be satisfactory and in line with the PRTM Highway Coding Manual.

¹ PRTM 2019 Coding Manual (December 2020)

Links	Distance	Speed Flow Curves	Capacity (Saturation Flows)
B4666 Coventry Road	✓	✓	✓
Northfield Road	✓	✓	✓
Trinity Lane	✓	✓	✓
Regent Street	✓	✓	✓

Table 1. Highway Network Link Coding Review

Junctions	Lanes	Turning Movements	Flare Length	Saturation Flows
B4666 Coventry Road / Short Way	X	✓	X	✓
B4666 Coventry Road / Northfield Road	✓	✓	✓	✓
B4666 Coventry Road / B4667 / B590 Trinity Lane	✓	✓	✓	✓
Coventry Rd / Regent St / Lancaster Rd / Rugby Rd	✓	✓	✓	✓
B590 Trinity Lane / Rugby Rd	✓	✓	✓	✓

Table 2. Junction Coding Review

3. Journey Time and Link Flow Validation

3.1. Link Flow Validation

3.1.1. TAG compliance for traffic flows is governed by meeting the acceptability criteria in Table 3:

Criteria	Description of Criteria	Acceptability Guidelines
1	Individual flows within 100 veh/h of counts for flows less than 700 veh/h	> 85% of cases
	Individual flows within 15% of counts for flows from 700 to 2,700 veh/h	> 85% of cases
	Individual flows within 400 veh/h of counts for flows more than 2,700 veh/h	> 85% of cases
2	GEH < 5 for individual flows	> 85% of cases

Table 3. TAG Link Flow and Turning Movement Validation Criteria and Acceptability Guidelines

- 3.1.2. A local area review of the 2019 base year highway model for the AM and PM Peak hours are shown in Figure 6 and Figure 7, respectively. Green represents those links where the modelled flow passes TAG acceptability guidelines, blue represents links where the model is under assigning and red represents links where the model is over assigning.
- 3.1.3. In the AM Peak hour, Rugby Road inbound is under assigning trips and the adjacent Wolvey Road inbound is over assigning. Conversely, in the PM Peak hour Rugby Road outbound is under assigning trips and Wolvey Road outbound is over assigning. This highlights that the routing choice between the two links in the model varies slightly to what is observed. A manual check has been performed, in which the flows from the two links were analysed together. When the trips are combined, the model validates in this area.

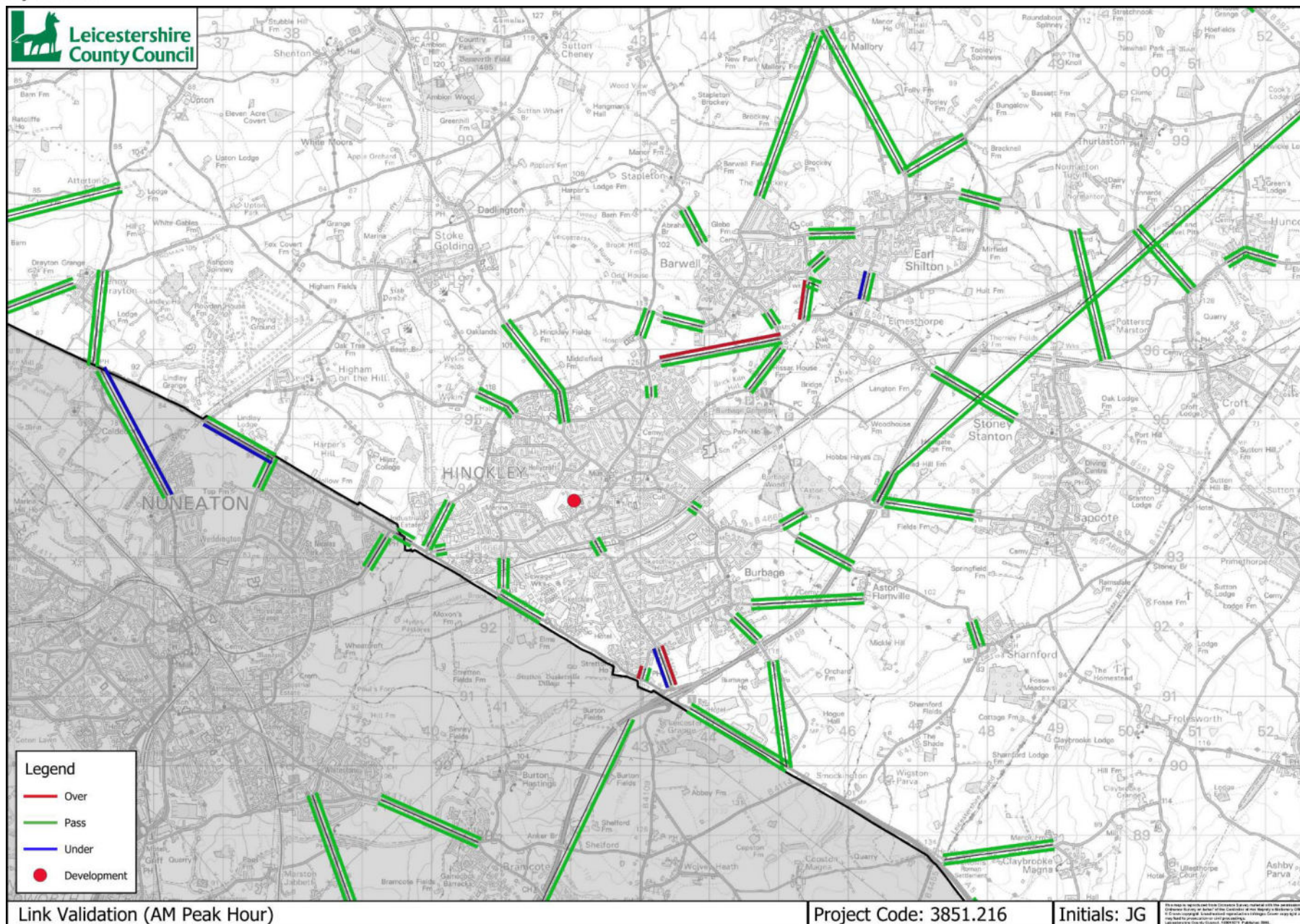


Figure 6. Link Validation - AM Peak Hour

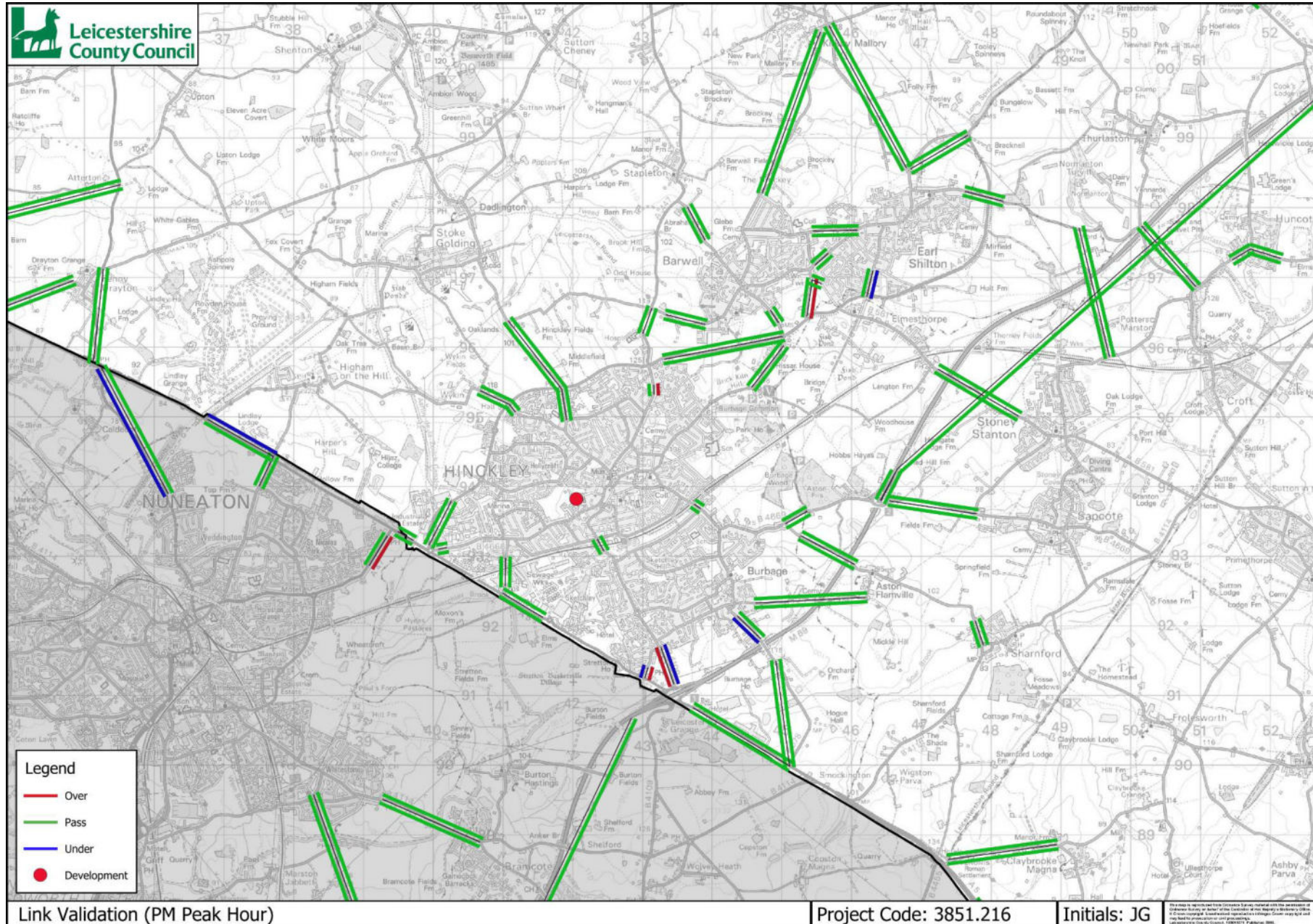


Figure 7. Link Validation - PM Peak Hour

- 3.1.4. Table 4 shows how PRTM2019 performs with respect to TAG on modelled versus observed link flows in the vicinity of the proposed development.
- 3.1.5. In the AM Peak hour 92.6% of links pass (100 of 108) the validation criteria and in the PM Peak hour 89.8% of links pass (97 of 108).

		AM	PM
Number of Links	Pass	100	97
	Over Assigned	4	5
	Under Assigned	4	6
Percentage	Pass	92.6%	89.8%
	Over Assigned	3.7%	4.6%
	Under Assigned	3.7%	5.6%

Table 4. Link Validation

- 3.1.6. Overall, the link flow performance exceeds, in both the AM and PM Peak, the 85% threshold of counts required to pass against TAG guidance. Therefore, the link flow performance in the vicinity of the proposed development is satisfactory.

3.2. Journey Time Validation

- 3.2.1. TAG compliance for modelled journey times is governed by meeting the acceptability criteria in Table 5:

Criteria	Acceptability Guidelines
Modelled times along routes should be within 15% of surveyed times (or within 1 minute of the observed times, if higher than 15%)	> 85% of routes

Table 5. TAG Journey Time Validation Criteria and Acceptability Guidelines

- 3.2.2. Figure 8 and Figure 9 show the journey time routes in the vicinity of the proposed development and whether they pass (green), are faster (blue) or slower (red) in the model than observed.

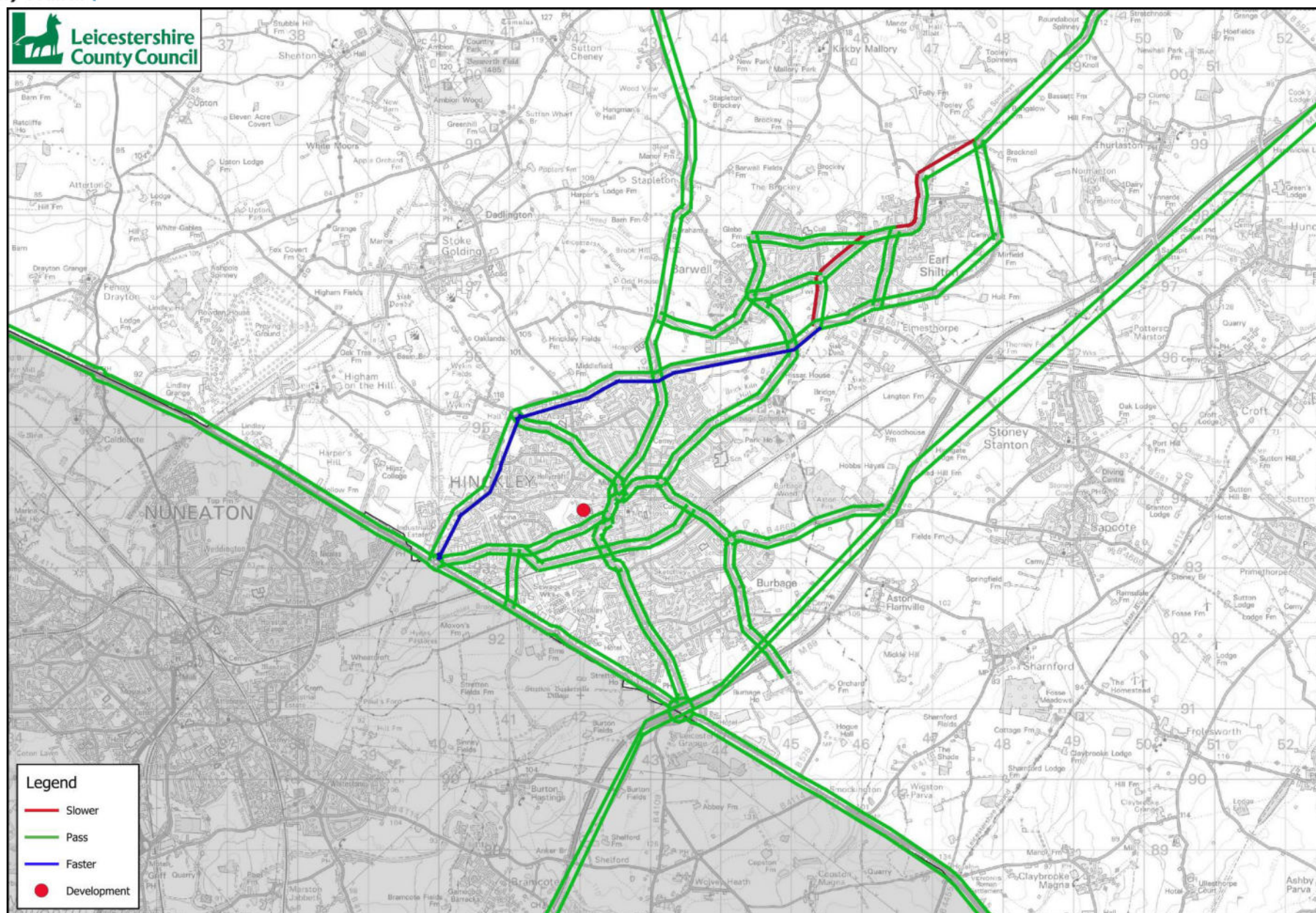
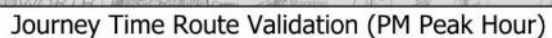


Figure 8. Journey Time Route Validation - AM Peak Hour



Project Code: 3851.216

Initials: JG

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Figure 9. Journey Time Route Validation - PM Peak Hour

3.2.3. Table 6 shows the journey time performance in the 2019 base year model for the journey time routes in the vicinity of the proposed development. The following two routes fail in the AM Peak hour:

- A47 Normandy Way Westbound (-19.2% / 02:19 minutes).
- Leicester Road Northbound (18.0% / 1:03 minutes) – fails marginally by 3 seconds.

3.2.4. The following four routes fail in the PM Peak hour:

- Coventry Road / Leicester Road Westbound (15.3% / 02:09 minutes) – fails marginal by 0.3%, with the route performing very strongly until the final approach to Dodwells Roundabout.
- Rugby Road / Ashby Road Northbound (23.5% / 03:31 minutes).
- Leicester Road Southbound (20.8% / 01:13 minutes) – fails marginally by 13 seconds.
- M69 (M6 to M1) Northbound (22.2% / 04:16 minutes) – likely fails due to an underrepresentation of delay on the final approach to M1 J21.

	Distance (km)		AM Peak Hour						PM Peak Hour					
	Obs.	Mod.	Obs.	Mod.	Diff	%Diff	TAG		Obs.	Mod.	Diff	%Diff	TAG	
A47 Normandy Way Eastbound	7.11	6.81	08:02	08:40	00:38	7.9%	✓		08:50	09:04	00:14	2.6%	✓	
A47 Normandy Way Westbound	7.14	6.81	12:05	09:45	-02:19	-19.2%	✗		09:32	09:34	00:02	0.3%	✓	
Coventry Road / Leicester Road Eastbound	6.44	6.50	10:52	11:16	00:24	3.7%	✓		10:36	11:53	01:17	12.1%	✓	
Coventry Road / Leicester Road Westbound	6.45	6.50	13:29	11:37	-01:52	-13.8%	✓		14:02	11:53	-02:09	-15.3%	✗	
Hollycroft / Sapcote Road Eastbound	6.34	6.32	11:36	11:25	-00:10	-1.5%	✓		11:43	11:21	-00:22	-3.2%	✓	
Hollycroft / Sapcote Road Westbound	6.53	6.52	13:41	13:10	-00:31	-3.8%	✓		15:05	13:47	-01:18	-8.6%	✓	
Rugby Road / Ashby Road Northbound	5.36	5.21	11:27	11:36	00:08	1.2%	✓		14:59	11:28	-03:31	-23.5%	✗	
Rugby Road / Ashby Road Southbound	5.34	5.19	11:14	11:42	00:28	4.1%	✓		11:25	12:59	01:34	13.7%	✓	
Hinckley Road / Southfield Road / Nuts Lane Eastbound	6.63	6.62	13:48	14:43	00:54	6.6%	✓		17:21	16:02	-01:19	-7.6%	✓	
Hinckley Road / Southfield Road / Nuts Lane Westbound	6.62	6.62	14:08	14:23	00:16	1.8%	✓		17:03	15:31	-01:32	-9.0%	✓	
Earl Shilton Bypass Eastbound	4.44	4.74	04:00	04:33	00:33	13.7%	✓		03:55	04:49	00:53	22.7%	✓	
Earl Shilton Bypass Westbound	4.44	4.74	04:05	05:02	00:56	23.0%	✓		03:59	04:40	00:42	17.4%	✓	
Leicester Road Northbound	4.03	4.14	05:49	06:52	01:03	18.0%	✗		05:51	06:50	00:58	16.6%	✓	
Leicester Road Southbound	4.04	4.14	06:05	07:01	00:57	15.6%	✓		05:52	07:05	01:13	20.8%	✗	
Station Road / Heath Lane / The Common Anti-Clockwise	5.08	5.10	09:19	10:08	00:49	8.8%	✓		08:58	10:08	01:10	12.9%	✓	
Station Road / Heath Lane / The Common Clockwise	4.96	4.94	08:57	09:21	00:24	4.5%	✓		08:46	09:19	00:33	6.2%	✓	
Mill Street / Shilton Road Eastbound	2.68	2.70	04:45	04:26	-00:19	-6.6%	✓		04:22	04:28	00:05	2.1%	✓	
Mill Street / Shilton Road Westbound	2.68	2.70	04:24	04:29	00:05	1.8%	✓		04:13	04:30	00:17	6.8%	✓	
A47 (Leicester Forest East to Earl Shilton) Eastbound	6.02	6.08	07:16	06:41	-00:36	-8.2%	✓		06:43	06:17	-00:26	-6.5%	✓	
A47 (Leicester Forest East to Earl Shilton) Westbound	6.02	6.01	05:52	05:54	00:01	0.4%	✓		05:31	05:28	-00:03	-1.0%	✓	
A447 (A47 to A511) Northbound	20.58	20.50	20:47	22:02	01:14	6.0%	✓		20:22	21:29	01:07	5.5%	✓	
A447 (A47 to A511) Southbound	20.58	20.50	23:26	21:28	-01:58	-8.4%	✓		22:26	21:42	-00:43	-3.2%	✓	
M69 (M6 to M1) Northbound	25.99	25.86	15:49	14:42	-01:07	-7.1%	✓		19:11	14:55	-04:16	-22.2%	✗	
M69 (M6 to M1) Southbound	26.13	26.21	14:24	14:44	00:20	2.3%	✓		13:57	14:28	00:31	3.7%	✓	
A5 (DIRFT to M42) Eastbound	45.98	43.92	43:42	42:22	-01:21	-3.1%	✓		41:59	40:59	-01:00	-2.4%	✓	
A5 (DIRFT to M42) Westbound	44.48	43.81	41:54	40:21	-01:33	-3.7%	✓		45:05	42:56	-02:09	-4.8%	✓	

Table 6. Journey Time Route Validation in the Vicinity of the Proposed Development

3.2.5. Table 7 shows the number of routes that pass the TAG criteria in the AM and PM Peak hours. In the AM Peak hour 92.3% (24 out of 26) of journey time routes meet the TAG criteria, with 84.6% (22 out of 26) passing in the PM Peak hour. Whilst this is slightly below the 85% acceptability threshold, the Coventry Road / Leicester Road Westbound route only fails marginally by 0.3% and the Leicester Road southbound only fails by 13 seconds. Therefore, the journey time performance in the vicinity of the proposed development is considered satisfactory.

	AM		PM	
Pass	24	92.3%	22	84.6%
Fail	2	7.7%	4	15.4%

Table 7. Journey Time Route Validation

3.2.6. Graphs comparing observed and modelled journey times are included in Appendix A – Journey Time Route Performance.

4. Summary

- 4.1.1. This base year highway model review is focused on assessing the suitability of the PRTM for the assessment of the proposed development Brick Kiln Street Hinckley in the AM and PM Peak hours.
- 4.1.2. The review has considered multiple elements of the model, including modelled link flow and journey time against data collected as part of the model development, zone system, network structure and coding in the vicinity of the proposed development.
- 4.1.3. The model zone system is considered to contain sufficient detail for a strategic assessment of the proposed development. It is suggested that the proposed Brick Kiln Street development is contained in its own new development zone to allow for detailed analysis and reporting of development trips.
- 4.1.4. The highway network close to the proposed development, including key junctions, has been reviewed. It was found that the Coventry Road / Short Way junction was missing a flare. A sensitivity test was performed in the AM and PM Peak hour model, with the right-hand flare included on Coventry Road westbound, and this alteration made no material difference (less than 25 passenger car units (PCUs)). Following this sensitivity test, it is considered that the highway network is suitable for the assessment.
- 4.1.5. In the link flow performance, 108 links were considered in the vicinity of the proposed development. In the AM Peak hour 92.6% of links pass and in the PM Peak hour 89.8% of links pass, suggesting that both time periods are robust in relation to the 85% TAG criterion.
- 4.1.6. In respect of journey time routes, 92.3% (24 out of 26) and 84.6% (22 out of 26) routes meet TAG criterion in the AM and PM Peak hours, respectively. Whilst this is slightly below the 85% TAG acceptability threshold, the Coventry Road / Leicester Road Westbound route only fails marginally by 0.3% and Leicester Road Southbound fails by 13 seconds. Considering the former route mentioned, it does not fail the validation criteria until near the Dodwells Roundabout which is considered far enough away to not have an impact on the assessment of the proposed development. Therefore, the journey time performance in the vicinity of the proposed development is considered satisfactory.
- 4.1.7. Based on this base year model review the PRTM is considered suitable for the strategic assessment of the proposed development at Brick Kiln Street Hinckley.



5. Contact Details

We trust that our report meets your expectations and look forward to working with you again soon.

If you have any questions please do not hesitate to contact:

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Framework Manager
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LE3 8RA

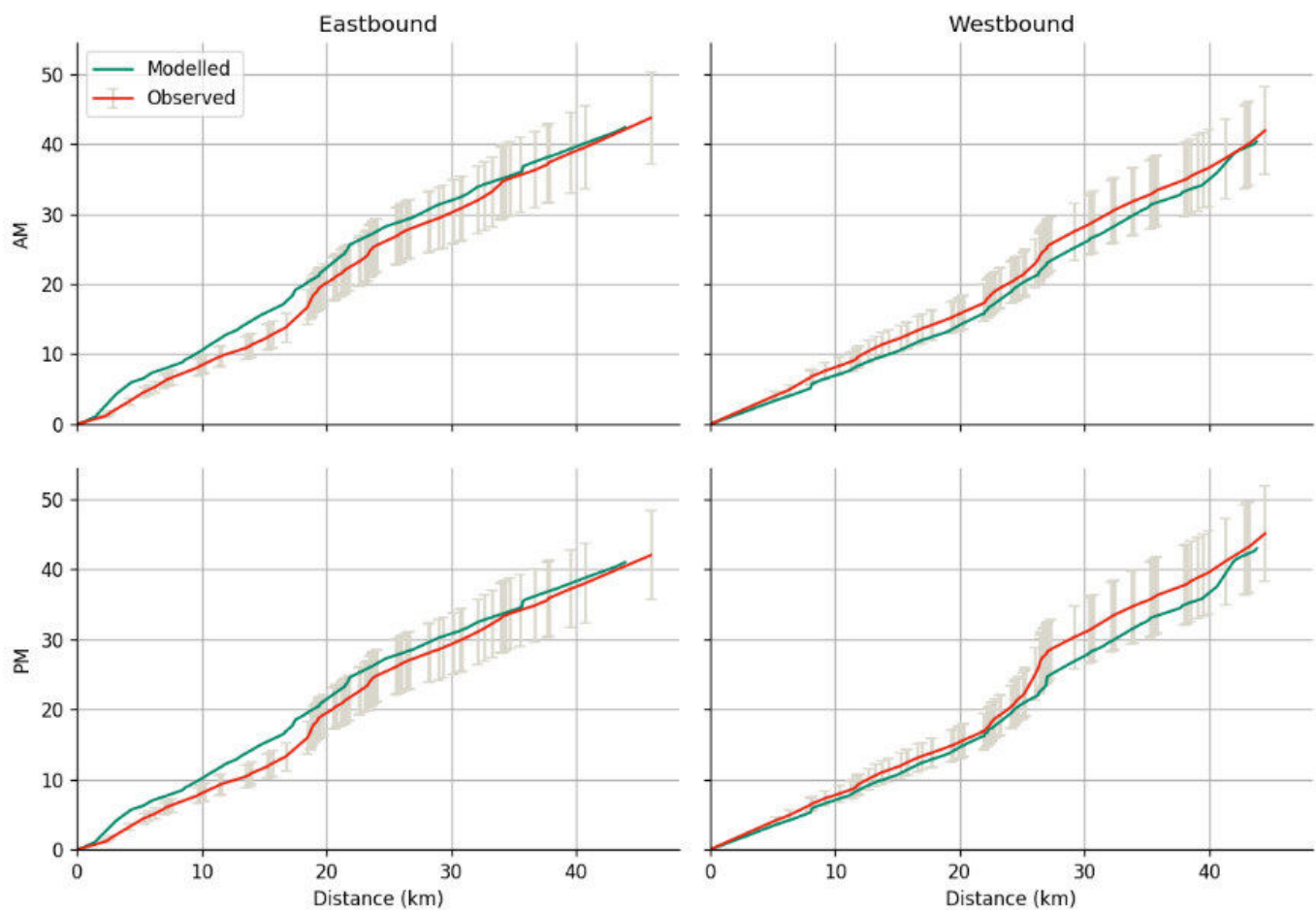
etcf@leics.gov.uk

<http://www.leics.gov.uk>

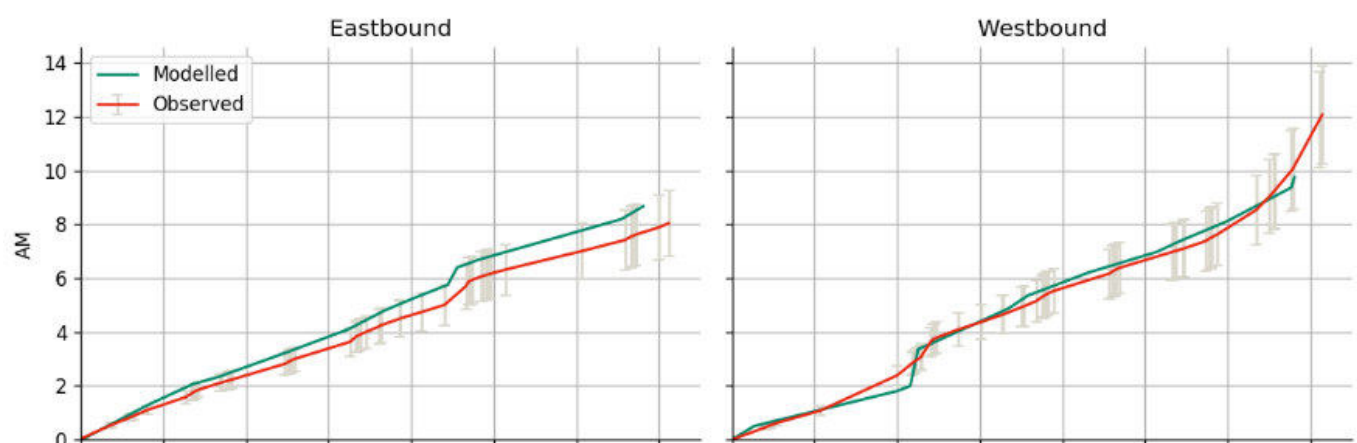


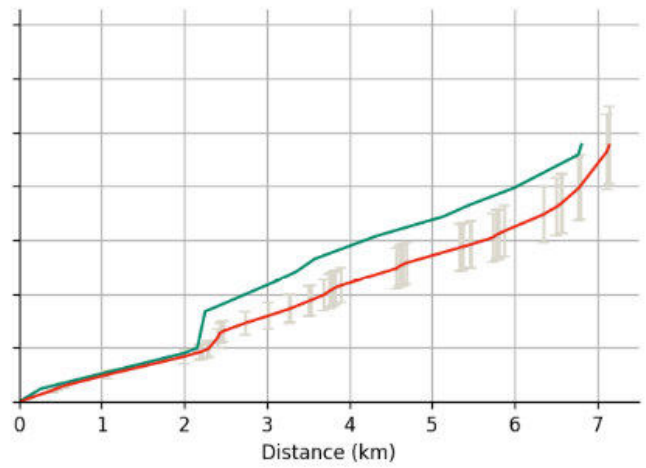
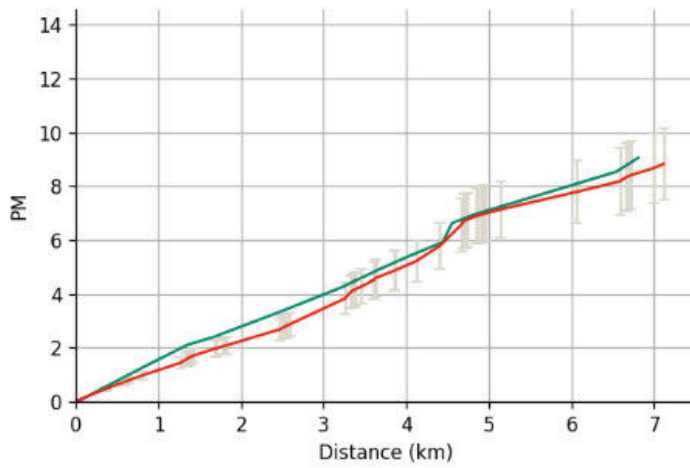
6. Appendix A – Journey Time Route Performance

A5 (DIRFT to M42)

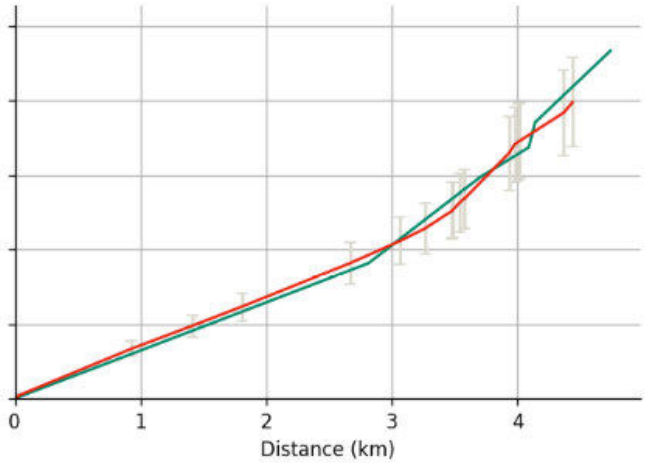
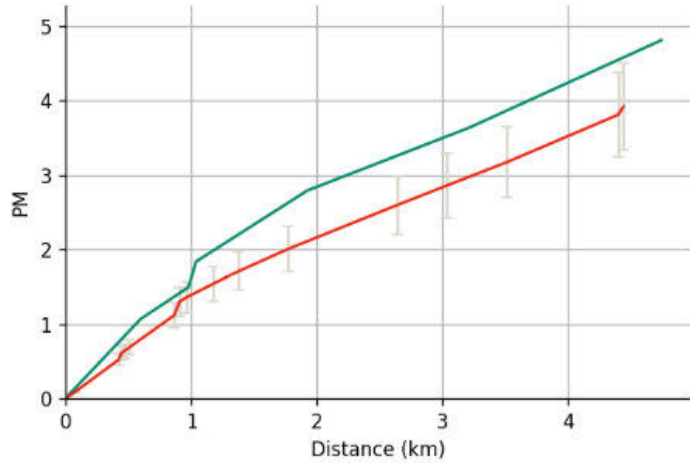
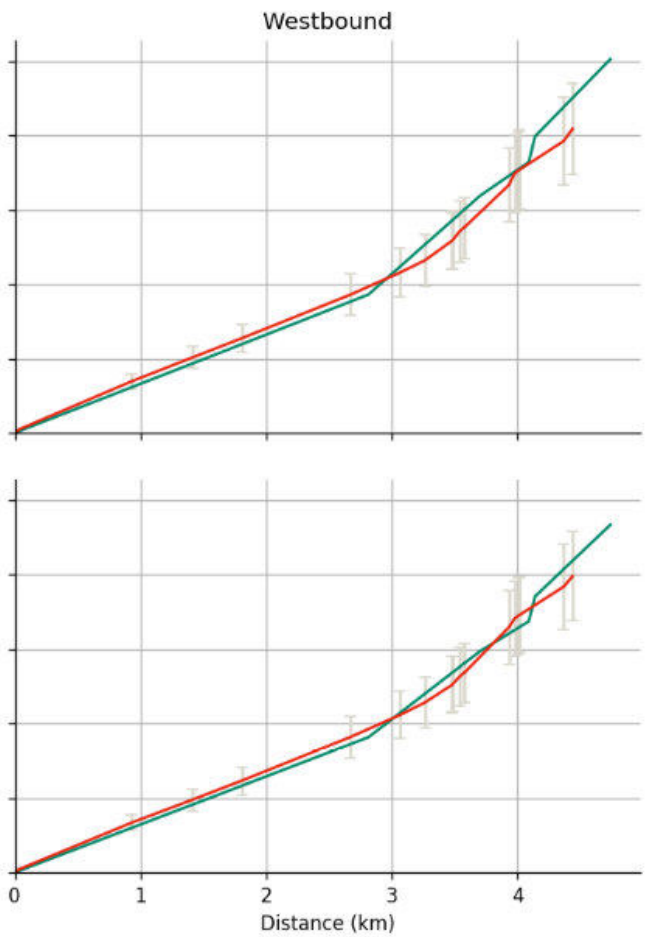
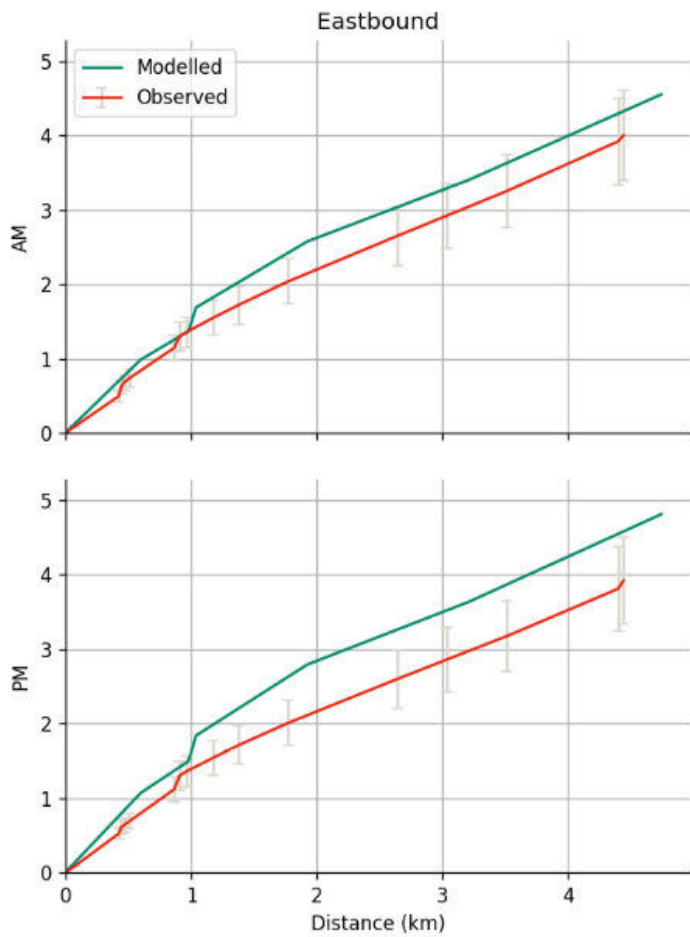


A47 Normandy Way



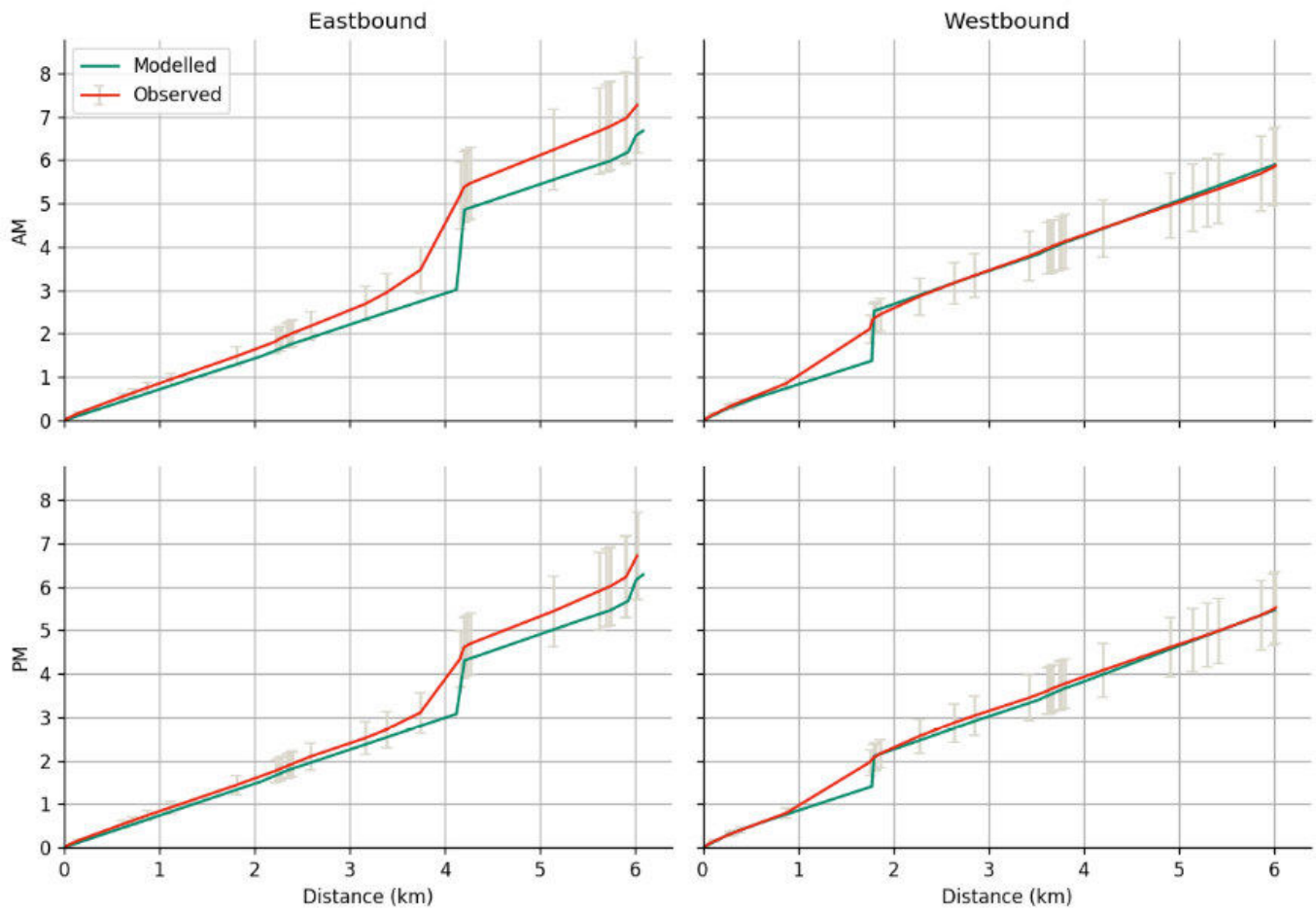


Earl Shilton Bypass

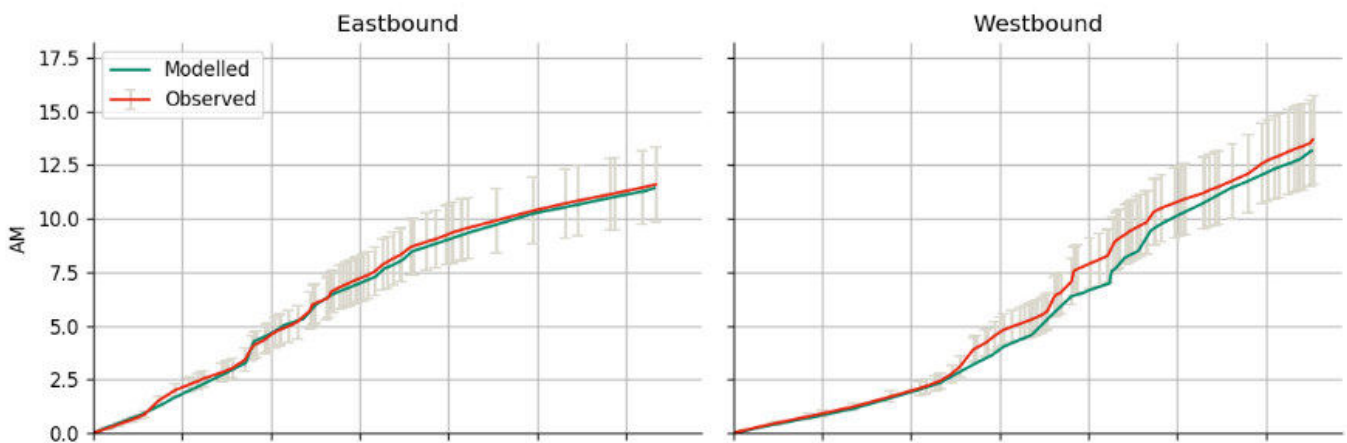


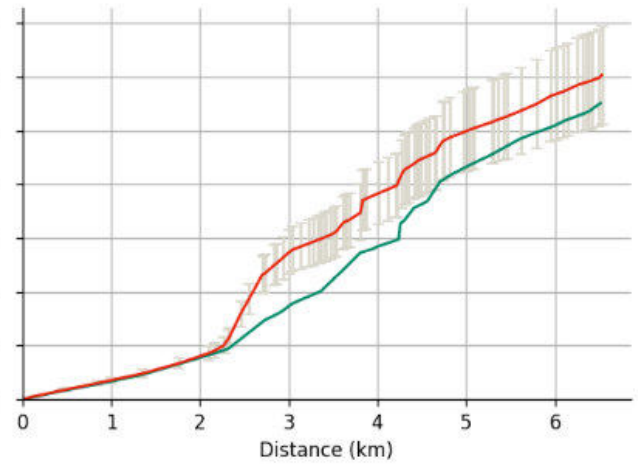
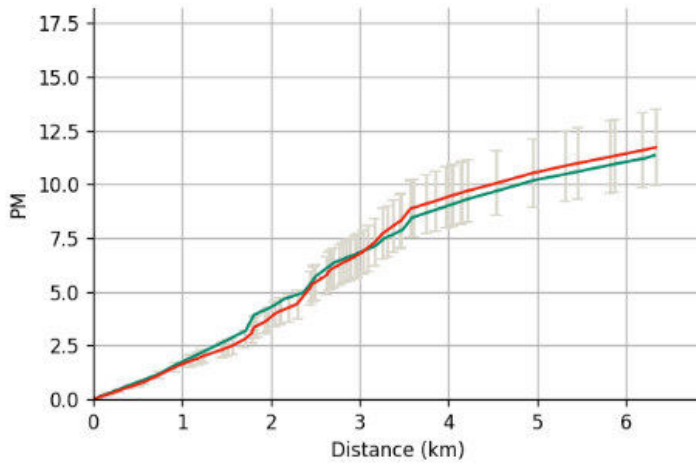


A47 (Leicester Forest East to Earl Shilton)



HollyCroft / Sapcote Road

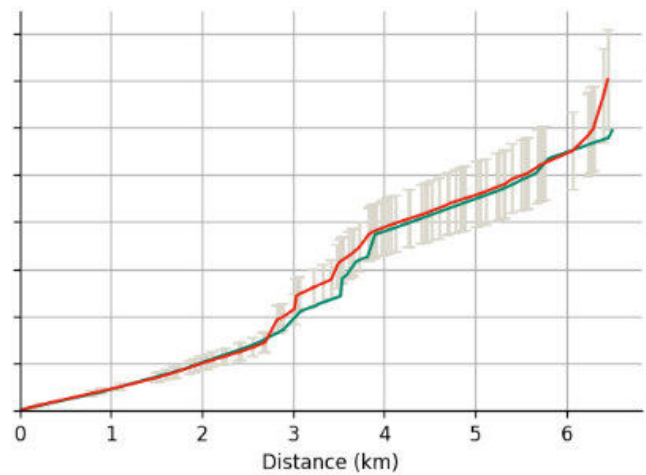
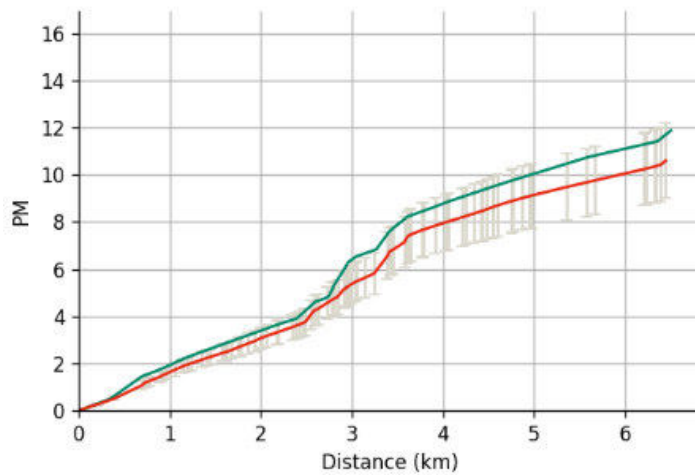
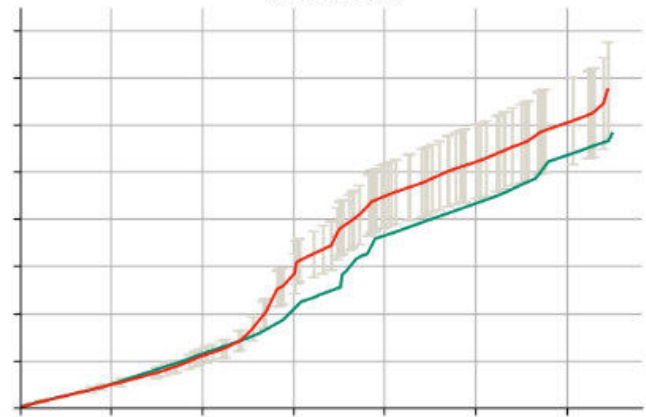
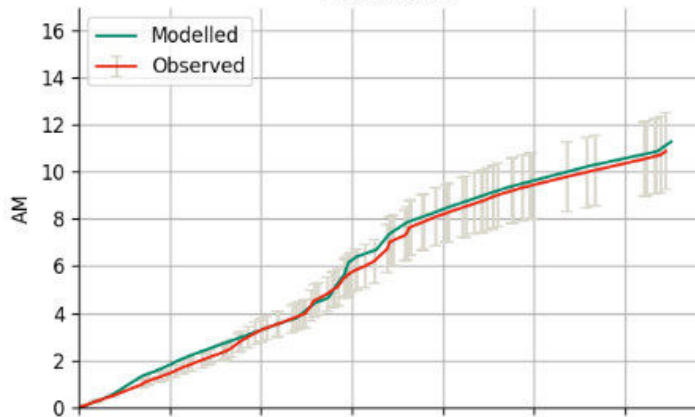




Coventry Road / Leicester Road

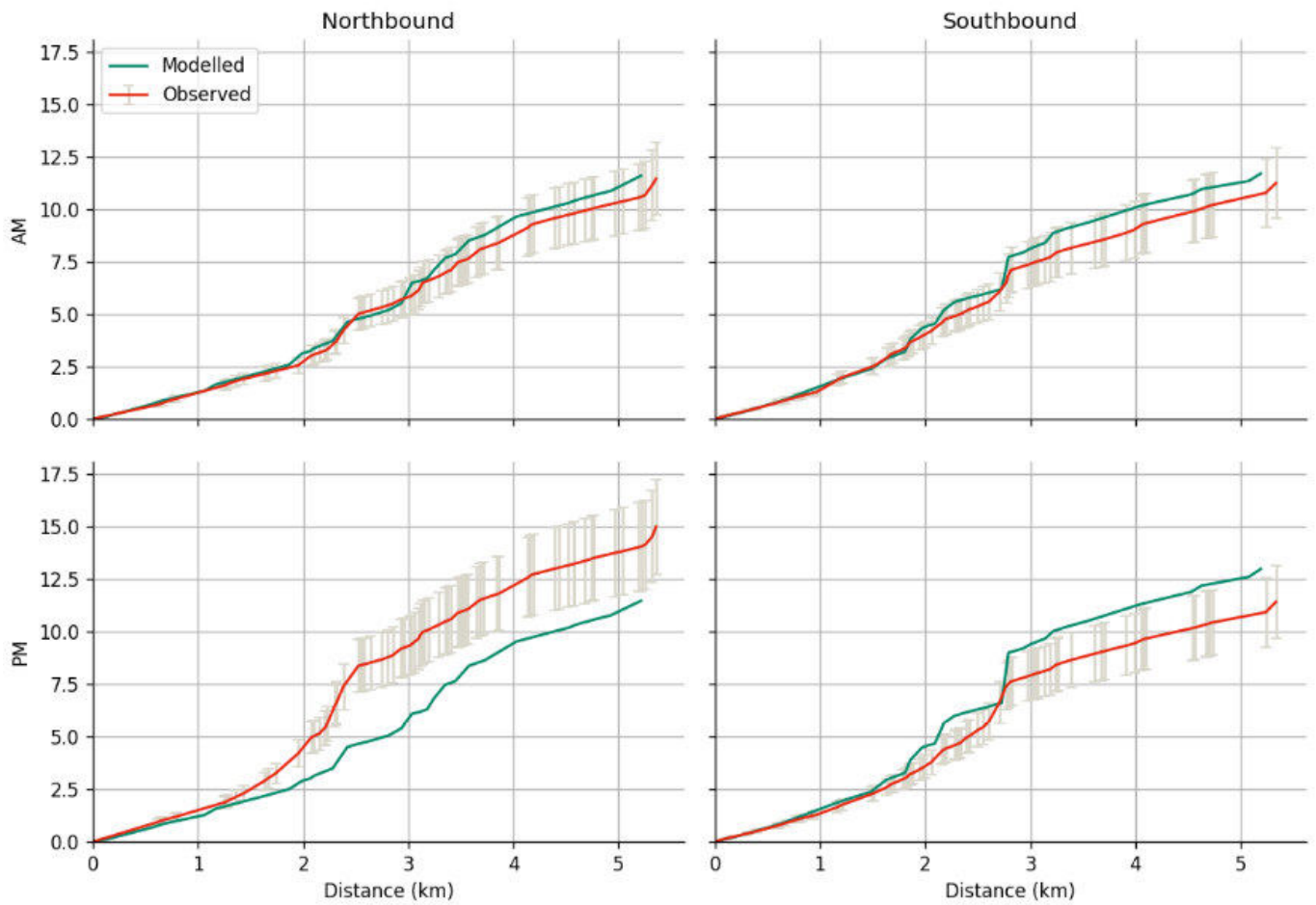
Eastbound

Westbound

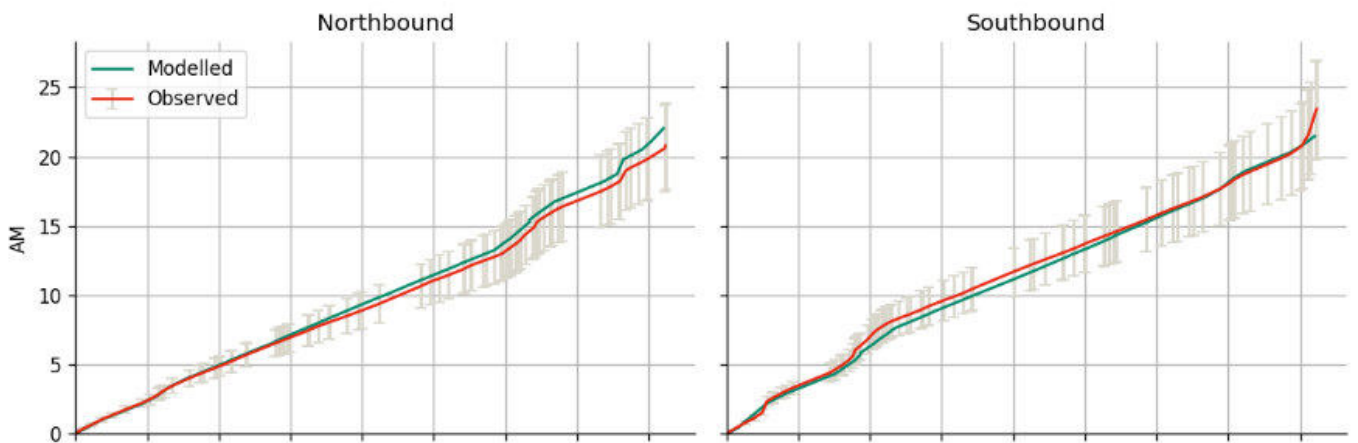


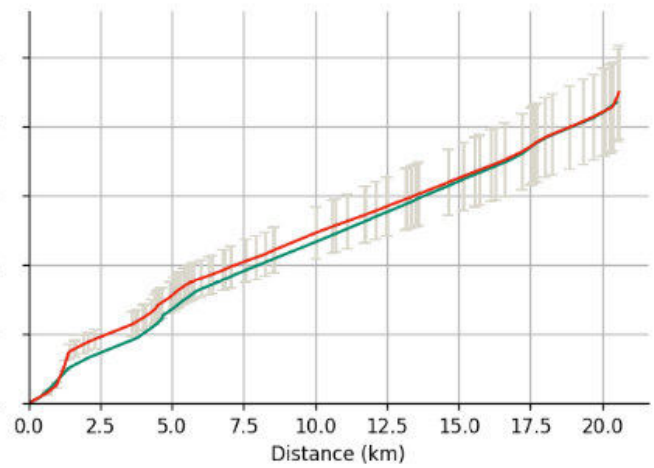
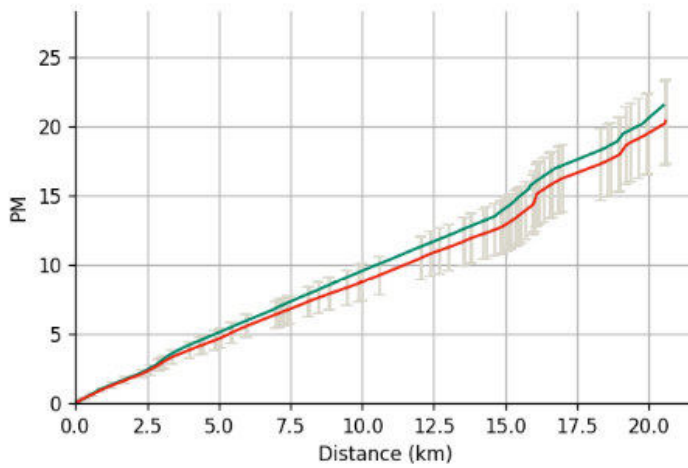


Rugby Road / Ashby Road

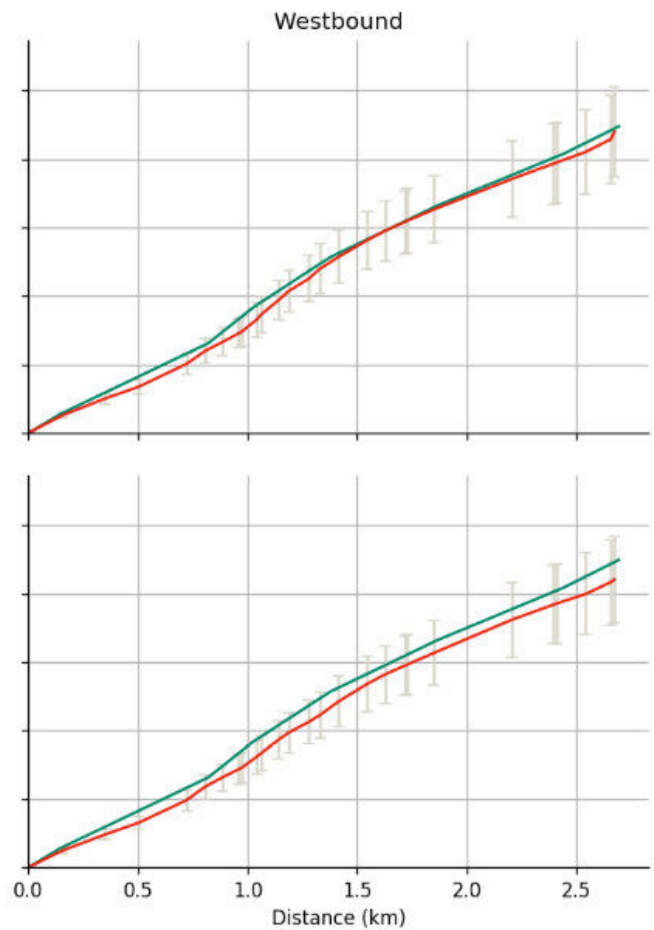
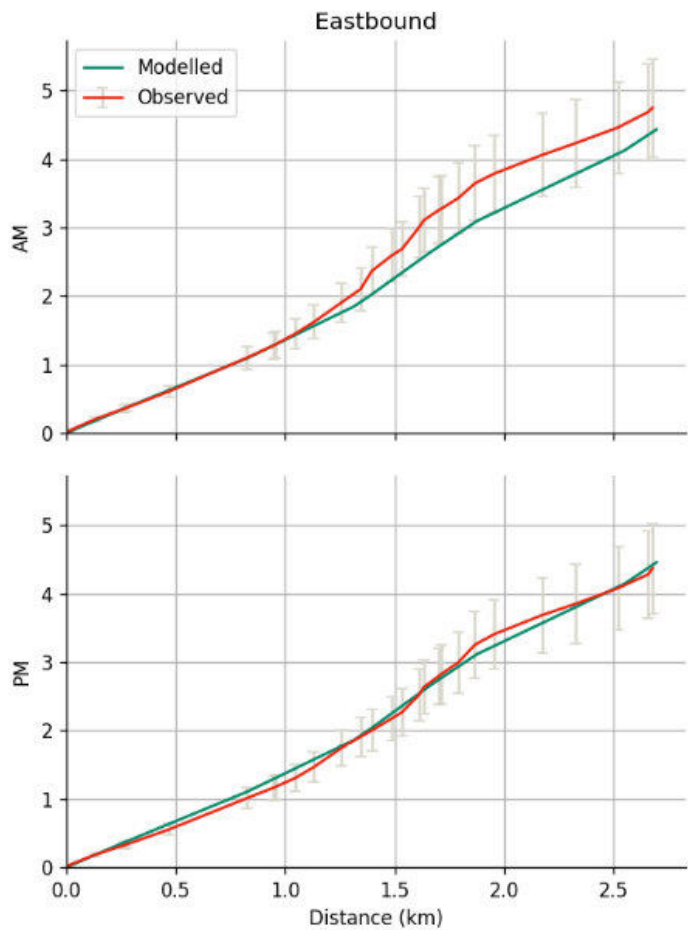


A447 (A47 to A511)



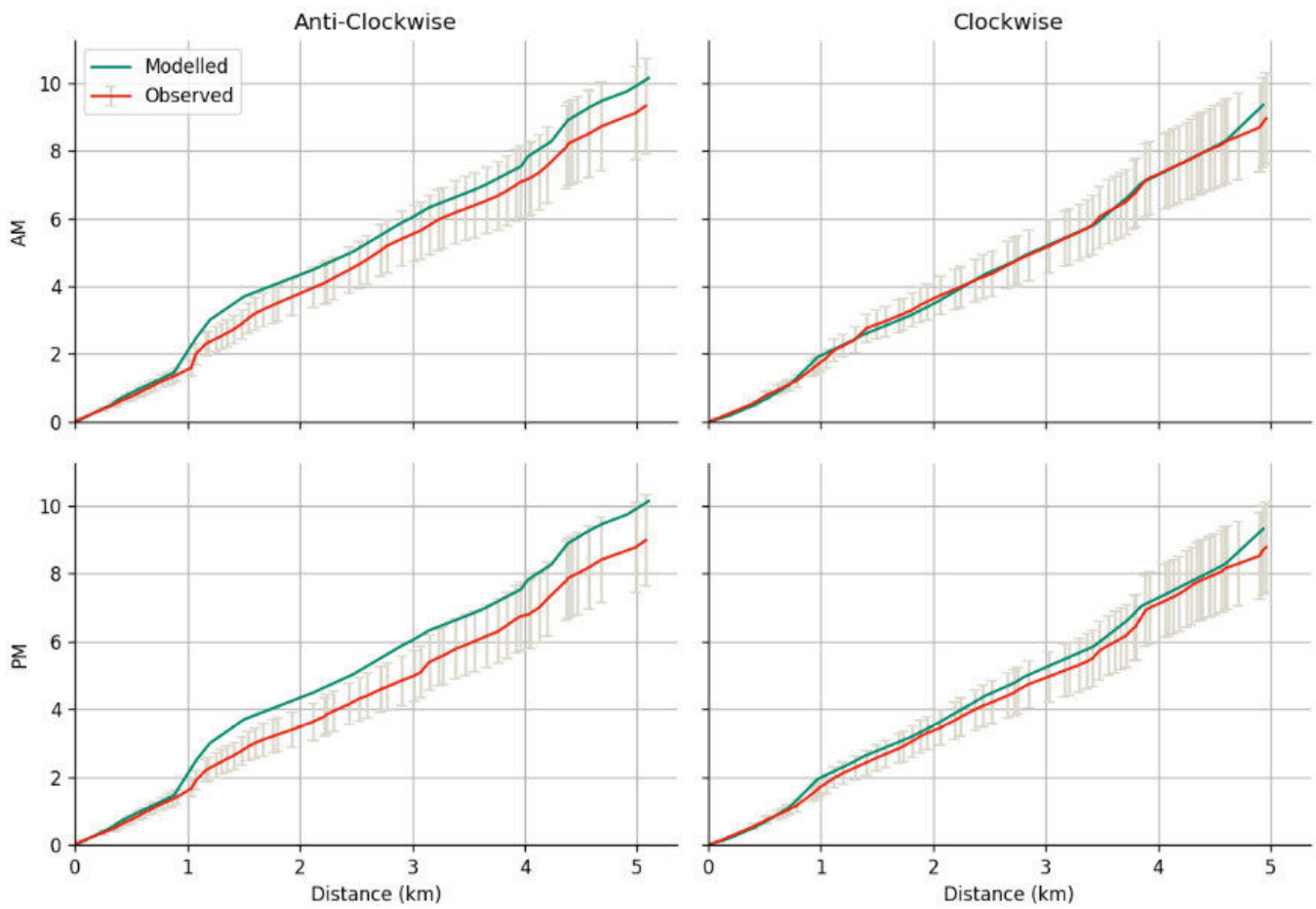


Mill Street / Shilton Road

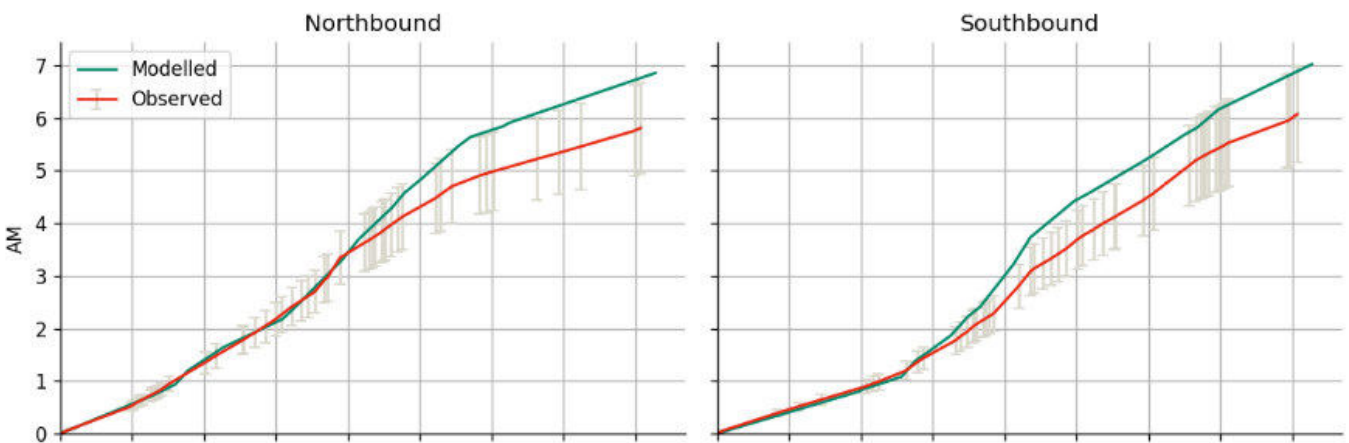


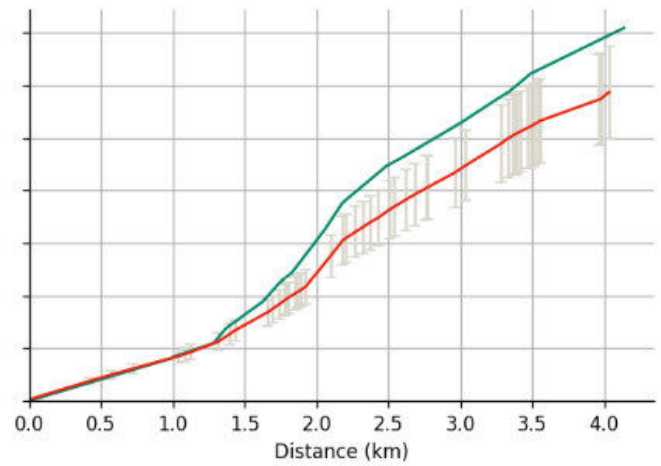
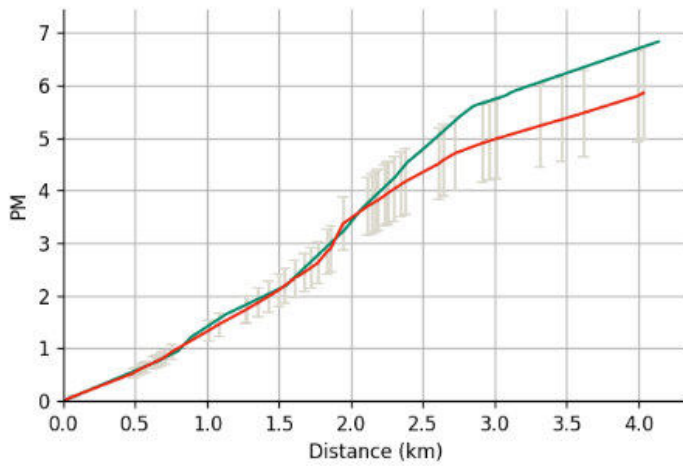


Station Road / Heath Lane / The Common

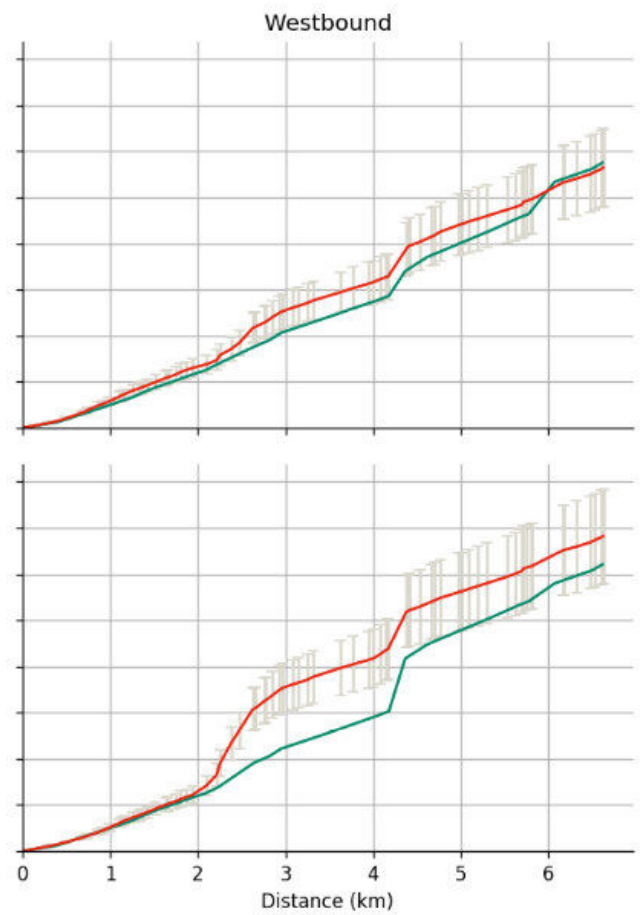
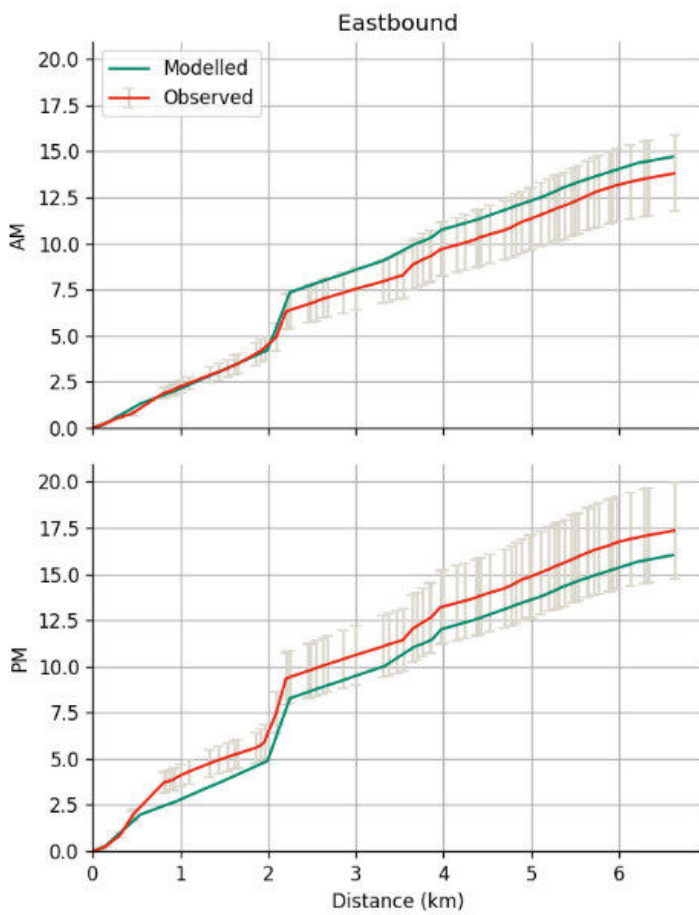


Leicester Road



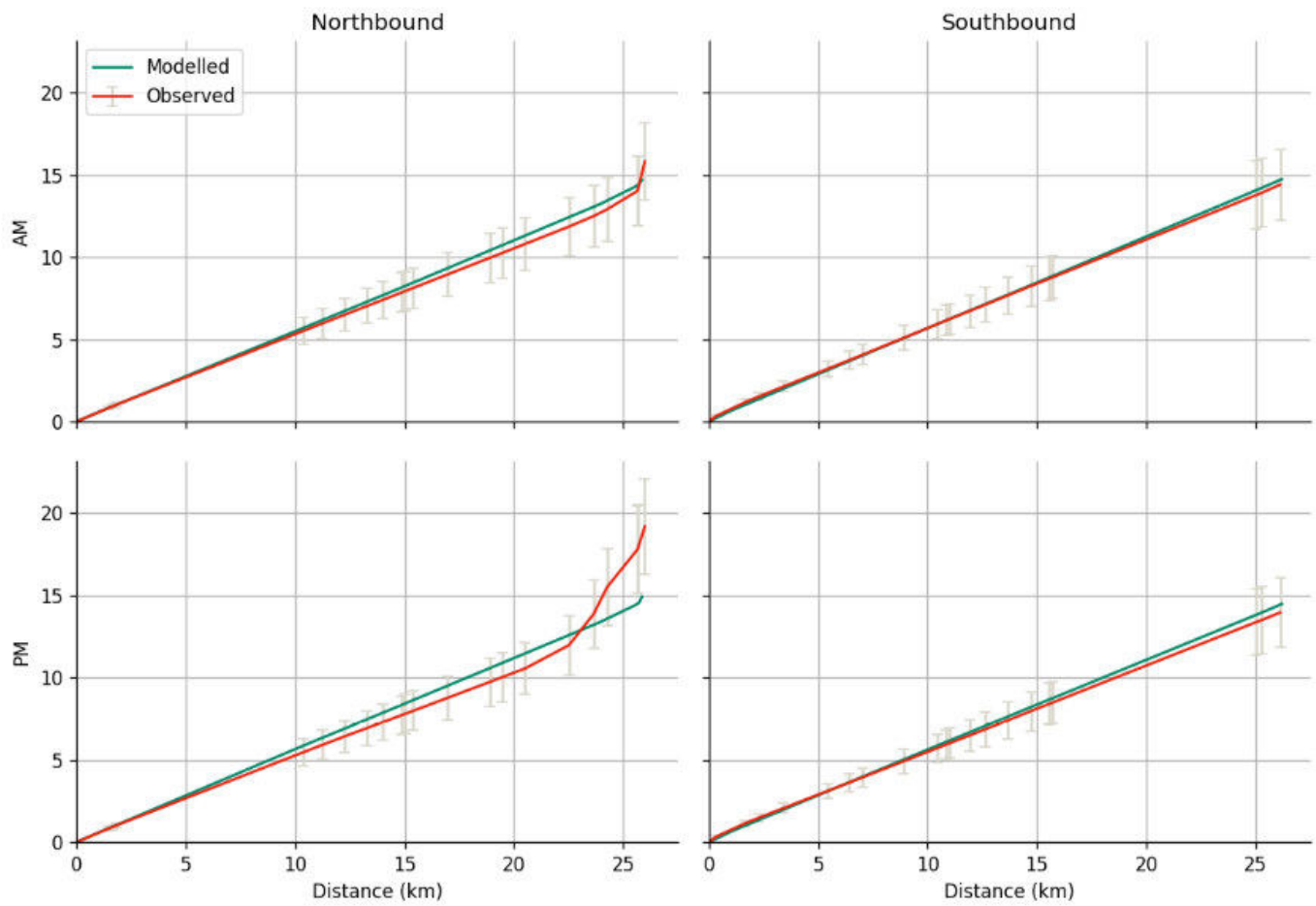


Hinckley Road / Southfield Road / Nutts Lane





M69 (M6 to M1)



Appendix E

PRTM Forecast Modelling Report

Environment and Transport Modelling Services Contract

Brick Kiln Street, Hinckley

Forecasting Report

May 2025
3851.216

Document Sign-off

Control Details

Document Location:	X:\TMODELLING\05. 3851 (External)\MF3851.216 Brick Kiln Street, Hinckley\12. Deliverables\01. Reports\3851.216 Brick Kiln Street_Forecasting Report v1.0.docx
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Author:	JG
Owner:	Alex Gray, Network Data and Intelligence Team

Document history and status

Ver	Date	Description	Author	Review	Approved	Released
0.1	30/04/25	Draft for internal review	JG	PB		
1.0	02/05/25	Final version for release to the client	JG	PB	PB	ETCF

Model Version

Model:	PRTM2019 v1.2
Constrained / NTEM minimum:	NTEM-Minimum
Planning Data:	HH19Emp19
SATURN Version:	11.5.05N

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1. Introduction

1.1. Background

- 1.1.1. Leicestershire County Council's (LCC's) Network Data & Intelligence (NDI) consultants have been commissioned by The Transportation Consultancy (ttc) to undertake strategic transport modelling to assess the potential traffic impacts of the proposed Brick Kiln Street development. This assessment has been undertaken using the Pan Regional Transport Model (PRTM) for the AM and PM Peak hours.
- 1.1.2. The proposed development is a residential development of up to 195 dwellings. The site is located to the north of the B4666 Coventry Road in Hinckley, Leicestershire, and is expected to be fully built by 2030. Figure 1 shows the indicative location of the proposed development.

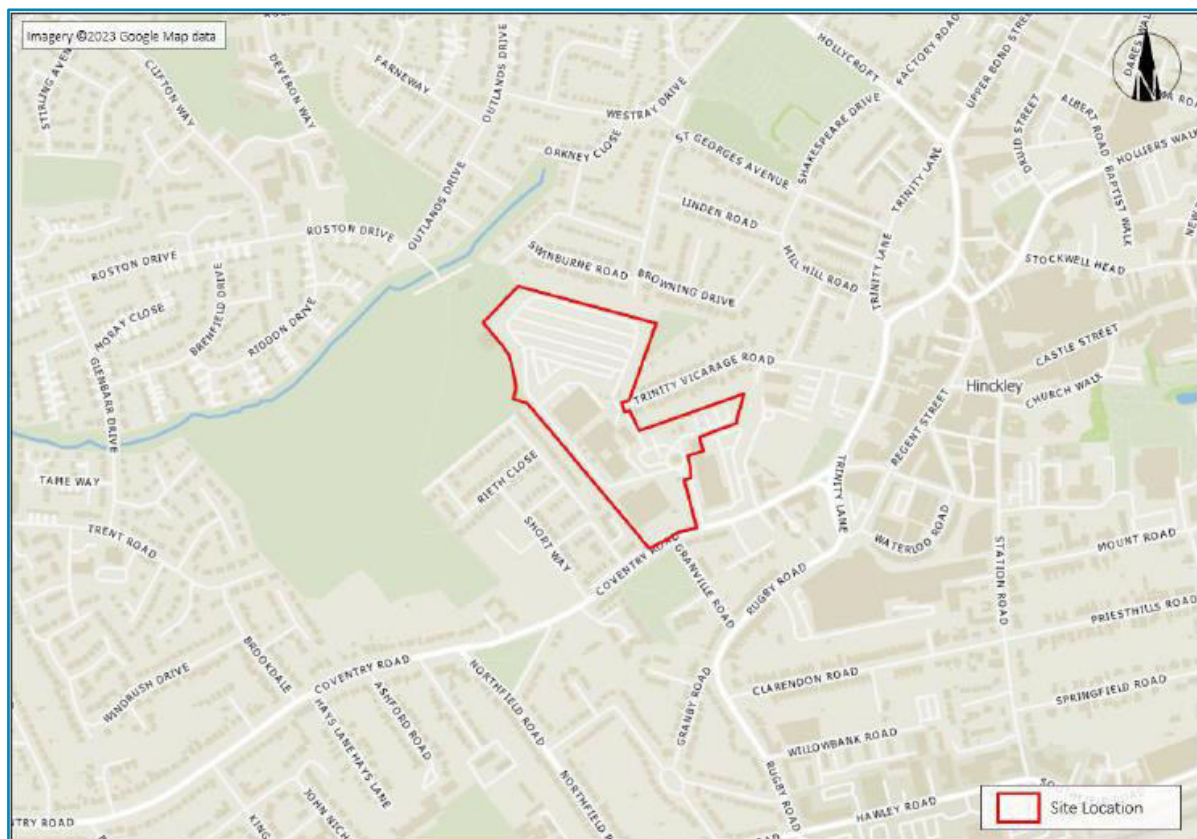


Figure 1. Location of the Proposed Development

- 1.1.3. The proposed development will be accessed via the existing priority T-junction off the B4666 Coventry Road with Brick Kiln Street, with ghost island provision in the 'with development' scenario. Access for the proposed development is shown in Figure 2.

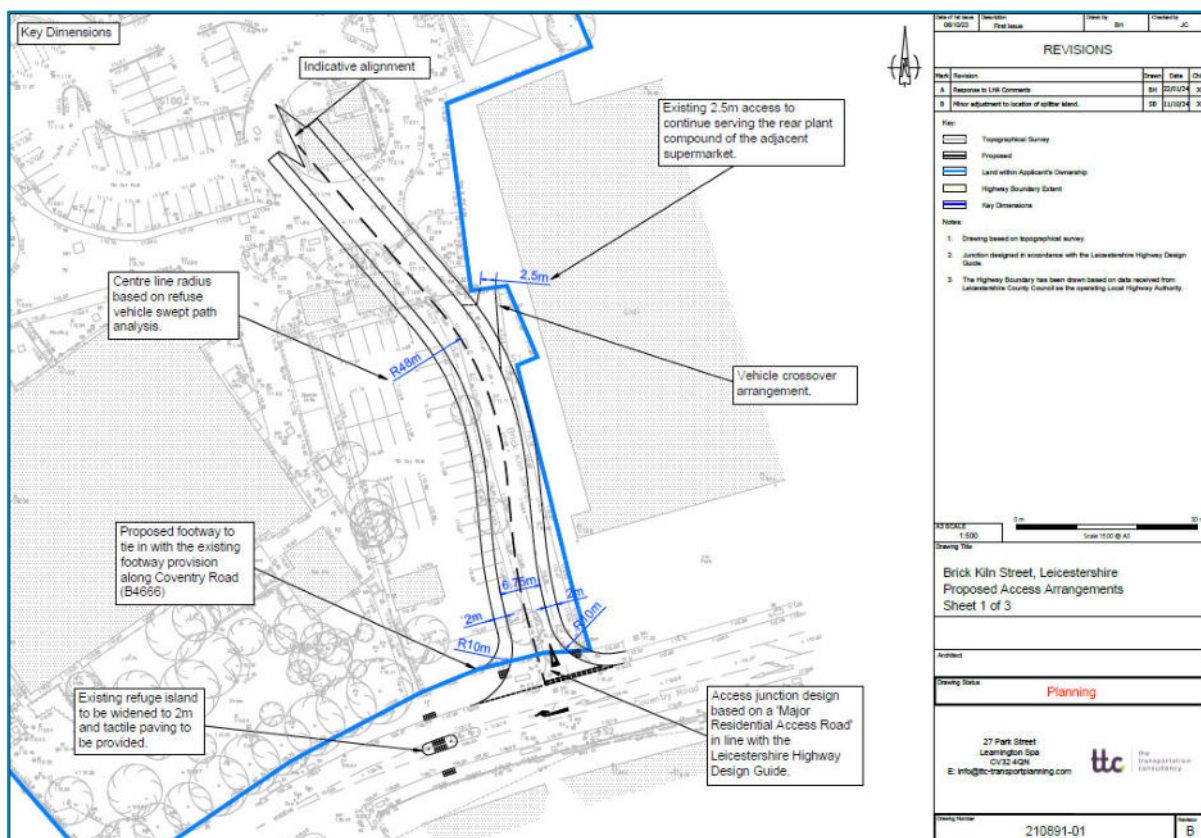


Figure 2. B4666 Coventry Road Access

1.1.4. This report is the Forecasting Report containing the forecast model results of the strategic modelling assessment of the proposed development. This report follows the Brick Kiln Street Base Year Model Review Report¹, which details the 2019 base year model network review and performance in the vicinity of the proposed site.

1.2. Report Structure

- 1.2.1. Section 2 details the model suitability, including the agreements around the Uncertainty log and development trip generation.
- 1.2.2. Section 3 outlines the forecast model results for all scenarios.
- 1.2.3. Section 4 summarises the results of the PRTM assessment of the proposed development.

¹ 3851.216 Brick Kiln Street_BYMR v1.0 (21/01/2025)

2. Forecast Approach and Assumptions

2.1. Introduction

2.1.1. For this strategic modelling assessment, the following forecast model scenarios have been produced:

- 2024 'Do Nothing' scenario,
- 2024 'with Cadent Gas' scenario,
- 2030 'Do Nothing' scenario,
- 2030 'Do Nothing' + Development (100%); 'Do Something' scenario.

2.1.2. The 'Do Nothing' and 'with Cadent Gas' forecasts have been run through the wider PRTM modelling suite which includes, among others: a highway model, a public transport model, and a variable demand model. Therefore, the forecasts include the response of travel demand to forecast changes in the costs of travel (including congestion, fuel prices and public transport fares) and change in assumed highway and public transport infrastructure over time.

2.1.3. To produce the 2030 'Do Something' scenario; the highway trips, specified by the client in the trip generation numbers for the proposed development, have been added to the 2030 'Do Nothing' highway demand matrices using the agreed parent-zone distribution and assigned in the PRTM highway model.

2.2. 'Do Nothing' Assumptions

2.2.1. The forecast planning data and infrastructure schemes used to produce the forecast 'Do Nothing' scenarios were reviewed by the client in the format of an uncertainty log.

2.2.2. The trip forecasting process contained within the PRTM uses forecasts of population, households, and jobs to generate estimates of future travel demand. Planning forecasts (containing measures of housing and development) were unconstrained (NTEM minimum²) for this application.

2.3. Proposed Development Access Assumptions

2.3.1. A new development zone has been used for this application, which accesses the network via the B4666 Coventry Road. The development zone has been implemented to represent the recently demolished Cadent Gas head office, in the 2024 forecast year, and the Brick Kiln Street development, in the 2030 forecast year.

2.3.2. In the 2024 and 2030 'Do Nothing' networks, this development zone reflected the existing junction of B4666 / Brick Kiln Street. To create the 2030 'Do Something' network, the 2030 'Do Nothing' network was amended to reflect the proposed development access on the B4666 Coventry Road (Brick Kiln Street), with ghost island provision.

2.4. Proposed Development Trip Generation Assumptions

2.4.1. Assumptions regarding trip rates generated by the previous land use and the proposed development were provided by the client. The trip rate figures are shown in Table 1 and Table 2.

² If the planning data result in forecasts below NTEM / TEMPro growth, the model reverts to NTEM / TEMPro as minimum.

Vehicle Type	AM			PM		
	In	Out	Total	In	Out	Total
Light	1.142	0.214	1.626	0.165	0.921	1.086
Heavies	-	-	-	-	-	-
Total	1.142	0.214	1.626	0.165	0.921	1.086

Table 1. Cadent Gas Trip Rates

Vehicle Type	AM			PM		
	In	Out	Total	In	Out	Total
Light	0.12	0.375	0.495	0.336	0.196	0.532
Heavies	-	-	-	-	-	-
Total	0.12	0.375	0.495	0.336	0.196	0.532

Table 2. Development Trip Rates

2.4.2. The trip generation figures provided are shown in Table 3 and Table 4. The trips that egress/arrive from the development zone, used to reflect the land use within the corresponding scenario, are constrained to the values below for the corresponding time period.

Vehicle Type	AM			PM		
	In	Out	Total	In	Out	Total
Light	230	35	265	27	150	177
Heavies	-	-	-	-	-	-
Total	230	35	265	27	150	177

Table 3. Cadent Gas Trip Generation

Vehicle Type	AM			PM		
	In	Out	Total	In	Out	Total
Light	23	73	96	66	38	104
Heavies	-	-	-	-	-	-
Total	23	73	96	66	38	104

Table 4. Development Trip Generation

2.5. Proposed Development Trip Distribution Assumptions

2.5.1. It was agreed³ that the development trip distribution should be based on existing PRTM 'parent zone' 6042 as it contains mainly residential land-use and loads onto the B4666 to the west of Brick Kiln Street. Figure 3 shows the location of zone 6042.

³ Inception Meeting, 6th February 2025.

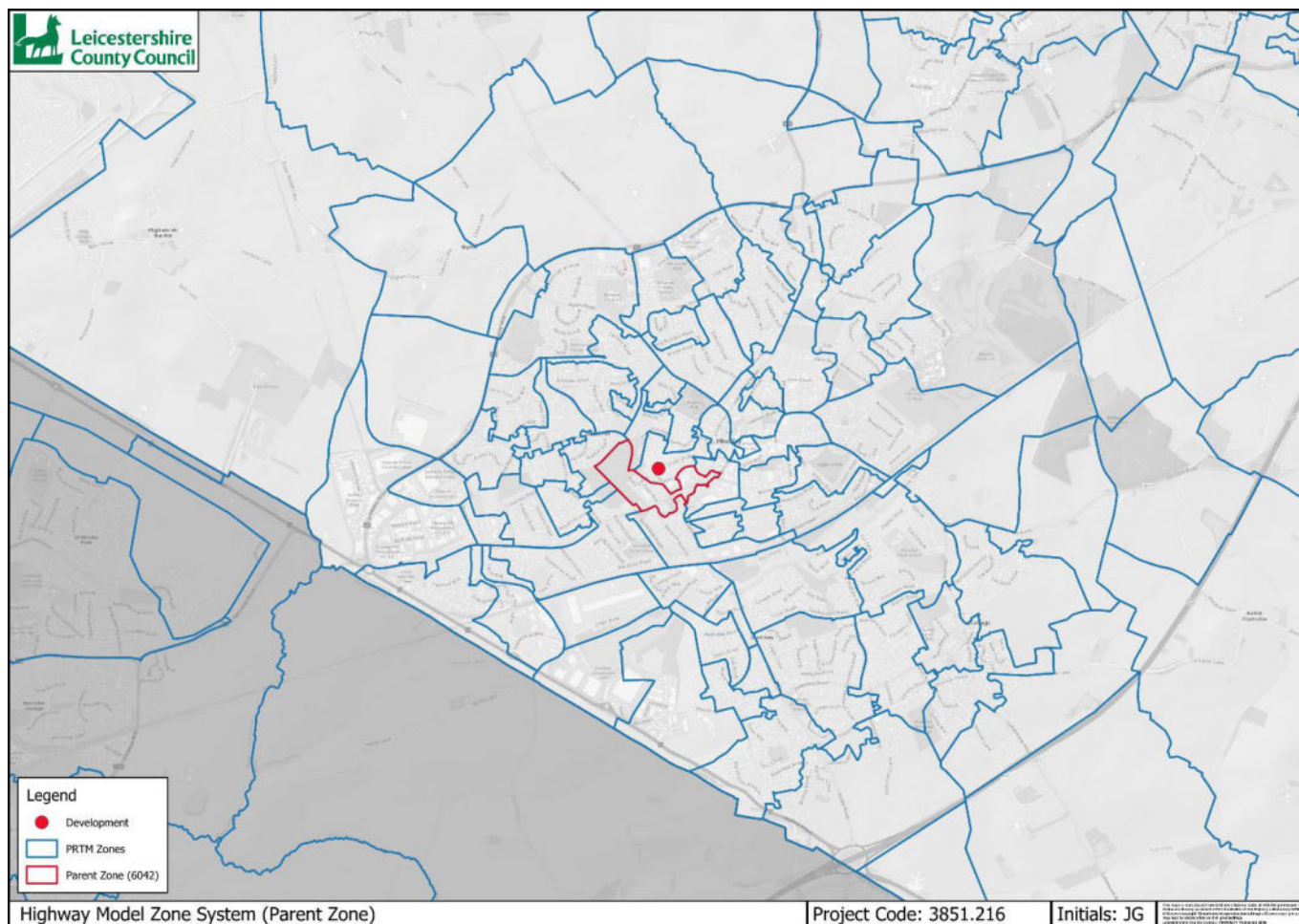


Figure 3. Location of PRTM Zone 6042

- 2.5.2. Figure 4 and Figure 5 shows the forecast development trip distribution on the highway network for the 2030 'Do Something' scenario in the AM and PM Peak hours, respectively. Labels are only displayed when the flows are 4% or more. Similar figures have been included in Appendix A, where the trip distribution is shown in PCUs.
- 2.5.3. These figures show that traffic is mainly routing to and from the development via the B4109 Rugby Road to the south, B4666 Coventry Road to the west, B4667 Trinity Lane to the north, and B4669 Burbage Road to the east. More detail about the forecast development traffic has been included in section 3.2.

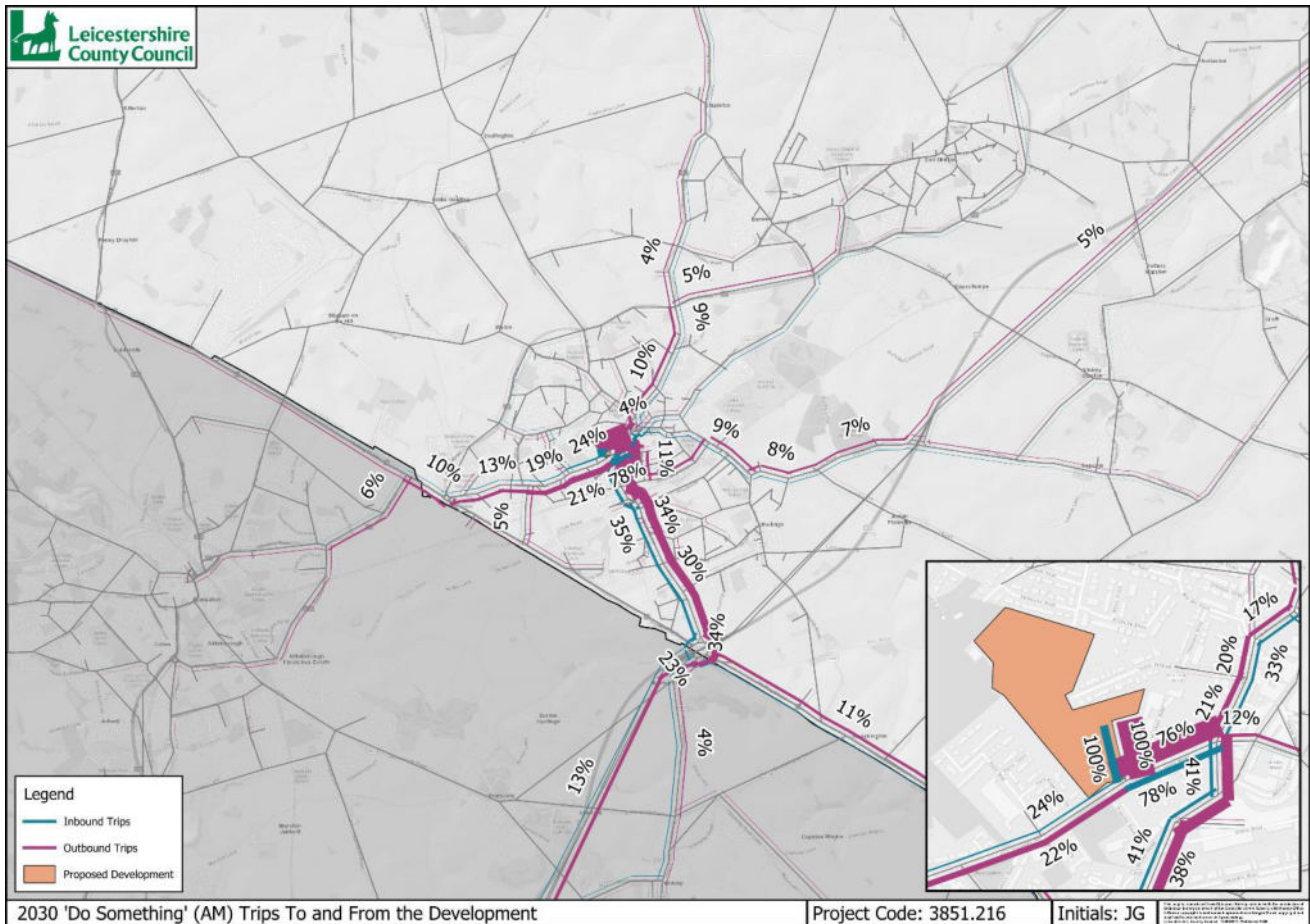


Figure 4. Vehicle Trip Distribution to and from the Proposed Development – 2030 DS AM

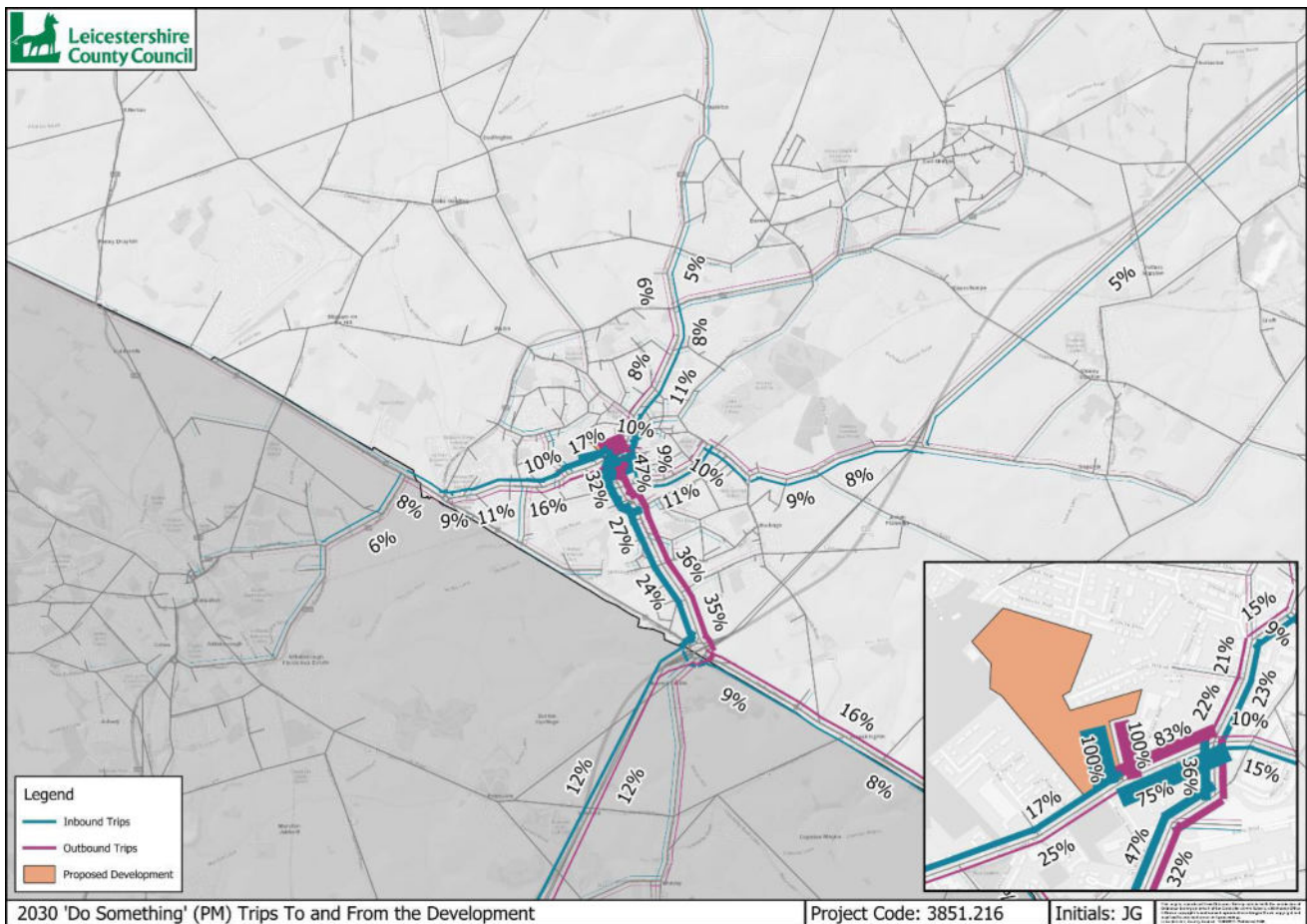


Figure 5. Vehicle Trip Distribution to and from the Proposed Development – 2030 DS PM

3. Forecast Model Results

3.1. Introduction

3.1.1. This section details the forecast impact of removing the Cadent Gas Head Office on the network, and the forecast model results for the proposed development Brick Kiln Street, Hinckley, for the AM Peak (8am to 9am) and PM Peak (5pm to 6pm) hours.

3.2. Forecast Cadent Gas Traffic

3.2.1. Figure 6 and Figure 7 show the assigned forecast trip distribution to and from the Cadent Gas site in 2024 for both the AM and PM Peak hours, respectively. The figures show that traffic generated by the offices was likely to:

- Route west via the B4666 Coventry Road, towards the A5 and Nuneaton.
- Route south via the B4109 Rugby Road, towards Burbage, Coventry, and the A5.
- Route east via the B4669 Burbage Road, towards Leicester, Sapcote and Stoney Stanton.
- Route north via the B4667 Trinity Lane, towards Hinckley, Earl Shilton, Stapleton and beyond.

3.2.2. Unlike the trip distribution for the proposed housing development, there is less balance between inbound and outbound trips, with trips largely entering the site in the AM Peak hour and departing the site in the PM Peak hour. In addition, there is a higher percentage of trips travelling longer distances. Similar figures have been included in Appendix A, where the trip distribution is shown in PCUs.

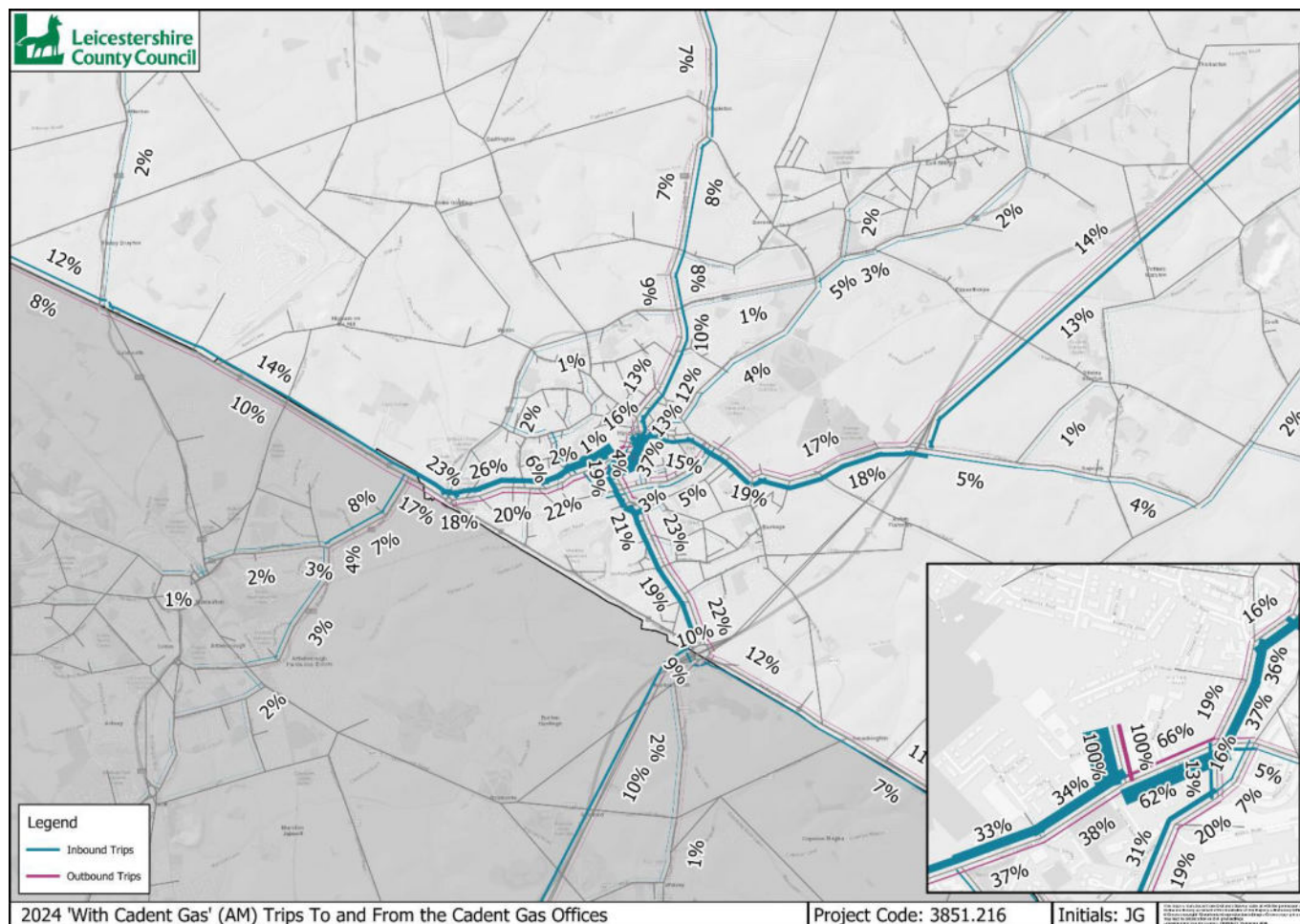


Figure 6. Vehicle Trip Distribution to and from the Cadent Gas Offices – 2024 WCG AM

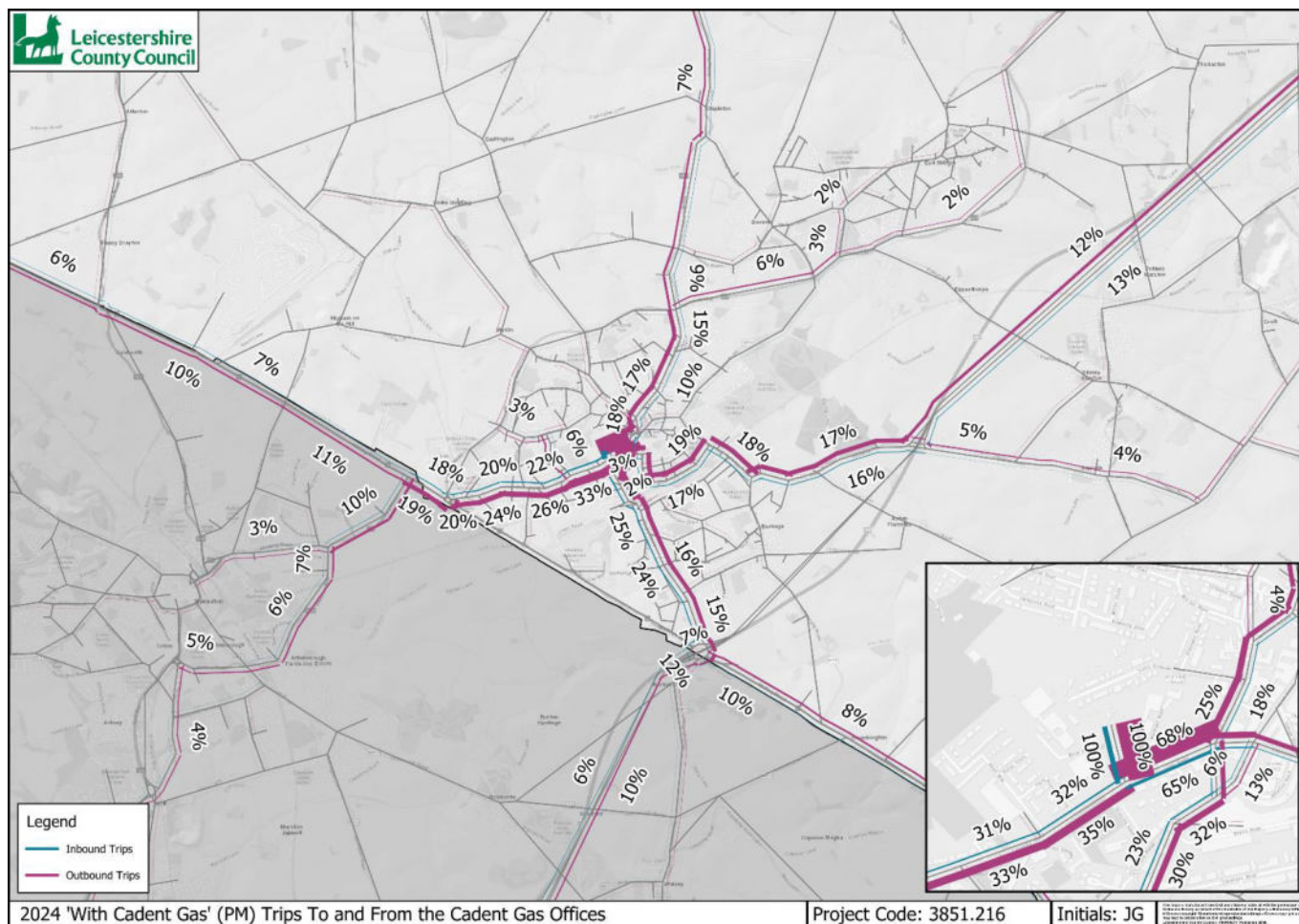


Figure 7. Vehicle Trip Distribution to and from the Cadent Gas Offices – 2024 WCG PM

- 3.2.3. Figure 8 to Figure 9 show the trips from the offices in the 2024 'with Cadent Gas' scenario disaggregated by distance for both the AM and PM Peak hours, respectively. These are mapped when the combined flow is greater than 2 PCU.
- 3.2.4. Car trips of less than 10km are mainly routing along the B4666 Coventry Road / B4667 Trinity Lane, as well as nearby residential areas within Hinckley, while Car, HGV, and LGV trips of greater than 10km are routing towards the A5, M69, and Leicester, etc.

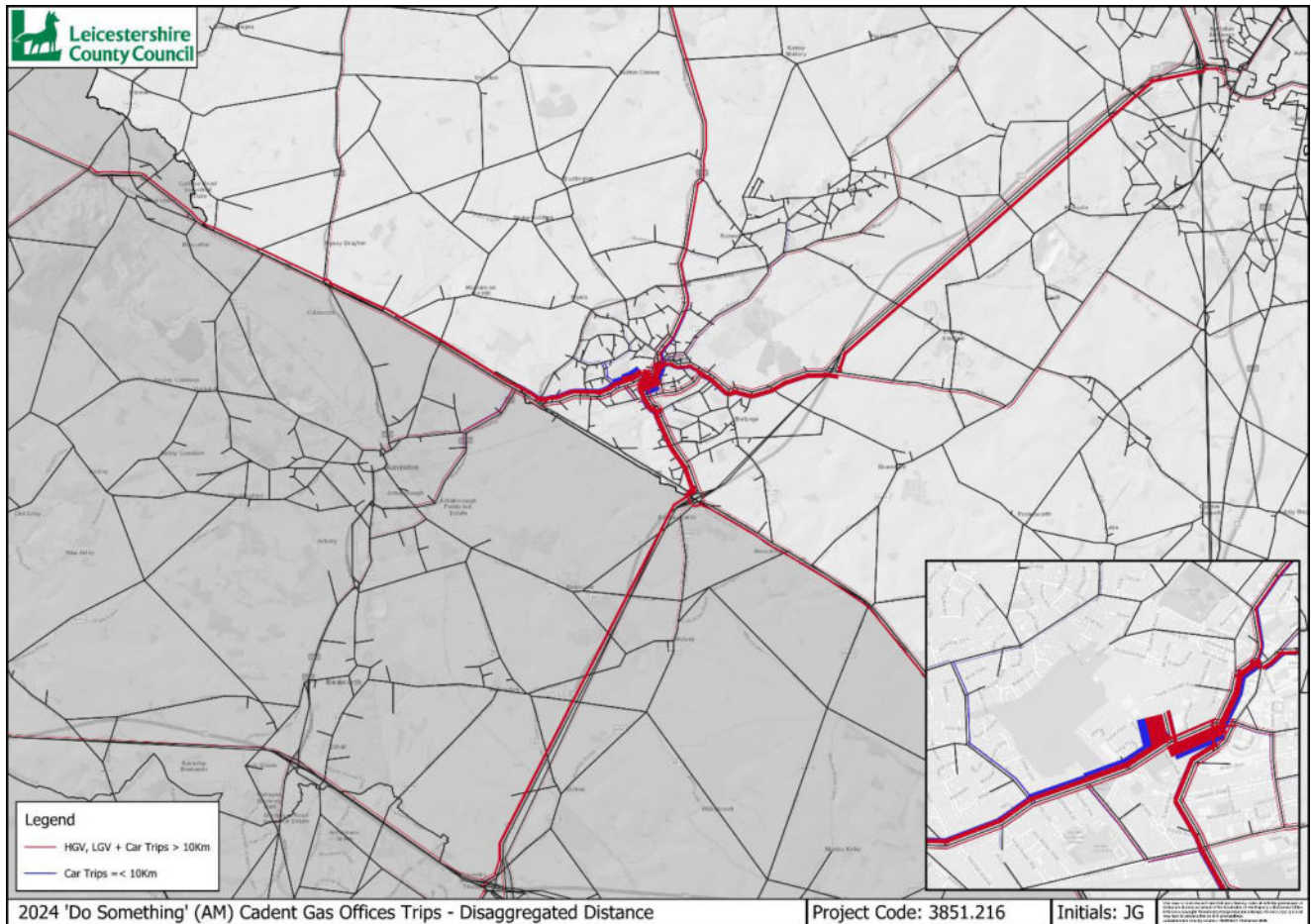


Figure 8. Cadent Gas Office Trips Disaggregated by Distance – 2024 WCG AM

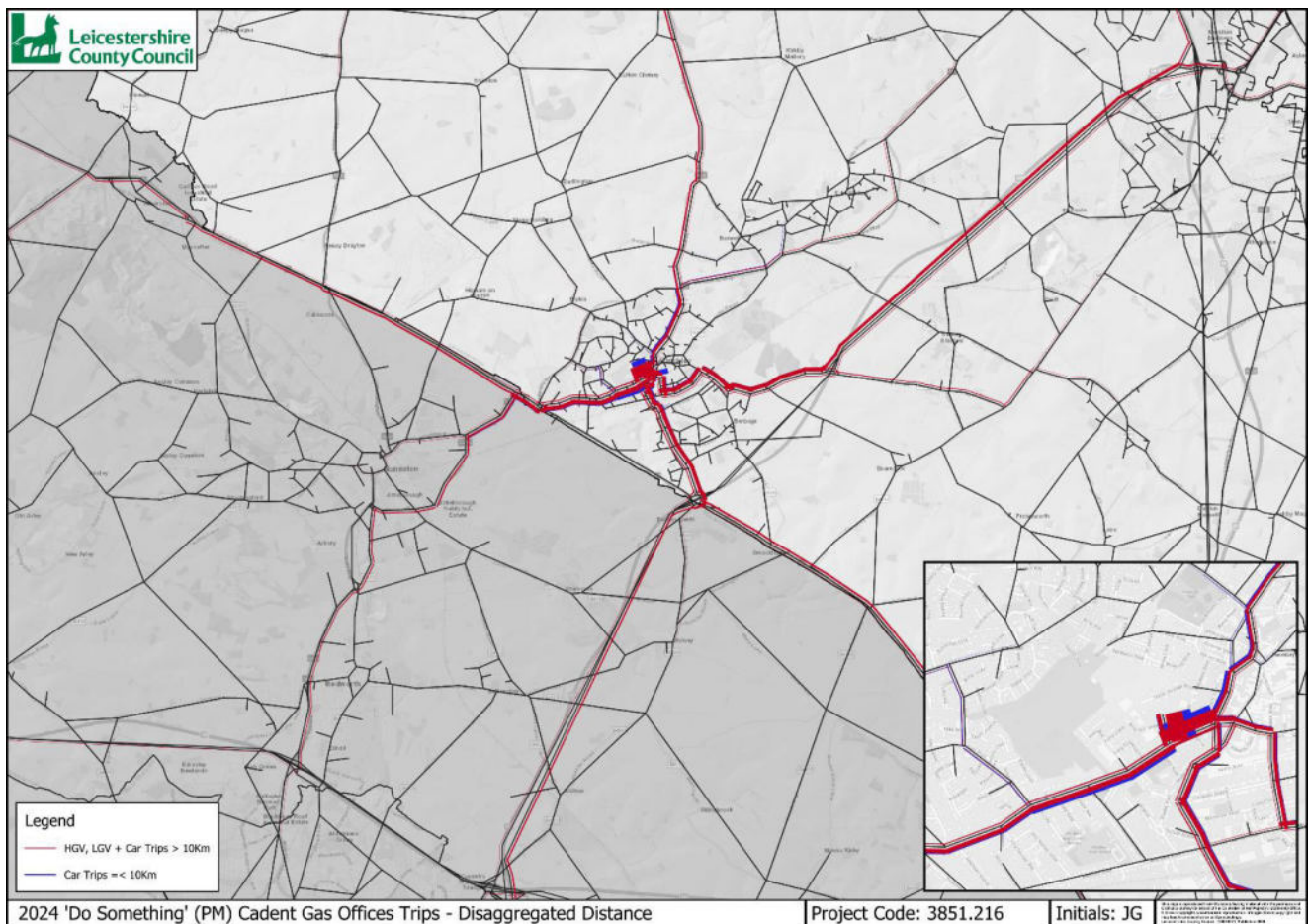


Figure 9. Cadent Gas Office Trips Disaggregated by Distance – 2024 WCG PM

3.3. Forecast Development Traffic

3.3.1. Figure 4 and Figure 5 in section 2.5 show the assigned forecast trip distribution to and from the proposed development in 2030 for both the AM and PM Peak hours, respectively. The figures show that traffic generated by the proposed development is forecast to:

- Route south via the B4109 Rugby Road, towards Burbage, Coventry, and the A5.
- Route west via the B4666 Coventry Road, towards Nuneaton.
- Route north via the B4667 Trinity Lane, towards Hinckley, Earl Shilton, Stapleton and beyond.
- Route east via the B4669 Burbage Road, towards Sapcote, Stoney Stanton, and Leicester.

3.3.2. Figure 10 to Figure 11 show the trips from the proposed development in the 2030 'Do Something' scenario disaggregated by distance for both the AM and PM Peak hours, respectively. These are mapped when the combined flow is greater than 2 PCU.

3.3.3. Car trips of less than 10km are mainly routing along the B4666 Coventry Road, while Car, HGV, and LGV trips of greater than 10km are routing towards the A5 and M69. Compared to the disaggregated trip distribution for the Cadent Gas Head Office, there are fewer trips travelling greater than 10km from the proposed housing development than for the industrial use.

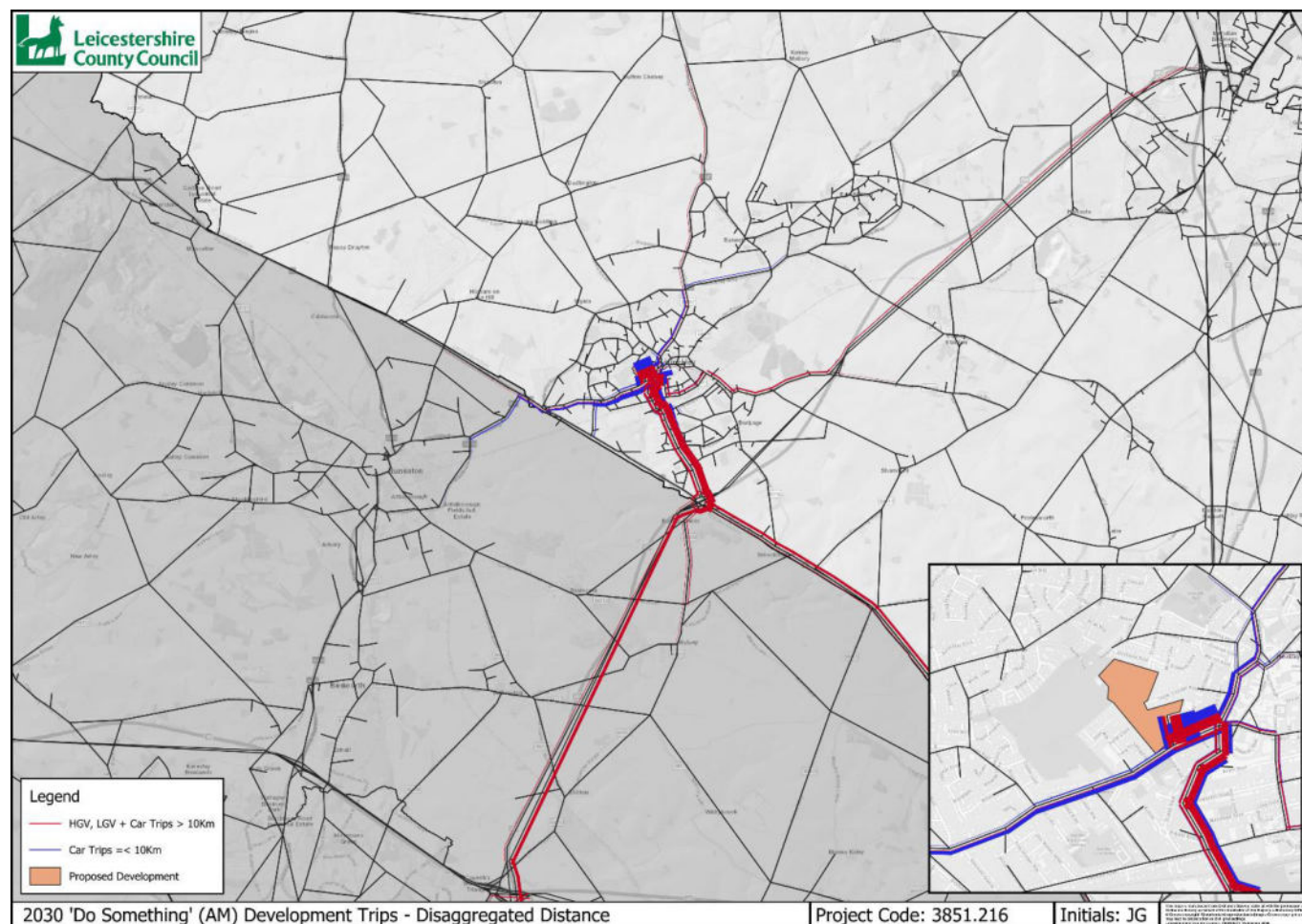


Figure 10. Development Trips Disaggregated by Distance – 2030 DS AM

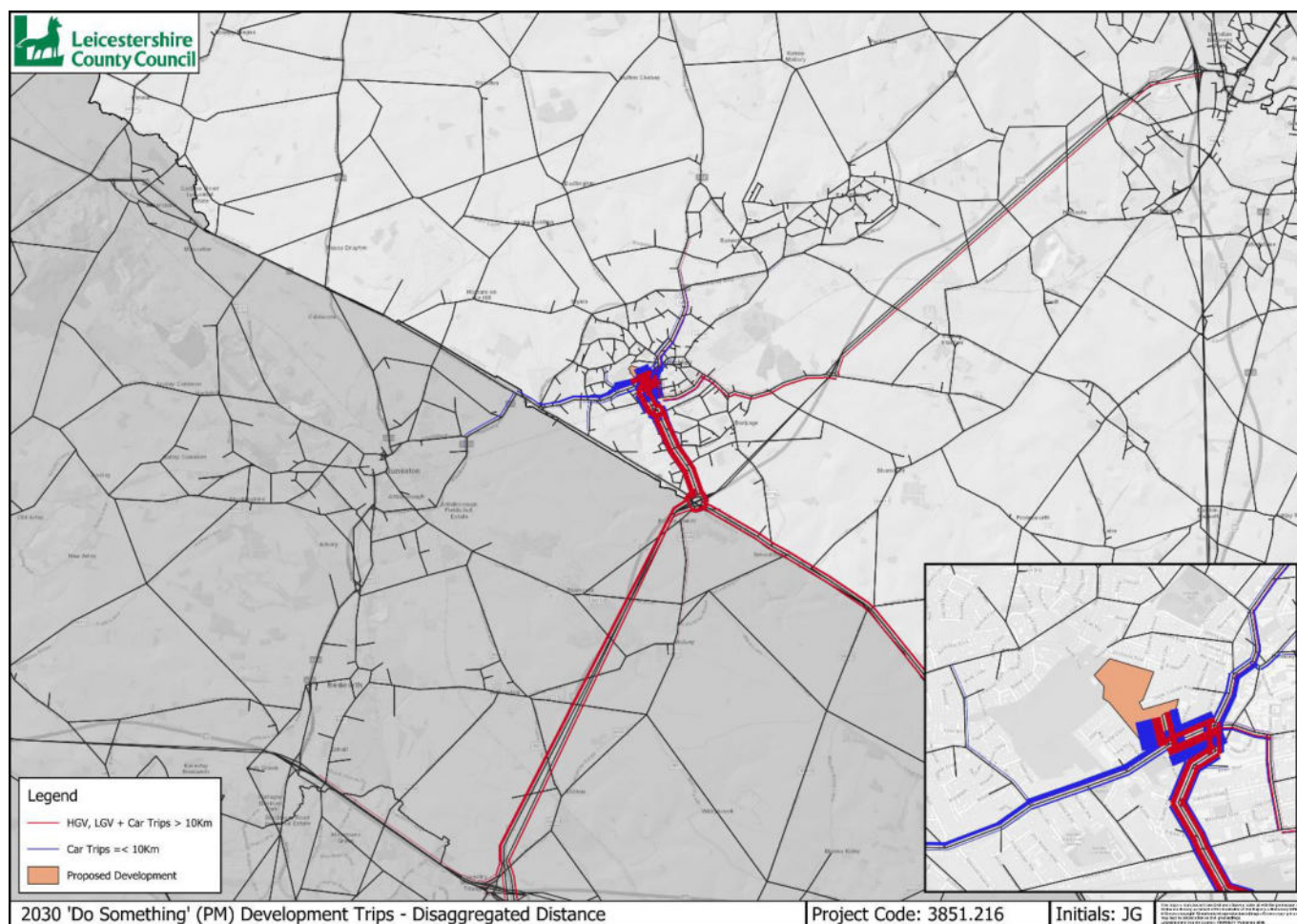


Figure 11. Development Trips Disaggregated by Distance – 2030 DS PM

3.4. Forecast Flow Change

- 3.4.1. This section shows flow difference plots for the various scenarios, where red bandwidths represent a flow increase and blue represent a flow decrease. Labels are only displayed when the change in flow is 20 passenger car units (PCUs) or more.
- 3.4.2. Figure 12 and Figure 13 show the forecast flow changes between the 2024 'Do Nothing' and 2024 'With Cadent Gas' scenarios for the AM and PM Peak hours, respectively. Undertaken as a 'Do Nothing' minus 'with Cadent Gas' comparison to reflect the removal of the office building. This, in turn, represents the impacts of the demolition of the Cadent Gas office on the present-day network. In general, the flow differences are greater in the AM Peak hour. Most of the flow differences are negative which implies a relief being provided within the centre of Hinckley, though this is the expected result of a demolition of a large office building. The largest differences (excluding Brick Kiln Street) are along the B4666 Coventry Road, the B4669 Sapcote Road, and the B4109 Rugby Road.
- 3.4.3. Figure 14 and Figure 15 show the forecast flow changes between the 2024 'Do Nothing' and 2030 'Do Nothing' scenarios for the AM and PM Peak hours, respectively. This highlights the background change in flows between the two forecast years with no additional impact from the development. It should be noted that these two plots have a different theming scale to the other flow comparison plots, to ensure that the flow differences are legible. Please consider this when comparing these plots with the others provided.

- 3.4.4. From 2024 to 2030 there is a forecast increase in flows on the majority of links in and around Hinckley, particularly along main arterial routes, like the M69, A5, A47 Normandy Way / Earl Shilton Bypass, and Stoke Road, etc. The flow increases along the B4666 Coventry Road eastbound, adjacent to the proposed development, are greater in the AM Peak hour than the PM Peak hour. In the westbound direction, there is a slight decrease in flows in both the AM and PM Peak hours.
- 3.4.5. Figure 16 and Figure 17 show the forecast flow changes in 2030 between the 'Do Nothing' and 'Do Something' scenarios for the AM and PM Peak hours, respectively. This indicates the level of impact on traffic flows caused by the development. These have been scaled identically to the 2024 'Do Nothing' – 'with Cadent Gas' scenarios to enable direct comparison.
- 3.4.6. The development has a minor impact on the surrounding network, with the largest flow differences in the immediate vicinity of the proposed development. This includes, the site access road (Brick Kiln Street), the B4666 Coventry Road, and the B590 Trinity Lane / Rugby Road. In the AM peak hour, there is a negative flow difference along the M69 southbound. This flow difference stems from within the Fosse Park/Leicester Outer Ring Road (A563) area and causes the flow difference to be present until M6 J2. LCC NDI consider this unrelated to the developmental impacts.

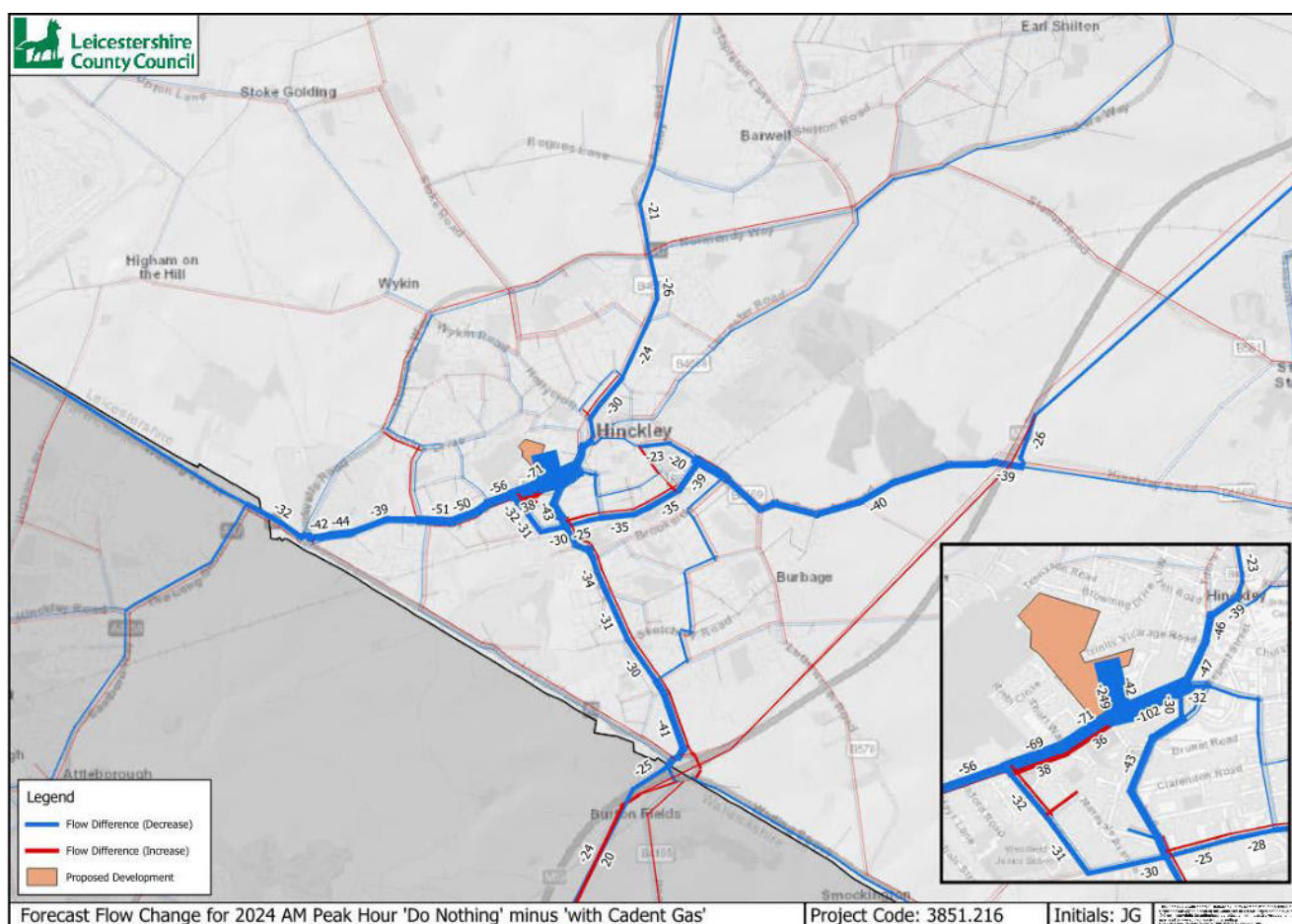


Figure 12. Forecast Flow Change for 2024 'Do Nothing' – 2024 'with Cadent Gas', AM Peak Hour

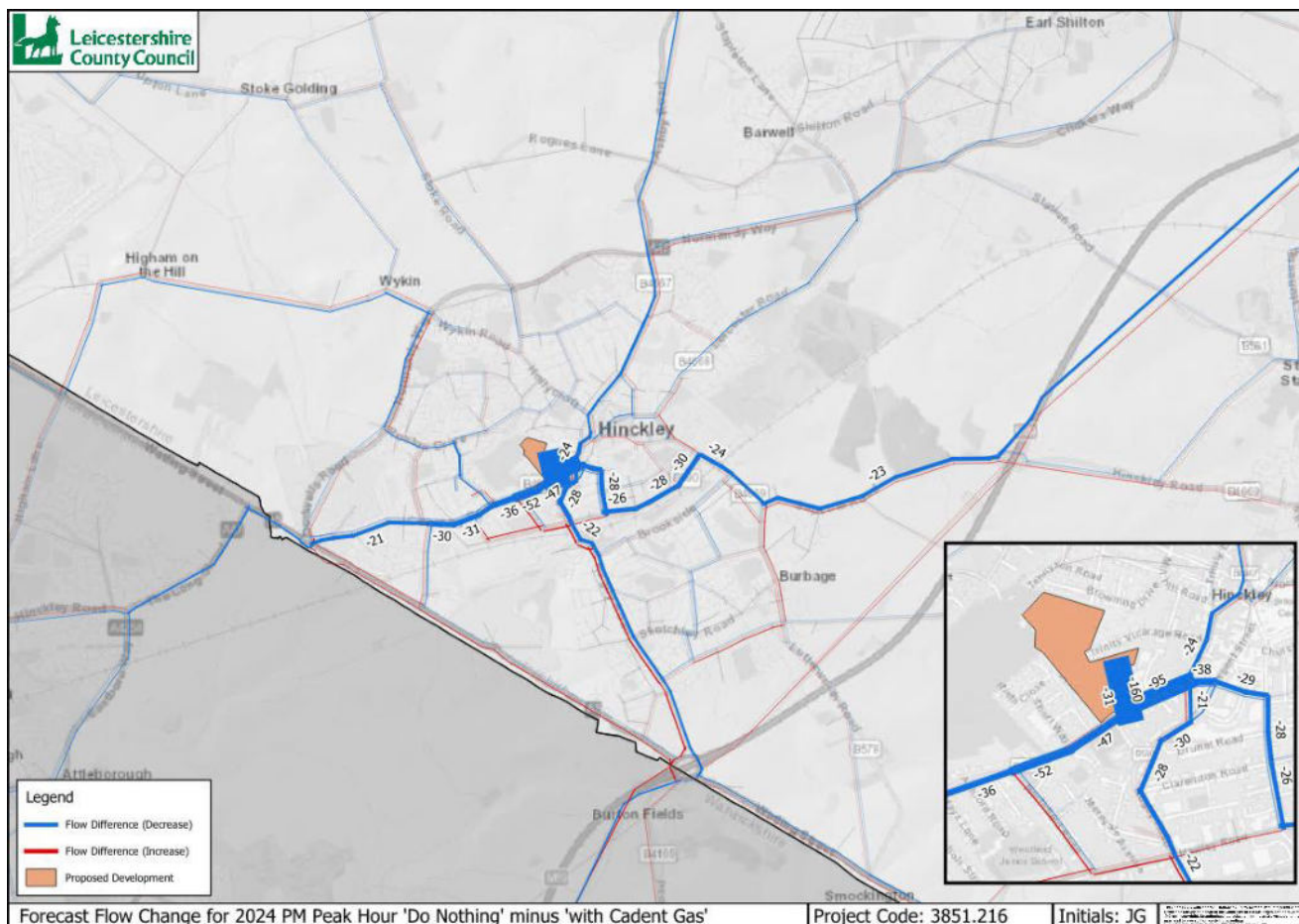


Figure 13. Forecast Flow Change for 2024 'Do Nothing' – 2024 'With Cadent Gas', PM Peak Hour

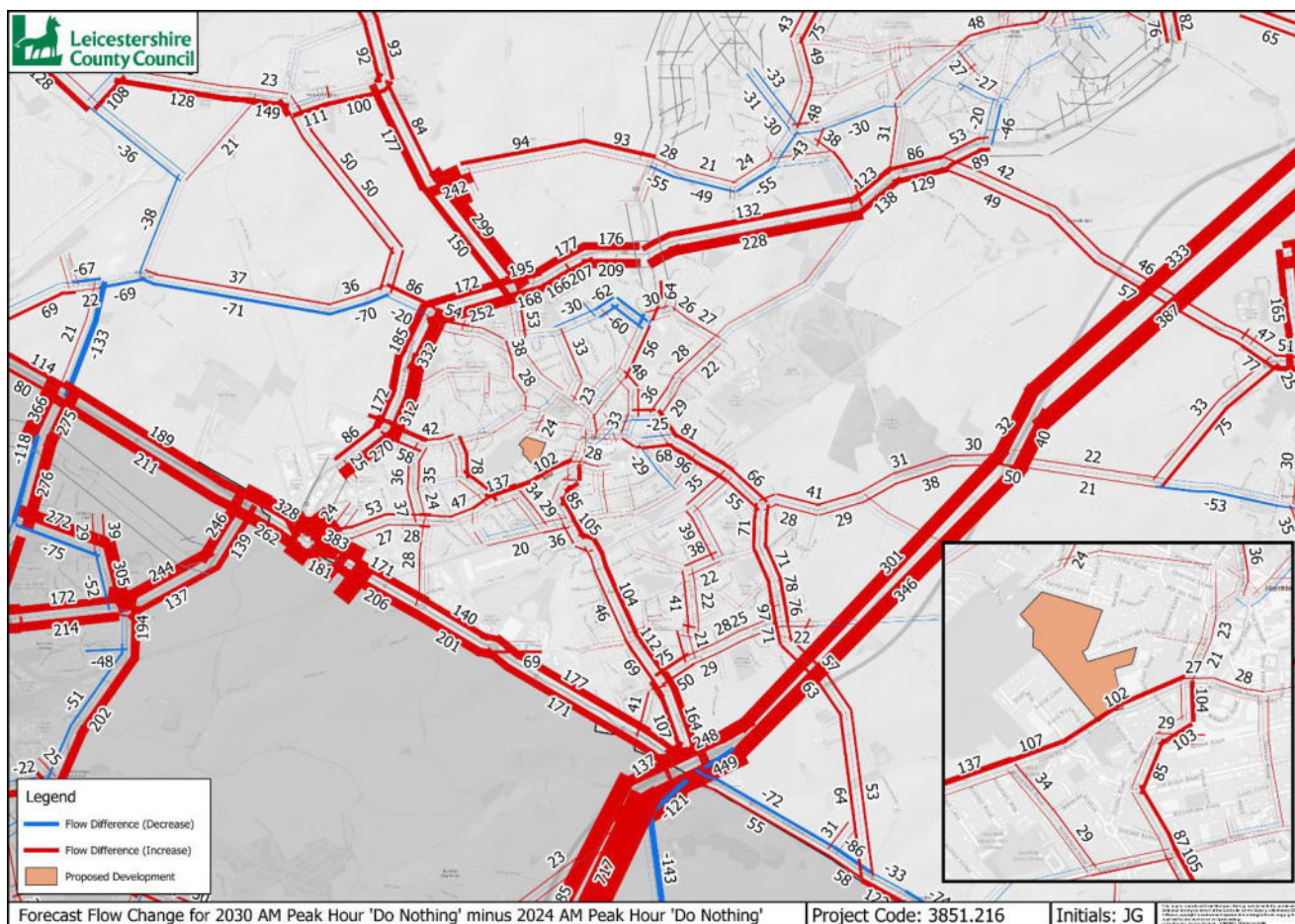


Figure 14. Forecast Flow Change for 2030 – 2024 'Do Nothing', AM Peak Hour

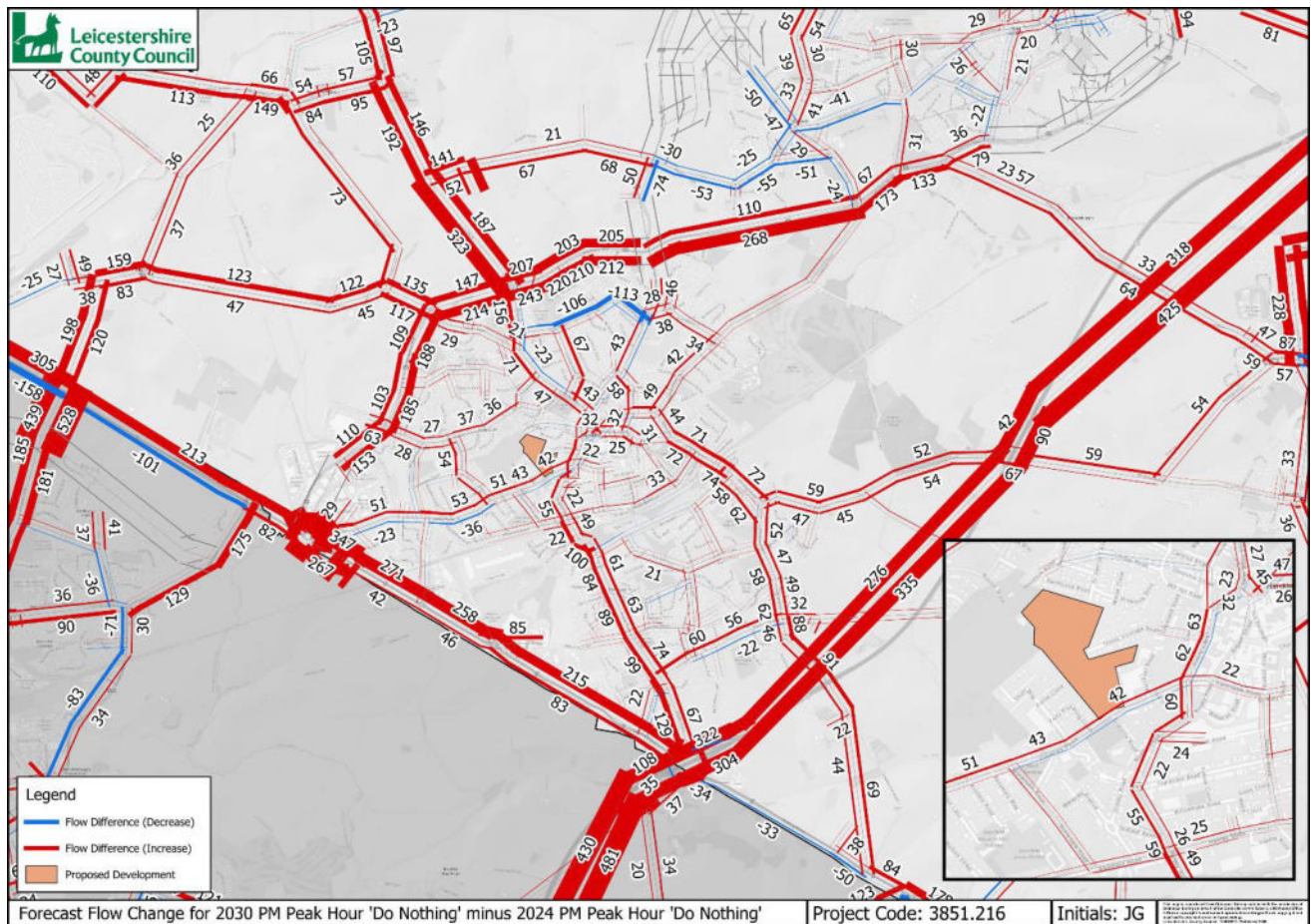


Figure 15. Forecast Flow Change for 2030 – 2024 'Do Nothing', PM Peak Hour

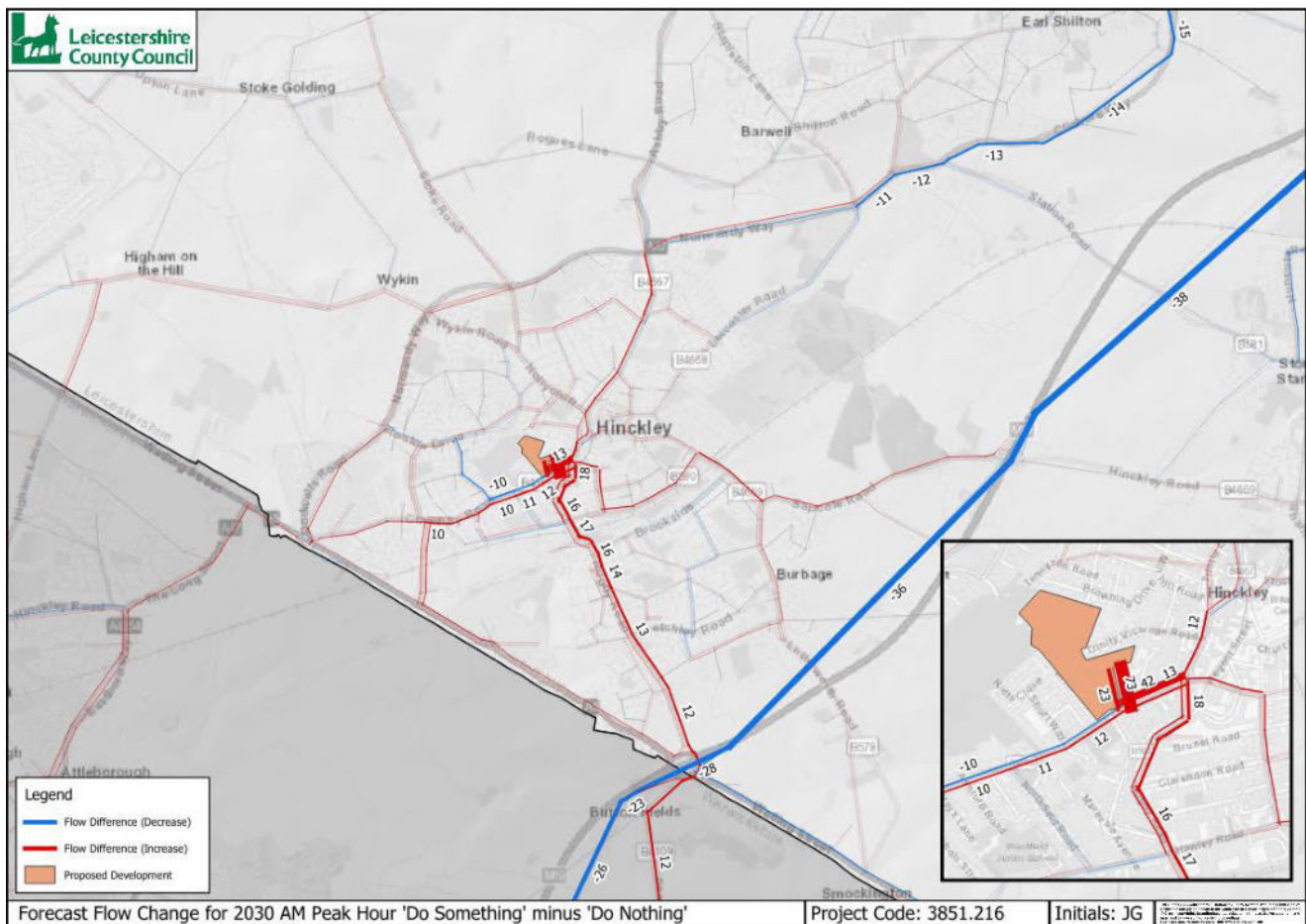


Figure 16. Forecast Flow Change for 2030 AM Peak Hour 'Do Something' – 'Do Nothing'

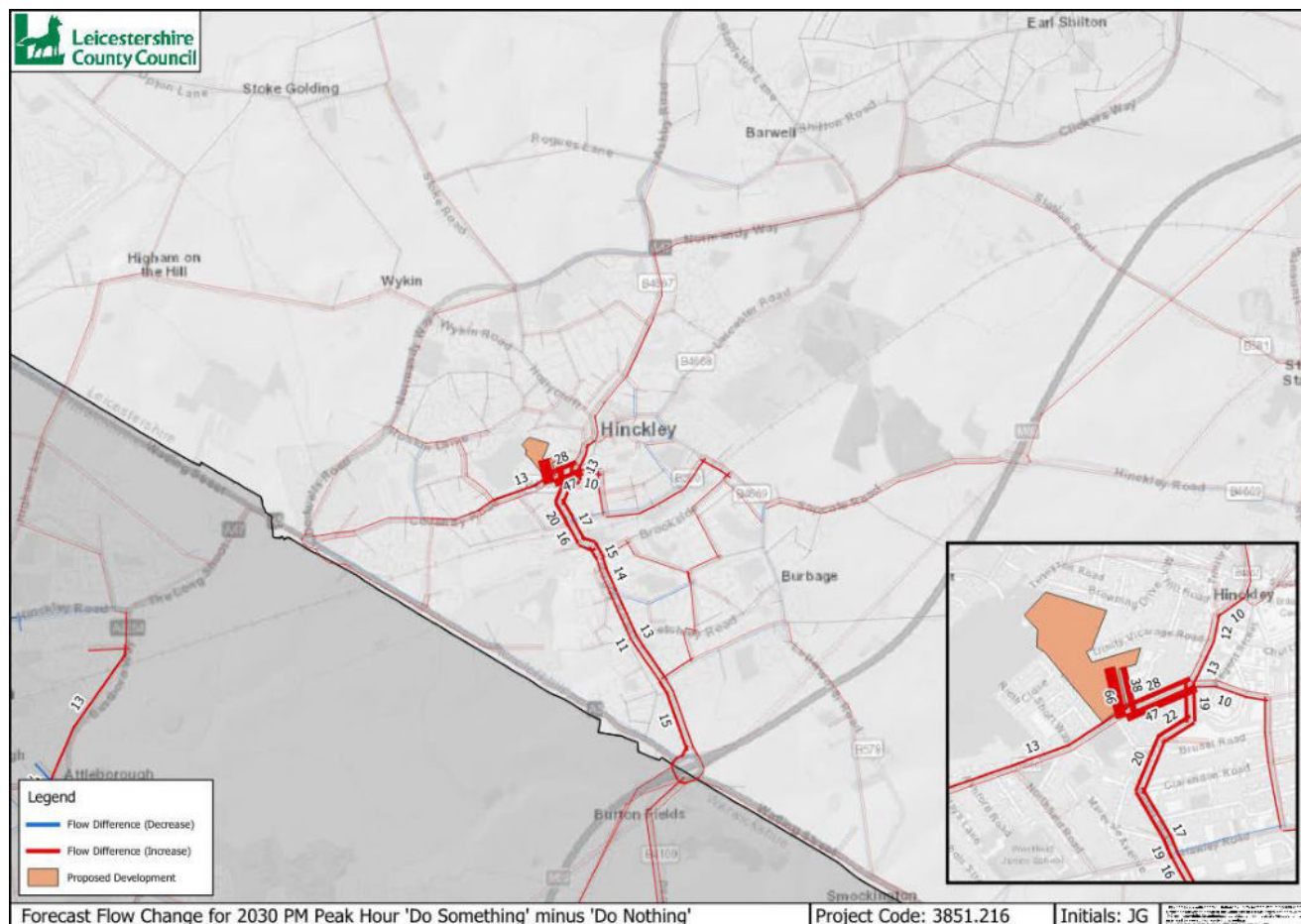


Figure 17. Forecast Flow Change for 2030 PM Peak Hour 'Do Something' – 'Do Nothing'

3.5. Area of Influence

- 3.5.1. The Area of Influence (AoI) for 2030, shown in Figure 18, has been defined using the forecast flow changes between the 'Do Something' and 'Do Nothing' scenarios.
- 3.5.2. The AoI has been defined by links with a forecast flow change of at least $\pm 5\%$ and ± 30 PCUs between the scenarios mentioned above, in either the AM Peak or the PM Peak hour.
- 3.5.3. The forecast AoI for the 'Do Something' scenario includes Brick Kiln Street and the B4666 Coventry Road.

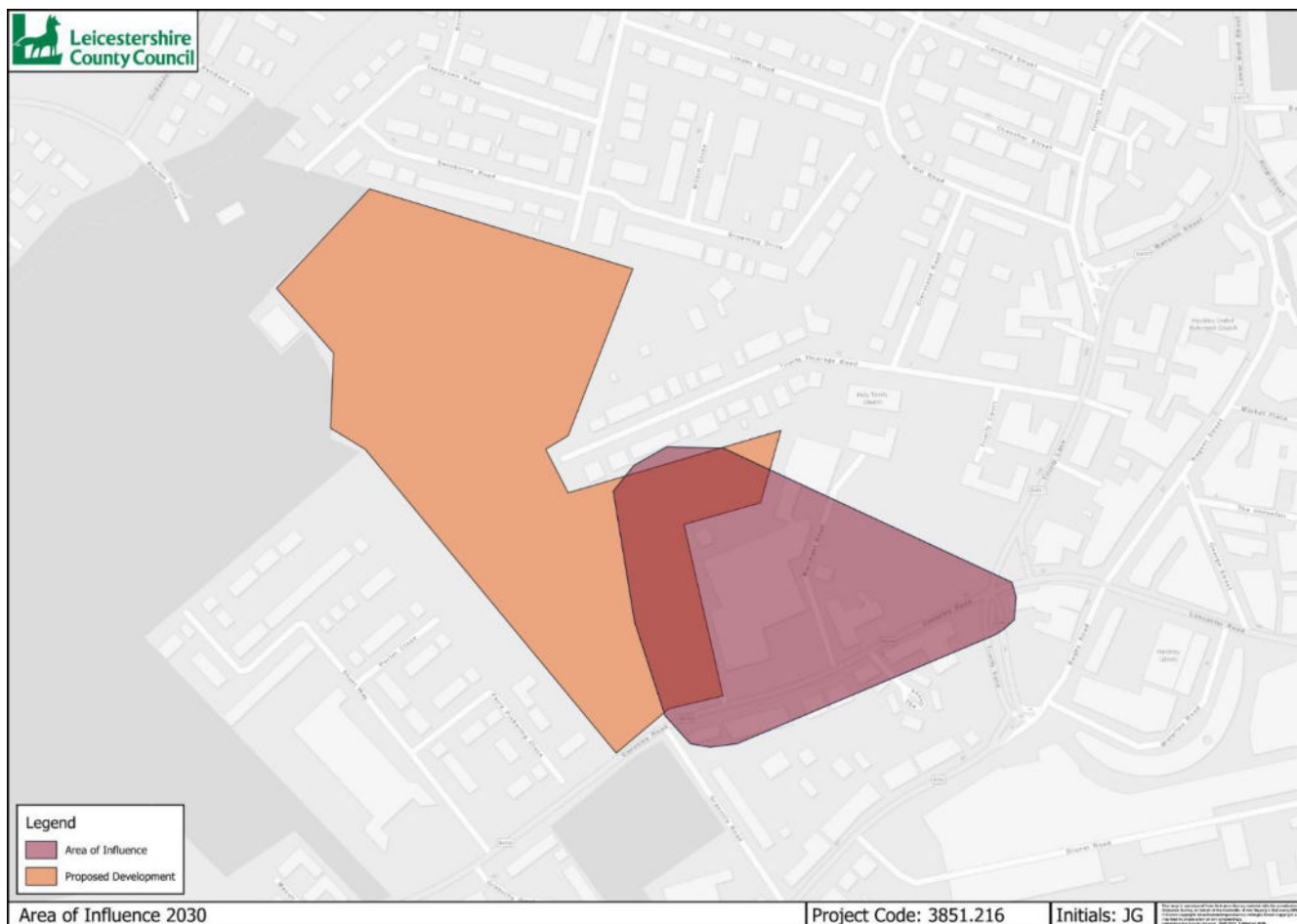


Figure 18. Area of Influence for 2030 'With Development'

3.6. Forecast Delay Change

- 3.6.1. This section shows several delay difference plots for the various scenarios, where red bandwidths represent a delay increase and blue represent a delay decrease. Labels are only displayed when the change in delay is 20 seconds or more.
- 3.6.2. Figure 19 and Figure 20 show the forecast delay changes between the 2024 'Do Nothing' and 2024 'With Cadent Gas' scenarios for the AM and PM Peak hours, respectively. Undertaken as a 'Do Nothing' minus 'with Cadent Gas' comparison to reflect the removal of the office building. The delay differences are generally less than 2 seconds, with the largest differences along Westfield Road eastbound, particularly in the AM Peak hour.
- 3.6.3. Figure 21 and Figure 22 show the forecast delay changes between the 2024 'Do Nothing' and 2030 'Do Nothing' scenarios for the AM and PM Peak hours, respectively. These two plots have a different theming scale to the other delay difference plots. This is to ensure that the impact on nearby delays can be seen. Please consider this when comparing these plots with the others provided.
- 3.6.4. In the AM peak hour, for the 2024 'Do Nothing' – 'With Cadent Gas' scenario and the 2030 – 2024 'Do Nothing' scenario, there appears to be large fluctuations in delay along Westfield Road approaching the junction with the B590 and Hawley Road. Further investigation reveals that the 2024 AM 'Do Nothing' scenario has a high volume/capacity ratio for the approaching Westfield Road arm. Therefore, very small changes in flows are likely to impact the level of delay at the junction. A further individual junction assessment would be needed to confirm that there are no issues at the junction.

- 3.6.5. From 2024 to 2030 the greatest increases in delay are at the Higham Roundabout, in both the AM and PM Peak hours. The largest decreases in flow can be seen at the eastbound approach of the Westfield Road / B4109 Rugby Road junction in the AM Peak hour, and the westbound approach of The Long Shoot junction in the PM Peak hour. There is also a large decrease in delay (>50 secs) at the westbound approach of the A47 Normandy Way / A447 Ashby Road junction, likely due to the future mitigation at this junction.
- 3.6.6. Figure 23 and Figure 24 show the forecast delay changes in 2030 between the 'Do Nothing' and 'Do Something' scenarios for the AM and PM Peak hours, respectively. These indicate that there is minimal impact on delays as a result of the development, with delay differences generally less than 2 seconds. The greatest delay differences are forecast at the Higham Roundabout in the AM Peak hour and at The Long Shoot junction in the PM Peak hour.
- 3.6.7. At the northbound approach of The Long Shoot / A5 junction, the 6 second delay increase is not considered to be a cause for concern as the flow difference on this link is only 1 PCU. Similarly, at the Nuneaton Lane entry of the Higham Roundabout the increase in delay is around 16 seconds, spread across all movements, however the flow difference is only 1 PCU.

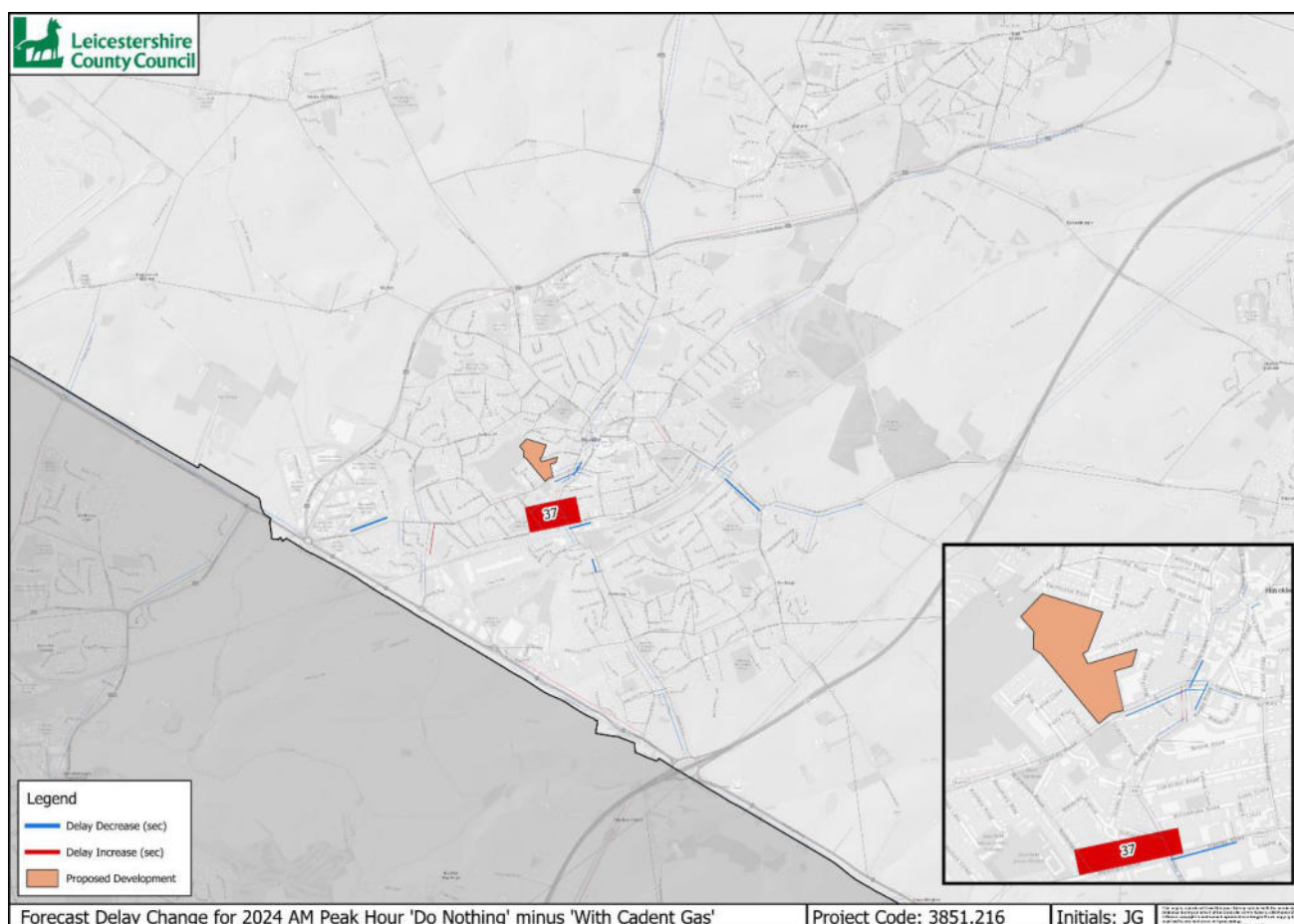


Figure 19. Forecast Delay Change for 2024 'Do Nothing' – 2024 'With Cadent Gas', AM Peak Hour

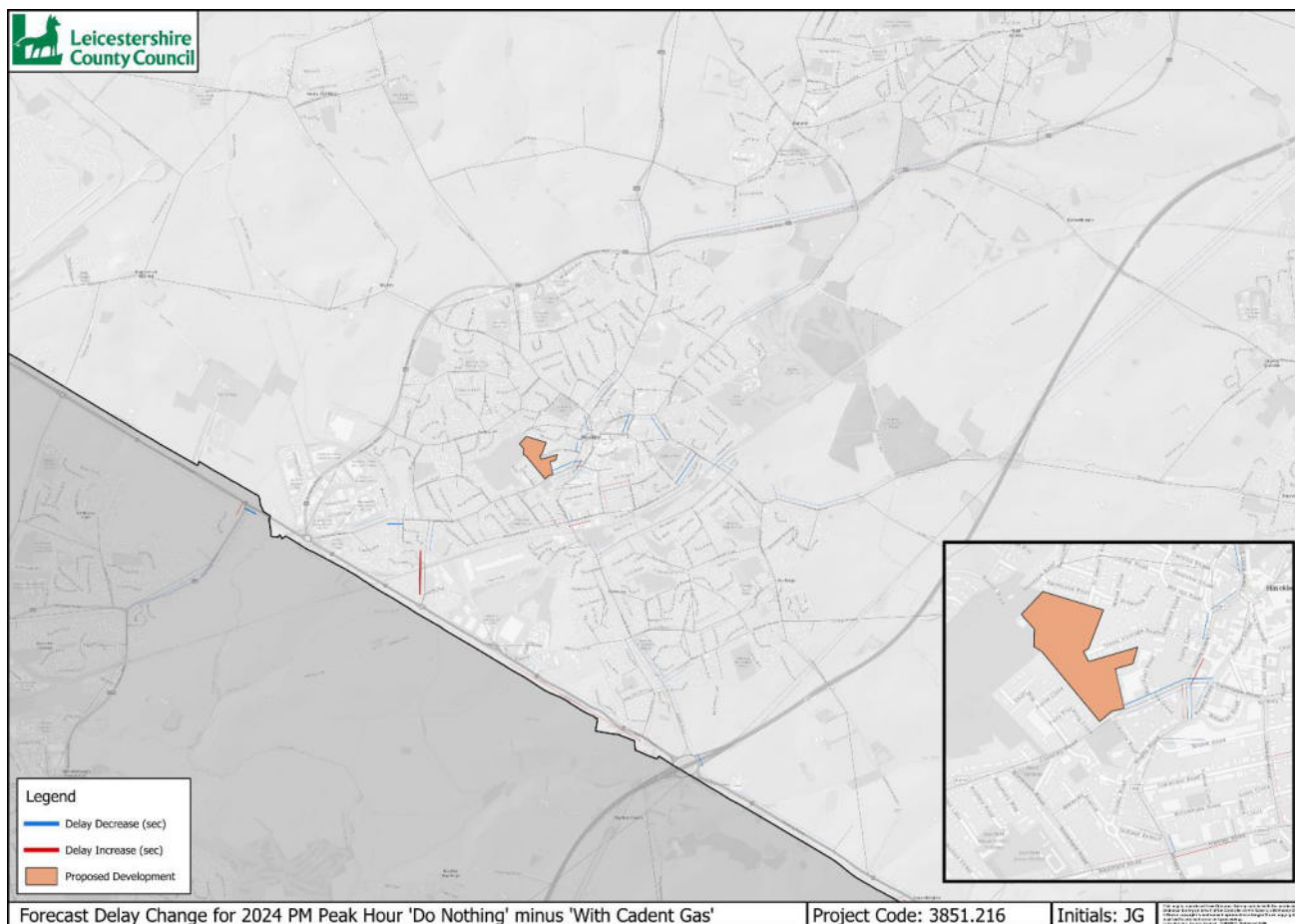


Figure 20. Forecast Delay Change for 2024 'Do Nothing' – 2024 'With Cadent Gas', PM Peak Hour

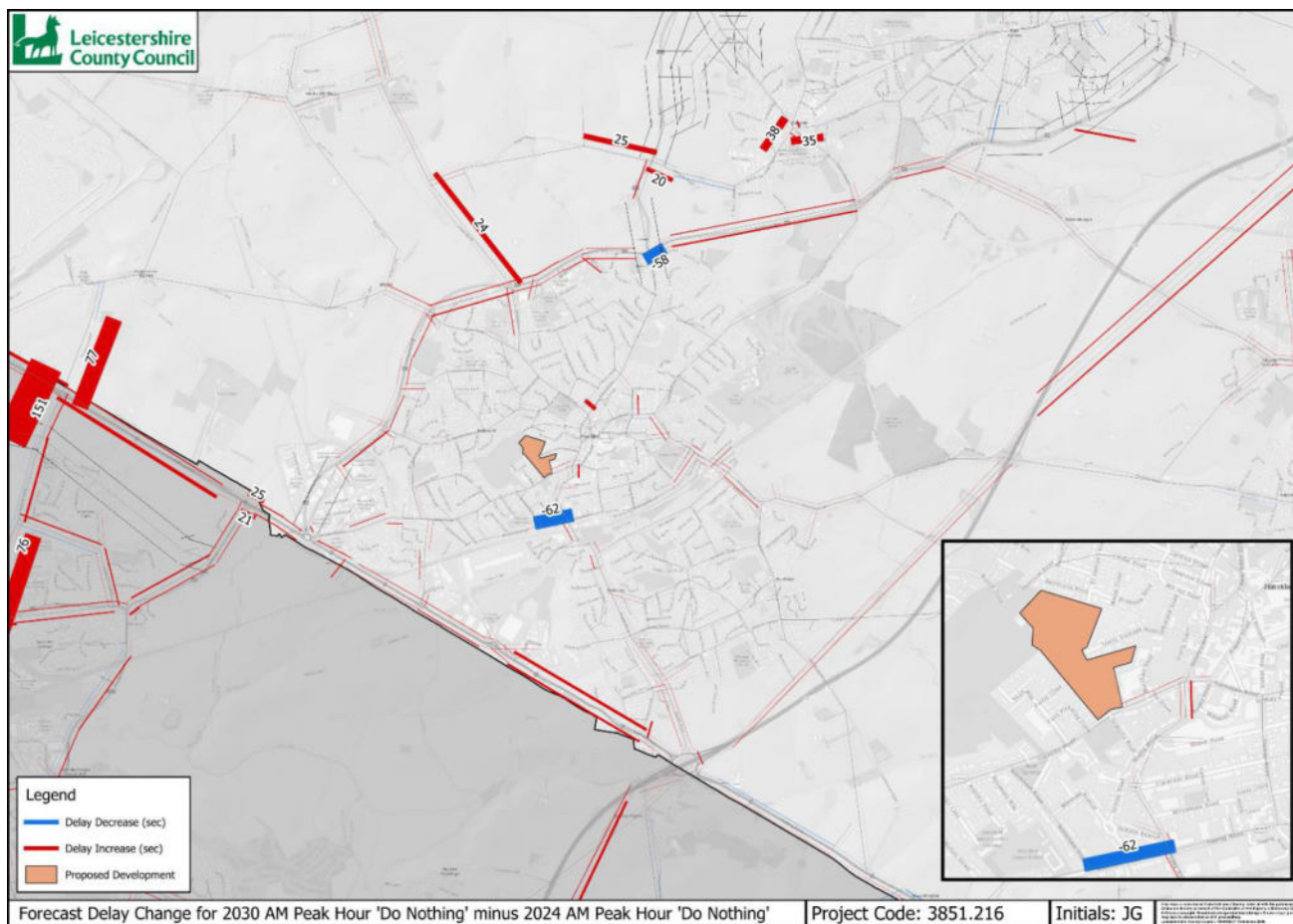


Figure 21. Forecast Delay Change for 2030 – 2024 'Do Nothing', AM Peak Hour

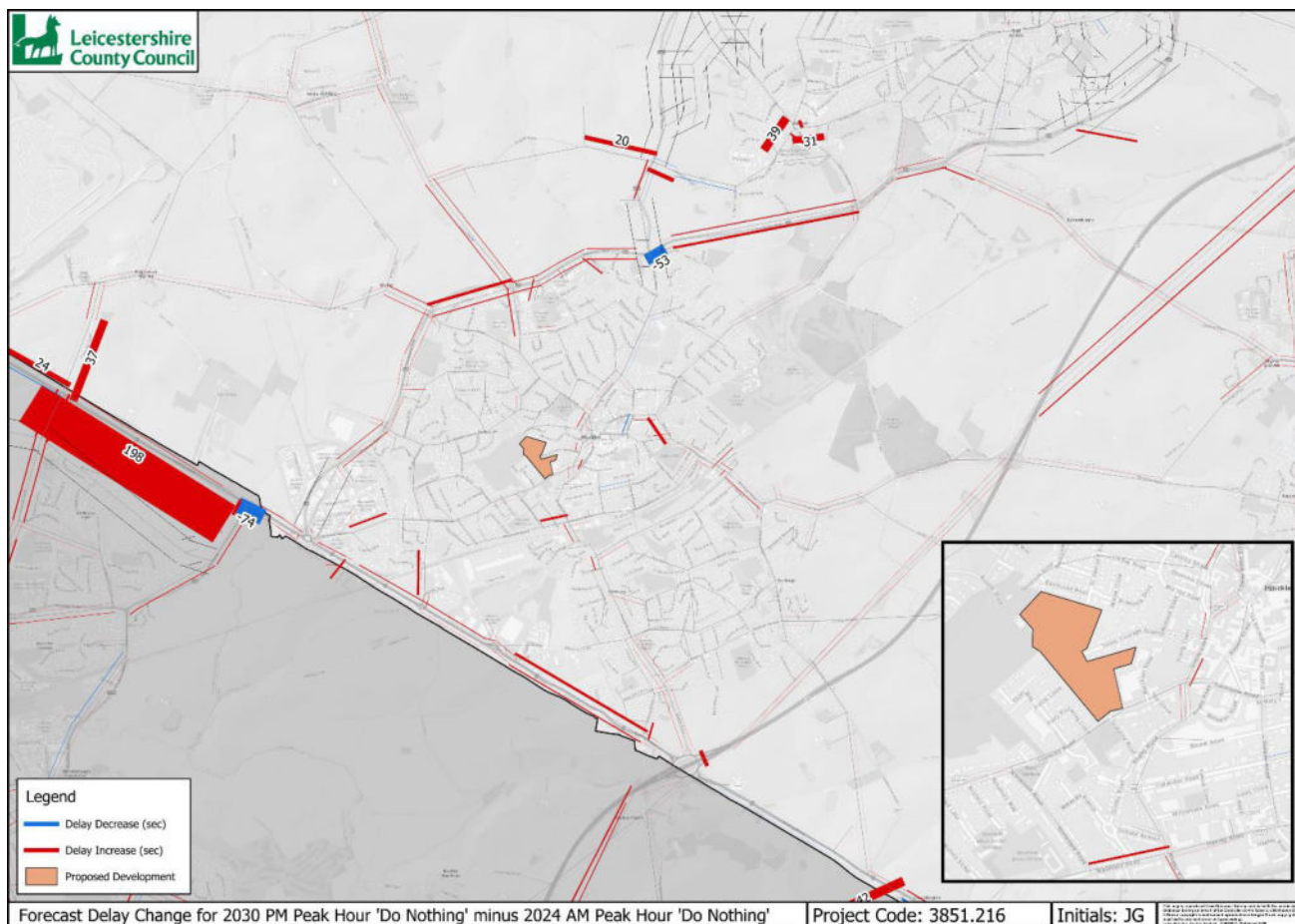


Figure 22. Forecast Delay Change for 2030 – 2024 'Do Nothing', PM Peak Hour

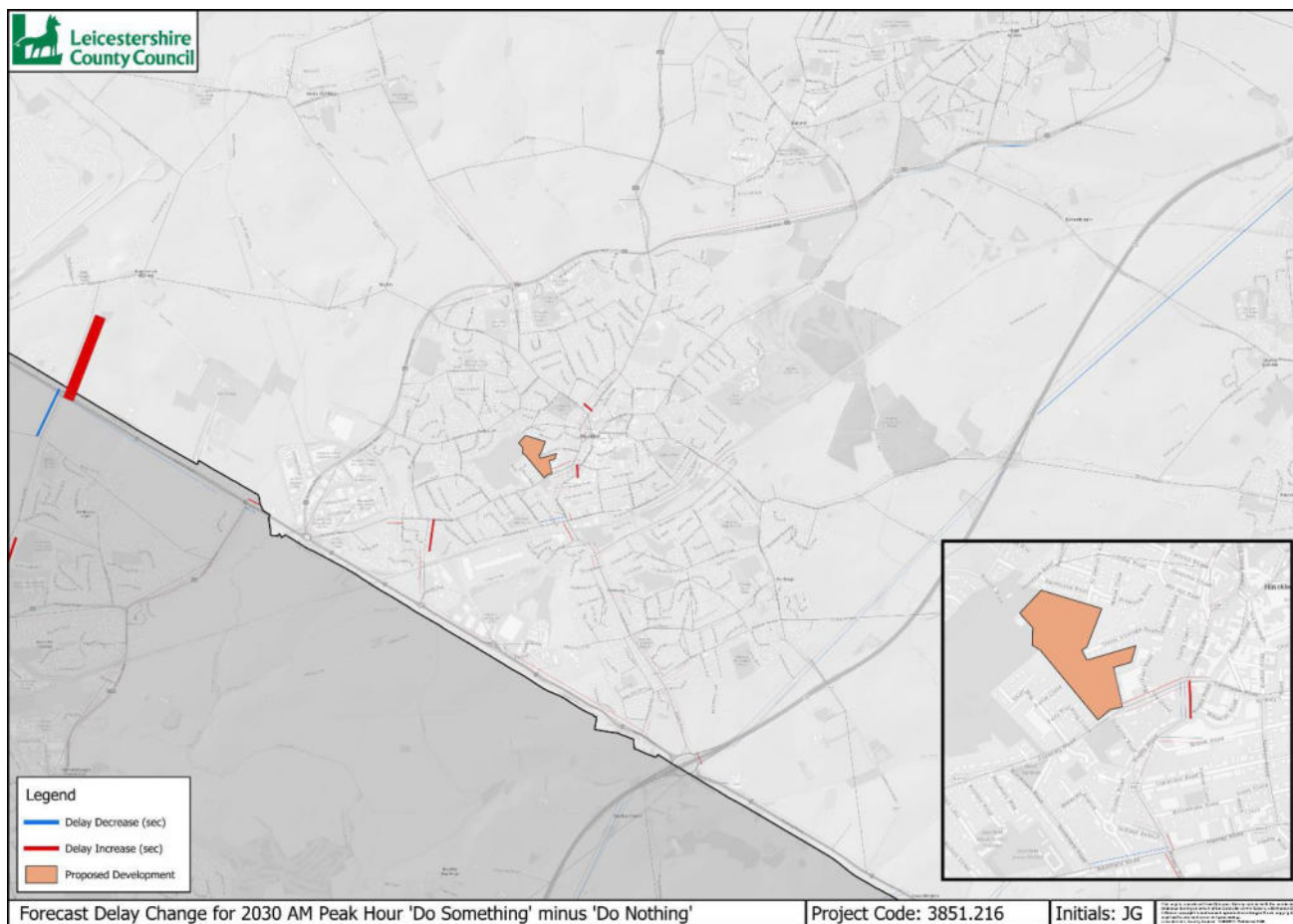


Figure 23. Forecast Delay Change for 2030 AM Peak Hour 'Do Something' – 'Do Nothing'

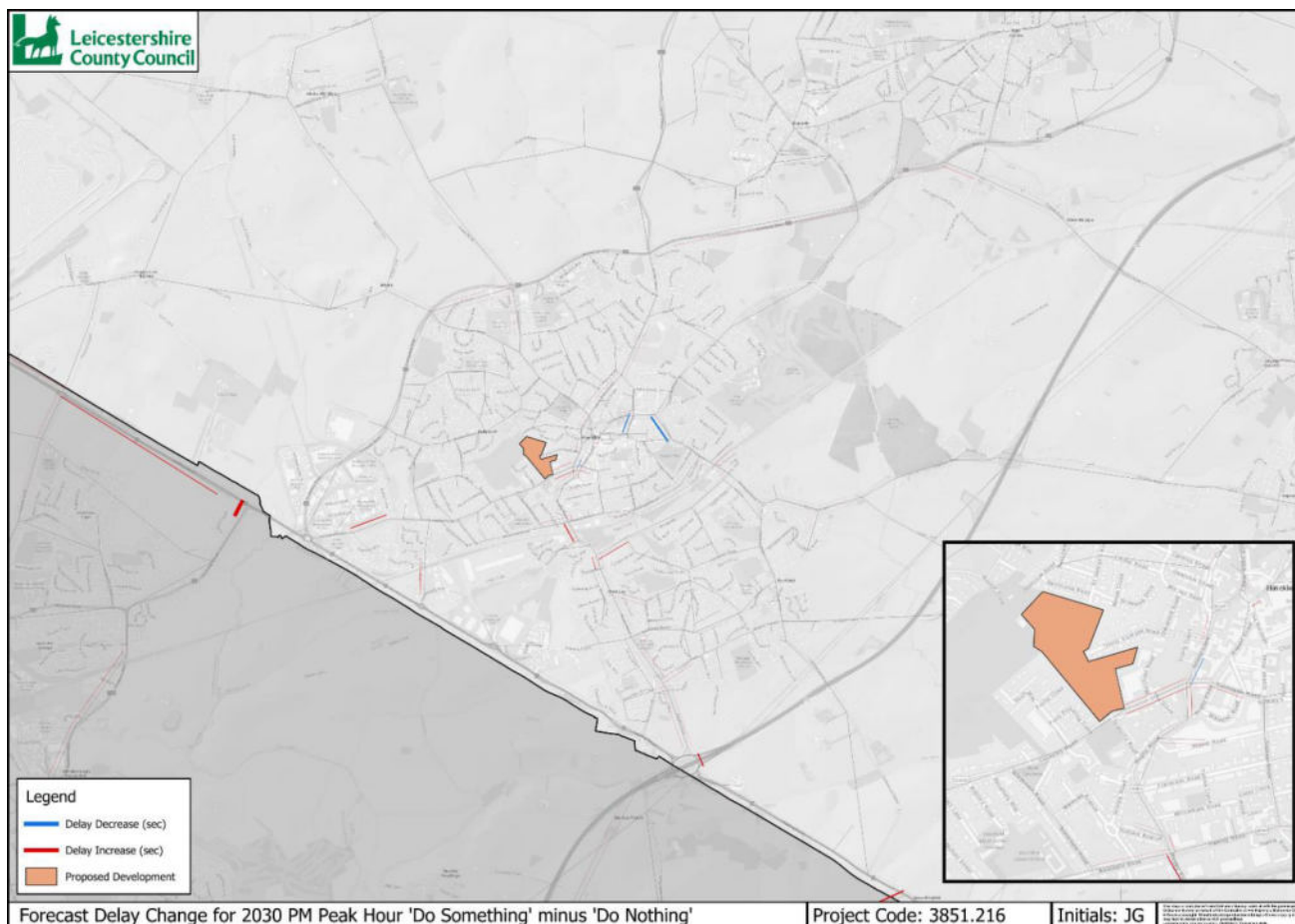


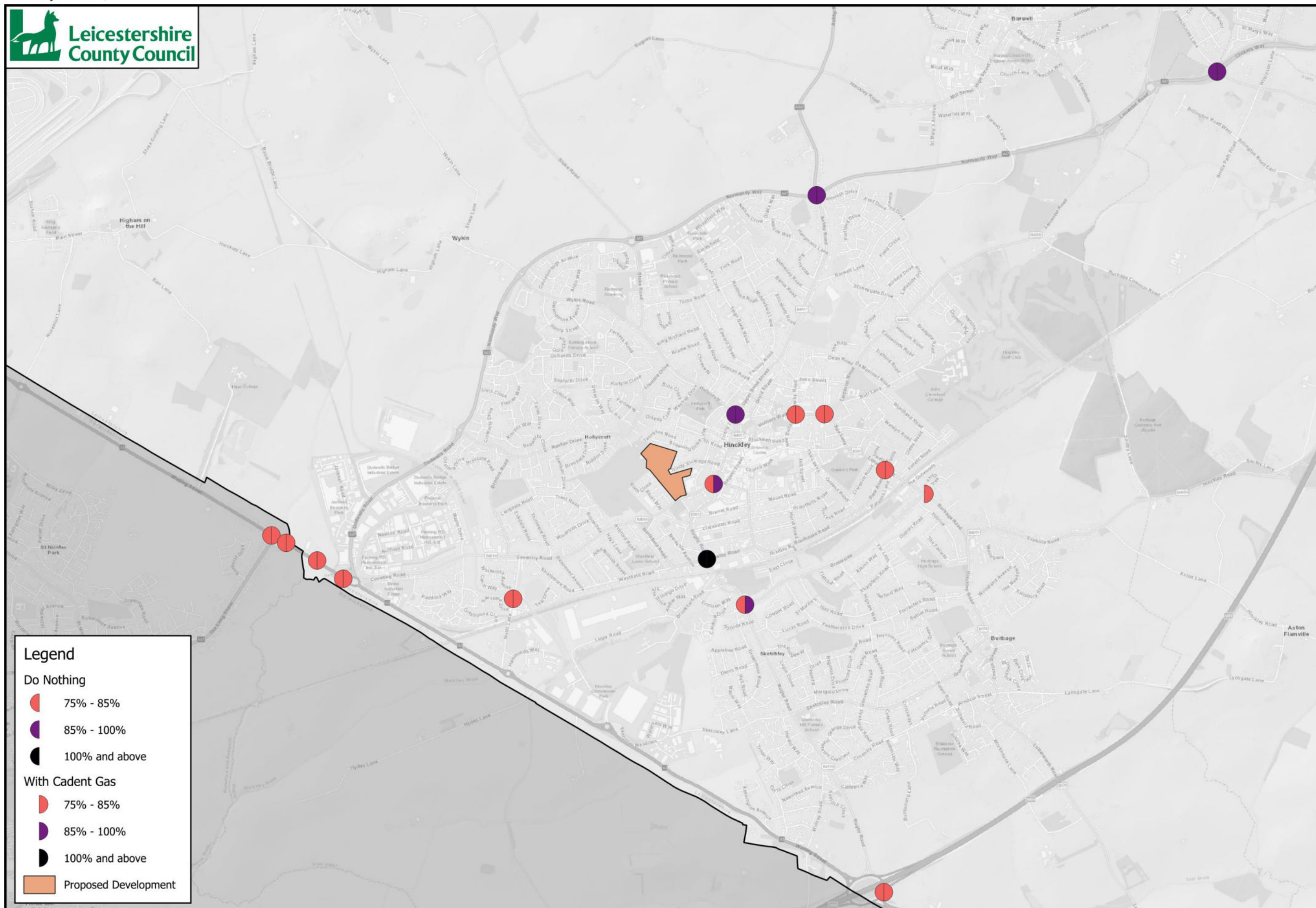
Figure 24. Forecast Delay Change for 2030 PM Peak Hour 'Do Something' – 'Do Nothing'

3.7. Maximum Volume / Capacity Ratios

- 3.7.1. Junction capacities are estimated for individual turning movements at the junction, reporting on these maximum values. Maximum node volume-capacity ratios (V/C's) are used to identify locations where the forecast flows at a junction are approaching or exceeding the forecast capacity.
- 3.7.2. Ratios exceeding 85% indicate that the highway network is under stress and there is likely to be increased delays. When junctions have a high V/C, a large increase in delay can be created by a small increase in flow.
- 3.7.3. Figure 25 and Figure 26 show the forecast maximum V/Cs for the 2024 'Do Nothing' and 'With Cadent Gas' scenarios on the same plot for the AM and PM Peak hours, respectively. It should be noted that only junctions where the V/C exceeds 75% are displayed on the plots.
- 3.7.4. In the AM Peak hour, the removal of Cadent Gas improves the V/C of two junctions near the development. The B4666 Coventry Road / Trinity Lane and B4109 Rugby Road / Brookside junctions have a V/C exceeding 85% in the 'With Cadent Gas' scenario and V/C of 75-85% in the 'Do Nothing' scenario. In the PM Peak hour, the removal of Cadent Gas has no impact on the V/C classification of any junctions in the Hinckley area.
- 3.7.5. Figure 27 and Figure 28 show the maximum V/Cs for the 2024 and 2030 'Do Nothing' scenarios on the same plot for the AM and PM Peak hours, respectively. This indicates the background change in junction capacities between the two forecast years with no additional impact from the development. The following junctions, in close proximity to the development, flag as having a forecast V/C of over 85%:

- B590 Hawley Road / B4109 Rugby Road / Westfield Road junction in all the 'Do Nothing' scenarios,
- B4666 Coventry Road / Trinity Lane junction in the PM Peak hour in 2024, and both Peak hours in 2030,
- Trinity Lane / B4667 Lower Bond Street / Hollycroft junction in the AM Peak hour in 2024, and both Peak hours in 2030; and
- Trinity Lane / B4667 Mansion Street junction in the PM Peak hour in 2030.

3.7.6. Figure 29 and Figure 30 show the maximum V/Cs for the 2030 'Do Nothing' and 'Do Something' scenarios on the same plot for the AM and PM Peak hours, respectively. At the Trinity Lane / Rugby Road junction, the V/C is forecast to increase from 75-85% in the 'Do Nothing' scenario to exceeding 85% in the 'Do Something' scenario in the AM Peak hour. There are no junctions near the development that change V/C classification in the PM Peak hour.



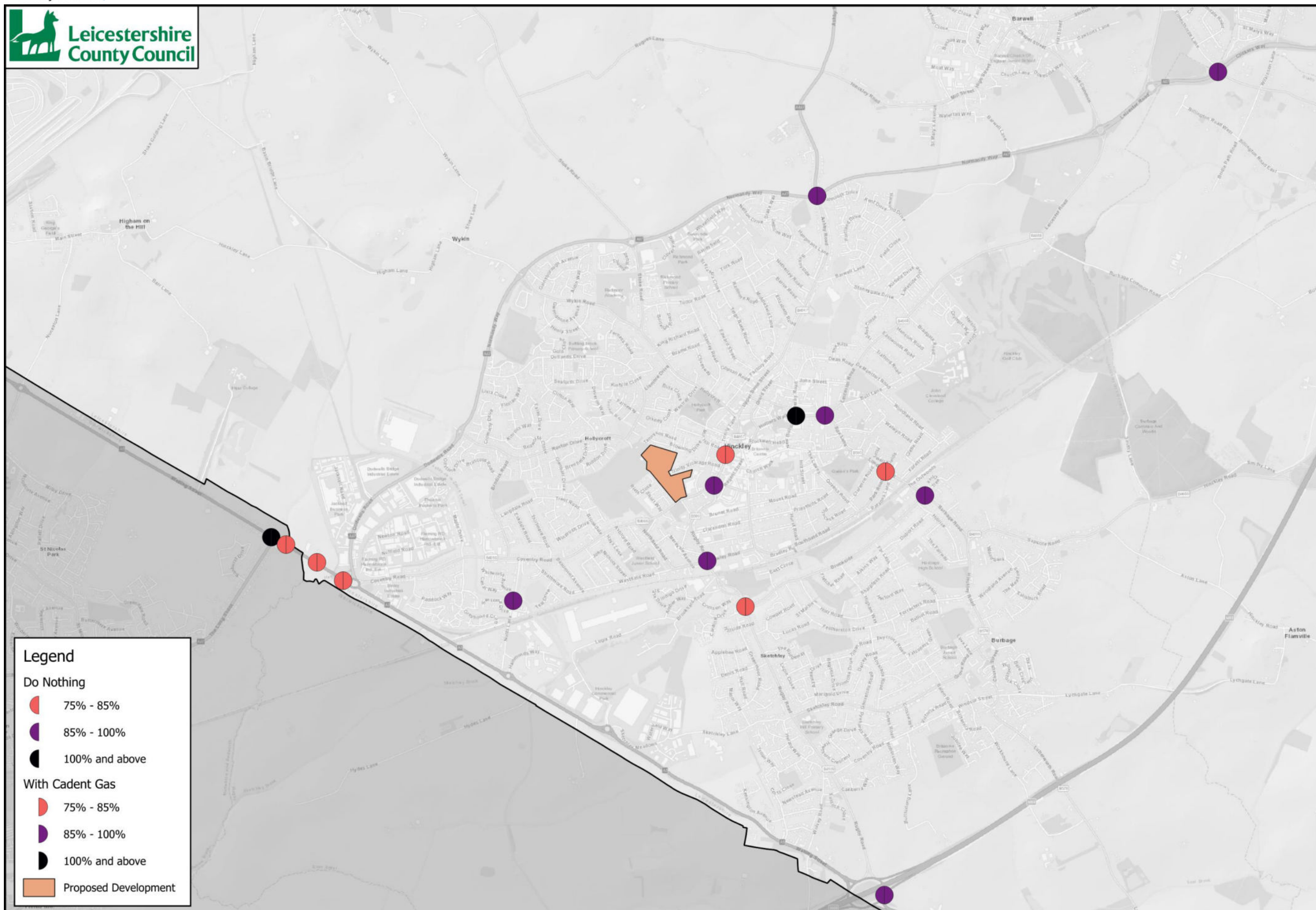
Forecast Node Volume-Capacity Ratio for 2024 AM Peak Hour 'Do Nothing' and 'With Cadent Gas'

Project Code: 3851.216

Initials: JG

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Figure 25. Forecast Node Volume-Capacity Ratio for 2024 'Do Nothing' and 2024 'With Cadent Gas', AM Peak Hour



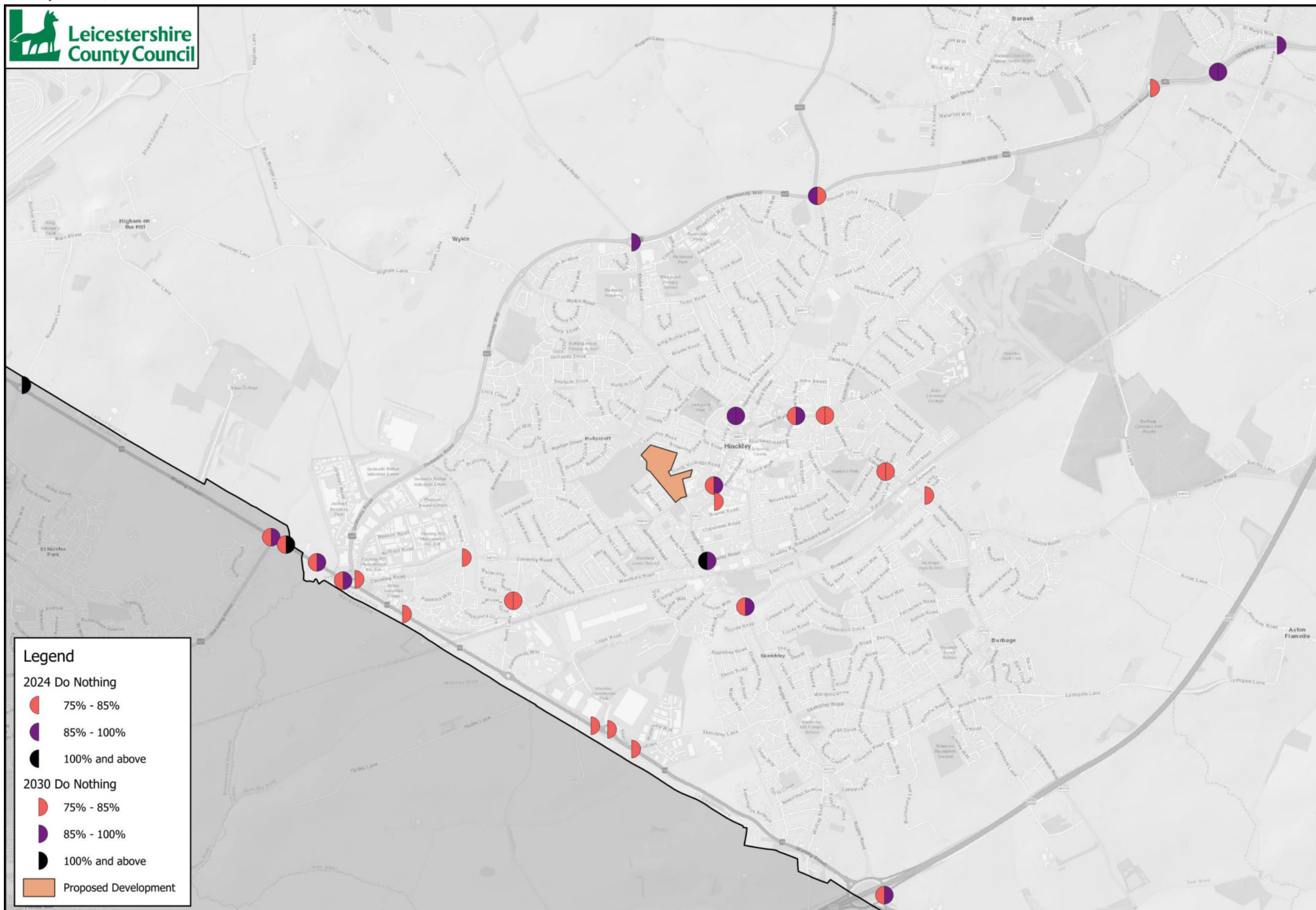
Forecast Node Volume-Capacity Ratio for 2024 PM Peak Hour 'Do Nothing' and 'With Cadent Gas'

Project Code: 3851.216

Initials: JG

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Figure 26. Forecast Node Volume-Capacity Ratio for 2024 'Do Nothing' and 2024 'With Cadent Gas', PM Peak Hour



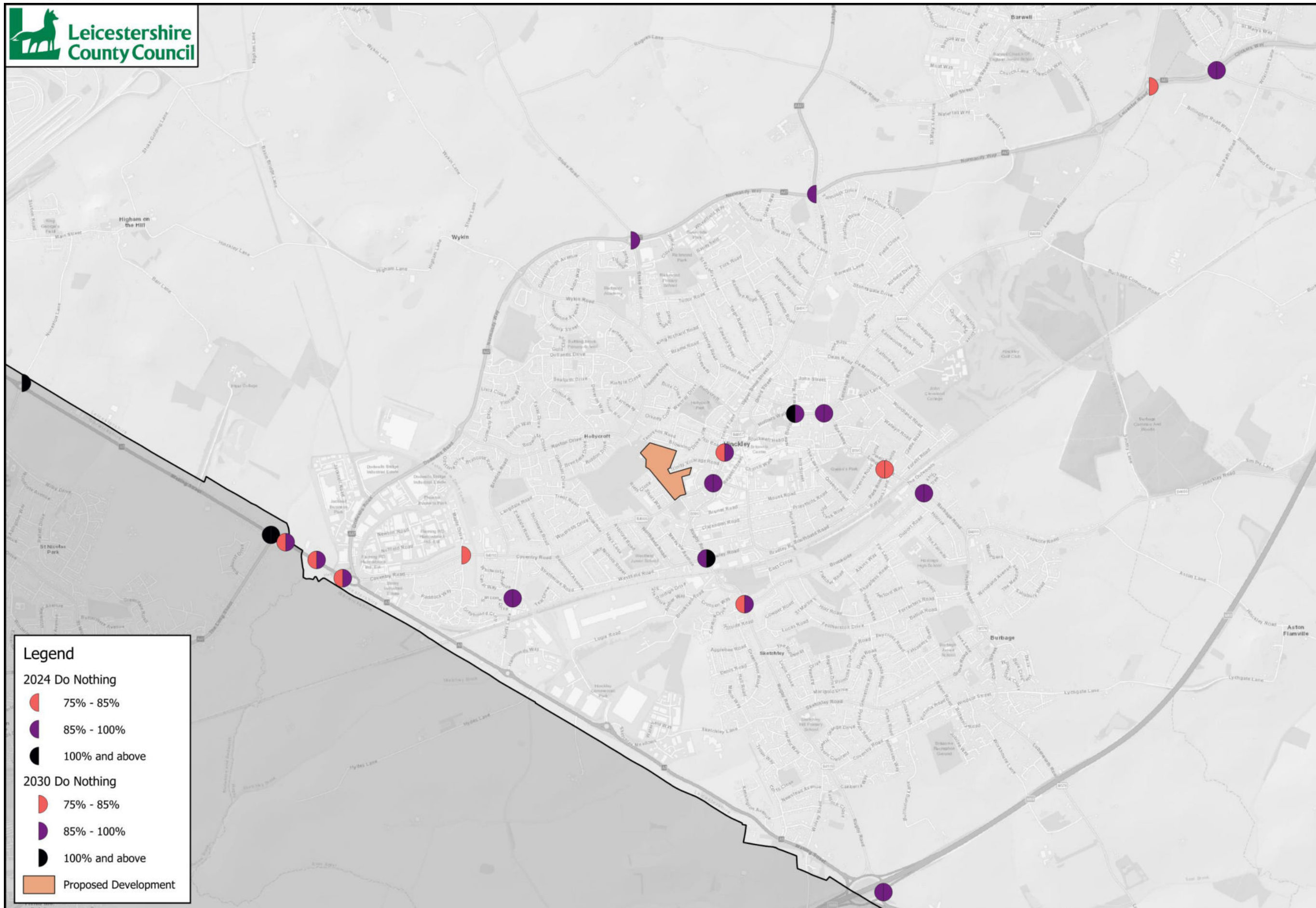
Forecast Node Volume-Capacity Ratio for 2024 AM Peak Hour 'Do Nothing' and 2030 AM Peak Hour 'Do Nothing'

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Initials: JG

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Figure 27. Forecast Node Volume-Capacity Ratio for 2024 'Do Nothing' and 2030 'Do Nothing', AM Peak Hour



Forecast Node Volume-Capacity Ratio for 2024 PM Peak Hour 'Do Nothing' and 2030 PM Peak Hour 'Do Nothing'

Project Code: 3851.216

Initials: JG

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Figure 28. Forecast Node Volume-Capacity Ratio for 2024 'Do Nothing' and 2030 'Do Nothing', PM Peak Hour

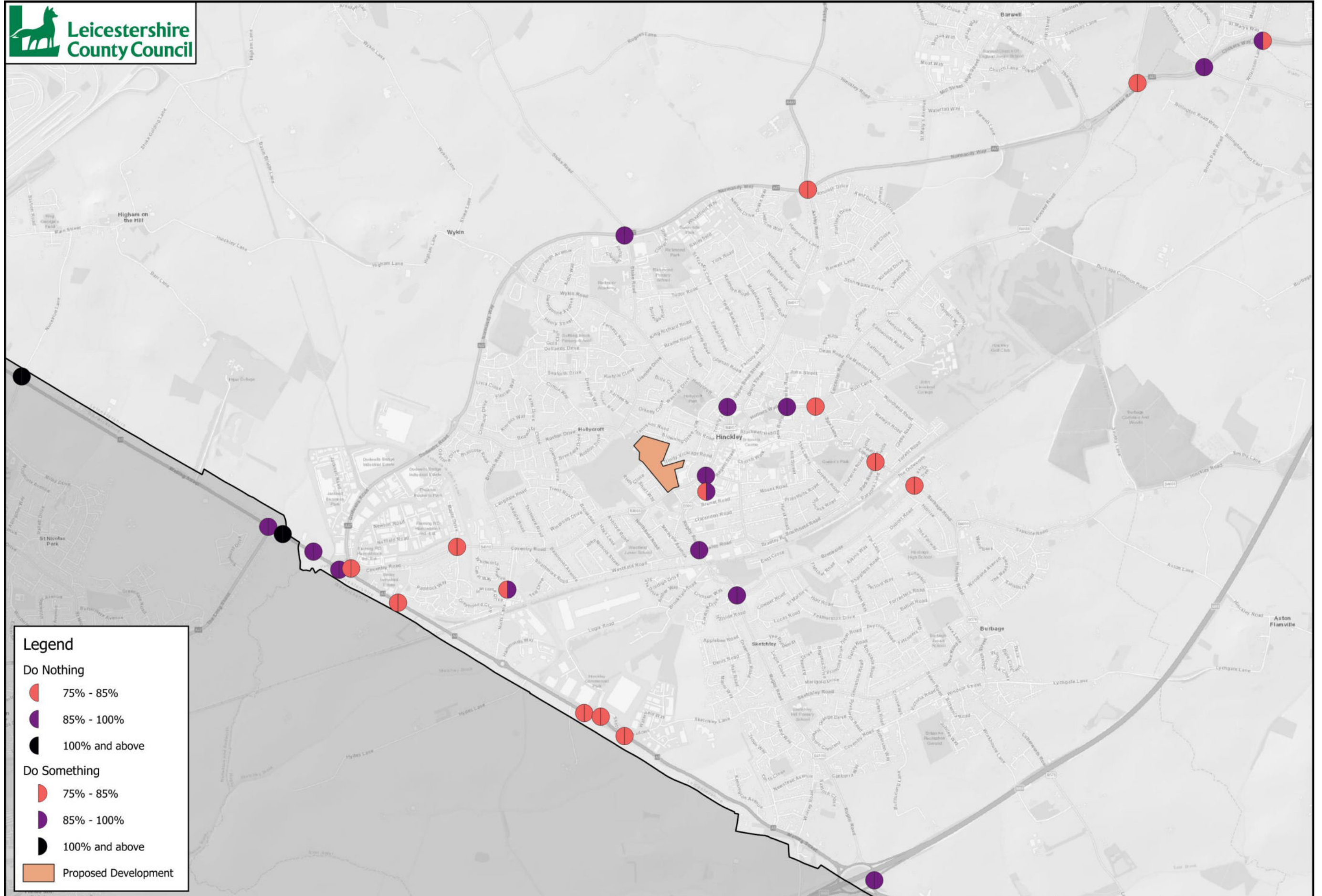
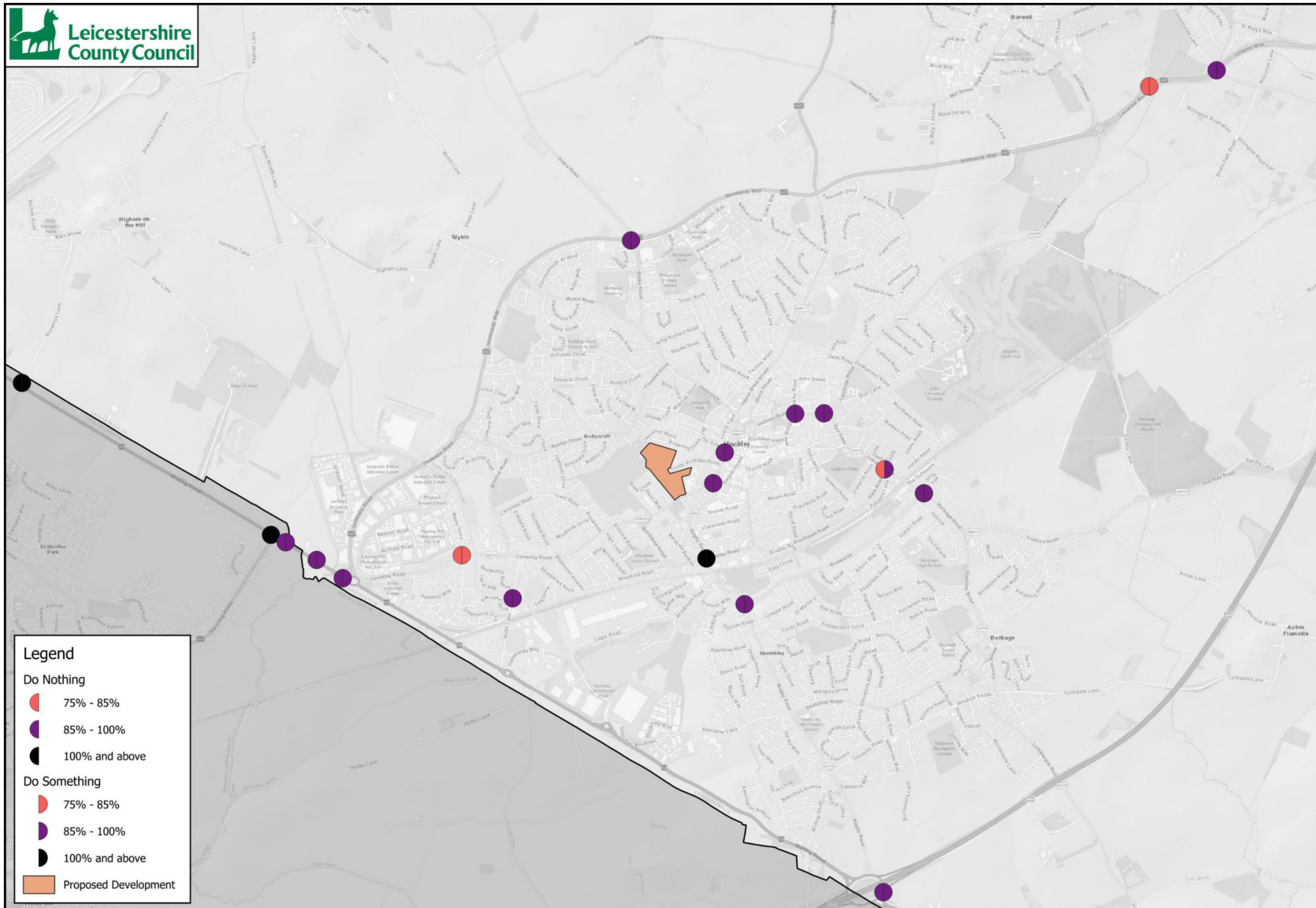


Figure 29. Forecast Node Volume-Capacity Ratio for 2030 'Do Nothing' and 2030 'Do Something', AM Peak Hour



Forecast Node Volume-Capacity Ratio for 2030 PM Peak Hour 'Do Nothing' and 'Do Something'

Project Code: 3851.216

Initials: JG

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Figure 30. Forecast Node Volume-Capacity Ratio for 2030 'Do Nothing' and 2030 'Do Something', PM Peak Hour

4. Summary

4.1. Summary of Assessment

- 4.1.1. Using the PRTM, forecasts have been undertaken to produce the 2024 and 2030 'Do Nothing', 2024 'With Cadent Gas', and 2030 'Do Something' scenarios for the AM and PM Peak hours, for the strategic assessment of the proposed development Brick Kiln Street, Hinckley. The points below provide a summary of the key findings for the assessment.
- 4.1.2. Trips generated by the Cadent Gas offices are forecast to route via the following roads:
- to and from the west via the B4666 Coventry Road, towards the A5 and Nuneaton.
 - to and from the south via the B4109 Rugby Road, towards Burbage, Coventry, and the A5.
 - to and from the east via the B4669 Burbage Road, towards Leicester, Sapcote and Stoney Stanton.
 - to and from the north via the B4667 Trinity Lane, towards Hinckley, Earl Shilton, Stapleton and beyond.
- 4.1.3. Development trips are forecast to route via the following roads:
- to and from the south via the B4109 Rugby Road, towards Burbage, Coventry, and the A5,
 - to and from the west via the B4666 Coventry Road, towards Nuneaton,
 - to and from the north via the B4667 Trinity Lane, towards Hinckley, Earl Shilton, Stapleton and beyond; and
 - to and from the east via the B4669 Burbage Road, towards Sapcote, Stoney Stanton, and Leicester.
- 4.1.4. Compared to the proposed housing development, there is less balance between inbound and outbound trips for the 'With Cadent Gas' scenario, with trips largely entering the site in the AM Peak hour and departing the site in the PM Peak hour. In addition, there is a higher percentage of trips travelling greater than 10km from the Cadent Gas Head Offices.
- 4.1.5. In 2024, the impacts of demolishing the Cadent Gas Head Office on the network are generally greater in AM Peak hour. Most of the flow differences are below 50 PCUs, with the largest differences (exc. Brick Kiln Street) along the B4666 Coventry Road, the B4669 Sapcote Road, and the B4109 Rugby Road.
- 4.1.6. In 2030, the development is forecast to have a minor impact on the surrounding network. The flow differences are largest along roads in the immediate vicinity of the proposed development. This includes, the site access road (Brick Kiln Street), the B4666 Coventry Road, and the B590 Trinity Lane / Rugby Road. Beyond this, the flow differences generally do not exceed 20 PCUs.
- 4.1.7. The Area of Influence has been determined by identifying links forecast to change by more than $\pm 5\%$ flow and ± 30 PCUs between the 'Do Something' and 'Do Nothing' scenarios in either the AM or PM Peak hour. The forecast Area of Influence includes Brick Kiln Street and the B4666 Coventry Road.
- 4.1.8. In the 'Do Something' scenario, there is minimal impact on delays as a result of the development, with delay differences generally less than 2 seconds.
- 4.1.9. The following junctions, in close proximity to the development, have forecast maximum node volume-capacity ratios (V/Cs) of over 85% in the 'Do Nothing' scenarios:
- B590 Hawley Road / B4109 Rugby Road / Westfield Road junction in all the 'Do Nothing' scenarios,
 - B4666 Coventry Road / Trinity Lane junction in the PM Peak hour in 2024, and the AM and PM Peak hours in 2030,

- Trinity Lane / B4667 Lower Bond Street / Hollycroft junction in the AM Peak hour in 2024, and the AM and PM Peak hours in 2030; and
- Trinity Lane / B4667 Mansion Street junction in the PM Peak hour in 2030.

4.1.10. In the 2024 AM Peak hour, the removal of the Cadent Gas offices improves the V/C of two junctions near the development, namely the B4666 Coventry Road / Trinity Lane and B4109 Rugby Road / Brookside junctions. In the PM Peak hour, the removal of Cadent Gas has no impact on the V/C classification of any junctions in the Hinckley area.

4.1.11. In the 2030 AM Peak hour, the V/C is forecast to increase from 75-85% in the 'Do Nothing' scenario to exceeding 85% in the 'Do Something' scenario at the Trinity Lane / Rugby Road junction. There are no junctions near the proposed development that change V/C classification in the PM Peak hour.

4.1.12. Due to the strategic nature of the PRTM, not all roads are modelled, and the results should be interpreted with that in mind.

5. Contact Details

We trust that our report meets your expectations and look forward to working with you again soon.

If you have any questions, please do not hesitate to contact:

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Framework Manager
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Environment & Transport Department
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<http://www.leics.gov.uk>



6. Appendix A

6.1. Cadent Gas Trip Distribution (PCUs)

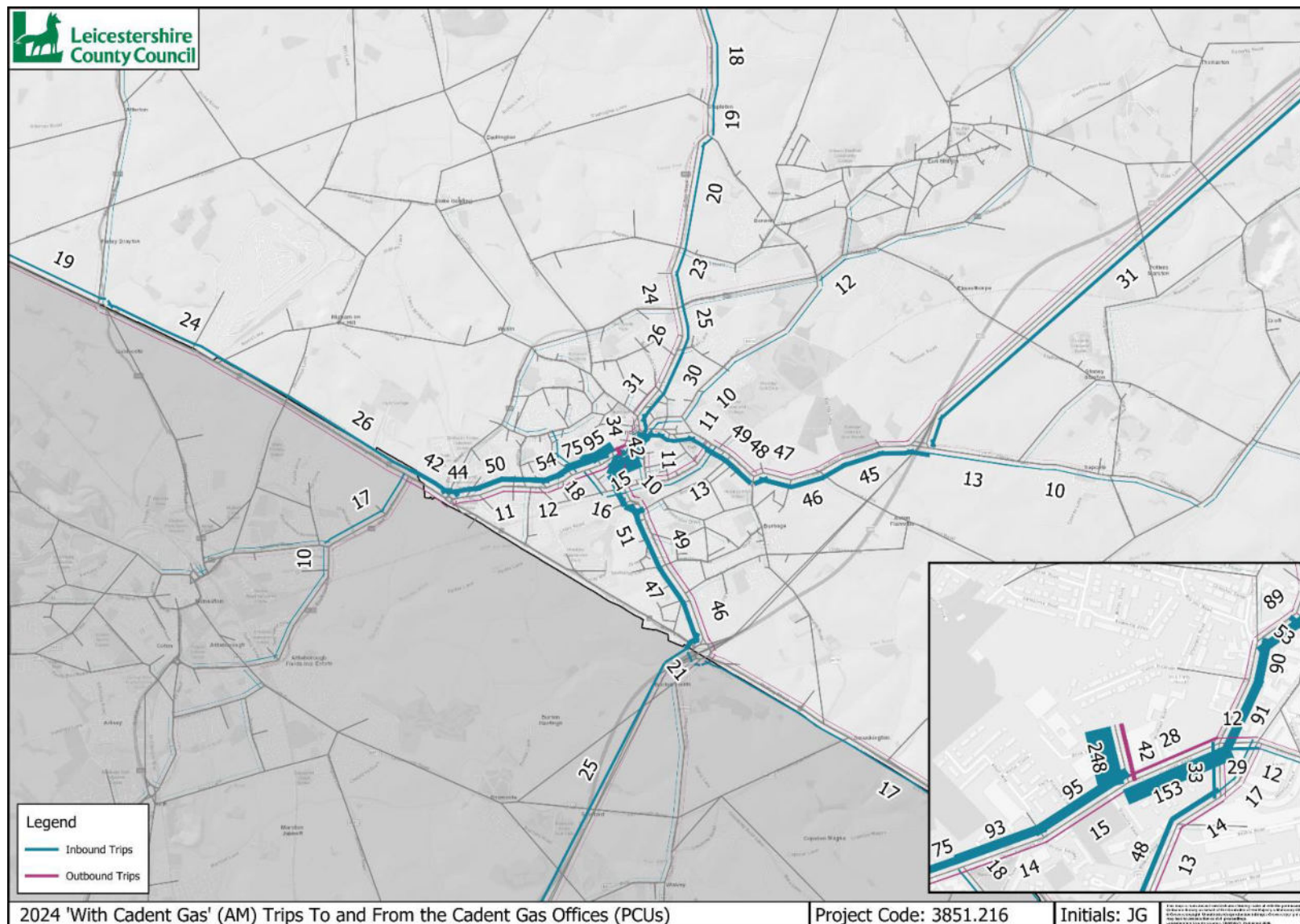
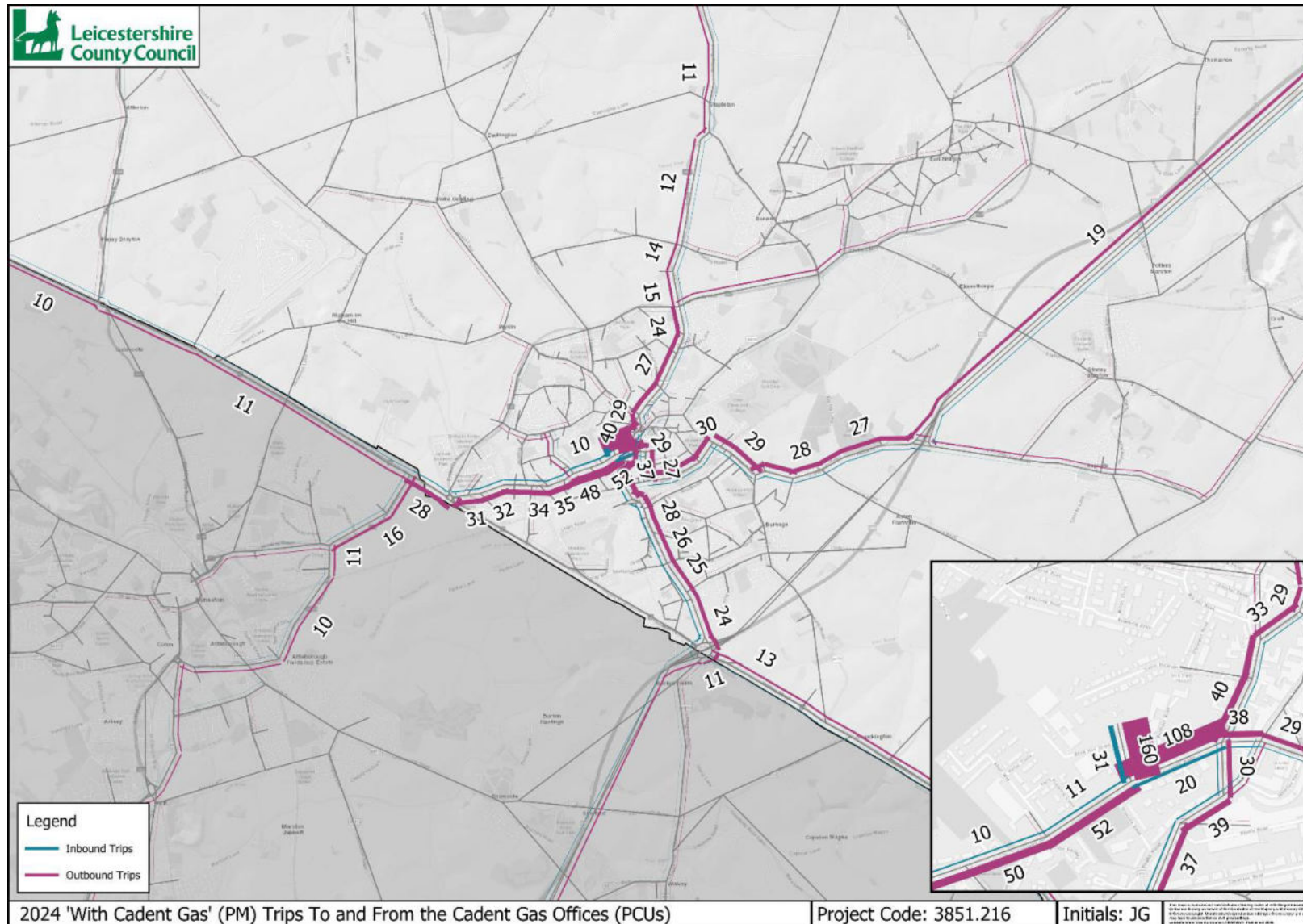
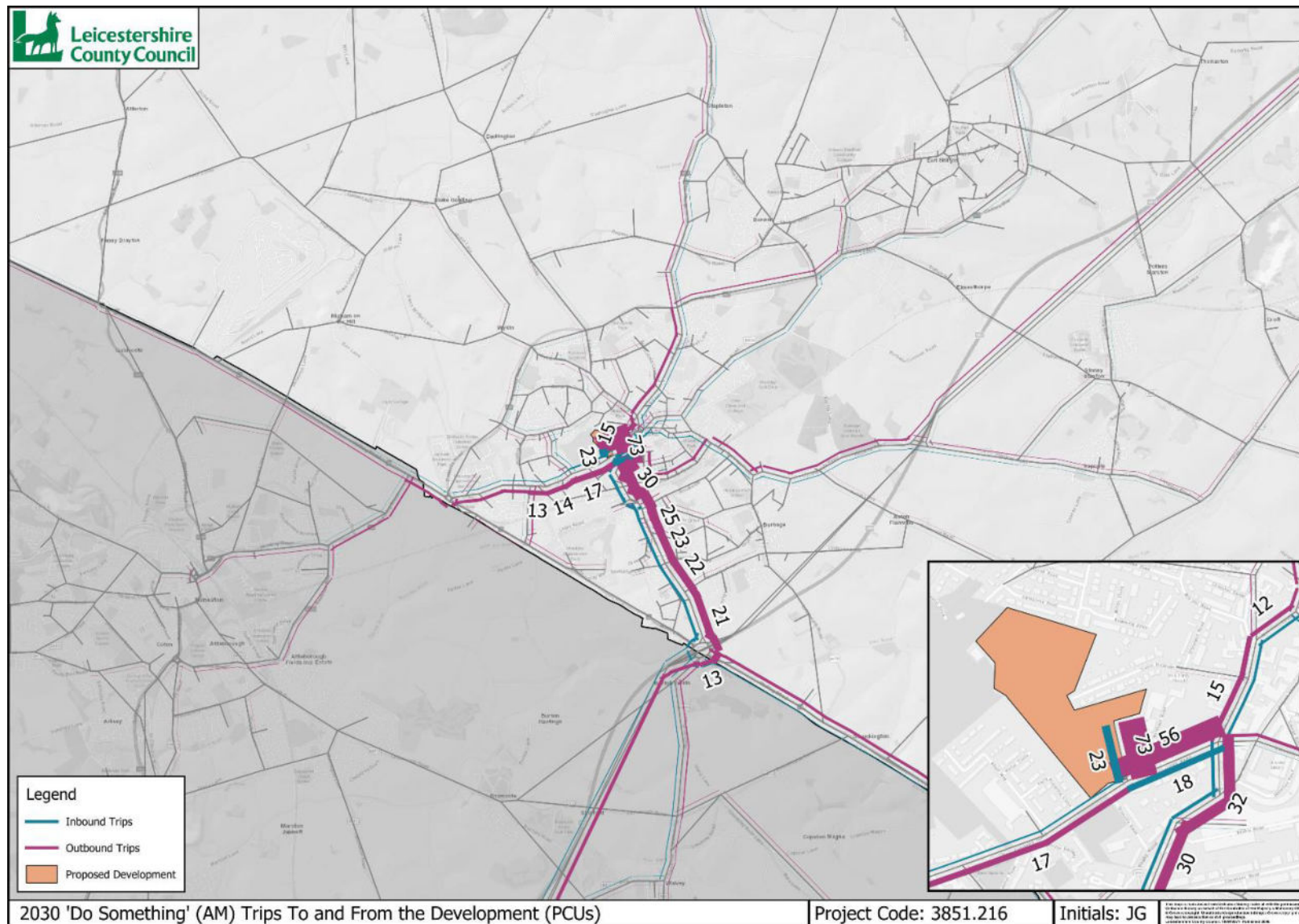


Figure 31. Vehicle Trip Distribution to and from the Cadent Gas Offices (PCUs) – 2024 WCG AM



6.2. Development Trip Distribution (PCUs)



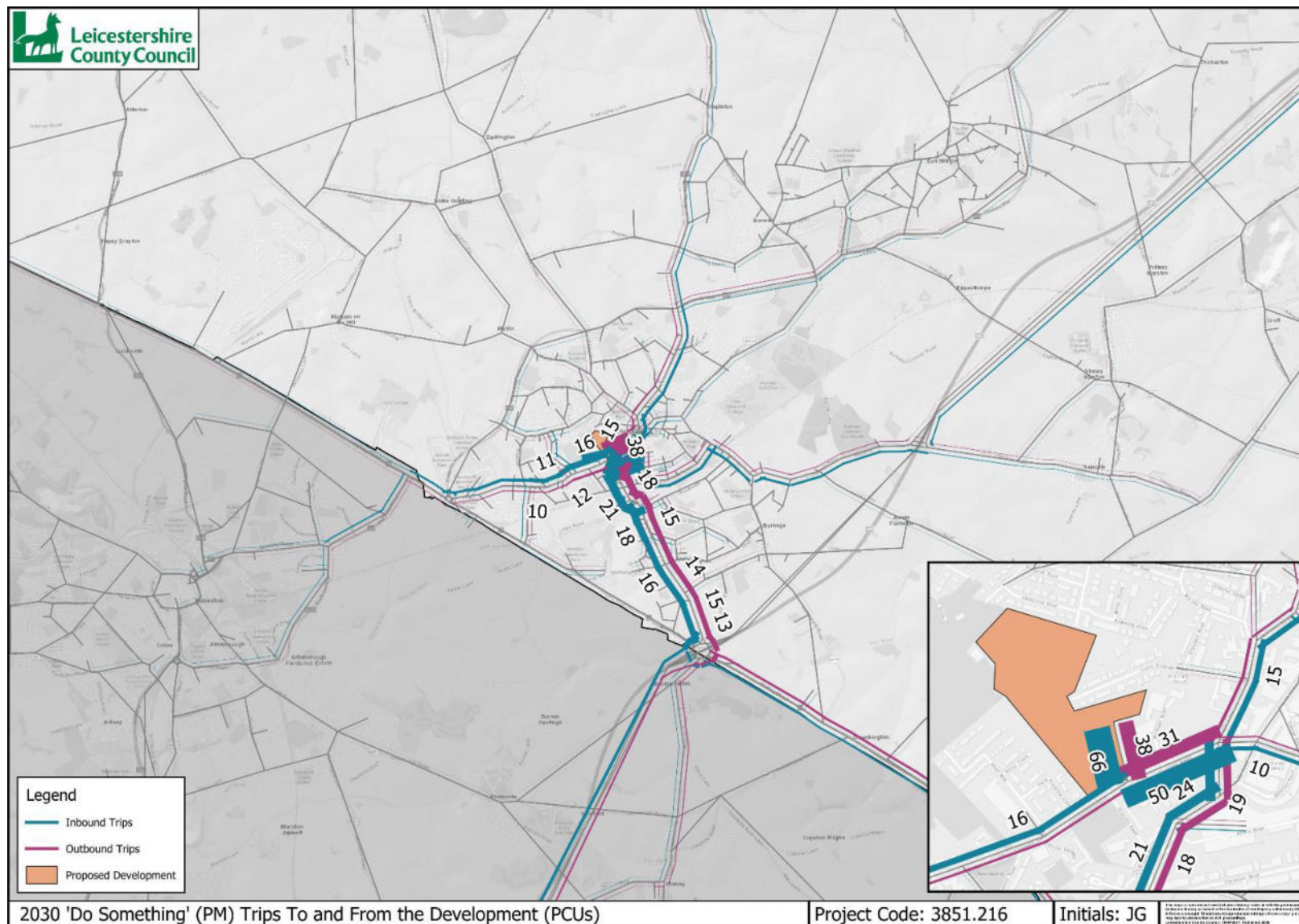


Figure 34. Vehicle Trip Distribution to and from the Proposed Development (PCUs) – 2030 DS PM

Appendix F

Furnished Traffic Flow Matrices

Brick Kiln Street / B4666 Coventry Road A = Brick Kiln Street B = Coventry Road E C = Coventry Road W	B4666 Coventry Road / Granville Road A = Coventry Road E B = Granville Road C = Coventry Road W	B590 Rugby Road / Granville Road A = Rugby Road NE B = Rugby Road SW C = Granville Road	B4666 Coventry Road / B590 Trinity Lane / B4667 Trinity Lane A = Trinity Lane N B = Coventry Road E C = Trinity Lane S D = Coventry Road W																																																																																																																																																																																																																														
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C	446	0	0	40	486																																																																																																																																																																																																																												
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Total	989	297	450	502																																																																																																																																																																																																																													

Furnished Matrices

2030 DN AM					2030 DN PM					2030 DN AM					2030 DN PM					2030 DN AM					2030 DN PM					2030 DN AM					2030 DN PM														
A	B	C	Total		A	B	C	Total		A	B	C	Total		A	B	C	Total		A	B	C	Total		A	B	C	Total		A	B	C	Total																
0	2	0	2		0	0	1	1		0	18	408	426		0	12	459	471		0	590	12	602		0	526	51	577		0	103	499	279	881															
3	0	426	429		0	0	470	470		9	0	36	45		19	0	59	78		492	0	38	530		623	0	55	678		0	0	1	126	127															
1	587	0	588		1	582	0	583		576	40	0	616		564	44	0	608		21	39	0	60		30	52	0	82		447	0	0	57	504															
4	589	426			1	582	471			585	58	444		583	56	518			513	629	50			653	578	106		754	293	565	462		307	190	65	0	562												
Total					Total					Total					Total					Total					Total					Total					Total					Total									
2030 DS AM					2030 DS PM					2030 DS AM					2030 DS PM					2030 DS AM					2030 DS PM					2030 DS AM					2030 DS PM														
A	B	C	Total		A	B	C	Total		A	B	C	Total		A	B	C	Total		A	B	C	Total		A	B	C	Total		A	B	C	Total		A	B	C	Total											
0	60	15	75		0	32	7	39		0	18	419	437		0	12	463	475		0	606	13	619		0	541	53	594		0	96	506	279	881		0	120	409	267	796									
21	0	420	441		51	0	467	518		9	0	36	45		20	0	60	80		500	0	38	538		640	0	57	697		0	0	1	128	129	0	0	0	180	180										
6	573	0	579		16	579	0	595		567	40	0	607		576	45	0	621		21	40	0	61		32	54	0	86		445	0	0	67	512	633	1	0	88	722										
27	633	435			67	611	474			576	58	455		596	57	523			521	646	51			672	595	110		766	302	583	474		321	206	76	0	603	424	202	77	0	703							
Total					Total					Total					Total					Total					Total					Total					Total					Total					Total				

2030 DN AM

	A	B	C	Total
A	0	101	65	166
B	39	0	452	491
C	9	552	0	561
Total	48	653	517	

2030 DN PM

	A	B	C	Total
A	0	132	121	253
B	87	0	576	663
C	17	452	0	469
Total	104	584	697	

2030 DN AM

	A	B	C	Total
A	0	93	564	657
B	20	0	41	61
C	468	48	0	516
Total	488	141	605	

2030 DN PM

	A	B	C	Total
A	0	134	451	585
B	135	0	125	260
C	547	107	0	654
Total	682	241	576	

2030 DN AM

	A	B	C	D	Total
A	0	71	519	7	597
B	68	0	164	182	414
C	440	205	0	287	932
D	0	208	293	0	501
Total	508	484	976	476	

2030 DN PM

	A	B	C	D	Total
A	0	129	441	10	580
B	100	0	267	190	557
C	560	317	0	222	1099
D	0	221	233	0	454
Total	660	667	941	422	

2030 DS AM

	A	B	C	Total
A	0	101	65	166
B	39	0	460	499
C	9	570	0	579
Total	48	671	525	

2030 DS PM

	A	B	C	Total
A	0	133	121	254
B	87	0	598	685
C	17	470	0	487
Total	104	603	719	

2030 DS AM

	A	B	C	Total
A	0	95	580	675
B	20	0	42	62
C	476	48	0	524
Total	496	143	622	

2030 DS PM

	A	B	C	Total
A	0	137	467	604
B	138	0	125	263
C	568	105	0	673
Total	706	242	592	

2030 DS AM

	A	B	C	D	Total
A	0	72	534	7	613
B	69	0	166	180	415
C	446	205	0	284	935
D	0	207	294	0	501
Total	515	484	994	471	

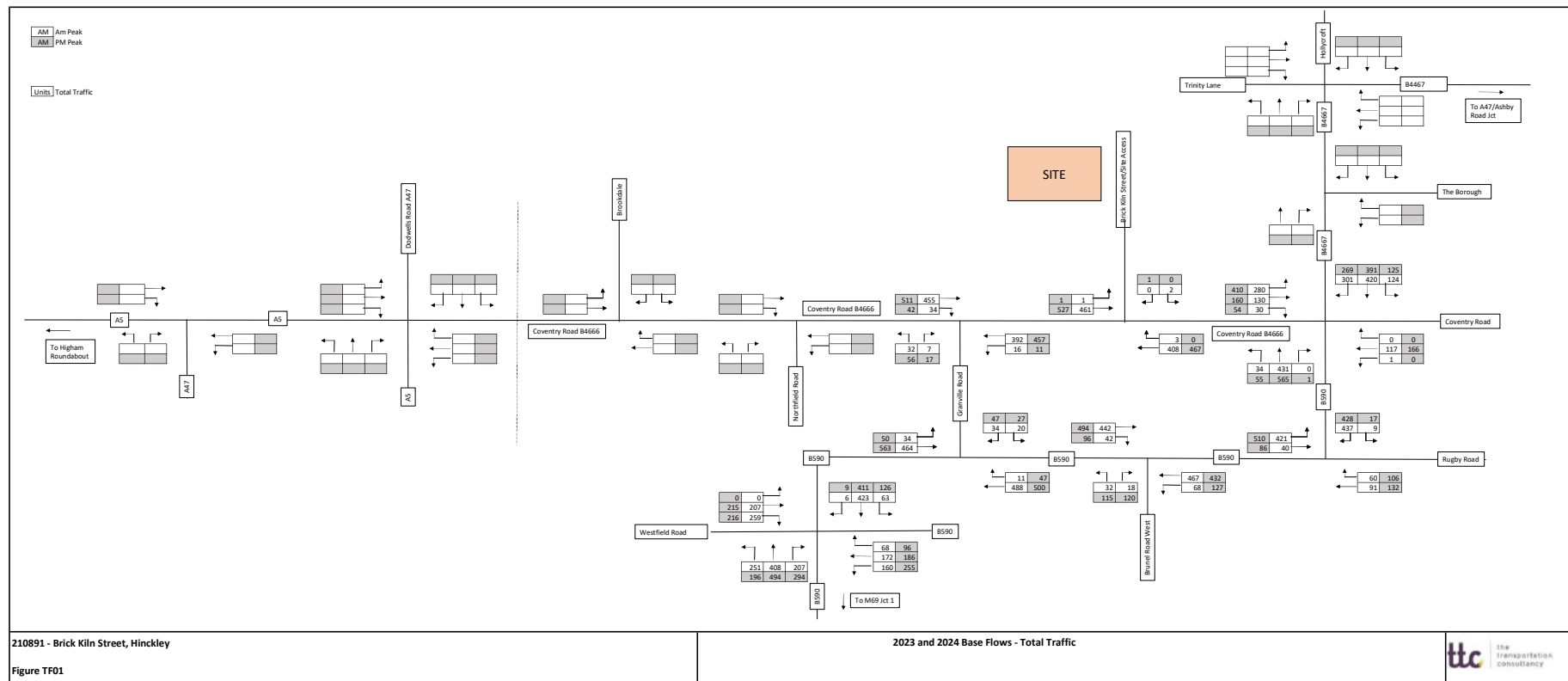
2030 DS PM

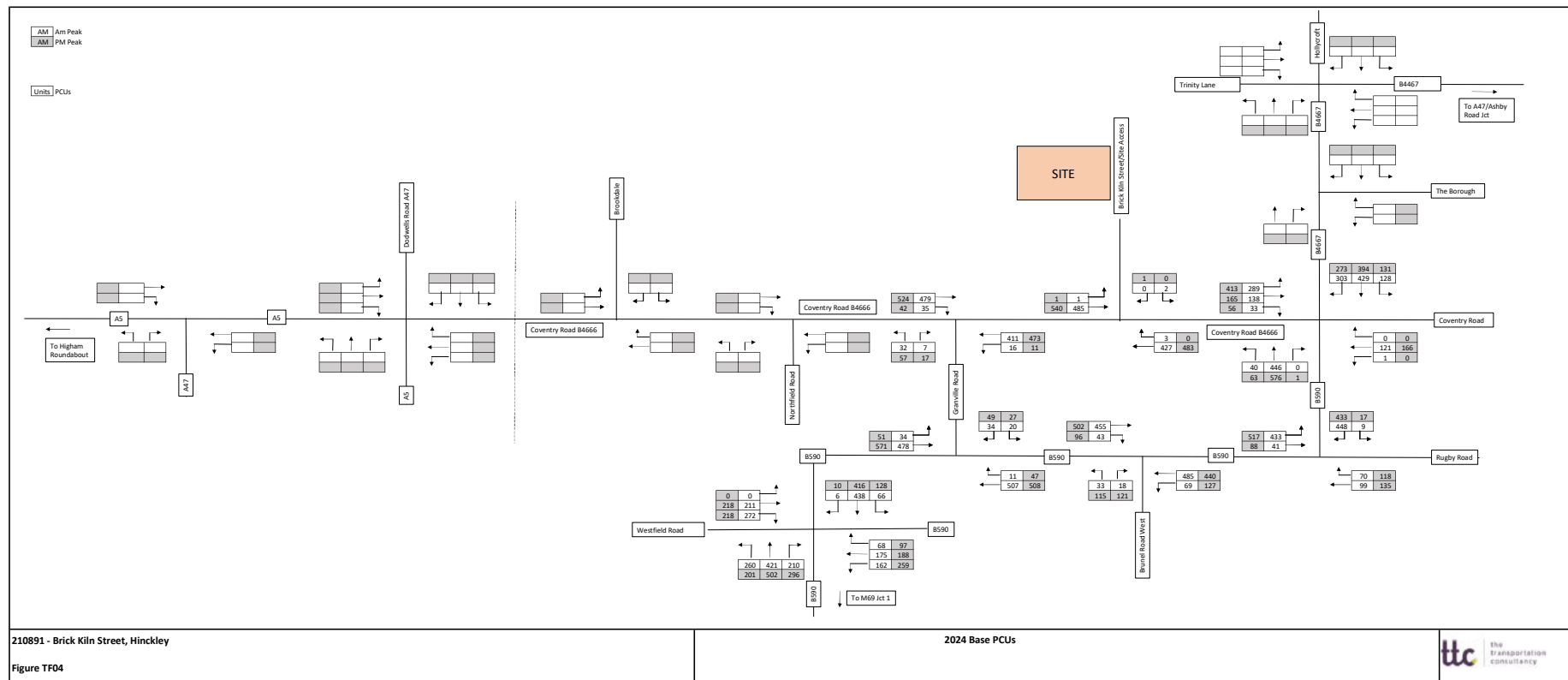
	A	B	C	D	Total
A	0	130	456	11	597
B	101	0	268	189	558
C	577	314	0	223	1114
D	0	219	235	0	454
Total	678	663	959	423	



Appendix G

Traffic Flow Diagrams







Appendix H

Site Access PICADY Outputs

Junctions 10									
PICADY 10 - Priority Intersection Module									
Version: 10.0.1.1519									
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+44 (0)1344 379777 software@trl.co.uk trlsoftware.com									
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution									

Filename: Brick Kiln Street - Coventry Road B4666 v2.j10

Path: C:\Users\JamesCorbett\TTC Transportplanning\TTC Transportplanning Team Site - Documents\TTC - Projects\210891 - Brick Kiln Street, Hinckley\Data\Junction Modelling\New

Report generation date: 06/06/2025 13:43:30

»2030 Do Something, AM

»2030 Do Something, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2030 Do Something										
Stream B-AC	D5	0.2	9.68	0.18	A	D6	0.1	8.86	0.10	A
Stream C-AB		0.0	7.09	0.04	A		0.1	7.66	0.11	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	24/05/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\SamBarber
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		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)
D5	2030 Do Something	AM	ONE HOUR	07:45	09:15	15
D6	2030 Do Something	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2030 Do Something, AM

Data Errors and Warnings

No errors or warnings

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		0.80	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.80	A

Arms

Arms

Arm	Name	Description	Arm type
A	untitled		Major
B	untitled		Minor
C	untitled		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	6.50		✓	3.00	120.0	✓	7.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.78	21	17

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	531	0.095	0.239	0.151	0.342
B-C	684	0.103	0.259	-	-
C-B	699	0.265	0.265	-	-

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 segment length (min)
D5	2030 Do Something	AM	ONE HOUR	07:45	09:15	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 (PCU/hr)	Scaling Factor (%)
A		✓	579	100.000
B		✓	75	100.000
C		✓	441	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	6	573
	B	15	0	60
	C	420	21	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	4
	B	0	0	0
	C	4	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:45-08:00	A	436	436
	B	56	56
	C	332	332
08:00-08:15	A	521	521
	B	67	67
	C	396	396
08:15-08:30	A	637	637
	B	83	83
	C	486	486
08:30-08:45	A	637	637
	B	83	83
	C	486	486
08:45-09:00	A	521	521
	B	67	67
	C	396	396
09:00-09:15	A	436	436
	B	56	56
	C	332	332

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.18	9.68	0.2	A
C-AB	0.04	7.09	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	517	0.109	56	0.1	7.795	A
C-AB	16	584	0.027	16	0.0	6.336	A
C-A	316			316			
A-B	5			5			
A-C	431			431			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	67	491	0.137	67	0.2	8.488	A
C-AB	19	561	0.034	19	0.0	6.633	A
C-A	378			378			
A-B	5			5			
A-C	515			515			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	83	454	0.182	82	0.2	9.670	A
C-AB	23	530	0.044	23	0.0	7.094	A
C-A	462			462			
A-B	7			7			
A-C	631			631			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	83	454	0.182	83	0.2	9.681	A
C-AB	23	530	0.044	23	0.0	7.094	A
C-A	462			462			
A-B	7			7			
A-C	631			631			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	67	491	0.137	68	0.2	8.503	A
C-AB	19	561	0.034	19	0.0	6.637	A
C-A	378			378			
A-B	5			5			
A-C	515			515			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	517	0.109	57	0.1	7.815	A
C-AB	16	584	0.027	16	0.0	6.339	A
C-A	316			316			
A-B	5			5			
A-C	431			431			

2030 Do Something, PM

Data Errors and Warnings

No errors or warnings

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		0.64	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.64	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)
D6	2030 Do Something	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 (PCU/hr)	Scaling Factor (%)
A		✓	595	100.000
B		✓	39	100.000
C		✓	518	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	16	579
	B	7	0	32
	C	467	51	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	2
	B	0	0	0
	C	3	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A	448	448
	B	29	29
	C	390	390
17:00-17:15	A	535	535
	B	35	35
	C	466	466
17:15-17:30	A	655	655
	B	43	43
	C	570	570
17:30-17:45	A	655	655
	B	43	43
	C	570	570
17:45-18:00	A	535	535
	B	35	35
	C	466	466
18:00-18:15	A	448	448
	B	29	29
	C	390	390

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.10	8.86	0.1	A
C-AB	0.11	7.66	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	516	0.057	29	0.1	7.393	A
C-AB	38	581	0.066	38	0.1	6.632	A
C-A	352			352			
A-B	12			12			
A-C	436			436			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	488	0.072	35	0.1	7.941	A
C-AB	46	558	0.082	46	0.1	7.032	A
C-A	420			420			
A-B	14			14			
A-C	521			521			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	449	0.096	43	0.1	8.861	A
C-AB	56	526	0.107	56	0.1	7.661	A
C-A	514			514			
A-B	18			18			
A-C	637			637			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	449	0.096	43	0.1	8.865	A
C-AB	56	526	0.107	56	0.1	7.664	A
C-A	514			514			
A-B	18			18			
A-C	637			637			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	488	0.072	35	0.1	7.948	A
C-AB	46	558	0.082	46	0.1	7.038	A
C-A	420			420			
A-B	14			14			
A-C	521			521			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	516	0.057	29	0.1	7.404	A
C-AB	38	581	0.066	38	0.1	6.641	A
C-A	352			352			
A-B	12			12			
A-C	436			436			

Appendix I

Granville Road/B4666 PICADY Outputs

Junctions 10									
PICADY 10 - Priority Intersection Module									
Version: 10.0.1.1519 © Copyright TRL Software Limited, 2021									
For sales and distribution information, program advice and maintenance, contact TRL Software: +44 (0)1344 379777 software@trl.co.uk trlsoftware.com									
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution									

Filename: Granville Road - Coventry Road B4666 v2.j10

Path: C:\Users\SamBarber\TTC Transportplanning\TTC Transportplanning Team Site - Documents\TTC - Projects\210891 - Brick Kiln Street, Hinckley\Data\Junction Modelling\New

Report generation date: 28/05/2025 21:37:06

»2024 Do Nothing, AM
 »2024 Do Nothing, PM
 »2030 Do Nothing, AM
 »2030 Do Nothing, PM
 »2030 Do Something, AM
 »2030 Do Something, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2024 Do Nothing									
Stream B-AC	D1	0.1	7.90	0.09	A	D2	0.2	9.41	0.18	A
Stream C-AB		0.2	4.87	0.11	A		0.4	4.85	0.14	A
	2030 Do Nothing									
Stream B-AC	D5	0.1	8.25	0.10	A	D6	0.2	9.62	0.19	A
Stream C-AB		0.3	4.63	0.14	A		0.4	4.74	0.15	A
	2030 Do Something									
Stream B-AC	D7	0.1	8.29	0.10	A	D8	0.2	9.79	0.19	A
Stream C-AB		0.3	4.67	0.14	A		0.4	4.72	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.

File summary

File Description

Title	
Location	
Site number	
Date	24/05/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\SamBarber
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		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	2024 Do Nothing	AM	ONE HOUR	07:45	09:15	15
D2	2024 Do Nothing	PM	ONE HOUR	16:45	18:15	15
D5	2030 Do Nothing	AM	ONE HOUR	07:45	09:15	15
D6	2030 Do Nothing	PM	ONE HOUR	16:45	18:15	15
D7	2030 Do Something	AM	ONE HOUR	07:45	09:15	15
D8	2030 Do Something	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2024 Do Nothing, 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	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		0.69	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.69	A

Arms

Arms

Arm	Name	Description	Arm type
A	untitled		Major
B	untitled		Minor
C	untitled		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.30			50.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.48	21	17

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	516	0.085	0.214	0.135	0.306
B-C	665	0.092	0.232	-	-
C-B	603	0.210	0.210	-	-

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 segment length (min)
D1	2024 Do Nothing	AM	ONE HOUR	07:45	09:15	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 (PCU/hr)	Scaling Factor (%)
A		✓	427	100.000
B		✓	39	100.000
C		✓	514	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A	B	C
	A	0	16	411
	B	7	0	32
	C	479	35	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.09	7.90	0.1	A
C-AB	0.11	4.87	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

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Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	542	0.054	29	0.1	7.009	A
C-AB	49	789	0.062	48	0.1	4.861	A
C-A	338			338			
A-B	12			12			
A-C	309			309			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	524	0.067	35	0.1	7.357	A
C-AB	66	828	0.079	66	0.1	4.725	A
C-A	396			396			
A-B	14			14			
A-C	369			369			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	499	0.086	43	0.1	7.895	A
C-AB	96	884	0.109	96	0.2	4.570	A
C-A	470			470			
A-B	18			18			
A-C	453			453			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	499	0.086	43	0.1	7.899	A
C-AB	96	884	0.109	96	0.2	4.573	A
C-A	470			470			
A-B	18			18			
A-C	453			453			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	524	0.067	35	0.1	7.360	A
C-AB	66	828	0.080	66	0.2	4.729	A
C-A	396			396			
A-B	14			14			
A-C	369			369			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	542	0.054	29	0.1	7.020	A
C-AB	49	789	0.062	49	0.1	4.867	A
C-A	338			338			
A-B	12			12			
A-C	309			309			

2024 Do Nothing, 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	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		1.05	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.05	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	2024 Do Nothing	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 (PCU/hr)	Scaling Factor (%)
A		✓	484	100.000
B		✓	74	100.000
C		✓	566	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	11	473
	B	17	0	57
	C	524	42	0

Vehicle Mix

Heavy Vehicle Percentages

To			

From		A	B	C
	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.18	9.41	0.2	A
C-AB	0.14	4.85	0.4	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	517	0.108	55	0.1	7.790	A
C-AB	62	805	0.077	61	0.1	4.837	A
C-A	364			364			
A-B	8			8			
A-C	356			356			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	67	495	0.134	66	0.2	8.395	A
C-AB	85	849	0.100	85	0.2	4.715	A
C-A	424			424			
A-B	10			10			
A-C	425			425			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	81	464	0.176	81	0.2	9.399	A
C-AB	127	911	0.139	126	0.4	4.595	A
C-A	496			496			
A-B	12			12			
A-C	521			521			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	81	464	0.176	81	0.2	9.412	A
C-AB	127	911	0.140	127	0.4	4.602	A
C-A	496			496			
A-B	12			12			
A-C	521			521			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	67	495	0.134	67	0.2	8.412	A
C-AB	86	849	0.101	86	0.2	4.727	A
C-A	423			423			
A-B	10			10			
A-C	425			425			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	517	0.108	56	0.1	7.813	A
C-AB	62	806	0.077	63	0.1	4.848	A
C-A	364			364			
A-B	8			8			
A-C	356			356			

2030 Do Nothing, 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	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		0.77	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.77	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)
D5	2030 Do Nothing	AM	ONE HOUR	07:45	09:15	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 (PCU/hr)	Scaling Factor (%)
A		✓	426	100.000
B		✓	45	100.000
C		✓	616	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	18	408
	B	9	0	36
	C	576	40	0

Vehicle Mix

Heavy Vehicle Percentages

To			

From		A	B	C
	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.10	8.25	0.1	A
C-AB	0.14	4.63	0.3	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	534	0.064	34	0.1	7.198	A
C-AB	62	840	0.074	62	0.1	4.623	A
C-A	402			402			
A-B	14			14			
A-C	307			307			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	514	0.079	40	0.1	7.602	A
C-AB	86	890	0.097	86	0.2	4.479	A
C-A	467			467			
A-B	16			16			
A-C	367			367			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	486	0.102	49	0.1	8.244	A
C-AB	130	961	0.135	130	0.3	4.335	A
C-A	548			548			
A-B	20			20			
A-C	449			449			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	486	0.102	50	0.1	8.248	A
C-AB	131	961	0.136	131	0.3	4.339	A
C-A	548			548			
A-B	20			20			
A-C	449			449			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	514	0.079	41	0.1	7.606	A
C-AB	87	891	0.097	87	0.2	4.488	A
C-A	467			467			
A-B	16			16			
A-C	367			367			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	533	0.064	34	0.1	7.210	A
C-AB	63	840	0.075	63	0.1	4.635	A
C-A	401			401			
A-B	14			14			
A-C	307			307			

2030 Do Nothing, 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	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		1.10	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.10	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)
D6	2030 Do Nothing	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 (PCU/hr)	Scaling Factor (%)
A		✓	471	100.000
B		✓	78	100.000
C		✓	608	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	12	459
	B	19	0	59
	C	564	44	0

Vehicle Mix

Heavy Vehicle Percentages

To			

From		A	B	C
	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.19	9.62	0.2	A
C-AB	0.15	4.74	0.4	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	59	514	0.114	58	0.1	7.893	A
C-AB	68	828	0.082	67	0.2	4.730	A
C-A	390			390			
A-B	9			9			
A-C	346			346			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	70	492	0.143	70	0.2	8.535	A
C-AB	94	876	0.108	94	0.2	4.604	A
C-A	452			452			
A-B	11			11			
A-C	413			413			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	86	460	0.187	86	0.2	9.610	A
C-AB	142	945	0.151	142	0.4	4.489	A
C-A	527			527			
A-B	13			13			
A-C	505			505			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	86	460	0.187	86	0.2	9.623	A
C-AB	143	945	0.151	143	0.4	4.496	A
C-A	527			527			
A-B	13			13			
A-C	505			505			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	70	492	0.143	70	0.2	8.553	A
C-AB	95	877	0.108	95	0.2	4.615	A
C-A	452			452			
A-B	11			11			
A-C	413			413			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	59	514	0.114	59	0.1	7.919	A
C-AB	68	829	0.083	69	0.2	4.743	A
C-A	389			389			
A-B	9			9			
A-C	346			346			

2030 Do Something, 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	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		0.77	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.77	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)
D7	2030 Do Something	AM	ONE HOUR	07:45	09:15	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 (PCU/hr)	Scaling Factor (%)
A		✓	437	100.000
B		✓	45	100.000
C		✓	607	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	18	419
	B	9	0	36
	C	567	40	0

Vehicle Mix

Heavy Vehicle Percentages

	To			

From		A	B	C
	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.10	8.29	0.1	A
C-AB	0.14	4.67	0.3	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	532	0.064	34	0.1	7.221	A
C-AB	62	834	0.074	61	0.1	4.657	A
C-A	395			395			
A-B	14			14			
A-C	315			315			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	512	0.079	40	0.1	7.632	A
C-AB	85	883	0.097	85	0.2	4.515	A
C-A	460			460			
A-B	16			16			
A-C	377			377			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	484	0.102	49	0.1	8.287	A
C-AB	129	952	0.135	128	0.3	4.373	A
C-A	540			540			
A-B	20			20			
A-C	461			461			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	484	0.102	50	0.1	8.291	A
C-AB	129	953	0.135	129	0.3	4.377	A
C-A	539			539			
A-B	20			20			
A-C	461			461			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	512	0.079	41	0.1	7.640	A
C-AB	86	883	0.097	86	0.2	4.525	A
C-A	460			460			
A-B	16			16			
A-C	377			377			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	532	0.064	34	0.1	7.230	A
C-AB	62	834	0.074	62	0.1	4.668	A
C-A	395			395			
A-B	14			14			
A-C	315			315			

2030 Do Something, 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	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		1.13	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.13	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)
D8	2030 Do Something	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 (PCU/hr)	Scaling Factor (%)
A		✓	475	100.000
B		✓	80	100.000
C		✓	621	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	12	463
	B	20	0	60
	C	576	45	0

Vehicle Mix

Heavy Vehicle Percentages

To			

From		A	B	C
	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.19	9.79	0.2	A
C-AB	0.16	4.72	0.4	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	60	511	0.118	60	0.1	7.972	A
C-AB	71	834	0.085	70	0.2	4.709	A
C-A	397			397			
A-B	9			9			
A-C	349			349			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	72	488	0.147	72	0.2	8.643	A
C-AB	98	884	0.111	98	0.2	4.586	A
C-A	460			460			
A-B	11			11			
A-C	416			416			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	88	456	0.193	88	0.2	9.774	A
C-AB	149	954	0.156	148	0.4	4.475	A
C-A	535			535			
A-B	13			13			
A-C	510			510			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	88	456	0.193	88	0.2	9.790	A
C-AB	149	954	0.156	149	0.4	4.483	A
C-A	535			535			
A-B	13			13			
A-C	510			510			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	72	488	0.147	72	0.2	8.662	A
C-AB	99	884	0.112	99	0.3	4.597	A
C-A	460			460			
A-B	11			11			
A-C	416			416			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	60	511	0.118	60	0.1	7.998	A
C-AB	71	835	0.085	71	0.2	4.723	A
C-A	396			396			
A-B	9			9			
A-C	349			349			

Appendix J

Granville Road/Rugby Road PICADY Outputs

Junctions 10									
PICADY 10 - Priority Intersection Module									
Version: 10.0.1.1519 © Copyright TRL Software Limited, 2021									
For sales and distribution information, program advice and maintenance, contact TRL Software: +44 (0)1344 379777 software@trl.co.uk trlsoftware.com									
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution									

Filename: Granville Road - Rugby Road B590 v2.j10

Path: C:\Users\SamBarber\TTC Transportplanning\TTC Transportplanning Team Site - Documents\TTC - Projects\210891 - Brick Kiln Street, Hinckley\Data\Junction Modelling\New

Report generation date: 28/05/2025 22:02:01

»2024 Do Nothing, AM
 »2024 Do Nothing, PM
 »2030 Do Nothing, AM
 »2030 Do Nothing, PM
 »2030 Do Something, AM
 »2030 Do Something, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2024 Do Nothing									
Stream B-AC	D1	0.2	11.92	0.16	B	D2	0.3	15.01	0.26	C
Stream C-AB		0.0	4.50	0.03	A		0.4	4.91	0.16	A
	2030 Do Nothing									
Stream B-AC	D5	0.2	12.99	0.19	B	D6	0.4	16.50	0.29	C
Stream C-AB		0.1	4.30	0.04	A		0.5	4.95	0.18	A
	2030 Do Something									
Stream B-AC	D7	0.2	13.30	0.20	B	D8	0.4	17.33	0.31	C
Stream C-AB		0.1	4.27	0.05	A		0.5	4.95	0.19	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.

File summary

File Description

Title	
Location	
Site number	
Date	24/05/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\SamBarber
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		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	2024 Do Nothing	AM	ONE HOUR	07:45	09:15	15
D2	2024 Do Nothing	PM	ONE HOUR	16:45	18:15	15
D5	2030 Do Nothing	AM	ONE HOUR	07:45	09:15	15
D6	2030 Do Nothing	PM	ONE HOUR	16:45	18:15	15
D7	2030 Do Something	AM	ONE HOUR	07:45	09:15	15
D8	2030 Do Something	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2024 Do Nothing, 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	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		0.70	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.70	A

Arms

Arms

Arm	Name	Description	Arm type
A	untitled		Major
B	untitled		Minor
C	untitled		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.05			110.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	20	25

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	496	0.082	0.208	0.131	0.297
B-C	640	0.089	0.226	-	-
C-B	638	0.225	0.225	-	-

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 segment length (min)
D1	2024 Do Nothing	AM	ONE HOUR	07:45	09:15	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 (PCU/hr)	Scaling Factor (%)
A		✓	512	100.000
B		✓	54	100.000
C		✓	518	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A	B	C
	A	0	34	478
	B	34	0	20
	C	507	11	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.16	11.92	0.2	B
C-AB	0.03	4.50	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

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Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	41	420	0.097	40	0.1	9.473	A
C-AB	16	816	0.019	15	0.0	4.498	A
C-A	374			374			
A-B	26			26			
A-C	360			360			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	49	396	0.123	48	0.1	10.368	B
C-AB	21	855	0.025	21	0.0	4.319	A
C-A	444			444			
A-B	31			31			
A-C	430			430			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	59	361	0.164	59	0.2	11.902	B
C-AB	31	911	0.034	31	0.0	4.093	A
C-A	539			539			
A-B	37			37			
A-C	526			526			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	59	361	0.164	59	0.2	11.919	B
C-AB	31	911	0.034	31	0.0	4.094	A
C-A	539			539			
A-B	37			37			
A-C	526			526			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	49	396	0.123	49	0.1	10.387	B
C-AB	21	855	0.025	21	0.0	4.319	A
C-A	444			444			
A-B	31			31			
A-C	430			430			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	41	420	0.097	41	0.1	9.501	A
C-AB	16	816	0.019	16	0.0	4.498	A
C-A	374			374			
A-B	26			26			
A-C	360			360			

2024 Do Nothing, 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	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		1.34	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.34	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	2024 Do Nothing	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 (PCU/hr)	Scaling Factor (%)
A		✓	622	100.000
B		✓	76	100.000
C		✓	555	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	51	571
	B	49	0	27
	C	508	47	0

Vehicle Mix

Heavy Vehicle Percentages

To			

From		A	B	C
	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.26	15.01	0.3	C
C-AB	0.16	4.91	0.4	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	57	394	0.145	57	0.2	10.642	B
C-AB	68	802	0.084	67	0.2	4.900	A
C-A	350			350			
A-B	38			38			
A-C	430			430			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	365	0.187	68	0.2	12.125	B
C-AB	93	839	0.111	93	0.2	4.829	A
C-A	406			406			
A-B	46			46			
A-C	513			513			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	84	324	0.259	83	0.3	14.951	B
C-AB	139	893	0.156	139	0.4	4.779	A
C-A	472			472			
A-B	56			56			
A-C	629			629			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	84	323	0.259	84	0.3	15.011	C
C-AB	140	893	0.156	140	0.4	4.789	A
C-A	471			471			
A-B	56			56			
A-C	629			629			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	365	0.187	69	0.2	12.188	B
C-AB	94	839	0.111	94	0.3	4.843	A
C-A	405			405			
A-B	46			46			
A-C	513			513			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	57	394	0.145	57	0.2	10.709	B
C-AB	68	802	0.085	68	0.2	4.915	A
C-A	350			350			
A-B	38			38			
A-C	430			430			

2030 Do Nothing, 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	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		0.76	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.76	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)
D5	2030 Do Nothing	AM	ONE HOUR	07:45	09:15	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 (PCU/hr)	Scaling Factor (%)
A		✓	530	100.000
B		✓	60	100.000
C		✓	602	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	38	492
	B	39	0	21
	C	590	12	0

Vehicle Mix

Heavy Vehicle Percentages

To			

From		A	B	C
	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.19	12.99	0.2	B
C-AB	0.04	4.30	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	45	407	0.111	45	0.1	9.927	A
C-AB	19	857	0.022	19	0.0	4.295	A
C-A	434			434			
A-B	29			29			
A-C	370			370			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	54	380	0.142	54	0.2	11.016	B
C-AB	26	905	0.029	26	0.0	4.097	A
C-A	515			515			
A-B	34			34			
A-C	442			442			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	66	343	0.192	66	0.2	12.964	B
C-AB	40	973	0.041	40	0.1	3.856	A
C-A	623			623			
A-B	42			42			
A-C	542			542			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	66	343	0.193	66	0.2	12.990	B
C-AB	40	973	0.041	40	0.1	3.858	A
C-A	623			623			
A-B	42			42			
A-C	542			542			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	54	380	0.142	54	0.2	11.046	B
C-AB	26	905	0.029	26	0.0	4.100	A
C-A	515			515			
A-B	34			34			
A-C	442			442			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	45	407	0.111	45	0.1	9.964	A
C-AB	19	857	0.022	19	0.0	4.295	A
C-A	434			434			
A-B	29			29			
A-C	370			370			

2030 Do Nothing, 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	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		1.47	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.47	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)
D6	2030 Do Nothing	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 (PCU/hr)	Scaling Factor (%)
A		✓	678	100.000
B		✓	82	100.000
C		✓	577	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	55	623
	B	52	0	30
	C	526	51	0

Vehicle Mix

Heavy Vehicle Percentages

To			

From		A	B	C
	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.29	16.50	0.4	C
C-AB	0.18	4.95	0.5	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	385	0.161	61	0.2	11.098	B
C-AB	76	804	0.094	75	0.2	4.940	A
C-A	359			359			
A-B	41			41			
A-C	469			469			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	74	353	0.209	73	0.3	12.863	B
C-AB	105	842	0.125	105	0.3	4.886	A
C-A	414			414			
A-B	49			49			
A-C	560			560			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	90	308	0.293	90	0.4	16.411	C
C-AB	159	898	0.177	158	0.5	4.875	A
C-A	476			476			
A-B	61			61			
A-C	686			686			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	90	308	0.293	90	0.4	16.503	C
C-AB	160	899	0.178	160	0.5	4.885	A
C-A	476			476			
A-B	61			61			
A-C	686			686			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	74	353	0.209	74	0.3	12.951	B
C-AB	106	843	0.125	106	0.3	4.903	A
C-A	413			413			
A-B	49			49			
A-C	560			560			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	384	0.161	62	0.2	11.178	B
C-AB	76	804	0.095	77	0.2	4.955	A
C-A	358			358			
A-B	41			41			
A-C	469			469			

2030 Do Something, 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	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		0.79	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.79	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)
D7	2030 Do Something	AM	ONE HOUR	07:45	09:15	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 (PCU/hr)	Scaling Factor (%)
A		✓	538	100.000
B		✓	61	100.000
C		✓	619	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	38	500
	B	40	0	21
	C	606	13	0

Vehicle Mix

Heavy Vehicle Percentages

To			

From		A	B	C
	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.20	13.30	0.2	B
C-AB	0.05	4.27	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	46	403	0.114	45	0.1	10.052	B
C-AB	21	864	0.024	21	0.0	4.267	A
C-A	445			445			
A-B	29			29			
A-C	376			376			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	55	376	0.146	55	0.2	11.199	B
C-AB	29	914	0.032	29	0.0	4.069	A
C-A	527			527			
A-B	34			34			
A-C	449			449			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	67	338	0.199	67	0.2	13.271	B
C-AB	45	985	0.045	44	0.1	3.828	A
C-A	637			637			
A-B	42			42			
A-C	551			551			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	67	338	0.199	67	0.2	13.300	B
C-AB	45	985	0.045	45	0.1	3.831	A
C-A	637			637			
A-B	42			42			
A-C	551			551			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	55	376	0.146	55	0.2	11.233	B
C-AB	29	914	0.032	29	0.0	4.070	A
C-A	527			527			
A-B	34			34			
A-C	449			449			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	46	403	0.114	46	0.1	10.092	B
C-AB	21	864	0.024	21	0.0	4.270	A
C-A	445			445			
A-B	29			29			
A-C	376			376			

2030 Do Something, 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	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		1.56	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.56	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)
D8	2030 Do Something	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 (PCU/hr)	Scaling Factor (%)
A		✓	697	100.000
B		✓	86	100.000
C		✓	594	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	57	640
	B	54	0	32
	C	541	53	0

Vehicle Mix

Heavy Vehicle Percentages

To			

From		A	B	C
	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.31	17.33	0.4	C
C-AB	0.19	4.95	0.5	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	65	381	0.170	64	0.2	11.323	B
C-AB	80	809	0.099	80	0.2	4.932	A
C-A	367			367			
A-B	43			43			
A-C	482			482			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	77	348	0.222	77	0.3	13.243	B
C-AB	112	849	0.132	112	0.3	4.889	A
C-A	422			422			
A-B	51			51			
A-C	575			575			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	95	303	0.313	94	0.4	17.213	C
C-AB	171	907	0.189	170	0.5	4.897	A
C-A	483			483			
A-B	63			63			
A-C	705			705			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	95	302	0.313	95	0.4	17.327	C
C-AB	172	908	0.189	172	0.5	4.905	A
C-A	482			482			
A-B	63			63			
A-C	705			705			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	77	348	0.222	78	0.3	13.347	B
C-AB	113	850	0.133	113	0.3	4.903	A
C-A	421			421			
A-B	51			51			
A-C	575			575			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	65	381	0.170	65	0.2	11.412	B
C-AB	81	810	0.100	81	0.2	4.950	A
C-A	366			366			
A-B	43			43			
A-C	482			482			

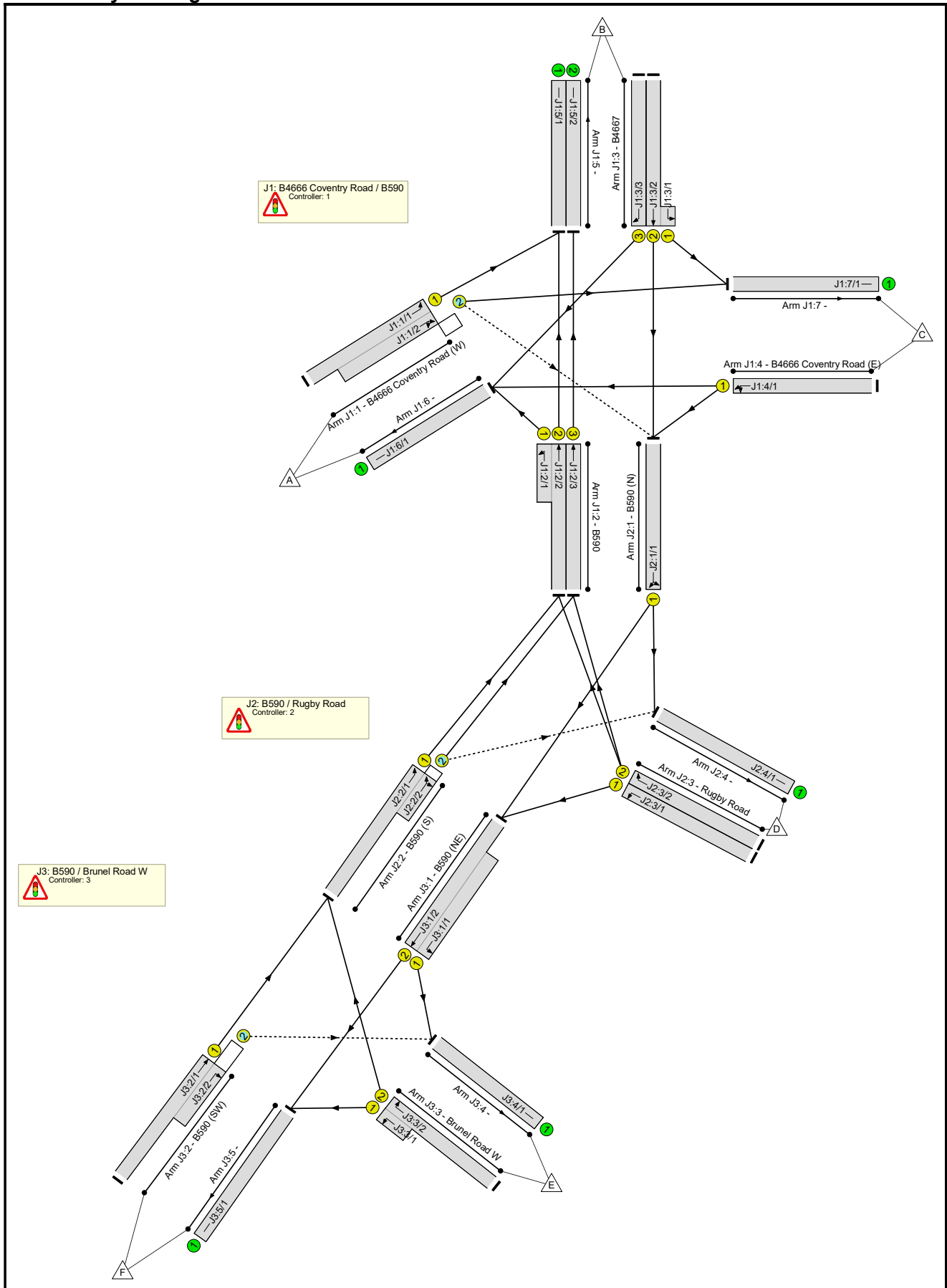
Appendix K

B590/B4666 (Coventry Road)/B4667; B590/Rugby Road;
B590/Brunel Road West Linked Signal LinSig Outputs

Full Input Data And Results**User and Project Details**

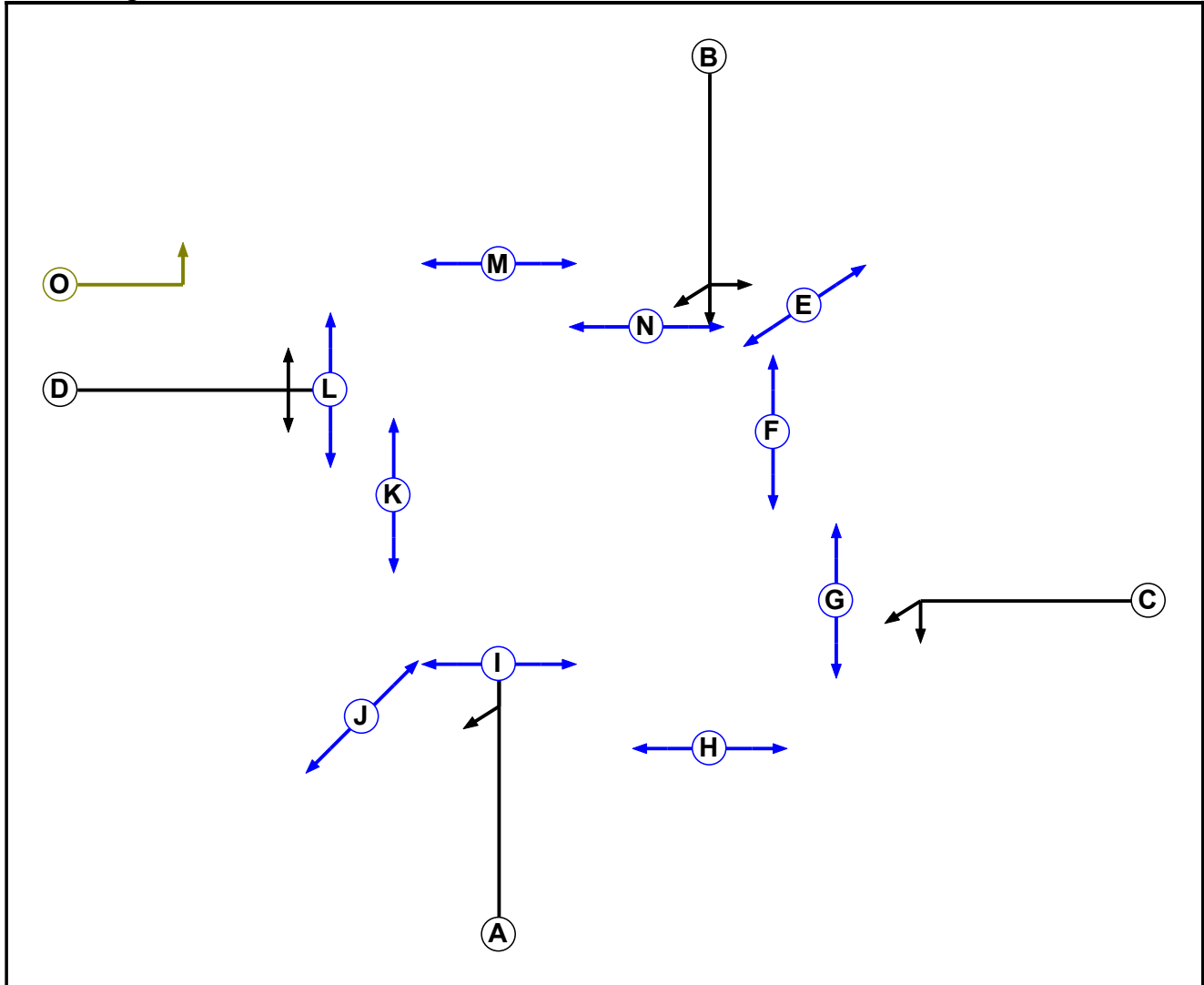
Project:	Brick Kiln Street, Hinckley
Title:	B4666 Coventry Road/B4667/Rugby Road/B590 Linked Signal Junctions - Hinckley
Location:	
Additional detail:	
File name:	Linked Junction v2.lsg3x
Author:	SB
Company:	TTC
Address:	

Network Layout Diagram



C1

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		5	5
F	Pedestrian		5	5
G	Pedestrian		5	5
H	Pedestrian		5	5
I	Pedestrian		5	5
J	Pedestrian		5	5
K	Pedestrian		5	5
L	Pedestrian		5	5
M	Pedestrian		5	5
N	Pedestrian		5	5
O	Filter	D	4	0

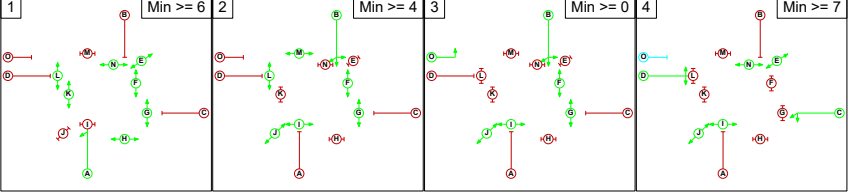
Phase Intergreens Matrix

		Starting Phase															
Terminating Phase		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
	A		6	6	6	-	-	-	-	5	5	-	-	7	-	6	
	B	6		6	6	6	-	-	7	-	-	7	-	-	6	-	
	C	8	8		-	-	-	7	7	-	-	7	-	-	-	-	
	D	8	8	-		-	7	-	7	-	-	-	7	7	-	-	
	E	-	6	-	-		-	-	-	-	-	-	-	-	-	-	
	F	-	-	-	6	-		-	-	-	-	-	-	-	-	-	
	G	-	-	6	-	-	-		-	-	-	-	-	-	-	-	
	H	-	6	6	6	-	-	-		-	-	-	-	-	-	-	
	I	6	-	-	-	-	-	-	-		-	-	-	-	-	-	
	J	6	-	-	-	-	-	-	-	-		-	-	-	-	-	
	K	-	6	6	-	-	-	-	-	-	-		-	-	-	-	
	L	-	-	-	6	-	-	-	-	-	-	-		-	-	6	
	M	6	-	-	6	-	-	-	-	-	-	-	-		-	6	
	N	-	6	-	-	-	-	-	-	-	-	-	-	-		-	
	O	8	-	-	-	-	-	-	-	-	-	-	7	7	-		

Phases in Stage

Stage No.	Phases in Stage
1	A E F G H K L N
2	B F G I J L M
3	B F G I J O
4	C D E I J N

Stage Diagram



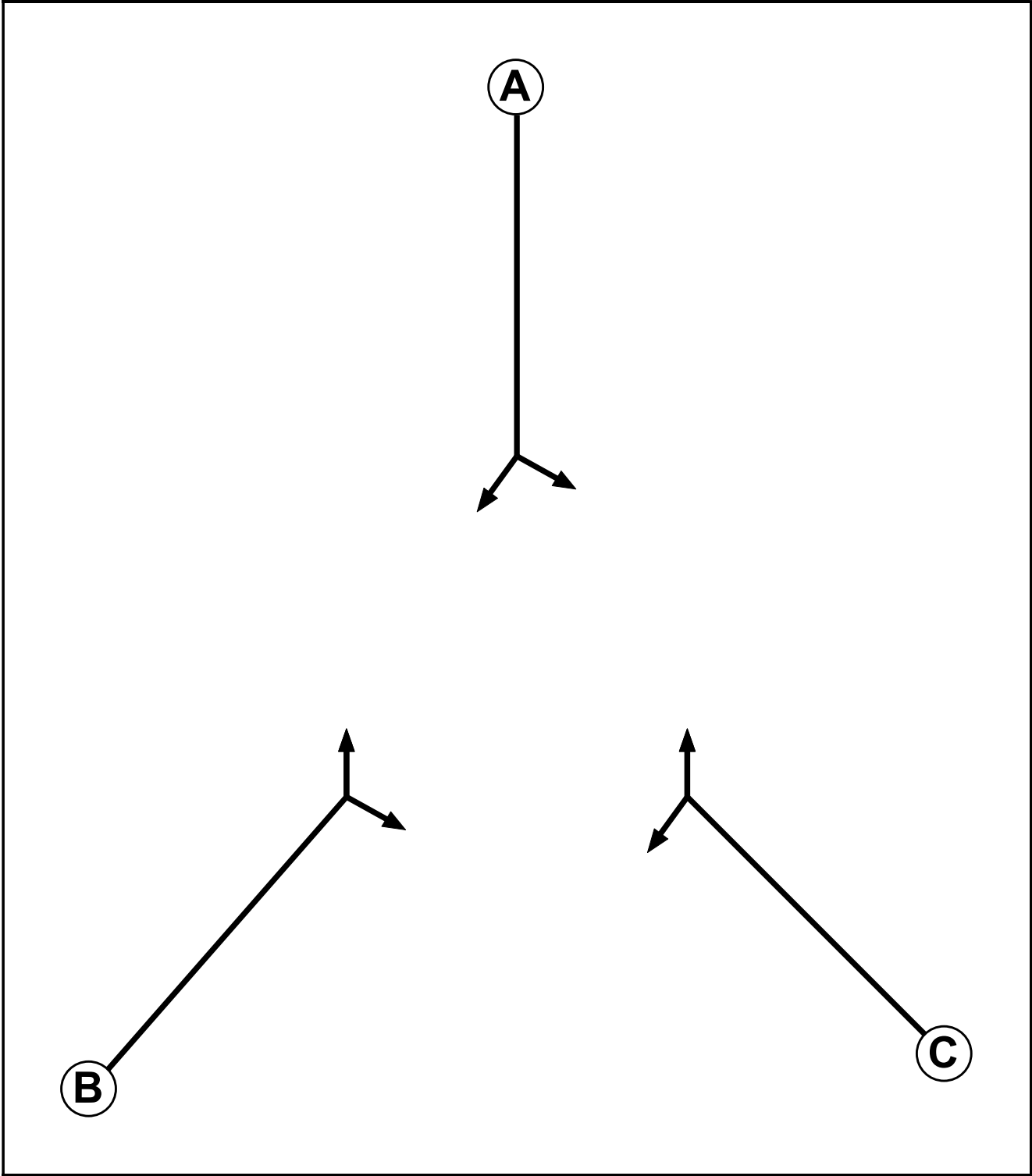
Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

	To Stage				
From Stage		1	2	3	4
	1		7	6	6
	2	7		6	6
	3	X	X		6
	4	8	8	8	

C2
Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7

Full Input Data And Results

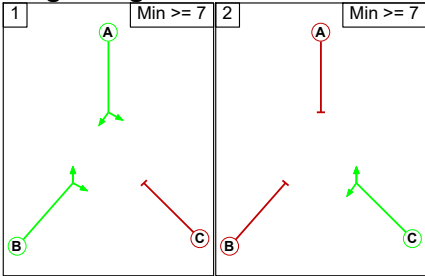
Phase Intergreens Matrix

	Starting Phase			
Terminating Phase		A	B	C
	A		-	5
	B	-		5
	C	6	6	

Phases in Stage

Stage No.	Phases in Stage
1	A B
2	C

Stage Diagram



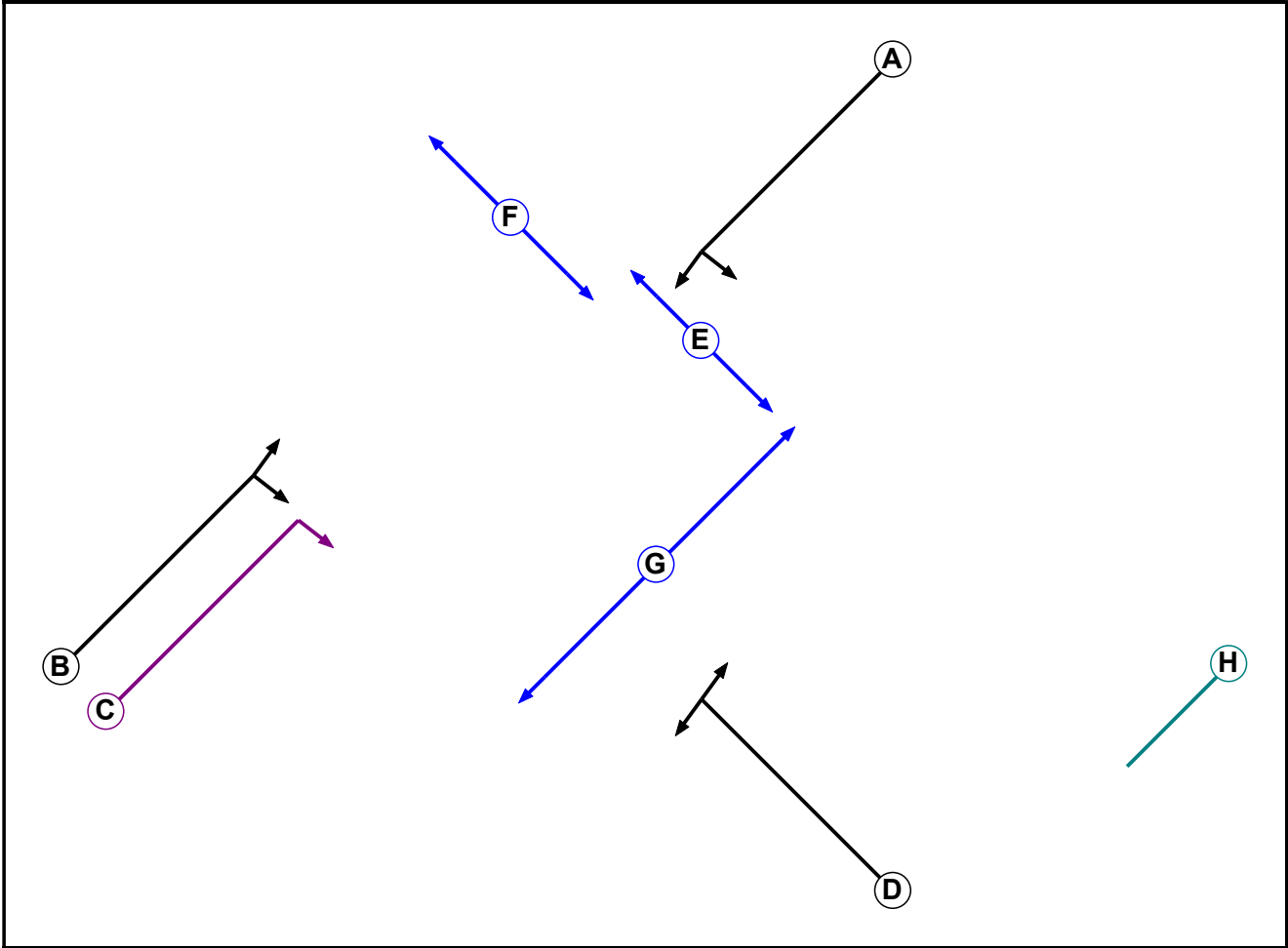
Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

	To Stage		
From Stage		1	2
	1		5
	2	6	

C3
Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		14	14
B	Traffic		7	7
C	Ind. Arrow	B	4	4
D	Traffic		7	7
E	Pedestrian		5	5
F	Pedestrian		5	5
G	Pedestrian		9	9
H	Dummy		11	11

Full Input Data And Results

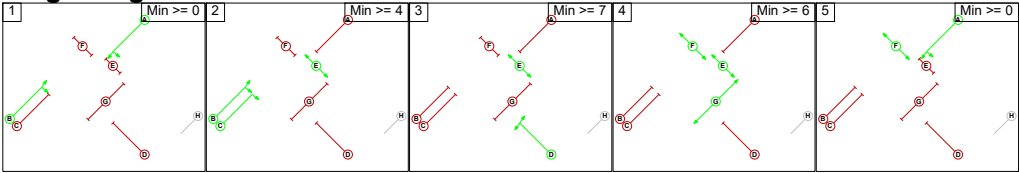
Phase Intergreens Matrix

		Starting Phase							
Terminating Phase		A	B	C	D	E	F	G	H
	A		-	5	5	5	-	7	-
	B	-		-	5	-	8	8	-
	C	5	-		5	-	-	8	-
	D	5	5	5		-	8	5	-
	E	6	-	-	-		-	-	-
	F	-	6	-	6	-		-	-
	G	12	12	12	13	-	-		-
	H	-	-	-	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B
2	B C E
3	D E
4	E F G
5	A F

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

		To Stage				
From Stage		1	2	3	4	5
	1		5	5	8	8
	2	6		5	8	8
	3	6	5		8	8
	4	12	12	13		12
	5	6	X	6	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: B4666 Coventry Road / B590											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
J1:1/2 (B4666 Coventry Road (W))	J2:1/1 (Right)	1400	0	J1:4/1	1.10	All	2.00	2.00	0.50	2	2.00

Junction: J2: B590 / Rugby Road											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
J2:2/2 (B590 (S))	J2:4/1 (Right)	1400	0	J2:1/1	1.10	All	1.00	-	0.50	1	2.00

Junction: J3: B590 / Brunel Road W											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
J3:2/2 (B590 (SW))	J3:4/1 (Right)	1440	0	J3:1/1	1.10	All	3.00	-	0.50	3	2.00
				J3:1/2	1.10	All					

Lane Input Data

Junction: J1: B4666 Coventry Road / B590												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J1:1/1 (B4666 Coventry Road (W))	U	D O	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J1:5 Left	90.00
J1:1/2 (B4666 Coventry Road (W))	O	D	2	3	12.0	Geom	-	3.00	0.00	Y	Arm J1:7 Ahead	Inf
											Arm J2:1 Right	15.00
J1:2/1 (B590)	U	A	2	3	6.0	Geom	-	3.50	0.00	Y	Arm J1:6 Left	13.00
J1:2/2 (B590)	U	A	2	3	11.0	Geom	-	3.50	0.00	Y	Arm J1:5 Ahead	Inf
J1:2/3 (B590)	U	A	2	3	11.0	Geom	-	3.50	0.00	Y	Arm J1:5 Ahead	Inf
J1:3/1 (B4667)	U	B	2	3	2.0	Geom	-	3.25	0.00	Y	Arm J1:7 Left	12.00
J1:3/2 (B4667)	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J2:1 Ahead	Inf
J1:3/3 (B4667)	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J1:6 Right	20.00
J1:4/1 (B4666 Coventry Road (E))	U	C	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J1:6 Ahead	Inf
											Arm J2:1 Left	20.00
J1:5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:5/2	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:7/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J2: B590 / Rugby Road												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J2:1/1 (B590 (N))	U	A	2	3	10.0	Geom	-	3.00	0.00	Y	Arm J2:4 Left	12.00
											Arm J3:1 Ahead	Inf
J2:2/1 (B590 (S))	U	B	2	3	15.0	Geom	-	3.50	0.00	Y	Arm J1:2 Ahead	30.00
J2:2/2 (B590 (S))	O	B	2	3	5.0	Geom	-	3.50	0.00	Y	Arm J1:2 Ahead	30.00
											Arm J2:4 Right	12.00
J2:3/1 (Rugby Road)	U	C	2	3	8.0	User	1800	-	-	-	-	-
J2:3/2 (Rugby Road)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J1:2 Right	12.00
J2:4/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Junction: J3: B590 / Brunel Road W												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J3:1/1 (B590 (NE))	U	A	2	3	13.0	Geom	-	3.00	0.00	Y	Arm J3:4 Left	14.00
J3:1/2 (B590 (NE))	U	A	2	3	15.0	Geom	-	3.00	0.00	Y	Arm J3:5 Ahead	Inf
J3:2/1 (B590 (SW))	U	B	2	3	60.0	Geom	-	2.50	0.00	Y	Arm J2:2 Ahead	Inf
J3:2/2 (B590 (SW))	O	B C	2	3	7.0	Geom	-	2.50	0.00	Y	Arm J3:4 Right	14.00
J3:3/1 (Brunel Road W)	U	D	2	3	3.5	Geom	-	3.00	0.00	Y	Arm J3:5 Left	12.00
J3:3/2 (Brunel Road W)	U	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J2:2 Right	Inf
J3:4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J3:5/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2024 Do Nothing AM'	08:00	09:00	01:00	
2: '2024 Do Nothing PM'	17:00	18:00	01:00	
3: '2030 Do Nothing AM'	08:00	09:00	01:00	
4: '2030 Do Nothing PM'	17:00	18:00	01:00	
5: '2030 Do Something AM'	08:00	09:00	01:00	
6: '2030 Do Something PM'	17:00	18:00	01:00	

Scenario 1: '2024 Do Nothing AM' (FG1: '2024 Do Nothing AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination							
		A	B	C	D	E	F	Tot.
Origin	A	0	289	138	1	4	28	460
	B	303	0	128	7	53	370	861
	C	121	0	0	0	0	1	122
	D	6	64	0	0	12	87	169
	E	1	15	0	1	0	33	50
	F	35	385	0	35	43	0	498
	Tot.	466	753	266	44	112	519	2160

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2024 Do Nothing AM
Junction: J1: B4666 Coventry Road / B590	
J1:1/1 (with short)	460(In) 289(Out)
J1:1/2 (short)	171
J1:2/1 (short)	42
J1:2/2 (with short)	281(In) 239(Out)
J1:2/3	225
J1:3/1 (short)	128
J1:3/2 (with short)	558(In) 430(Out)
J1:3/3	303
J1:4/1	122
J1:5/1	528
J1:5/2	225
J1:6/1	466
J1:7/1	266
Junction: J2: B590 / Rugby Road	
J2:1/1	464
J2:2/1 (with short)	472(In) 252(Out)
J2:2/2 (short)	220
J2:3/1	99
J2:3/2	70
J2:4/1	44
Junction: J3: B590 / Brunel Road W	
J3:1/1 (short)	69
J3:1/2 (with short)	555(In) 486(Out)
J3:2/1 (with short)	498(In) 455(Out)
J3:2/2 (short)	43
J3:3/1 (short)	33
J3:3/2 (with short)	50(In) 17(Out)
J3:4/1	112
J3:5/1	519

Lane Saturation Flows

Junction: J2: B590 / Rugby Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (B590 (N))	3.00	0.00	Y	Arm J2:4 Left	12.00	1.7 %	1911	1911
				Arm J3:1 Ahead	Inf	98.3 %		
J2:2/1 (B590 (S))	3.50	0.00	Y	Arm J1:2 Ahead	30.00	100.0 %	1871	1871
J2:2/2 (B590 (S))	3.50	0.00	Y	Arm J1:2 Ahead	30.00	83.6 %	1850	1850
				Arm J2:4 Right	12.00	16.4 %		
J2:3/1 (Rugby Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J2:3/2 (Rugby Road)	3.25	0.00	Y	Arm J1:2 Right	12.00	100.0 %	1724	1724
J2:4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J3: B590 / Brunel Road W								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (B590 (NE))	3.00	0.00	Y	Arm J3:4 Left	14.00	100.0 %	1730	1730
J3:1/2 (B590 (NE))	3.00	0.00	Y	Arm J3:5 Ahead	Inf	100.0 %	1915	1915
J3:2/1 (B590 (SW))	2.50	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1865	1865
J3:2/2 (B590 (SW))	2.50	0.00	Y	Arm J3:4 Right	14.00	100.0 %	1685	1685
J3:3/1 (Brunel Road W)	3.00	0.00	Y	Arm J3:5 Left	12.00	100.0 %	1702	1702
J3:3/2 (Brunel Road W)	3.00	0.00	Y	Arm J2:2 Right	Inf	100.0 %	1915	1915
J3:4/1	Infinite Saturation Flow						Inf	Inf
J3:5/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2024 Do Nothing PM' (FG2: '2024 Do Nothing PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination							
		A	B	C	D	E	F	Tot.
Origin	A	0	413	165	2	12	42	634
	B	273	0	131	11	86	297	798
	C	166	0	0	0	0	0	166
	D	12	106	0	0	30	105	253
	E	10	96	0	15	0	115	236
	F	43	397	0	61	96	0	597
	Tot.	504	1012	296	89	224	559	2684

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2024 Do Nothing PM
Junction: J1: B4666 Coventry Road / B590	
J1:1/1 (with short)	634(In) 413(Out)
J1:1/2 (short)	221
J1:2/1 (short)	65
J1:2/2 (with short)	358(In) 293(Out)
J1:2/3	306
J1:3/1 (short)	131
J1:3/2 (with short)	525(In) 394(Out)
J1:3/3	273
J1:4/1	166
J1:5/1	706
J1:5/2	306
J1:6/1	504
J1:7/1	296
Junction: J2: B590 / Rugby Road	
J2:1/1	450
J2:2/1 (with short)	622(In) 277(Out)
J2:2/2 (short)	345
J2:3/1	135
J2:3/2	118
J2:4/1	89
Junction: J3: B590 / Brunel Road W	
J3:1/1 (short)	128
J3:1/2 (with short)	572(In) 444(Out)
J3:2/1 (with short)	597(In) 501(Out)
J3:2/2 (short)	96
J3:3/1 (short)	115
J3:3/2 (with short)	236(In) 121(Out)
J3:4/1	224
J3:5/1	559

Lane Saturation Flows

Junction: J1: B4666 Coventry Road / B590								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (B4666 Coventry Road (W))	3.00	0.00	Y	Arm J1:5 Left	90.00	100.0 %	1884	1884
J1:1/2 (B4666 Coventry Road (W))	3.00	0.00	Y	Arm J1:7 Ahead	Inf	74.7 %	1868	1868
				Arm J2:1 Right	15.00	25.3 %		
J1:2/1 (B590)	3.50	0.00	Y	Arm J1:6 Left	13.00	100.0 %	1762	1762
J1:2/2 (B590)	3.50	0.00	Y	Arm J1:5 Ahead	Inf	100.0 %	1965	1965
J1:2/3 (B590)	3.50	0.00	Y	Arm J1:5 Ahead	Inf	100.0 %	1965	1965
J1:3/1 (B4667)	3.25	0.00	Y	Arm J1:7 Left	12.00	100.0 %	1724	1724
J1:3/2 (B4667)	3.50	0.00	Y	Arm J2:1 Ahead	Inf	100.0 %	1965	1965
J1:3/3 (B4667)	3.50	0.00	Y	Arm J1:6 Right	20.00	100.0 %	1828	1828
J1:4/1 (B4666 Coventry Road (E))	3.50	0.00	Y	Arm J1:6 Ahead	Inf	100.0 %	1965	1965
				Arm J2:1 Left	20.00	0.0 %		
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:5/2	Infinite Saturation Flow						Inf	Inf
J1:6/1	Infinite Saturation Flow						Inf	Inf
J1:7/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: B590 / Rugby Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (B590 (N))	3.00	0.00	Y	Arm J2:4 Left	12.00	2.9 %	1908	1908
				Arm J3:1 Ahead	Inf	97.1 %		
J2:2/1 (B590 (S))	3.50	0.00	Y	Arm J1:2 Ahead	30.00	100.0 %	1871	1871
J2:2/2 (B590 (S))	3.50	0.00	Y	Arm J1:2 Ahead	30.00	78.0 %	1842	1842
				Arm J2:4 Right	12.00	22.0 %		
J2:3/1 (Rugby Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J2:3/2 (Rugby Road)	3.25	0.00	Y	Arm J1:2 Right	12.00	100.0 %	1724	1724
J2:4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J3: B590 / Brunel Road W								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (B590 (NE))	3.00	0.00	Y	Arm J3:4 Left	14.00	100.0 %	1730	1730
J3:1/2 (B590 (NE))	3.00	0.00	Y	Arm J3:5 Ahead	Inf	100.0 %	1915	1915
J3:2/1 (B590 (SW))	2.50	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1865	1865
J3:2/2 (B590 (SW))	2.50	0.00	Y	Arm J3:4 Right	14.00	100.0 %	1685	1685
J3:3/1 (Brunel Road W)	3.00	0.00	Y	Arm J3:5 Left	12.00	100.0 %	1702	1702
J3:3/2 (Brunel Road W)	3.00	0.00	Y	Arm J2:2 Right	Inf	100.0 %	1915	1915
J3:4/1	Infinite Saturation Flow						Inf	Inf
J3:5/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2030 Do Nothing AM' (FG3: '2030 Do Nothing AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination							
		A	B	C	D	E	F	Tot.
Origin	A	0	307	190	1	9	55	562
	B	279	0	103	7	70	422	881
	C	126	0	0	0	0	1	127
	D	7	58	0	0	14	87	166
	E	2	16	0	1	0	41	60
	F	49	385	0	35	43	0	512
	Tot.	463	766	293	44	136	606	2308

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2030 Do Nothing AM
Junction: J1: B4666 Coventry Road / B590	
J1:1/1 (with short)	562(In) 307(Out)
J1:1/2 (short)	255
J1:2/1 (short)	58
J1:2/2 (with short)	288(In) 230(Out)
J1:2/3	229
J1:3/1 (short)	103
J1:3/2 (with short)	602(In) 499(Out)
J1:3/3	279
J1:4/1	127
J1:5/1	537
J1:5/2	229
J1:6/1	463
J1:7/1	293
Junction: J2: B590 / Rugby Road	
J2:1/1	565
J2:2/1 (with short)	488(In) 252(Out)
J2:2/2 (short)	236
J2:3/1	101
J2:3/2	65
J2:4/1	44
Junction: J3: B590 / Brunel Road W	
J3:1/1 (short)	93
J3:1/2 (with short)	658(In) 565(Out)
J3:2/1 (with short)	512(In) 469(Out)
J3:2/2 (short)	43
J3:3/1 (short)	41
J3:3/2 (with short)	60(In) 19(Out)
J3:4/1	136
J3:5/1	606

Lane Saturation Flows

Junction: J2: B590 / Rugby Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (B590 (N))	3.00	0.00	Y	Arm J2:4 Left	12.00	1.4 %	1912	1912
				Arm J3:1 Ahead	Inf	98.6 %		
J2:2/1 (B590 (S))	3.50	0.00	Y	Arm J1:2 Ahead	30.00	100.0 %	1871	1871
J2:2/2 (B590 (S))	3.50	0.00	Y	Arm J1:2 Ahead	30.00	84.7 %	1851	1851
				Arm J2:4 Right	12.00	15.3 %		
J2:3/1 (Rugby Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J2:3/2 (Rugby Road)	3.25	0.00	Y	Arm J1:2 Right	12.00	100.0 %	1724	1724
J2:4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J3: B590 / Brunel Road W								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (B590 (NE))	3.00	0.00	Y	Arm J3:4 Left	14.00	100.0 %	1730	1730
J3:1/2 (B590 (NE))	3.00	0.00	Y	Arm J3:5 Ahead	Inf	100.0 %	1915	1915
J3:2/1 (B590 (SW))	2.50	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1865	1865
J3:2/2 (B590 (SW))	2.50	0.00	Y	Arm J3:4 Right	14.00	100.0 %	1685	1685
J3:3/1 (Brunel Road W)	3.00	0.00	Y	Arm J3:5 Left	12.00	100.0 %	1702	1702
J3:3/2 (Brunel Road W)	3.00	0.00	Y	Arm J2:2 Right	Inf	100.0 %	1915	1915
J3:4/1	Infinite Saturation Flow						Inf	Inf
J3:5/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2030 Do Nothing PM' (FG4: '2030 Do Nothing PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination							
		A	B	C	D	E	F	Tot.
Origin	A	0	423	187	2	14	49	675
	B	249	0	131	11	90	302	783
	C	170	0	0	0	0	0	170
	D	12	109	0	0	30	102	253
	E	12	108	0	15	0	125	260
	F	48	438	0	60	107	0	653
	Tot.	491	1078	318	88	241	578	2794

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2030 Do Nothing PM
Junction: J1: B4666 Coventry Road / B590	
J1:1/1 (with short)	675(In) 423(Out)
J1:1/2 (short)	252
J1:2/1 (short)	72
J1:2/2 (with short)	388(In) 316(Out)
J1:2/3	339
J1:3/1 (short)	131
J1:3/2 (with short)	534(In) 403(Out)
J1:3/3	249
J1:4/1	170
J1:5/1	739
J1:5/2	339
J1:6/1	491
J1:7/1	318
Junction: J2: B590 / Rugby Road	
J2:1/1	468
J2:2/1 (with short)	681(In) 323(Out)
J2:2/2 (short)	358
J2:3/1	132
J2:3/2	121
J2:4/1	88
Junction: J3: B590 / Brunel Road W	
J3:1/1 (short)	134
J3:1/2 (with short)	587(In) 453(Out)
J3:2/1 (with short)	653(In) 546(Out)
J3:2/2 (short)	107
J3:3/1 (short)	125
J3:3/2 (with short)	260(In) 135(Out)
J3:4/1	241
J3:5/1	578

Full Input Data And Results

Lane Saturation Flows

Junction: J1: B4666 Coventry Road / B590								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (B4666 Coventry Road (W))	3.00	0.00	Y	Arm J1:5 Left	90.00	100.0 %	1884	1884
J1:1/2 (B4666 Coventry Road (W))	3.00	0.00	Y	Arm J1:7 Ahead	Inf	74.2 %	1867	1867
				Arm J2:1 Right	15.00	25.8 %		
J1:2/1 (B590)	3.50	0.00	Y	Arm J1:6 Left	13.00	100.0 %	1762	1762
J1:2/2 (B590)	3.50	0.00	Y	Arm J1:5 Ahead	Inf	100.0 %	1965	1965
J1:2/3 (B590)	3.50	0.00	Y	Arm J1:5 Ahead	Inf	100.0 %	1965	1965
J1:3/1 (B4667)	3.25	0.00	Y	Arm J1:7 Left	12.00	100.0 %	1724	1724
J1:3/2 (B4667)	3.50	0.00	Y	Arm J2:1 Ahead	Inf	100.0 %	1965	1965
J1:3/3 (B4667)	3.50	0.00	Y	Arm J1:6 Right	20.00	100.0 %	1828	1828
J1:4/1 (B4666 Coventry Road (E))	3.50	0.00	Y	Arm J1:6 Ahead	Inf	100.0 %	1965	1965
				Arm J2:1 Left	20.00	0.0 %		
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:5/2	Infinite Saturation Flow						Inf	Inf
J1:6/1	Infinite Saturation Flow						Inf	Inf
J1:7/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: B590 / Rugby Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (B590 (N))	3.00	0.00	Y	Arm J2:4 Left	12.00	2.8 %	1908	1908
				Arm J3:1 Ahead	Inf	97.2 %		
J2:2/1 (B590 (S))	3.50	0.00	Y	Arm J1:2 Ahead	30.00	100.0 %	1871	1871
J2:2/2 (B590 (S))	3.50	0.00	Y	Arm J1:2 Ahead	30.00	79.1 %	1844	1844
				Arm J2:4 Right	12.00	20.9 %		
J2:3/1 (Rugby Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J2:3/2 (Rugby Road)	3.25	0.00	Y	Arm J1:2 Right	12.00	100.0 %	1724	1724
J2:4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J3: B590 / Brunel Road W								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (B590 (NE))	3.00	0.00	Y	Arm J3:4 Left	14.00	100.0 %	1730	1730
J3:1/2 (B590 (NE))	3.00	0.00	Y	Arm J3:5 Ahead	Inf	100.0 %	1915	1915
J3:2/1 (B590 (SW))	2.50	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1865	1865
J3:2/2 (B590 (SW))	2.50	0.00	Y	Arm J3:4 Right	14.00	100.0 %	1685	1685
J3:3/1 (Brunel Road W)	3.00	0.00	Y	Arm J3:5 Left	12.00	100.0 %	1702	1702
J3:3/2 (Brunel Road W)	3.00	0.00	Y	Arm J2:2 Right	Inf	100.0 %	1915	1915
J3:4/1	Infinite Saturation Flow						Inf	Inf
J3:5/1	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2030 Do Something AM' (FG5: '2030 Do Something AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination							
		A	B	C	D	E	F	Tot.
Origin	A	0	321	206	1	11	64	603
	B	279	0	96	7	70	429	881
	C	128	0	0	0	0	1	129
	D	9	56	0	0	14	87	166
	E	2	16	0	1	0	42	61
	F	58	384	0	34	48	0	524
	Tot.	476	777	302	43	143	623	2364

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: 2030 Do Something AM
Junction: J1: B4666 Coventry Road / B590	
J1:1/1 (with short)	603(In) 321(Out)
J1:1/2 (short)	282
J1:2/1 (short)	69
J1:2/2 (with short)	298(In) 229(Out)
J1:2/3	227
J1:3/1 (short)	96
J1:3/2 (with short)	602(In) 506(Out)
J1:3/3	279
J1:4/1	129
J1:5/1	550
J1:5/2	227
J1:6/1	476
J1:7/1	302
Junction: J2: B590 / Rugby Road	
J2:1/1	583
J2:2/1 (with short)	495(In) 262(Out)
J2:2/2 (short)	233
J2:3/1	101
J2:3/2	65
J2:4/1	43
Junction: J3: B590 / Brunel Road W	
J3:1/1 (short)	95
J3:1/2 (with short)	676(In) 581(Out)
J3:2/1 (with short)	524(In) 476(Out)
J3:2/2 (short)	48
J3:3/1 (short)	42
J3:3/2 (with short)	61(In) 19(Out)
J3:4/1	143
J3:5/1	623

Lane Saturation Flows

Junction: J2: B590 / Rugby Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (B590 (N))	3.00	0.00	Y	Arm J2:4 Left	12.00	1.4 %	1912	1912
				Arm J3:1 Ahead	Inf	98.6 %		
J2:2/1 (B590 (S))	3.50	0.00	Y	Arm J1:2 Ahead	30.00	100.0 %	1871	1871
J2:2/2 (B590 (S))	3.50	0.00	Y	Arm J1:2 Ahead	30.00	85.0 %	1852	1852
				Arm J2:4 Right	12.00	15.0 %		
J2:3/1 (Rugby Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J2:3/2 (Rugby Road)	3.25	0.00	Y	Arm J1:2 Right	12.00	100.0 %	1724	1724
J2:4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J3: B590 / Brunel Road W								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (B590 (NE))	3.00	0.00	Y	Arm J3:4 Left	14.00	100.0 %	1730	1730
J3:1/2 (B590 (NE))	3.00	0.00	Y	Arm J3:5 Ahead	Inf	100.0 %	1915	1915
J3:2/1 (B590 (SW))	2.50	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1865	1865
J3:2/2 (B590 (SW))	2.50	0.00	Y	Arm J3:4 Right	14.00	100.0 %	1685	1685
J3:3/1 (Brunel Road W)	3.00	0.00	Y	Arm J3:5 Left	12.00	100.0 %	1702	1702
J3:3/2 (Brunel Road W)	3.00	0.00	Y	Arm J2:2 Right	Inf	100.0 %	1915	1915
J3:4/1	Infinite Saturation Flow						Inf	Inf
J3:5/1	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2030 Do Something PM' (FG6: '2030 Do Something PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination							
		A	B	C	D	E	F	Tot.
Origin	A	0	424	202	2	17	58	703
	B	267	0	120	11	90	308	796
	C	180	0	0	0	0	0	180
	D	15	106	0	0	30	103	254
	E	15	108	0	15	0	125	263
	F	62	444	0	61	105	0	672
	Tot.	539	1082	322	89	242	594	2868

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2030 Do Something PM
Junction: J1: B4666 Coventry Road / B590	
J1:1/1 (with short)	703(In) 424(Out)
J1:1/2 (short)	279
J1:2/1 (short)	92
J1:2/2 (with short)	423(In) 331(Out)
J1:2/3	327
J1:3/1 (short)	120
J1:3/2 (with short)	529(In) 409(Out)
J1:3/3	267
J1:4/1	180
J1:5/1	755
J1:5/2	327
J1:6/1	539
J1:7/1	322
Junction: J2: B590 / Rugby Road	
J2:1/1	486
J2:2/1 (with short)	705(In) 355(Out)
J2:2/2 (short)	350
J2:3/1	133
J2:3/2	121
J2:4/1	89
Junction: J3: B590 / Brunel Road W	
J3:1/1 (short)	137
J3:1/2 (with short)	606(In) 469(Out)
J3:2/1 (with short)	672(In) 567(Out)
J3:2/2 (short)	105
J3:3/1 (short)	125
J3:3/2 (with short)	263(In) 138(Out)
J3:4/1	242
J3:5/1	594

Lane Saturation Flows

Junction: J1: B4666 Coventry Road / B590								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (B4666 Coventry Road (W))	3.00	0.00	Y	Arm J1:5 Left	90.00	100.0 %	1884	1884
J1:1/2 (B4666 Coventry Road (W))	3.00	0.00	Y	Arm J1:7 Ahead	Inf	72.4 %	1864	1864
				Arm J2:1 Right	15.00	27.6 %		
J1:2/1 (B590)	3.50	0.00	Y	Arm J1:6 Left	13.00	100.0 %	1762	1762
J1:2/2 (B590)	3.50	0.00	Y	Arm J1:5 Ahead	Inf	100.0 %	1965	1965
J1:2/3 (B590)	3.50	0.00	Y	Arm J1:5 Ahead	Inf	100.0 %	1965	1965
J1:3/1 (B4667)	3.25	0.00	Y	Arm J1:7 Left	12.00	100.0 %	1724	1724
J1:3/2 (B4667)	3.50	0.00	Y	Arm J2:1 Ahead	Inf	100.0 %	1965	1965
J1:3/3 (B4667)	3.50	0.00	Y	Arm J1:6 Right	20.00	100.0 %	1828	1828
J1:4/1 (B4666 Coventry Road (E))	3.50	0.00	Y	Arm J1:6 Ahead	Inf	100.0 %	1965	1965
				Arm J2:1 Left	20.00	0.0 %		
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:5/2	Infinite Saturation Flow						Inf	Inf
J1:6/1	Infinite Saturation Flow						Inf	Inf
J1:7/1	Infinite Saturation Flow						Inf	Inf

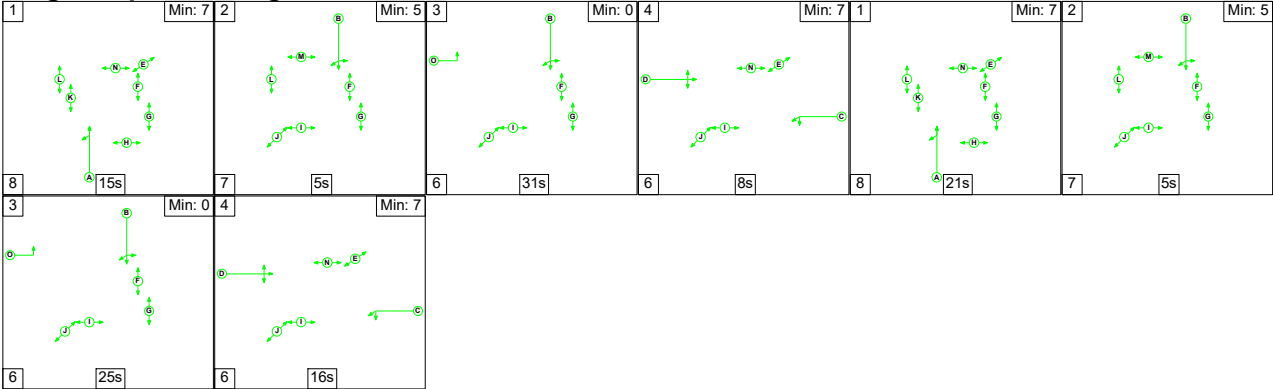
Junction: J2: B590 / Rugby Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (B590 (N))	3.00	0.00	Y	Arm J2:4 Left	12.00	2.7 %	1909	1909
				Arm J3:1 Ahead	Inf	97.3 %		
J2:2/1 (B590 (S))	3.50	0.00	Y	Arm J1:2 Ahead	30.00	100.0 %	1871	1871
J2:2/2 (B590 (S))	3.50	0.00	Y	Arm J1:2 Ahead	30.00	78.3 %	1843	1843
				Arm J2:4 Right	12.00	21.7 %		
J2:3/1 (Rugby Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J2:3/2 (Rugby Road)	3.25	0.00	Y	Arm J1:2 Right	12.00	100.0 %	1724	1724
J2:4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J3: B590 / Brunel Road W								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (B590 (NE))	3.00	0.00	Y	Arm J3:4 Left	14.00	100.0 %	1730	1730
J3:1/2 (B590 (NE))	3.00	0.00	Y	Arm J3:5 Ahead	Inf	100.0 %	1915	1915
J3:2/1 (B590 (SW))	2.50	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1865	1865
J3:2/2 (B590 (SW))	2.50	0.00	Y	Arm J3:4 Right	14.00	100.0 %	1685	1685
J3:3/1 (Brunel Road W)	3.00	0.00	Y	Arm J3:5 Left	12.00	100.0 %	1702	1702
J3:3/2 (Brunel Road W)	3.00	0.00	Y	Arm J2:2 Right	Inf	100.0 %	1915	1915
J3:4/1	Infinite Saturation Flow						Inf	Inf
J3:5/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2024 Do Nothing AM' (FG1: '2024 Do Nothing AM', Plan 1: 'Network Control Plan 1')
C1

Stage Sequence Diagram



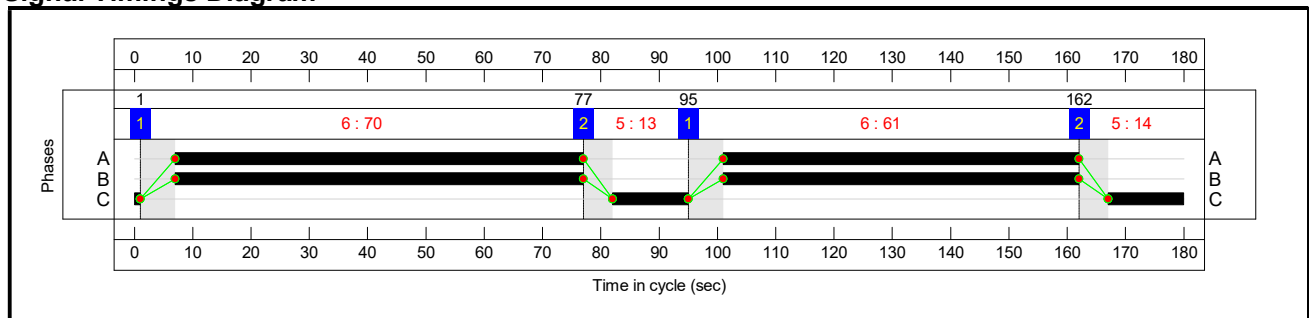
Stage Timings

Stage	1	2	3	4	1	2	3	4
Duration	15	5	31	8	21	5	25	16
Change Point	0	23	35	72	86	115	127	158

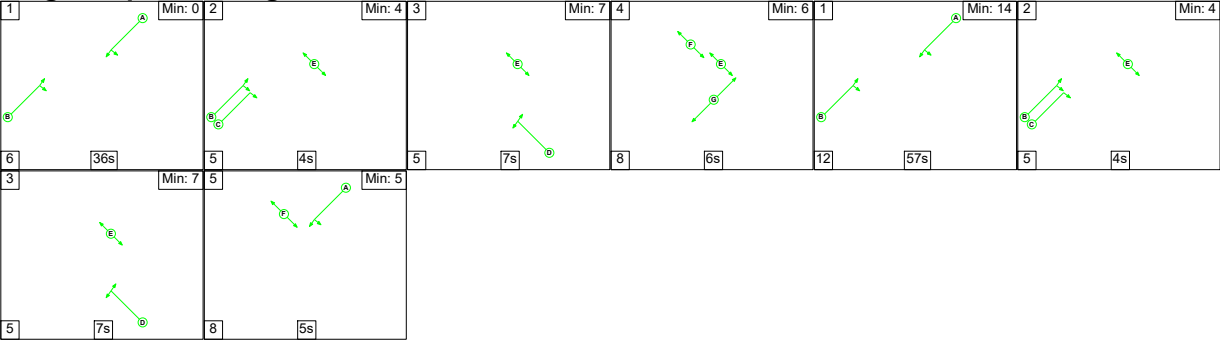
Signal Timings Diagram



Signal Timings Diagram



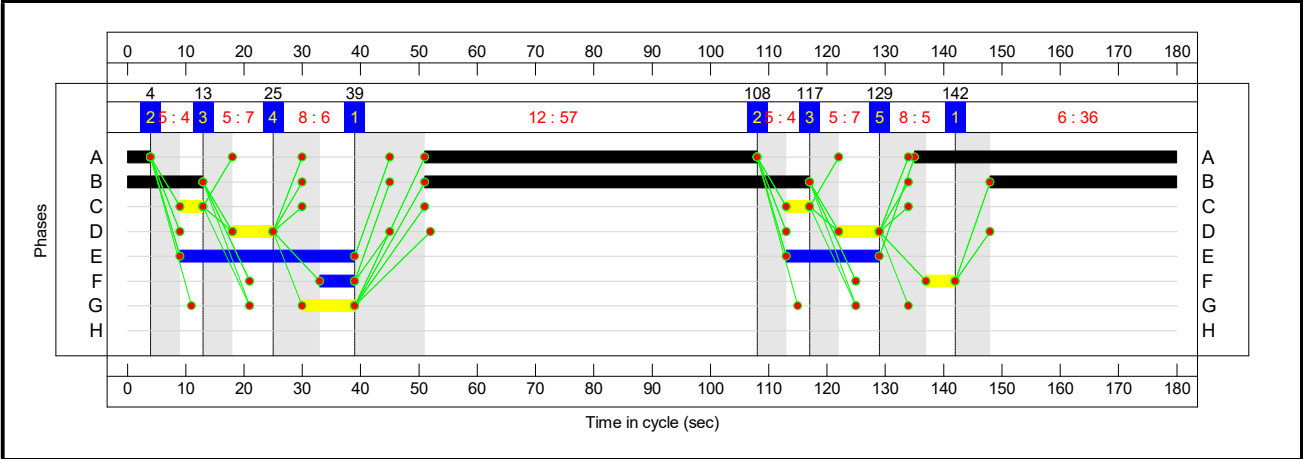
C3
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	1	2	3	5
Duration	36	4	7	6	57	4	7	5
Change Point	142	4	13	25	39	108	117	129

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	63.0%
J1: B4666 Coventry Road / B590	-	-	N/A	-	-		-	-	-	-	-	-	63.0%
1/1+1/2	B4666 Coventry Road (W) Left Ahead Right	U+O	N/A	N/A	C1:D	C1:O	2	92:24	68	460	1884:1879	459+271	63.0 : 63.0%
2/2+2/1	B590 Ahead Left	U	N/A	N/A	C1:A		2	36	-	281	1965:1762	386+68	61.9 : 61.9%
2/3	B590 Ahead	U	N/A	N/A	C1:A		2	36	-	225	1965	415	54.2%
3/2+3/1	B4667 Left Ahead	U	N/A	N/A	C1:B		2	80	-	558	1965:1724	683+203	62.9 : 62.9%
3/3	B4667 Right	U	N/A	N/A	C1:B		2	80	-	303	1828	833	36.4%
4/1	B4666 Coventry Road (E) Ahead Left	U	N/A	N/A	C1:C		2	24	-	122	1964	284	43.0%
5/1		U	N/A	N/A	-		-	-	-	528	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	225	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	466	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	266	Inf	Inf	0.0%
J2: B590 / Rugby Road	-	-	N/A	-	-		-	-	-	-	-	-	34.1%
1/1	B590 (N) Left Ahead	U	N/A	N/A	C2:A		2	131	-	464	1911	1412	32.9%
2/1+2/2	B590 (S) Ahead Right	U+O	N/A	N/A	C2:B		2	131	-	472	1871:1850	767+670	32.8 : 32.8%
3/1	Rugby Road Left	U	N/A	N/A	C2:C		2	27	-	99	1800	290	34.1%
3/2	Rugby Road Right	U	N/A	N/A	C2:C		2	27	-	70	1724	278	25.2%
4/1		U	N/A	N/A	-		-	-	-	44	Inf	Inf	0.0%

Full Input Data And Results

J3: B590 / Brunel Road W	-	-	N/A	-	-		-	-	-	-	-	-	45.4%
1/2+1/1	B590 (NE) Left Ahead	U	N/A	N/A	C3:A		2	106	-	555	1915:1730	1072+152	45.4 : 45.4%
2/1+2/2	B590 (SW) Ahead Right	U+O	N/A	N/A	C3:B	C3:C	2	111	8	498	1865:1685	1077+102	42.2 : 42.2%
3/2+3/1	Brunel Road W Right Left	U	N/A	N/A	C3:D		2	14	-	50	1915:1702	78+151	21.8 : 21.8%
4/1		U	N/A	N/A	-		-	-	-	112	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	519	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	106	3	2	15.4	5.6	0.1	21.1	-	-	-	-
J1: B4666 Coventry Road / B590	-	-	33	0	0	11.0	3.7	0.0	14.7	-	-	-	-
1/1+1/2	460	460	33	0	0	2.7	0.8	0.0	3.6	27.9	4.3	0.8	5.2
2/2+2/1	281	281	-	-	-	1.6	0.8	-	2.4	30.7	5.5	0.8	6.3
2/3	225	225	-	-	-	1.3	0.6	-	1.9	30.7	4.2	0.6	4.8
3/2+3/1	558	558	-	-	-	2.8	0.8	-	3.7	23.6	10.1	0.8	10.9
3/3	303	303	-	-	-	1.3	0.3	-	1.6	19.4	5.0	0.3	5.3
4/1	122	122	-	-	-	1.2	0.4	-	1.6	46.2	2.8	0.4	3.2
5/1	528	528	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	225	225	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	466	466	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	266	266	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: B590 / Rugby Road	-	-	35	0	1	2.2	0.9	0.0	3.1	-	-	-	-
1/1	464	464	-	-	-	0.1	0.2	-	0.4	2.9	1.0	0.2	1.3
2/1+2/2	472	472	35	0	1	0.5	0.2	0.0	0.7	5.5	10.7	0.2	10.9
3/1	99	99	-	-	-	0.9	0.3	-	1.2	43.0	2.3	0.3	2.6
3/2	70	70	-	-	-	0.6	0.2	-	0.8	41.8	1.6	0.2	1.8
4/1	44	44	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: B590 / Brunel Road W	-	-	38	3	1	2.2	0.9	0.1	3.2	-	-	-	-
1/2+1/1	555	555	-	-	-	0.6	0.4	-	1.0	6.3	8.3	0.4	8.7
2/1+2/2	498	498	38	3	1	1.1	0.4	0.1	1.6	11.3	6.1	0.4	6.4
3/2+3/1	50	50	-	-	-	0.5	0.1	-	0.7	49.2	0.9	0.1	1.0
4/1	112	112	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	519	519	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

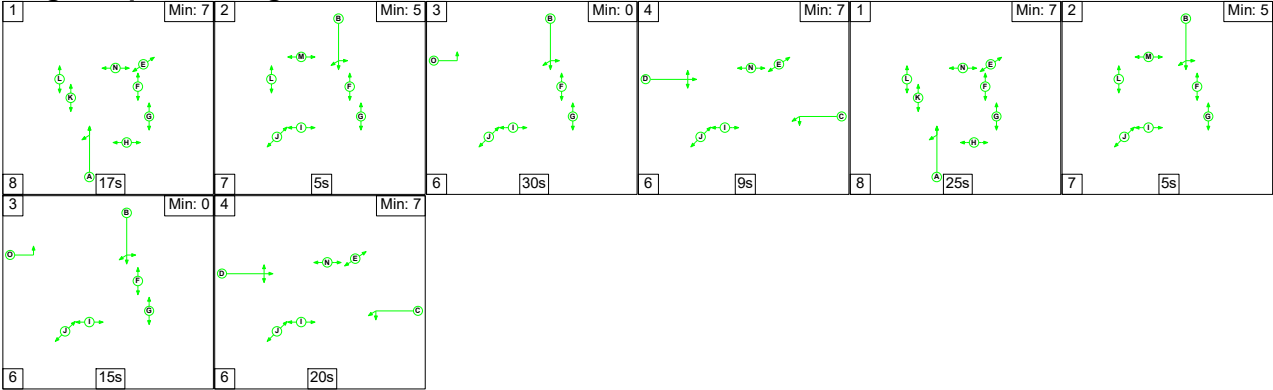
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	42.8	Total Delay for Signalled Lanes (pcuHr):	14.75	Cycle Time (s):	180
C2	PRC for Signalled Lanes (%):	163.6	Total Delay for Signalled Lanes (pcuHr):	3.09	Cycle Time (s):	180
C3	PRC for Signalled Lanes (%):	98.5	Total Delay for Signalled Lanes (pcuHr):	3.22	Cycle Time (s):	180
	PRC Over All Lanes (%):	42.8	Total Delay Over All Lanes(pcuHr):	21.05		

Full Input Data And Results
Scenario 2: '2024 Do Nothing PM' (FG2: '2024 Do Nothing PM', Plan 1: 'Network Control Plan 1')

C1

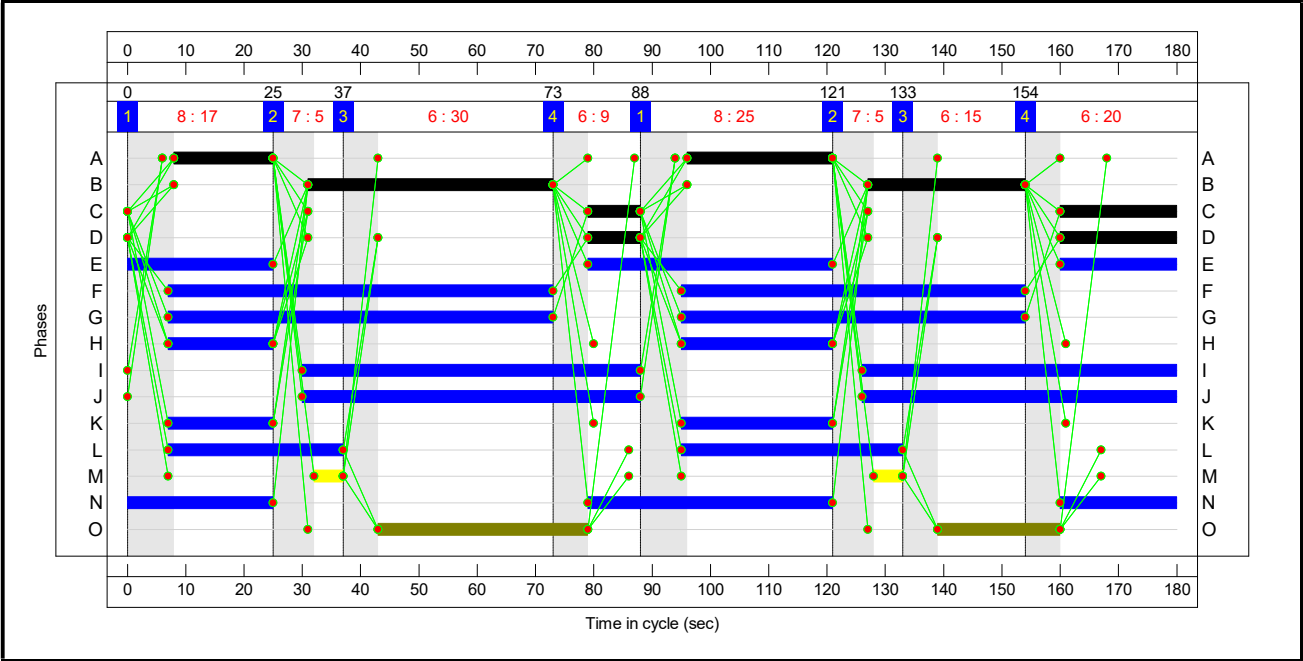
Stage Sequence Diagram



Stage Timings

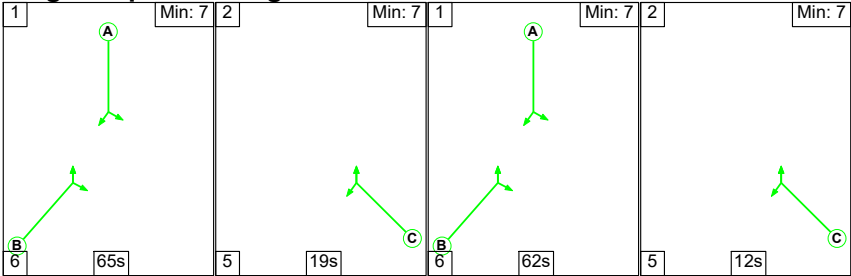
Stage	1	2	3	4	1	2	3	4
Duration	17	5	30	9	25	5	15	20
Change Point	0	25	37	73	88	121	133	154

Signal Timings Diagram



C2

Stage Sequence Diagram

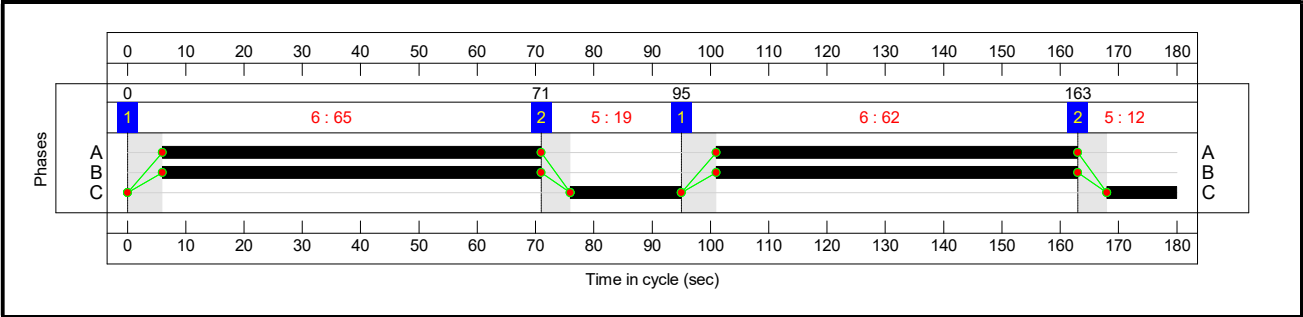


Full Input Data And Results

Stage Timings

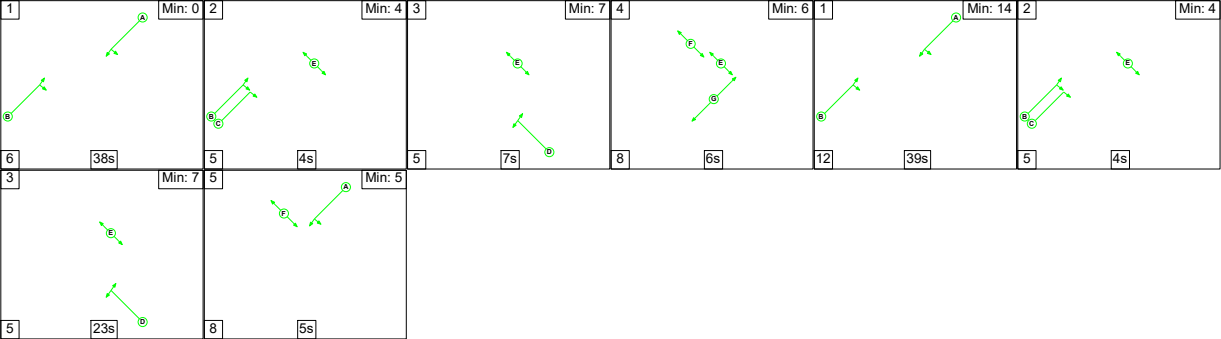
Stage	1	2	1	2
Duration	65	19	62	12
Change Point	0	71	95	163

Signal Timings Diagram



C3

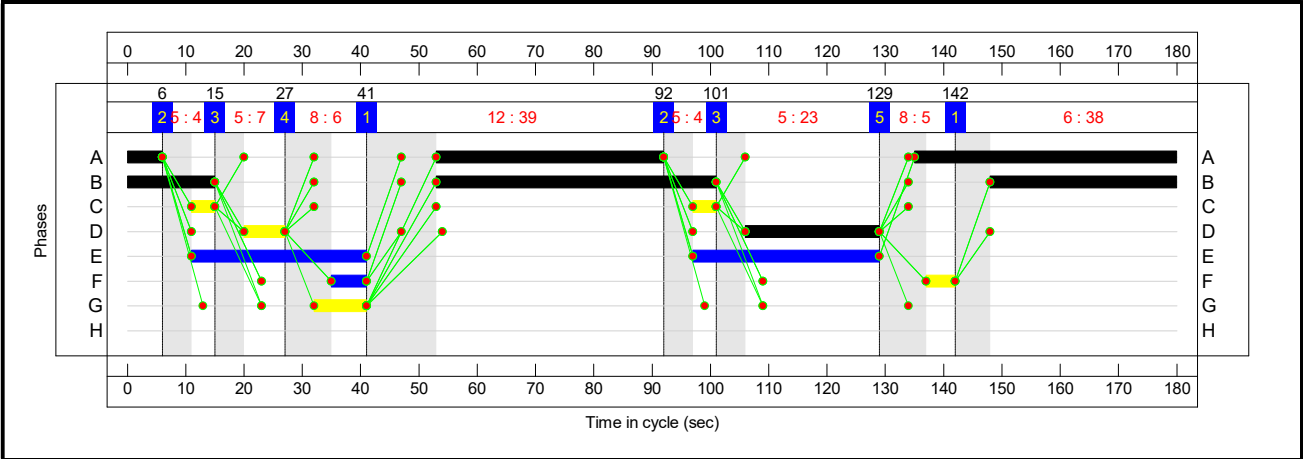
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	1	2	3	5
Duration	38	4	7	6	39	4	23	5
Change Point	142	6	15	27	41	92	101	129

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	68.7%
J1: B4666 Coventry Road / B590	-	-	N/A	-	-		-	-	-	-	-	-	68.7%
1/1+1/2	B4666 Coventry Road (W) Left Ahead Right	U+O	N/A	N/A	C1:D	C1:O	2	86:29	57	634	1884:1868	601+322	68.7 : 68.7%
2/2+2/1	B590 Ahead Left	U	N/A	N/A	C1:A		2	42	-	358	1965:1762	433+96	67.7 : 67.7%
2/3	B590 Ahead	U	N/A	N/A	C1:A		2	42	-	306	1965	480	63.7%
3/2+3/1	B4667 Left Ahead	U	N/A	N/A	C1:B		2	69	-	525	1965:1724	579+192	68.1 : 68.1%
3/3	B4667 Right	U	N/A	N/A	C1:B		2	69	-	273	1828	721	37.9%
4/1	B4666 Coventry Road (E) Ahead Left	U	N/A	N/A	C1:C		2	29	-	166	1965	338	49.1%
5/1		U	N/A	N/A	-		-	-	-	706	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	306	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	504	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	296	Inf	Inf	0.0%
J2: B590 / Rugby Road	-	-	N/A	-	-		-	-	-	-	-	-	51.4%
1/1	B590 (N) Left Ahead	U	N/A	N/A	C2:A		2	127	-	450	1908	1367	32.9%
2/1+2/2	B590 (S) Ahead Right	U+O	N/A	N/A	C2:B		2	127	-	622	1871:1842	539+671	51.4 : 51.4%
3/1	Rugby Road Left	U	N/A	N/A	C2:C		2	31	-	135	1800	330	40.9%
3/2	Rugby Road Right	U	N/A	N/A	C2:C		2	31	-	118	1724	316	37.3%
4/1		U	N/A	N/A	-		-	-	-	89	Inf	Inf	0.0%
J3: B590 / Brunel Road W	-	-	N/A	-	-		-	-	-	-	-	-	57.6%

Full Input Data And Results

1/2+1/1	B590 (NE) Left Ahead	U	N/A	N/A	C3:A		2	90	-	572	1915:1730	875+252	50.8 : 50.8%
2/1+2/2	B590 (SW) Ahead Right	U+O	N/A	N/A	C3:B	C3:C	2	95	8	597	1865:1685	870+167	57.6 : 57.6%
3/2+3/1	Brunel Road W Right Left	U	N/A	N/A	C3:D		2	30	-	236	1915:1702	239+228	50.5 : 50.5%
4/1		U	N/A	N/A	-		-	-	-	224	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	559	Inf	Inf	0.0%

Full Input Data And Results

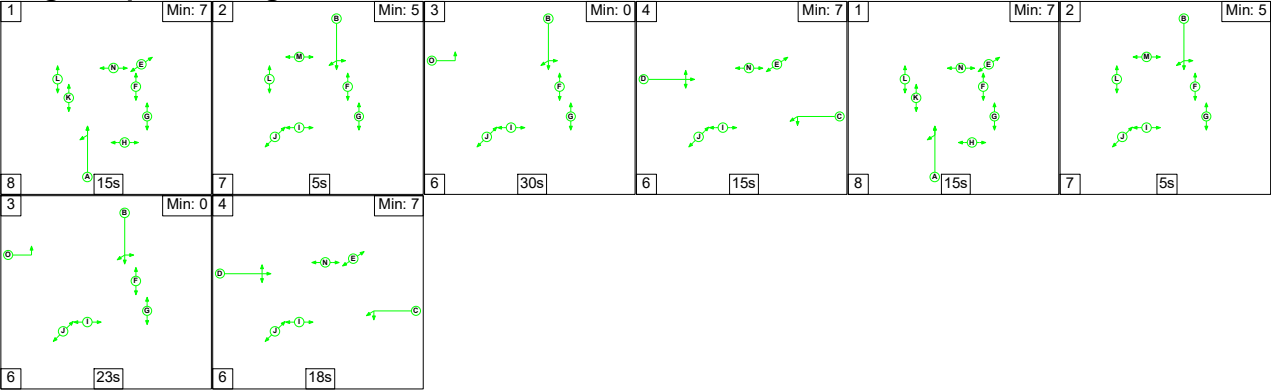
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	204	11	13	22.6	8.0	0.3	30.8	-	-	-	-
J1: B4666 Coventry Road / B590	-	-	48	0	8	13.8	4.8	0.1	18.7	-	-	-	-
1/1+1/2	634	634	48	0	8	4.0	1.1	0.1	5.1	29.2	7.3	1.1	8.4
2/2+2/1	358	358	-	-	-	1.6	1.0	-	2.7	26.7	7.4	1.0	8.5
2/3	306	306	-	-	-	2.0	0.9	-	2.8	33.2	5.6	0.9	6.4
3/2+3/1	525	525	-	-	-	3.2	1.1	-	4.3	29.2	10.3	1.1	11.3
3/3	273	273	-	-	-	1.5	0.3	-	1.8	23.4	4.9	0.3	5.2
4/1	166	166	-	-	-	1.6	0.5	-	2.0	44.1	3.9	0.5	4.4
5/1	706	706	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	306	306	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	504	504	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	296	296	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: B590 / Rugby Road	-	-	74	0	2	3.5	1.4	0.0	5.0	-	-	-	-
1/1	450	450	-	-	-	0.3	0.2	-	0.5	4.1	2.1	0.2	2.4
2/1+2/2	622	622	74	0	2	1.0	0.5	0.0	1.5	8.9	11.7	0.5	12.3
3/1	135	135	-	-	-	1.2	0.3	-	1.6	41.7	3.0	0.3	3.4
3/2	118	118	-	-	-	1.1	0.3	-	1.4	41.3	2.6	0.3	2.9
4/1	89	89	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: B590 / Brunel Road W	-	-	82	11	3	5.2	1.7	0.2	7.2	-	-	-	-
1/2+1/1	572	572	-	-	-	1.0	0.5	-	1.5	9.3	7.1	0.5	7.6
2/1+2/2	597	597	82	11	3	2.1	0.7	0.2	3.0	18.3	9.3	0.7	9.9
3/2+3/1	236	236	-	-	-	2.1	0.5	-	2.6	40.4	2.8	0.5	3.3
4/1	224	224	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	559	559	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	31.0	Total Delay for Signalled Lanes (pcuHr):	18.69	Cycle Time (s):	180
C2	PRC for Signalled Lanes (%):	75.0	Total Delay for Signalled Lanes (pcuHr):	4.95	Cycle Time (s):	180
C3	PRC for Signalled Lanes (%):	56.3	Total Delay for Signalled Lanes (pcuHr):	7.16	Cycle Time (s):	180
	PRC Over All Lanes (%):	31.0	Total Delay Over All Lanes(pcuHr):	30.81		

Full Input Data And Results
Scenario 3: '2030 Do Nothing AM' (FG3: '2030 Do Nothing AM', Plan 1: 'Network Control Plan 1')

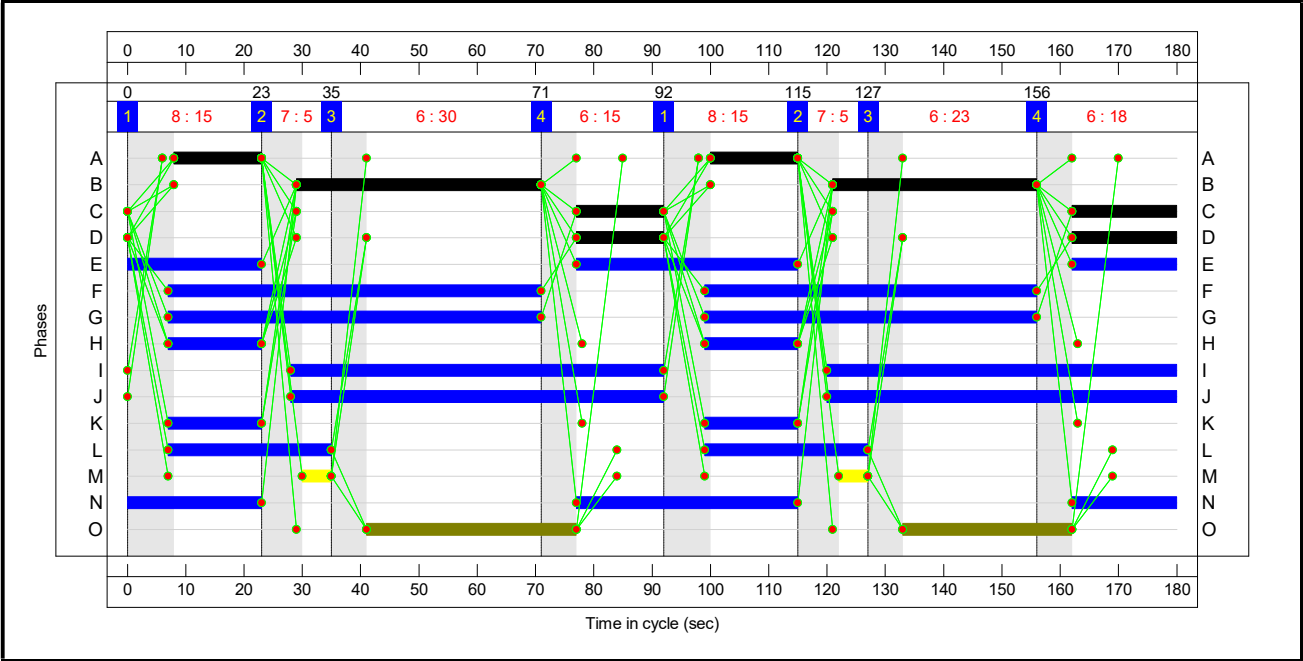
C1
Stage Sequence Diagram



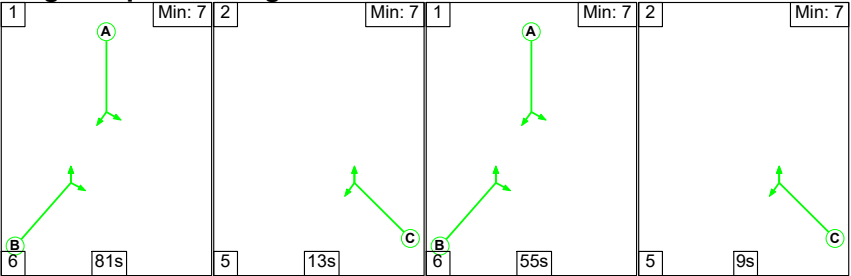
Stage Timings

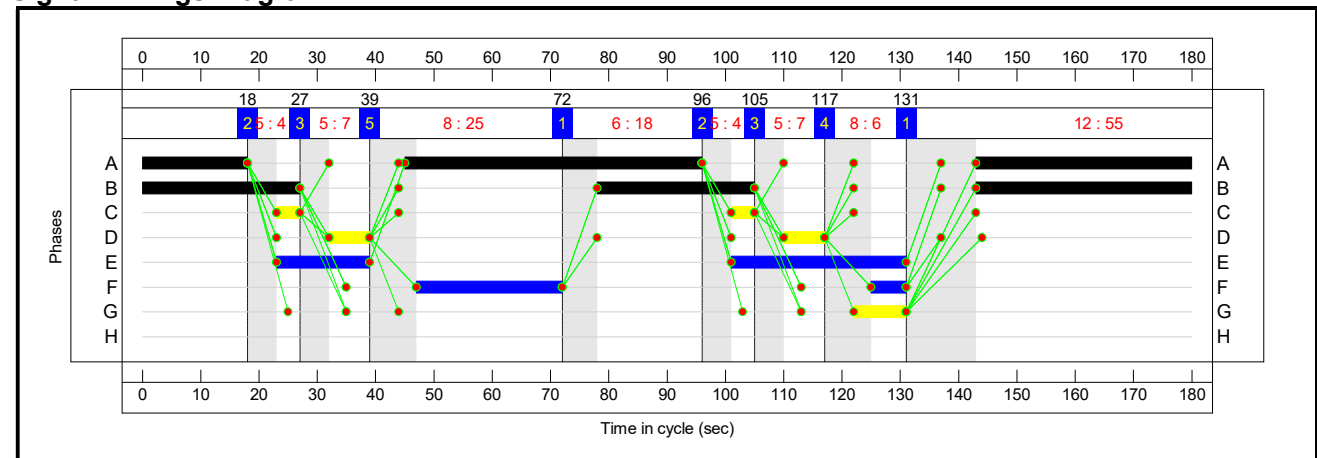
Stage	1	2	3	4	1	2	3	4
Duration	15	5	30	15	15	5	23	18
Change Point	0	23	35	71	92	115	127	156

Signal Timings Diagram



C2
Stage Sequence Diagram





Full Input Data And Results
Network Layout Diagram

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	70.7%
J1: B4666 Coventry Road / B590	-	-	N/A	-	-		-	-	-	-	-	-	70.7%
1/1+1/2	B4666 Coventry Road (W) Left Ahead Right	U+O	N/A	N/A	C1:D	C1:O	2	98:33	65	562	1884:1867	437+363	70.2 : 70.2%
2/2+2/1	B590 Ahead Left	U	N/A	N/A	C1:A		2	30	-	288	1965:1762	325+82	70.7 : 70.7%
2/3	B590 Ahead	U	N/A	N/A	C1:A		2	30	-	229	1965	349	65.6%
3/2+3/1	B4667 Left Ahead	U	N/A	N/A	C1:B		2	77	-	602	1965:1724	707+146	70.5 : 70.5%
3/3	B4667 Right	U	N/A	N/A	C1:B		2	77	-	279	1828	802	34.8%
4/1	B4666 Coventry Road (E) Ahead Left	U	N/A	N/A	C1:C		2	33	-	127	1964	382	33.3%
5/1		U	N/A	N/A	-		-	-	-	537	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	229	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	463	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	293	Inf	Inf	0.0%
J2: B590 / Rugby Road	-	-	N/A	-	-		-	-	-	-	-	-	42.1%
1/1	B590 (N) Left Ahead	U	N/A	N/A	C2:A		2	136	-	565	1912	1466	38.5%
2/1+2/2	B590 (S) Ahead Right	U+O	N/A	N/A	C2:B		2	136	-	488	1871:1851	668+626	37.7 : 37.7%
3/1	Rugby Road Left	U	N/A	N/A	C2:C		2	22	-	101	1800	240	42.1%
3/2	Rugby Road Right	U	N/A	N/A	C2:C		2	22	-	65	1724	230	28.3%
4/1		U	N/A	N/A	-		-	-	-	44	Inf	Inf	0.0%

Full Input Data And Results

J3: B590 / Brunel Road W	-	-	N/A	-	-		-	-	-	-	-	-	53.3%
1/2+1/1	B590 (NE) Left Ahead	U	N/A	N/A	C3:A		2	106	-	658	1915:1730	1060+174	53.3 : 53.3%
2/1+2/2	B590 (SW) Ahead Right	U+O	N/A	N/A	C3:B	C3:C	2	91	8	512	1865:1685	891+82	52.6 : 52.6%
3/2+3/1	Brunel Road W Right Left	U	N/A	N/A	C3:D		2	14	-	60	1915:1702	70+151	27.1 : 27.1%
4/1		U	N/A	N/A	-		-	-	-	136	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	606	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	138	5	2	17.5	7.5	0.1	25.1	-	-	-	-
J1: B4666 Coventry Road / B590	-	-	65	0	0	12.0	5.0	0.0	17.0	-	-	-	-
1/1+1/2	562	562	65	0	0	3.3	1.2	0.0	4.5	28.9	6.2	1.2	7.4
2/2+2/1	288	288	-	-	-	1.5	1.2	-	2.7	33.8	5.4	1.2	6.6
2/3	229	229	-	-	-	1.4	0.9	-	2.3	36.1	5.4	0.9	6.3
3/2+3/1	602	602	-	-	-	3.4	1.2	-	4.6	27.3	12.1	1.2	13.3
3/3	279	279	-	-	-	1.3	0.3	-	1.6	20.2	4.7	0.3	5.0
4/1	127	127	-	-	-	1.1	0.2	-	1.4	38.4	2.9	0.2	3.1
5/1	537	537	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	229	229	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	463	463	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	293	293	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: B590 / Rugby Road	-	-	36	0	0	2.2	1.2	0.0	3.4	-	-	-	-
1/1	565	565	-	-	-	0.3	0.3	-	0.6	3.7	2.3	0.3	2.6
2/1+2/2	488	488	36	0	0	0.2	0.3	0.0	0.5	4.0	11.2	0.3	11.5
3/1	101	101	-	-	-	1.0	0.4	-	1.4	49.7	2.7	0.4	3.1
3/2	65	65	-	-	-	0.7	0.2	-	0.8	47.0	1.7	0.2	1.9
4/1	44	44	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: B590 / Brunel Road W	-	-	37	5	1	3.4	1.3	0.1	4.7	-	-	-	-
1/2+1/1	658	658	-	-	-	0.7	0.6	-	1.3	7.0	9.9	0.6	10.4
2/1+2/2	512	512	37	5	1	2.0	0.6	0.1	2.6	18.5	8.9	0.6	9.4
3/2+3/1	60	60	-	-	-	0.6	0.2	-	0.8	50.1	1.1	0.2	1.3
4/1	136	136	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	606	606	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

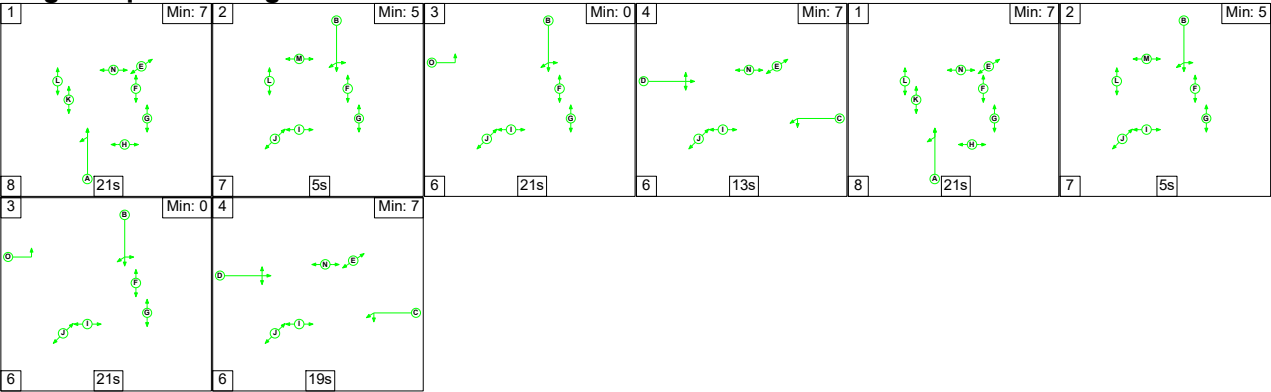
C1	PRC for Signalled Lanes (%):	27.3	Total Delay for Signalled Lanes (pcuHr):	16.99	Cycle Time (s):	180
C2	PRC for Signalled Lanes (%):	113.9	Total Delay for Signalled Lanes (pcuHr):	3.37	Cycle Time (s):	180
C3	PRC for Signalled Lanes (%):	68.8	Total Delay for Signalled Lanes (pcuHr):	4.74	Cycle Time (s):	180
	PRC Over All Lanes (%):	27.3	Total Delay Over All Lanes(pcuHr):	25.10		

Full Input Data And Results

Scenario 4: '2030 Do Nothing PM' (FG4: '2030 Do Nothing PM', Plan 1: 'Network Control Plan 1')

C1

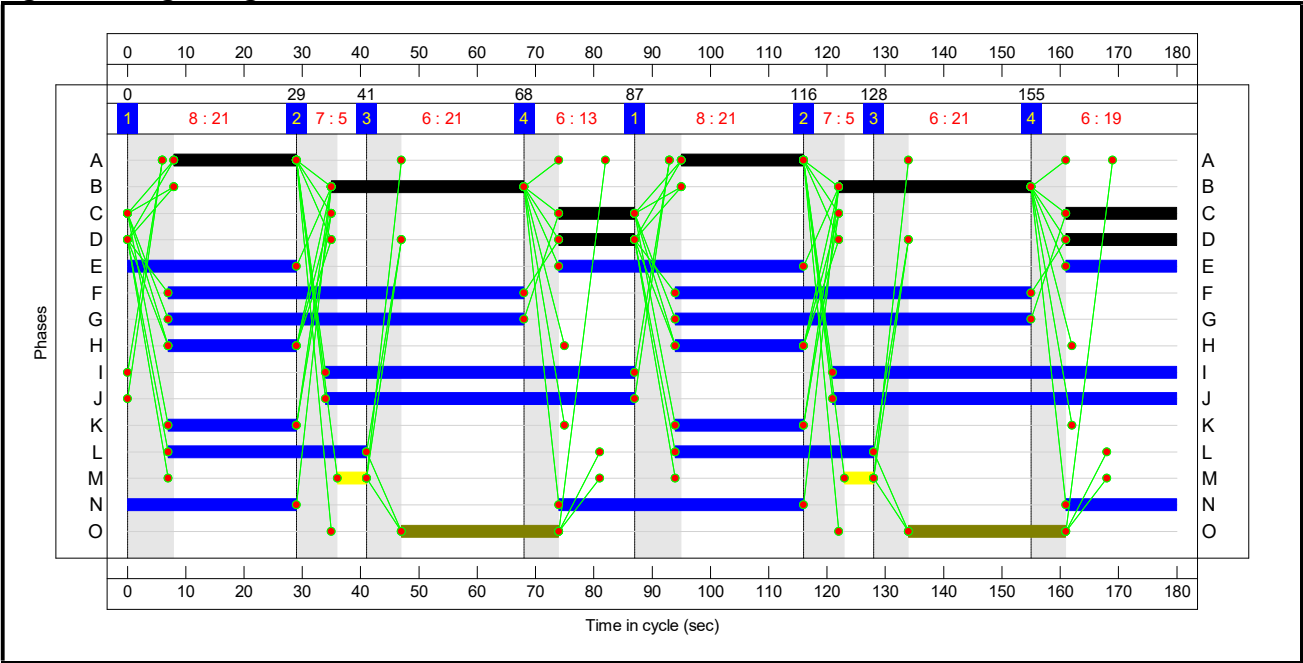
Stage Sequence Diagram



Stage Timings

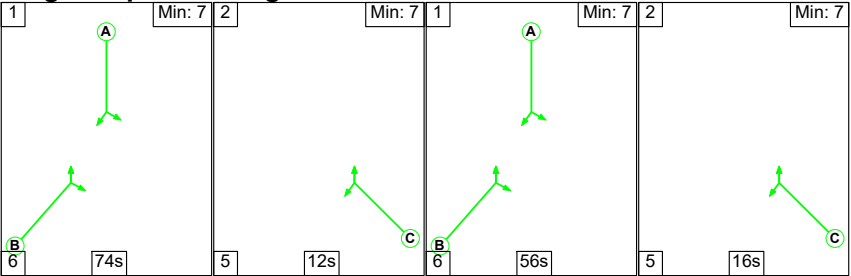
Stage	1	2	3	4	1	2	3	4
Duration	21	5	21	13	21	5	21	19
Change Point	0	29	41	68	87	116	128	155

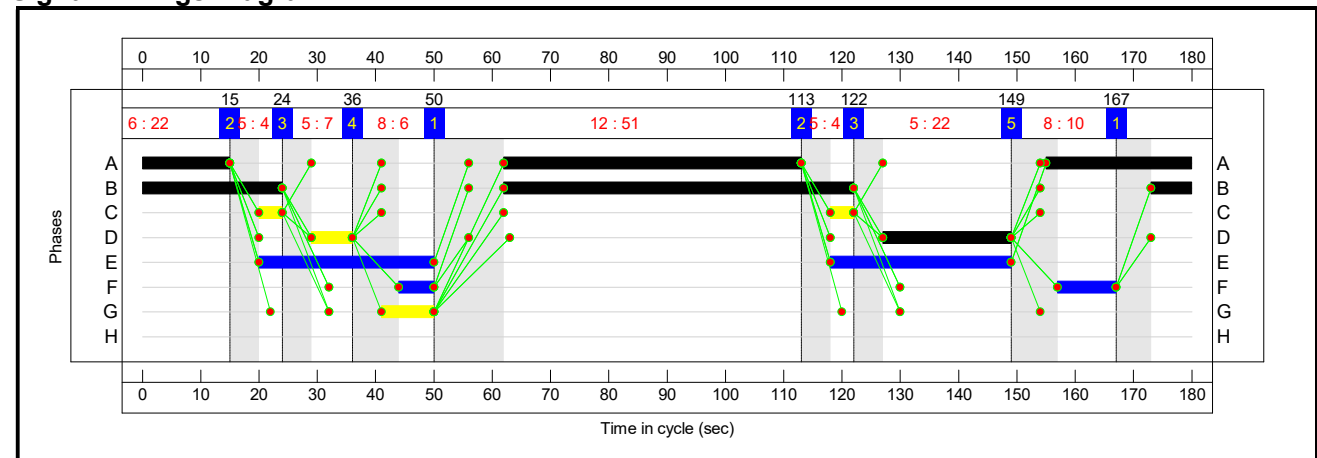
Signal Timings Diagram



C2

Stage Sequence Diagram





Full Input Data And Results
Network Layout Diagram

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	73.2%
J1: B4666 Coventry Road / B590	-	-	N/A	-	-		-	-	-	-	-	-	73.2%
1/1+1/2	B4666 Coventry Road (W) Left Ahead Right	U+O	N/A	N/A	C1:D	C1:O	2	86:32	54	675	1884:1867	589+351	71.8 : 71.8%
2/2+2/1	B590 Ahead Left	U	N/A	N/A	C1:A		2	42	-	388	1965:1762	432+98	73.2 : 73.2%
2/3	B590 Ahead	U	N/A	N/A	C1:A		2	42	-	339	1965	480	70.6%
3/2+3/1	B4667 Left Ahead	U	N/A	N/A	C1:B		2	66	-	534	1965:1724	558+181	72.2 : 72.2%
3/3	B4667 Right	U	N/A	N/A	C1:B		2	66	-	249	1828	691	36.1%
4/1	B4666 Coventry Road (E) Ahead Left	U	N/A	N/A	C1:C		2	32	-	170	1965	371	45.8%
5/1		U	N/A	N/A	-		-	-	-	739	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	339	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	491	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	318	Inf	Inf	0.0%
J2: B590 / Rugby Road	-	-	N/A	-	-		-	-	-	-	-	-	56.0%
1/1	B590 (N) Left Ahead	U	N/A	N/A	C2:A		2	130	-	468	1908	1399	33.4%
2/1+2/2	B590 (S) Ahead Right	U+O	N/A	N/A	C2:B		2	130	-	681	1871:1844	577+639	56.0 : 56.0%
3/1	Rugby Road Left	U	N/A	N/A	C2:C		2	28	-	132	1800	300	44.0%
3/2	Rugby Road Right	U	N/A	N/A	C2:C		2	28	-	121	1724	287	42.1%
4/1		U	N/A	N/A	-		-	-	-	88	Inf	Inf	0.0%
J3: B590 / Brunel Road W	-	-	N/A	-	-		-	-	-	-	-	-	65.5%

Full Input Data And Results

1/2+1/1	B590 (NE) Left Ahead	U	N/A	N/A	C3:A		2	91	-	587	1915:1730	881+261	51.4 : 51.4%
2/1+2/2	B590 (SW) Ahead Right	U+O	N/A	N/A	C3:B	C3:C	2	91	8	653	1865:1685	833+163	65.5 : 65.5%
3/2+3/1	Brunel Road W Right Left	U	N/A	N/A	C3:D		2	29	-	260	1915:1702	236+218	57.3 : 57.3%
4/1		U	N/A	N/A	-		-	-	-	241	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	578	Inf	Inf	0.0%

Full Input Data And Results

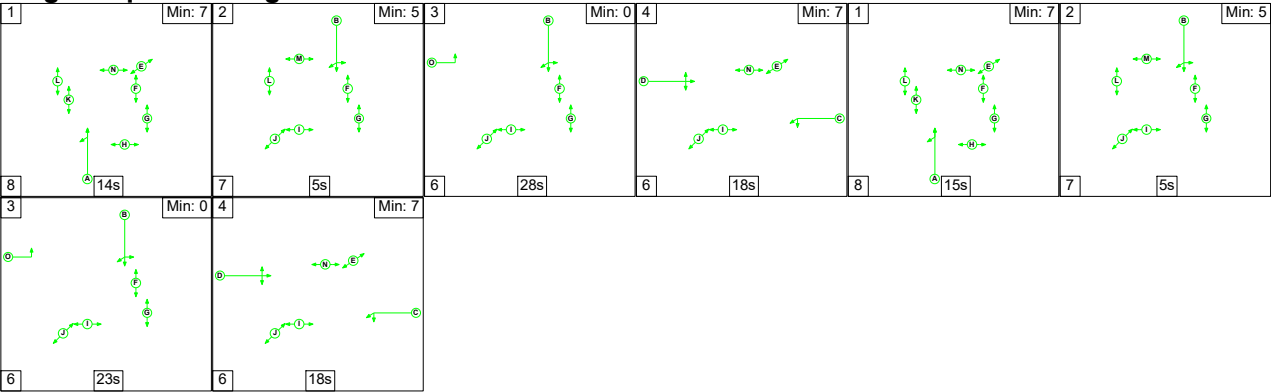
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	221	20	6	24.0	9.5	0.2	33.8	-	-	-	-
J1: B4666 Coventry Road / B590	-	-	65	0	0	14.4	5.8	0.1	20.2	-	-	-	-
1/1+1/2	675	675	65	0	0	4.2	1.3	0.1	5.5	29.3	6.9	1.3	8.2
2/2+2/1	388	388	-	-	-	1.7	1.3	-	3.0	28.2	6.7	1.3	8.0
2/3	339	339	-	-	-	2.1	1.2	-	3.3	35.2	8.3	1.2	9.5
3/2+3/1	534	534	-	-	-	3.5	1.3	-	4.8	32.1	11.2	1.3	12.5
3/3	249	249	-	-	-	1.4	0.3	-	1.7	24.3	4.7	0.3	5.0
4/1	170	170	-	-	-	1.5	0.4	-	2.0	41.3	3.7	0.4	4.2
5/1	739	739	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	339	339	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	491	491	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	318	318	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: B590 / Rugby Road	-	-	72	0	3	3.5	1.6	0.0	5.2	-	-	-	-
1/1	468	468	-	-	-	0.2	0.3	-	0.5	3.7	2.4	0.3	2.7
2/1+2/2	681	681	72	0	3	0.9	0.6	0.0	1.5	8.0	11.7	0.6	12.4
3/1	132	132	-	-	-	1.3	0.4	-	1.6	44.9	3.3	0.4	3.7
3/2	121	121	-	-	-	1.1	0.4	-	1.5	44.9	3.0	0.4	3.4
4/1	88	88	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: B590 / Brunel Road W	-	-	84	20	4	6.1	2.1	0.1	8.4	-	-	-	-
1/2+1/1	587	587	-	-	-	0.9	0.5	-	1.4	8.7	6.9	0.5	7.5
2/1+2/2	653	653	84	20	4	2.7	0.9	0.1	3.8	20.9	11.9	0.9	12.8
3/2+3/1	260	260	-	-	-	2.5	0.7	-	3.2	43.9	3.7	0.7	4.4
4/1	241	241	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	578	578	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	22.9	Total Delay for Signalled Lanes (pcuHr):	20.25	Cycle Time (s):	180
C2	PRC for Signalled Lanes (%):	60.7	Total Delay for Signalled Lanes (pcuHr):	5.15	Cycle Time (s):	180
C3	PRC for Signalled Lanes (%):	37.4	Total Delay for Signalled Lanes (pcuHr):	8.39	Cycle Time (s):	180
	PRC Over All Lanes (%):	22.9	Total Delay Over All Lanes(pcuHr):	33.79		

Full Input Data And Results
Scenario 5: '2030 Do Something AM' (FG5: '2030 Do Something AM', Plan 1: 'Network Control Plan 1')
C1

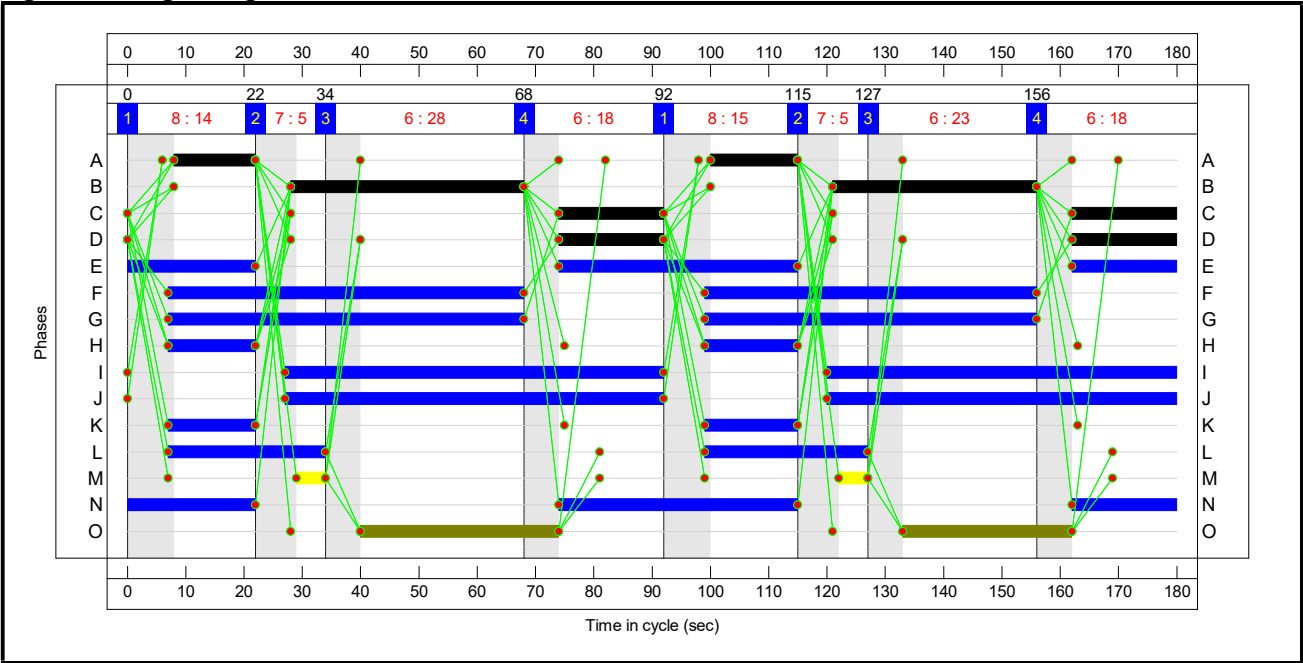
Stage Sequence Diagram



Stage Timings

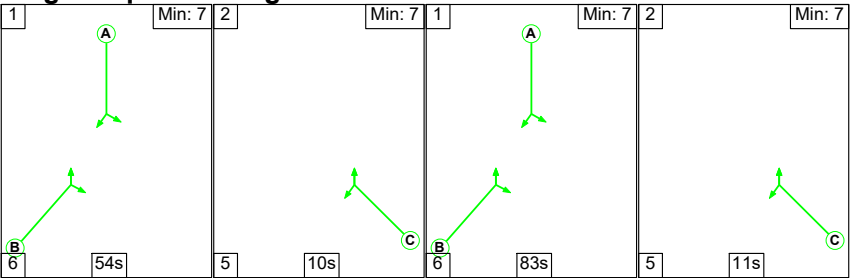
Stage	1	2	3	4	1	2	3	4
Duration	14	5	28	18	15	5	23	18
Change Point	0	22	34	68	92	115	127	156

Signal Timings Diagram



C2

Stage Sequence Diagram

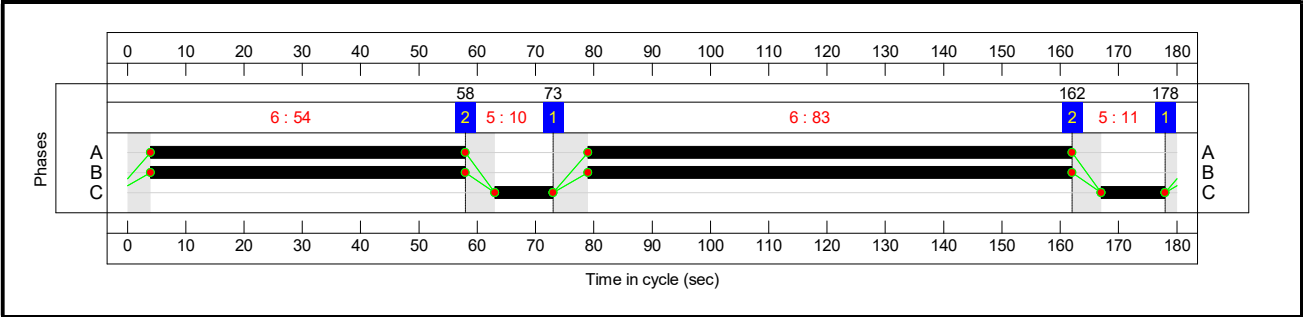


Full Input Data And Results

Stage Timings

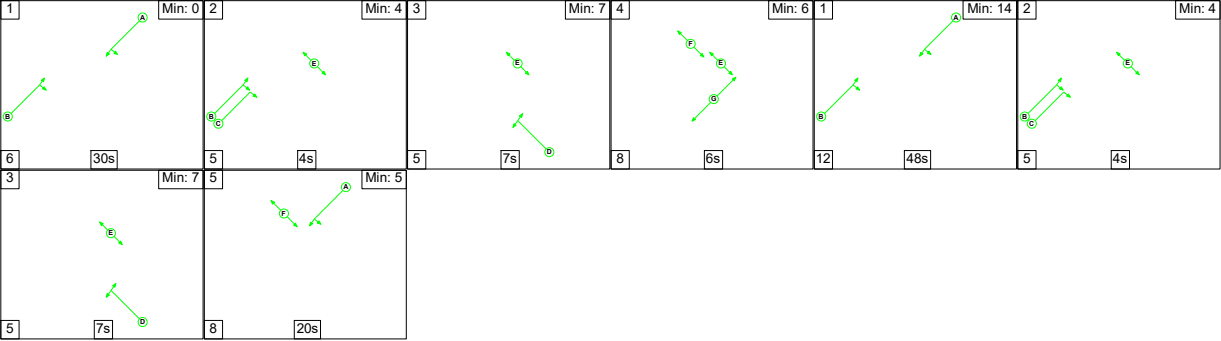
Stage	1	2	1	2
Duration	54	10	83	11
Change Point	178	58	73	162

Signal Timings Diagram



C3

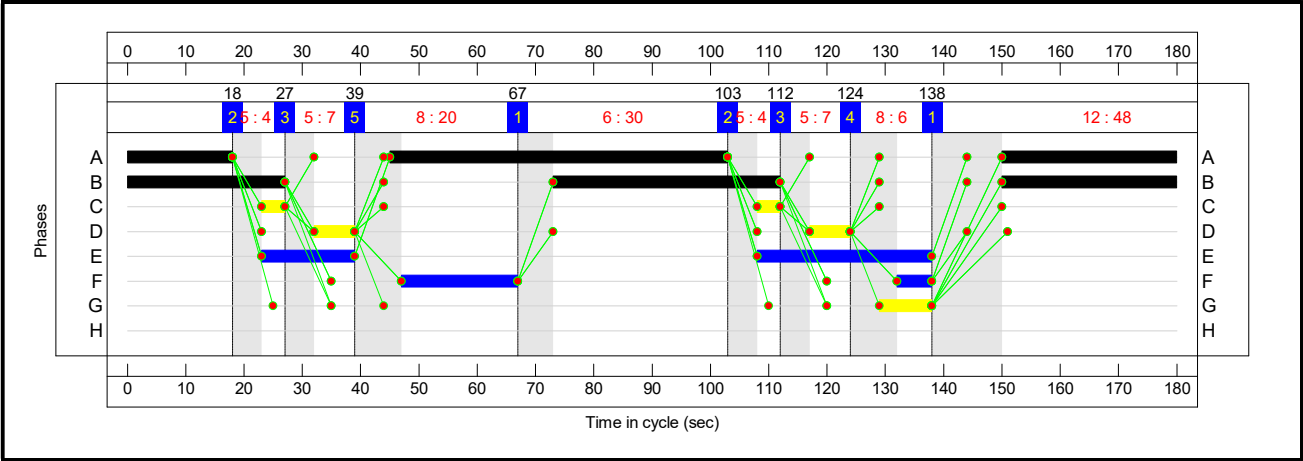
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	1	2	3	5
Duration	30	4	7	6	48	4	7	20
Change Point	67	103	112	124	138	18	27	39

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	73.0%
J1: B4666 Coventry Road / B590	-	-	N/A	-	-		-	-	-	-	-	-	73.0%
1/1+1/2	B4666 Coventry Road (W) Left Ahead Right	U+O	N/A	N/A	C1:D	C1:O	2	99:36	63	603	1884:1865	448+394	71.6 : 71.6%
2/2+2/1	B590 Ahead Left	U	N/A	N/A	C1:A		2	29	-	298	1965:1762	314+94	73.0 : 73.0%
2/3	B590 Ahead	U	N/A	N/A	C1:A		2	29	-	227	1965	338	67.1%
3/2+3/1	B4667 Left Ahead	U	N/A	N/A	C1:B		2	75	-	602	1965:1724	699+133	72.4 : 72.4%
3/3	B4667 Right	U	N/A	N/A	C1:B		2	75	-	279	1828	782	35.7%
4/1	B4666 Coventry Road (E) Ahead Left	U	N/A	N/A	C1:C		2	36	-	129	1964	415	31.1%
5/1		U	N/A	N/A	-		-	-	-	550	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	227	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	476	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	302	Inf	Inf	0.0%
J2: B590 / Rugby Road	-	-	N/A	-	-		-	-	-	-	-	-	43.9%
1/1	B590 (N) Left Ahead	U	N/A	N/A	C2:A		2	137	-	583	1912	1476	39.5%
2/1+2/2	B590 (S) Ahead Right	U+O	N/A	N/A	C2:B		2	137	-	495	1871:1852	690+613	38.0 : 38.0%
3/1	Rugby Road Left	U	N/A	N/A	C2:C		2	21	-	101	1800	230	43.9%
3/2	Rugby Road Right	U	N/A	N/A	C2:C		2	21	-	65	1724	220	29.5%
4/1		U	N/A	N/A	-		-	-	-	43	Inf	Inf	0.0%

Full Input Data And Results

J3: B590 / Brunel Road W	-	-	N/A	-	-		-	-	-	-	-	-	54.8%
1/2+1/1	B590 (NE) Left Ahead	U	N/A	N/A	C3:A		2	106	-	676	1915:1730	1061+173	54.8 : 54.8%
2/1+2/2	B590 (SW) Ahead Right	U+O	N/A	N/A	C3:B	C3:C	2	96	8	524	1865:1685	932+94	51.0 : 51.0%
3/2+3/1	Brunel Road W Right Left	U	N/A	N/A	C3:D		2	14	-	61	1915:1702	68+151	27.8 : 27.8%
4/1		U	N/A	N/A	-		-	-	-	143	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	623	Inf	Inf	0.0%

Full Input Data And Results

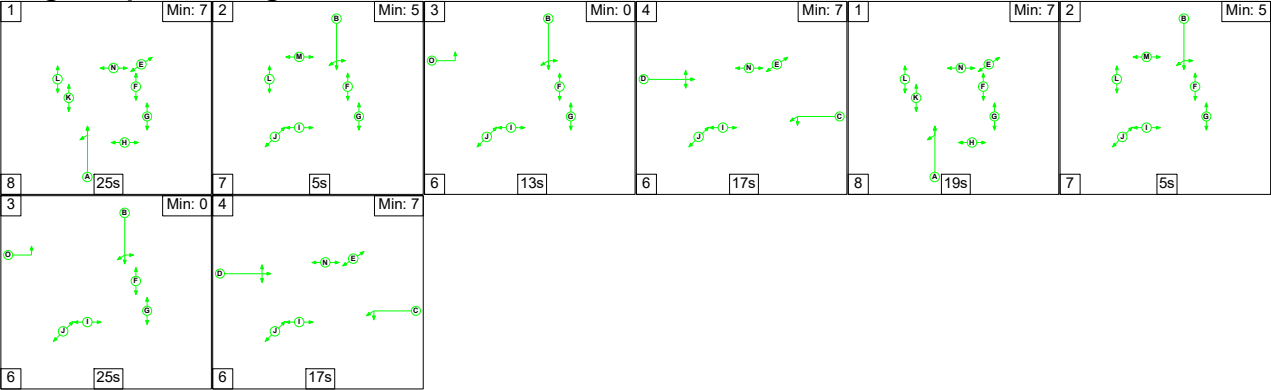
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	152	5	2	18.0	7.9	0.1	26.1	-	-	-	-
J1: B4666 Coventry Road / B590	-	-	76	0	0	12.4	5.4	0.0	17.8	-	-	-	-
1/1+1/2	603	603	76	0	0	3.5	1.2	0.0	4.8	28.7	6.7	1.2	8.0
2/2+2/1	298	298	-	-	-	1.7	1.3	-	3.0	36.0	5.4	1.3	6.7
2/3	227	227	-	-	-	1.3	1.0	-	2.3	36.9	5.5	1.0	6.5
3/2+3/1	602	602	-	-	-	3.5	1.3	-	4.8	28.8	12.2	1.3	13.5
3/3	279	279	-	-	-	1.3	0.3	-	1.6	21.0	4.7	0.3	5.0
4/1	129	129	-	-	-	1.1	0.2	-	1.3	36.3	2.8	0.2	3.0
5/1	550	550	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	227	227	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	476	476	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	302	302	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: B590 / Rugby Road	-	-	34	0	1	2.5	1.2	0.0	3.7	-	-	-	-
1/1	583	583	-	-	-	0.3	0.3	-	0.6	3.7	2.2	0.3	2.5
2/1+2/2	495	495	34	0	1	0.5	0.3	0.0	0.8	5.8	11.2	0.3	11.5
3/1	101	101	-	-	-	1.1	0.4	-	1.4	51.4	2.7	0.4	3.1
3/2	65	65	-	-	-	0.7	0.2	-	0.9	48.4	1.7	0.2	1.9
4/1	43	43	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: B590 / Brunel Road W	-	-	42	5	2	3.1	1.3	0.1	4.6	-	-	-	-
1/2+1/1	676	676	-	-	-	0.7	0.6	-	1.3	6.9	14.6	0.6	15.2
2/1+2/2	524	524	42	5	2	1.8	0.5	0.1	2.4	16.6	8.3	0.5	8.8
3/2+3/1	61	61	-	-	-	0.6	0.2	-	0.8	49.6	1.0	0.2	1.2
4/1	143	143	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	623	623	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	23.2	Total Delay for Signalled Lanes (pcuHr):	17.84	Cycle Time (s):	180
C2	PRC for Signalled Lanes (%):	105.0	Total Delay for Signalled Lanes (pcuHr):	3.70	Cycle Time (s):	180
C3	PRC for Signalled Lanes (%):	64.3	Total Delay for Signalled Lanes (pcuHr):	4.55	Cycle Time (s):	180
	PRC Over All Lanes (%):	23.2	Total Delay Over All Lanes(pcuHr):	26.10		

Full Input Data And Results
Scenario 6: '2030 Do Something PM' (FG6: '2030 Do Something PM', Plan 1: 'Network Control Plan 1')
C1

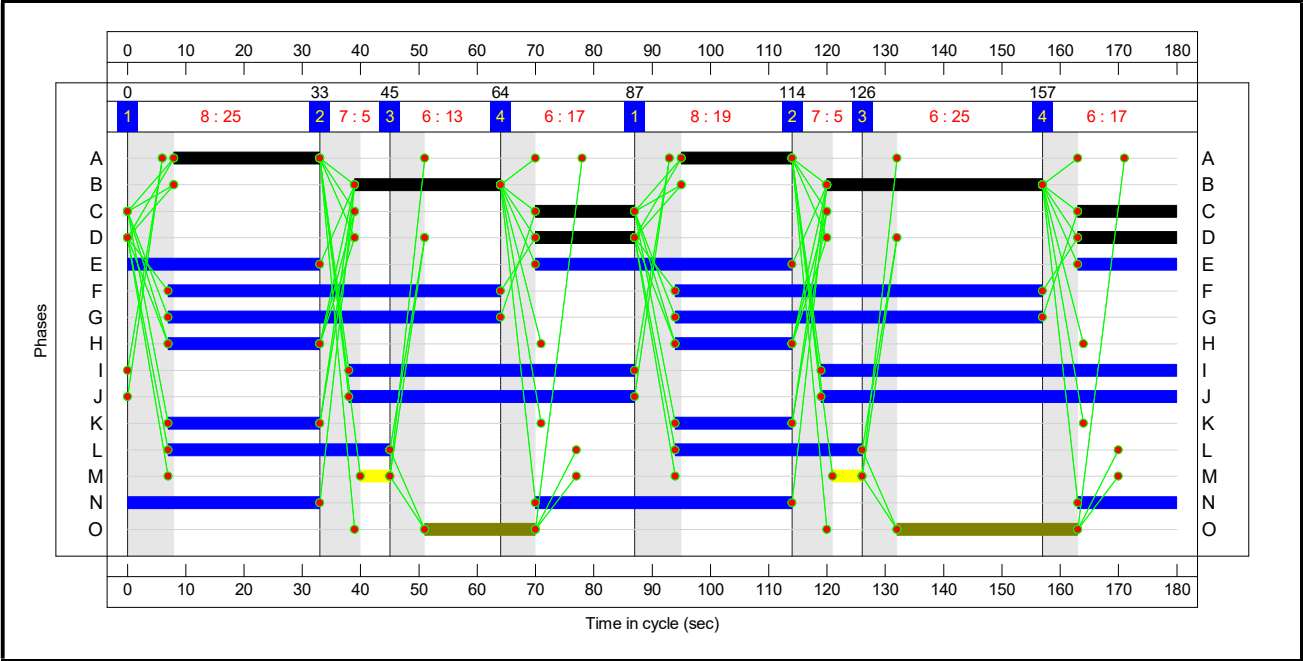
Stage Sequence Diagram



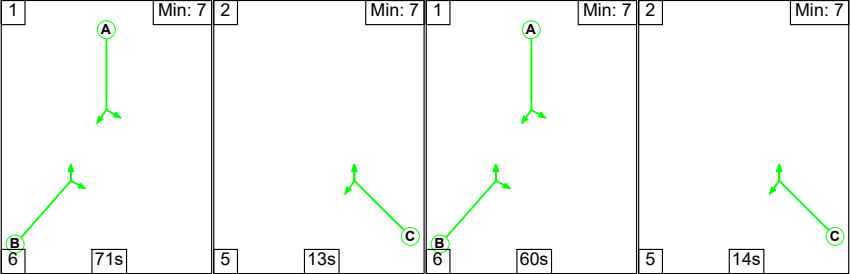
Stage Timings

Stage	1	2	3	4	1	2	3	4
Duration	25	5	13	17	19	5	25	17
Change Point	0	33	45	64	87	114	126	157

Signal Timings Diagram



C2
Stage Sequence Diagram

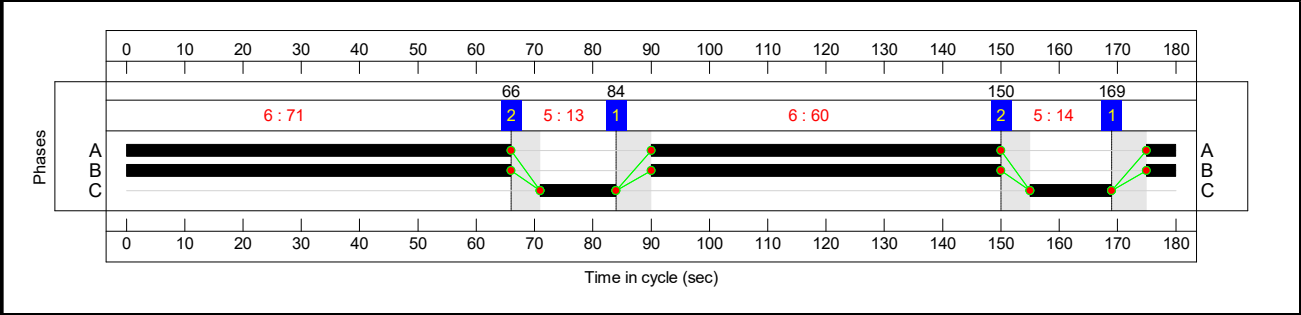


Full Input Data And Results

Stage Timings

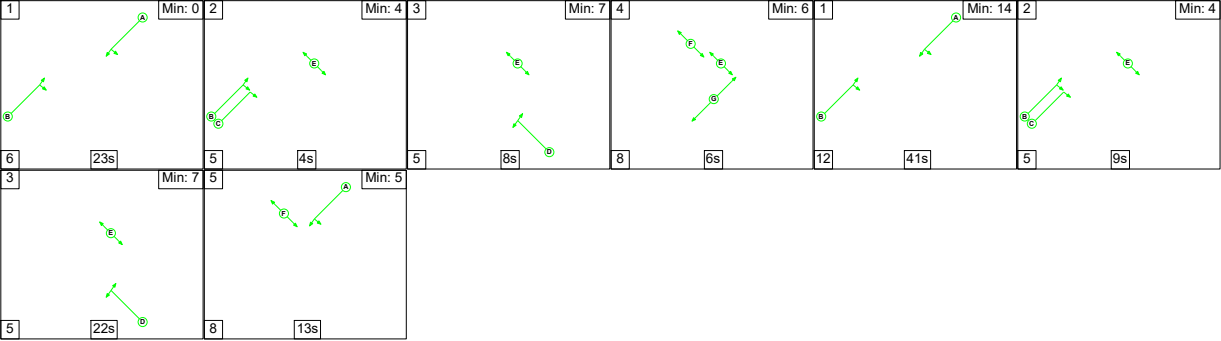
Stage	1	2	1	2
Duration	71	13	60	14
Change Point	169	66	84	150

Signal Timings Diagram



C3

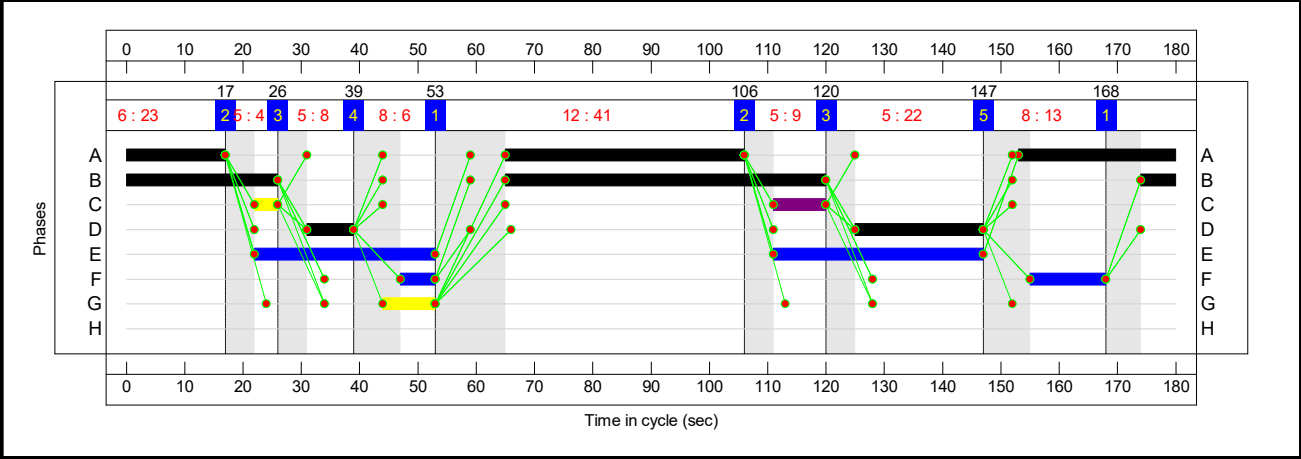
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	1	2	3	5
Duration	23	4	8	6	41	9	22	13
Change Point	168	17	26	39	53	106	120	147

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	76.0%
J1: B4666 Coventry Road / B590	-	-	N/A	-	-		-	-	-	-	-	-	76.0%
1/1+1/2	B4666 Coventry Road (W) Left Ahead Right	U+O	N/A	N/A	C1:D	C1:O	2	84:34	50	703	1884:1864	559+368	75.9 : 75.9%
2/2+2/1	B590 Ahead Left	U	N/A	N/A	C1:A		2	44	-	423	1965:1762	440+122	75.2 : 75.2%
2/3	B590 Ahead	U	N/A	N/A	C1:A		2	44	-	327	1965	502	65.1%
3/2+3/1	B4667 Left Ahead	U	N/A	N/A	C1:B		2	62	-	529	1965:1724	538+158	76.0 : 76.0%
3/3	B4667 Right	U	N/A	N/A	C1:B		2	62	-	267	1828	650	41.1%
4/1	B4666 Coventry Road (E) Ahead Left	U	N/A	N/A	C1:C		2	34	-	180	1965	393	45.8%
5/1		U	N/A	N/A	-		-	-	-	755	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	327	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	539	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	322	Inf	Inf	0.0%
J2: B590 / Rugby Road	-	-	N/A	-	-		-	-	-	-	-	-	59.6%
1/1	B590 (N) Left Ahead	U	N/A	N/A	C2:A		2	131	-	486	1909	1411	34.5%
2/1+2/2	B590 (S) Ahead Right	U+O	N/A	N/A	C2:B		2	131	-	705	1871:1843	595+587	59.6 : 59.6%
3/1	Rugby Road Left	U	N/A	N/A	C2:C		2	27	-	133	1800	290	45.9%
3/2	Rugby Road Right	U	N/A	N/A	C2:C		2	27	-	121	1724	278	43.6%
4/1		U	N/A	N/A	-		-	-	-	89	Inf	Inf	0.0%
J3: B590 / Brunel Road W	-	-	N/A	-	-		-	-	-	-	-	-	70.5%

Full Input Data And Results

1/2+1/1	B590 (NE) Left Ahead	U	N/A	N/A	C3:A		2	85	-	606	1915:1730	834+243	56.3 : 56.3%
2/1+2/2	B590 (SW) Ahead Right	U+O	N/A	N/A	C3:B	C3:C	2	87	13	672	1865:1685	805+149	70.5 : 70.5%
3/2+3/1	Brunel Road W Right Left	U	N/A	N/A	C3:D		2	30	-	263	1915:1702	242+219	57.1 : 57.1%
4/1		U	N/A	N/A	-		-	-	-	242	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	594	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	236	16	6	25.3	10.6	0.2	36.1	-	-	-	-
J1: B4666 Coventry Road / B590	-	-	77	0	0	14.9	6.3	0.1	21.3	-	-	-	-
1/1+1/2	703	703	77	0	0	4.5	1.6	0.1	6.1	31.4	7.5	1.6	9.1
2/2+2/1	423	423	-	-	-	1.5	1.5	-	3.0	25.8	6.7	1.5	8.2
2/3	327	327	-	-	-	2.0	0.9	-	2.9	32.0	7.5	0.9	8.4
3/2+3/1	529	529	-	-	-	3.7	1.6	-	5.3	35.7	11.6	1.6	13.2
3/3	267	267	-	-	-	1.6	0.3	-	2.0	26.6	5.3	0.3	5.6
4/1	180	180	-	-	-	1.6	0.4	-	2.0	40.2	4.1	0.4	4.5
5/1	755	755	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	327	327	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	539	539	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	322	322	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: B590 / Rugby Road	-	-	73	0	3	3.9	1.8	0.0	5.7	-	-	-	-
1/1	486	486	-	-	-	0.3	0.3	-	0.5	4.0	2.4	0.3	2.6
2/1+2/2	705	705	73	0	3	1.2	0.7	0.0	1.9	9.9	11.2	0.7	12.0
3/1	133	133	-	-	-	1.3	0.4	-	1.7	45.8	3.2	0.4	3.6
3/2	121	121	-	-	-	1.2	0.4	-	1.5	45.7	2.9	0.4	3.3
4/1	89	89	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: B590 / Brunel Road W	-	-	85	16	4	6.5	2.5	0.1	9.1	-	-	-	-
1/2+1/1	606	606	-	-	-	0.9	0.6	-	1.5	9.0	7.1	0.6	7.7
2/1+2/2	672	672	85	16	4	3.2	1.2	0.1	4.5	23.9	13.6	1.2	14.8
3/2+3/1	263	263	-	-	-	2.5	0.7	-	3.1	42.6	3.5	0.7	4.1
4/1	242	242	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	594	594	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	18.4	Total Delay for Signalled Lanes (pcuHr):	21.31	Cycle Time (s):	180
C2	PRC for Signalled Lanes (%):	51.0	Total Delay for Signalled Lanes (pcuHr):	5.70	Cycle Time (s):	180
C3	PRC for Signalled Lanes (%):	27.7	Total Delay for Signalled Lanes (pcuHr):	9.09	Cycle Time (s):	180
	PRC Over All Lanes (%):	18.4	Total Delay Over All Lanes(pcuHr):	36.10		

Appendix L

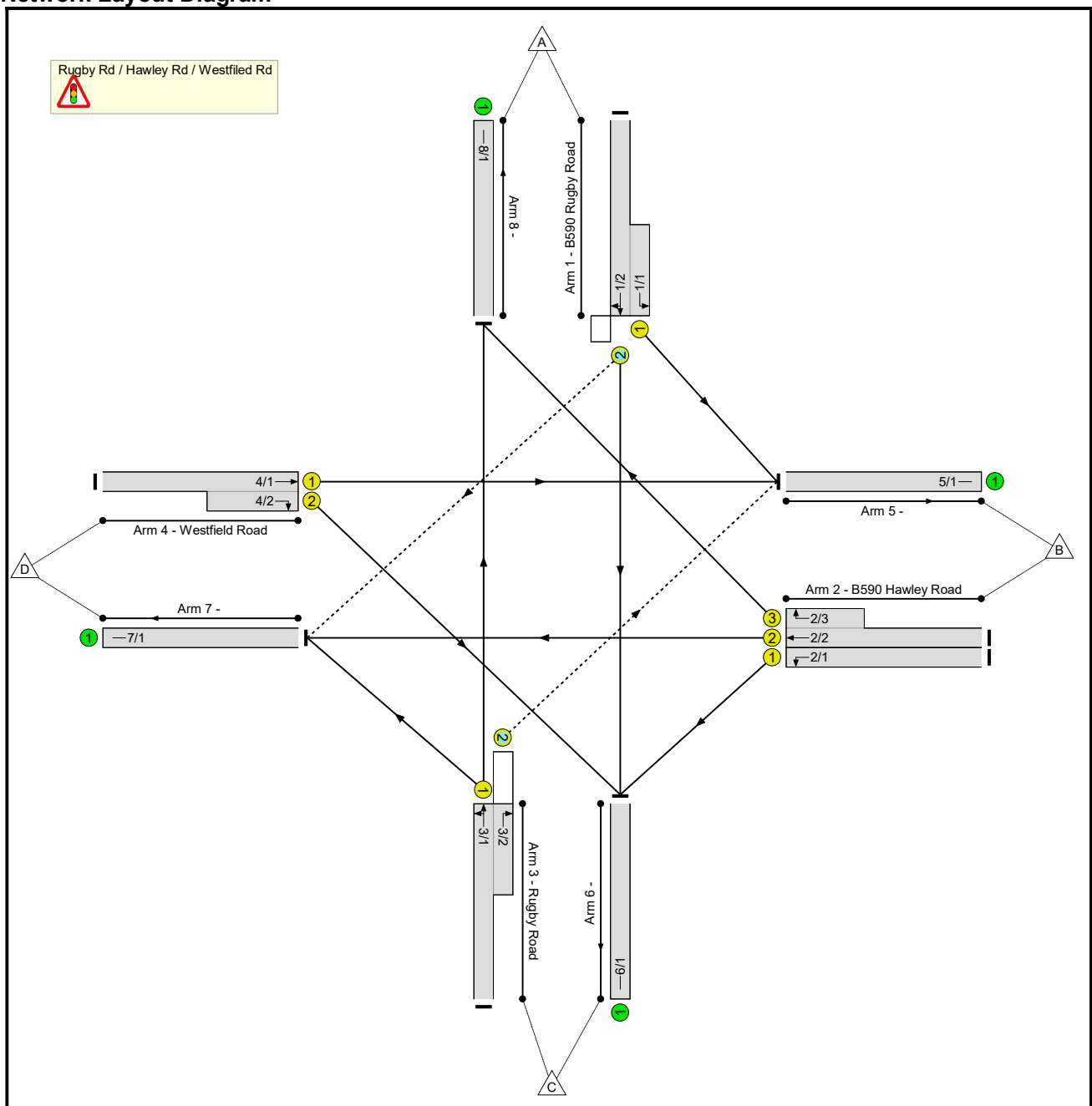
Westfield Road/Hawley Road (B590)/Rugby Road Signal Junction LinSig Outputs

Full Input Data And Results
Full Input Data And Results

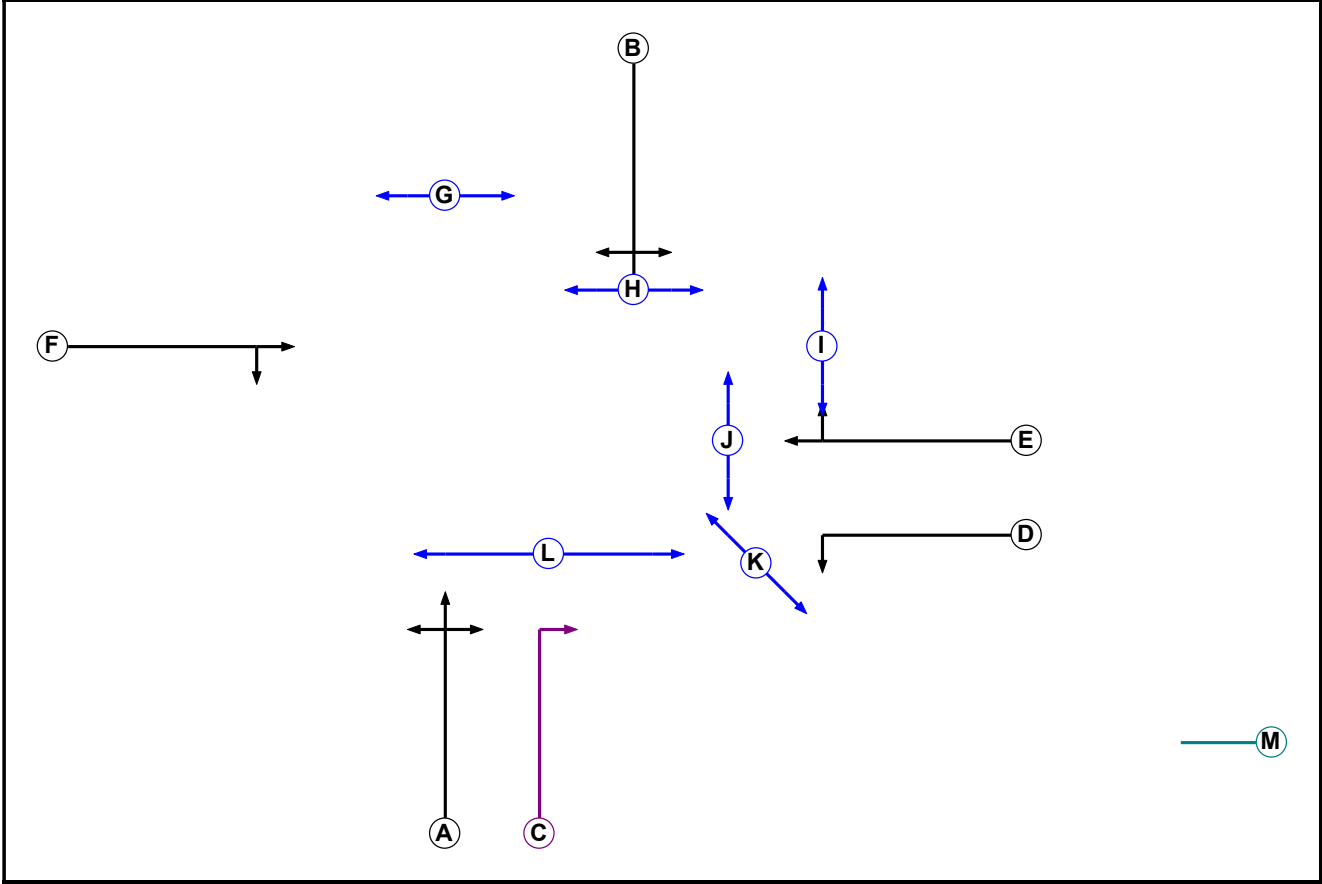
User and Project Details

Project:	Brick Kiln Street, Hinckley
Title:	Rugby Road/Westfield Road/Hawley Road Signal Junction
Location:	Hinckley
Additional detail:	
File name:	Rugby Road+ Westfield Road v2.lsg3x
Author:	SB
Company:	TTC
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Ind. Arrow	A	4	4
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7
G	Pedestrian		5	5
H	Pedestrian		5	5
I	Pedestrian		5	5
J	Pedestrian		5	5
K	Pedestrian		5	5
L	Pedestrian		5	5
M	Dummy		4	4

Full Input Data And Results

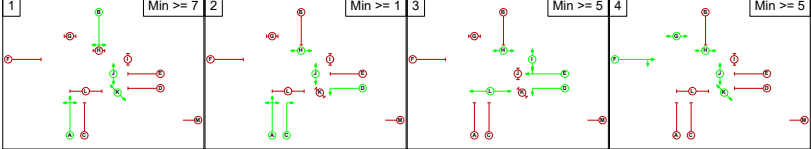
Phase Intergreens Matrix

		Starting Phase												
Terminating Phase		A	B	C	D	E	F	G	H	I	J	K	L	M
	A		-	-	-	5	6	10	-	10	-	-	6	3
	B	-		5	8	6	6	-	5	8	-	-	9	3
	C	-	6		-	5	5	-	-	10	-	-	6	3
	D	-	5	-		-	5	-	-	-	-	5	-	3
	E	5	5	5	-		5	9	-	-	5	-	-	3
	F	5	5	5	7	5		-	-	9	-	-	8	3
	G	6	-	-	-	6	-		-	-	-	-	-	3
	H	-	6	-	-	-	-	-		-	-	-	-	3
	I	6	6	6	-	-	6	-	-		-	-	-	3
	J	-	-	-	-	6	-	-	-	-		-	-	3
	K	-	-	-	6	-	-	-	-	-	-		-	3
	L	0	0	0	-	-	0	-	-	-	-	-		3
	M	2	2	2	2	2	2	2	2	2	2	2	2	

Phases in Stage

Stage No.	Phases in Stage
1	A B J K
2	A C D H J
3	D E H I L
4	F G H J K

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

		To Stage			
From Stage		1	2	3	4
	1		8	10	10
	2	6		10	10
	3	6	6		9
	4	6	X	9	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Rugby Rd / Hawley Rd / Westfiled Rd											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/2 (B590 Rugby Road)	7/1 (Right)	1439	0	3/1	1.09	All	2.00	2.00	0.50	2	2.00
3/2 (Rugby Road)	5/1 (Right)	1439	0	1/1	1.09	All	4.00	-	0.50	4	2.00
				1/2	1.09	All					

Lane Input Data

Junction: Rugby Rd / Hawley Rd / Westfield Rd												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (B590 Rugby Road)	U	B	2	3	7.0	Geom	-	2.80	0.00	Y	Arm 5 Left	21.00
1/2 (B590 Rugby Road)	O	B	2	3	60.0	Geom	-	2.80	0.00	Y	Arm 6 Ahead	Inf
											Arm 7 Right	10.00
2/1 (B590 Hawley Road)	U	D	2	3	60.0	Geom	-	4.40	0.00	Y	Arm 6 Left	25.00
2/2 (B590 Hawley Road)	U	E	2	3	9.0	Geom	-	3.10	0.00	Y	Arm 7 Ahead	Inf
2/3 (B590 Hawley Road)	U	E	2	3	6.0	Geom	-	3.10	0.00	Y	Arm 8 Right	15.00
3/1 (Rugby Road)	U	A	2	3	60.0	Geom	-	3.05	0.00	Y	Arm 7 Left	14.00
											Arm 8 Ahead	Inf
3/2 (Rugby Road)	O	A C	2	3	7.0	Geom	-	3.05	0.00	Y	Arm 5 Right	9.00
4/1 (Westfield Road)	U	F	2	3	60.0	Geom	-	2.90	0.00	Y	Arm 5 Ahead	Inf
4/2 (Westfield Road)	U	F	2	3	7.0	Geom	-	2.80	0.00	Y	Arm 6 Right	12.00
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2024 Do Nothing AM'	08:00	09:00	01:00	
2: '2024 Do Nothing PM'	17:00	18:00	01:00	
3: '2030 Do Nothing AM'	08:00	09:00	01:00	
4: '2030 Do Nothing PM'	17:00	18:00	01:00	
5: '2030 Do Something AM'	08:00	09:00	01:00	
6: '2030 Do Something PM'	17:00	18:00	01:00	

Full Input Data And Results

Scenario 1: '2024 Do Nothing AM' (FG1: '2024 Do Nothing AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	66	438	6	510
	B	68	0	162	175	405
	C	421	210	0	260	891
	D	0	211	272	0	483
	Tot.	489	487	872	441	2289

Traffic Lane Flows

Lane	Scenario 1: 2024 Do Nothing AM
Junction: Rugby Rd / Hawley Rd / Westfield Rd	
1/1 (short)	66
1/2 (with short)	510(In) 444(Out)
2/1	162
2/2 (with short)	243(In) 175(Out)
2/3 (short)	68
3/1 (with short)	891(In) 681(Out)
3/2 (short)	210
4/1 (with short)	483(In) 211(Out)
4/2 (short)	272
5/1	487
6/1	872
7/1	441
8/1	489

Lane Saturation Flows

Junction: Rugby Rd / Hawley Rd / Westfield Rd								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B590 Rugby Road)	2.80	0.00	Y	Arm 5 Left	21.00	100.0 %	1769	1769
1/2 (B590 Rugby Road)	2.80	0.00	Y	Arm 6 Ahead	Inf	98.6 %	1891	1891
				Arm 7 Right	10.00	1.4 %		
2/1 (B590 Hawley Road)	4.40	0.00	Y	Arm 6 Left	25.00	100.0 %	1939	1939
2/2 (B590 Hawley Road)	3.10	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1925	1925
2/3 (B590 Hawley Road)	3.10	0.00	Y	Arm 8 Right	15.00	100.0 %	1750	1750
3/1 (Rugby Road)	3.05	0.00	Y	Arm 7 Left	14.00	38.2 %	1845	1845
				Arm 8 Ahead	Inf	61.8 %		
3/2 (Rugby Road)	3.05	0.00	Y	Arm 5 Right	9.00	100.0 %	1646	1646
4/1 (Westfield Road)	2.90	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1905	1905
4/2 (Westfield Road)	2.80	0.00	Y	Arm 6 Right	12.00	100.0 %	1684	1684
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2024 Do Nothing PM' (FG2: '2024 Do Nothing PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	128	416	10	554
	B	97	0	259	188	544
	C	502	296	0	201	999
	D	0	218	218	0	436
	Tot.	599	642	893	399	2533

Traffic Lane Flows

Lane	Scenario 2: 2024 Do Nothing PM
Junction: Rugby Rd / Hawley Rd / Westfield Rd	
1/1 (short)	128
1/2 (with short)	554(In) 426(Out)
2/1	259
2/2 (with short)	285(In) 188(Out)
2/3 (short)	97
3/1 (with short)	999(In) 703(Out)
3/2 (short)	296
4/1 (with short)	436(In) 218(Out)
4/2 (short)	218
5/1	642
6/1	893
7/1	399
8/1	599

Lane Saturation Flows

Junction: Rugby Rd / Hawley Rd / Westfield Rd								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B590 Rugby Road)	2.80	0.00	Y	Arm 5 Left	21.00	100.0 %	1769	1769
1/2 (B590 Rugby Road)	2.80	0.00	Y	Arm 6 Ahead	Inf	97.7 %	1888	1888
				Arm 7 Right	10.00	2.3 %		
2/1 (B590 Hawley Road)	4.40	0.00	Y	Arm 6 Left	25.00	100.0 %	1939	1939
2/2 (B590 Hawley Road)	3.10	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1925	1925
2/3 (B590 Hawley Road)	3.10	0.00	Y	Arm 8 Right	15.00	100.0 %	1750	1750
3/1 (Rugby Road)	3.05	0.00	Y	Arm 7 Left	14.00	28.6 %	1863	1863
				Arm 8 Ahead	Inf	71.4 %		
3/2 (Rugby Road)	3.05	0.00	Y	Arm 5 Right	9.00	100.0 %	1646	1646
4/1 (Westfield Road)	2.90	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1905	1905
4/2 (Westfield Road)	2.80	0.00	Y	Arm 6 Right	12.00	100.0 %	1684	1684
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2030 Do Nothing AM' (FG3: '2030 Do Nothing AM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Desired****Desired Flow :**

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	71	519	7	597
	B	68	0	164	182	414
	C	440	205	0	287	932
	D	0	208	293	0	501
	Tot.	508	484	976	476	2444

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2030 Do Nothing AM
Junction: Rugby Rd / Hawley Rd / Westfield Rd	
1/1 (short)	71
1/2 (with short)	597(In) 526(Out)
2/1	164
2/2 (with short)	250(In) 182(Out)
2/3 (short)	68
3/1 (with short)	932(In) 727(Out)
3/2 (short)	205
4/1 (with short)	501(In) 208(Out)
4/2 (short)	293
5/1	484
6/1	976
7/1	476
8/1	508

Lane Saturation Flows

Junction: Rugby Rd / Hawley Rd / Westfield Rd								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B590 Rugby Road)	2.80	0.00	Y	Arm 5 Left	21.00	100.0 %	1769	1769
1/2 (B590 Rugby Road)	2.80	0.00	Y	Arm 6 Ahead	Inf	98.7 %	1891	1891
				Arm 7 Right	10.00	1.3 %		
2/1 (B590 Hawley Road)	4.40	0.00	Y	Arm 6 Left	25.00	100.0 %	1939	1939
2/2 (B590 Hawley Road)	3.10	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1925	1925
2/3 (B590 Hawley Road)	3.10	0.00	Y	Arm 8 Right	15.00	100.0 %	1750	1750
3/1 (Rugby Road)	3.05	0.00	Y	Arm 7 Left	14.00	39.5 %	1842	1842
				Arm 8 Ahead	Inf	60.5 %		
3/2 (Rugby Road)	3.05	0.00	Y	Arm 5 Right	9.00	100.0 %	1646	1646
4/1 (Westfield Road)	2.90	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1905	1905
4/2 (Westfield Road)	2.80	0.00	Y	Arm 6 Right	12.00	100.0 %	1684	1684
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2030 Do Nothing PM' (FG4: '2030 Do Nothing PM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Desired****Desired Flow :**

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	129	441	10	580
	B	100	0	267	190	557
	C	560	317	0	222	1099
	D	0	221	233	0	454
	Tot.	660	667	941	422	2690

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2030 Do Nothing PM
Junction: Rugby Rd / Hawley Rd / Westfield Rd	
1/1 (short)	129
1/2 (with short)	580(In) 451(Out)
2/1	267
2/2 (with short)	290(In) 190(Out)
2/3 (short)	100
3/1 (with short)	1099(In) 782(Out)
3/2 (short)	317
4/1 (with short)	454(In) 221(Out)
4/2 (short)	233
5/1	667
6/1	941
7/1	422
8/1	660

Lane Saturation Flows

Junction: Rugby Rd / Hawley Rd / Westfield Rd								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B590 Rugby Road)	2.80	0.00	Y	Arm 5 Left	21.00	100.0 %	1769	1769
1/2 (B590 Rugby Road)	2.80	0.00	Y	Arm 6 Ahead	Inf	97.8 %	1889	1889
				Arm 7 Right	10.00	2.2 %		
2/1 (B590 Hawley Road)	4.40	0.00	Y	Arm 6 Left	25.00	100.0 %	1939	1939
2/2 (B590 Hawley Road)	3.10	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1925	1925
2/3 (B590 Hawley Road)	3.10	0.00	Y	Arm 8 Right	15.00	100.0 %	1750	1750
3/1 (Rugby Road)	3.05	0.00	Y	Arm 7 Left	14.00	28.4 %	1863	1863
				Arm 8 Ahead	Inf	71.6 %		
3/2 (Rugby Road)	3.05	0.00	Y	Arm 5 Right	9.00	100.0 %	1646	1646
4/1 (Westfield Road)	2.90	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1905	1905
4/2 (Westfield Road)	2.80	0.00	Y	Arm 6 Right	12.00	100.0 %	1684	1684
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2030 Do Something AM' (FG5: '2030 Do Something AM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Desired****Desired Flow :**

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	72	534	7	613
	B	69	0	166	180	415
	C	446	205	0	284	935
	D	0	207	294	0	501
	Tot.	515	484	994	471	2464

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: 2030 Do Something AM
Junction: Rugby Rd / Hawley Rd / Westfield Rd	
1/1 (short)	72
1/2 (with short)	613(In) 541(Out)
2/1	166
2/2 (with short)	249(In) 180(Out)
2/3 (short)	69
3/1 (with short)	935(In) 730(Out)
3/2 (short)	205
4/1 (with short)	501(In) 207(Out)
4/2 (short)	294
5/1	484
6/1	994
7/1	471
8/1	515

Lane Saturation Flows

Junction: Rugby Rd / Hawley Rd / Westfield Rd								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B590 Rugby Road)	2.80	0.00	Y	Arm 5 Left	21.00	100.0 %	1769	1769
1/2 (B590 Rugby Road)	2.80	0.00	Y	Arm 6 Ahead	Inf	98.7 %	1891	1891
				Arm 7 Right	10.00	1.3 %		
2/1 (B590 Hawley Road)	4.40	0.00	Y	Arm 6 Left	25.00	100.0 %	1939	1939
2/2 (B590 Hawley Road)	3.10	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1925	1925
2/3 (B590 Hawley Road)	3.10	0.00	Y	Arm 8 Right	15.00	100.0 %	1750	1750
3/1 (Rugby Road)	3.05	0.00	Y	Arm 7 Left	14.00	38.9 %	1843	1843
				Arm 8 Ahead	Inf	61.1 %		
3/2 (Rugby Road)	3.05	0.00	Y	Arm 5 Right	9.00	100.0 %	1646	1646
4/1 (Westfield Road)	2.90	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1905	1905
4/2 (Westfield Road)	2.80	0.00	Y	Arm 6 Right	12.00	100.0 %	1684	1684
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2030 Do Something PM' (FG6: '2030 Do Something PM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Desired****Desired Flow :**

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	130	456	11	597
	B	101	0	268	189	558
	C	577	314	0	223	1114
	D	0	219	235	0	454
	Tot.	678	663	959	423	2723

Full Input Data And Results

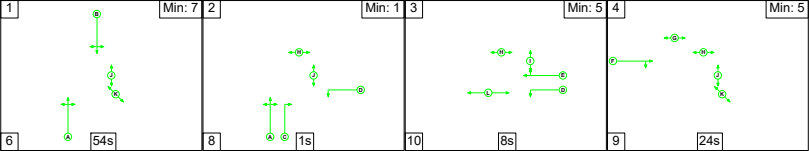
Traffic Lane Flows

Lane	Scenario 6: 2030 Do Something PM
Junction: Rugby Rd / Hawley Rd / Westfield Rd	
1/1 (short)	130
1/2 (with short)	597(In) 467(Out)
2/1	268
2/2 (with short)	290(In) 189(Out)
2/3 (short)	101
3/1 (with short)	1114(In) 800(Out)
3/2 (short)	314
4/1 (with short)	454(In) 219(Out)
4/2 (short)	235
5/1	663
6/1	959
7/1	423
8/1	678

Lane Saturation Flows

Junction: Rugby Rd / Hawley Rd / Westfield Rd								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B590 Rugby Road)	2.80	0.00	Y	Arm 5 Left	21.00	100.0 %	1769	1769
1/2 (B590 Rugby Road)	2.80	0.00	Y	Arm 6 Ahead	Inf	97.6 %	1888	1888
				Arm 7 Right	10.00	2.4 %		
2/1 (B590 Hawley Road)	4.40	0.00	Y	Arm 6 Left	25.00	100.0 %	1939	1939
2/2 (B590 Hawley Road)	3.10	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1925	1925
2/3 (B590 Hawley Road)	3.10	0.00	Y	Arm 8 Right	15.00	100.0 %	1750	1750
3/1 (Rugby Road)	3.05	0.00	Y	Arm 7 Left	14.00	27.9 %	1864	1864
				Arm 8 Ahead	Inf	72.1 %		
3/2 (Rugby Road)	3.05	0.00	Y	Arm 5 Right	9.00	100.0 %	1646	1646
4/1 (Westfield Road)	2.90	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1905	1905
4/2 (Westfield Road)	2.80	0.00	Y	Arm 6 Right	12.00	100.0 %	1684	1684
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

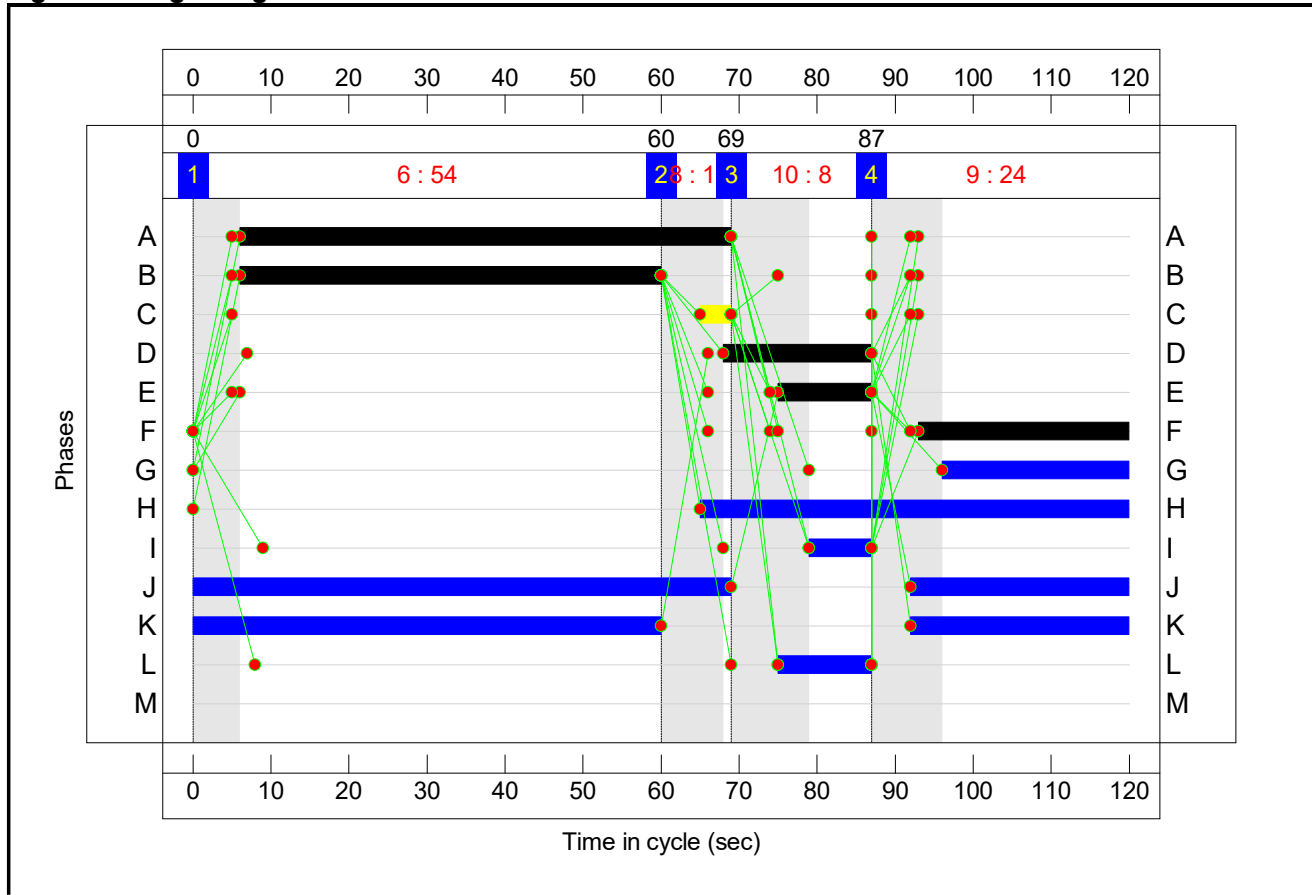
Scenario 1: '2024 Do Nothing AM' (FG1: '2024 Do Nothing AM', Plan 1: 'Network Control Plan 1')
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	54	1	8	24
Change Point	0	60	69	87

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	87.2%
Rugby Rd / Hawley Rd / Westfield Rd	-	-	N/A	-	-		-	-	-	-	-	-	87.2%
1/2+1/1	B590 Rugby Road Left Ahead Right	O+U	N/A	N/A	B		1	54	-	510	1891:1769	781+116	56.8 : 56.8%
2/1	B590 Hawley Road Left	U	N/A	N/A	D		1	19	-	162	1939	323	50.1%
2/2+2/3	B590 Hawley Road Ahead Right	U	N/A	N/A	E		1	12	-	243	1925:1750	202+79	86.4 : 86.4%
3/1+3/2	Rugby Road Right Left Ahead	U+O	N/A	N/A	A	C	1	63	4	891	1845:1646	781+241	87.2 : 87.2%
4/1+4/2	Westfield Road Ahead Right	U	N/A	N/A	F		1	27	-	483	1905:1684	247+318	85.5 : 85.5%
5/1		U	N/A	N/A	-		-	-	-	487	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	872	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	441	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	489	Inf	Inf	0.0%

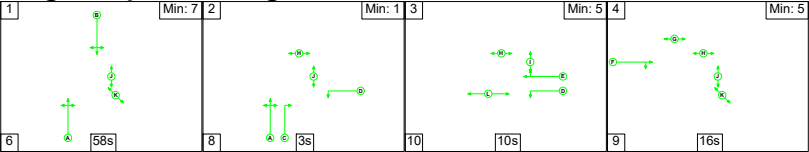
Full Input Data And Results

[illegible]

Full Input Data And Results

Scenario 2: '2024 Do Nothing PM' (FG2: '2024 Do Nothing PM', Plan 1: 'Network Control Plan 1')

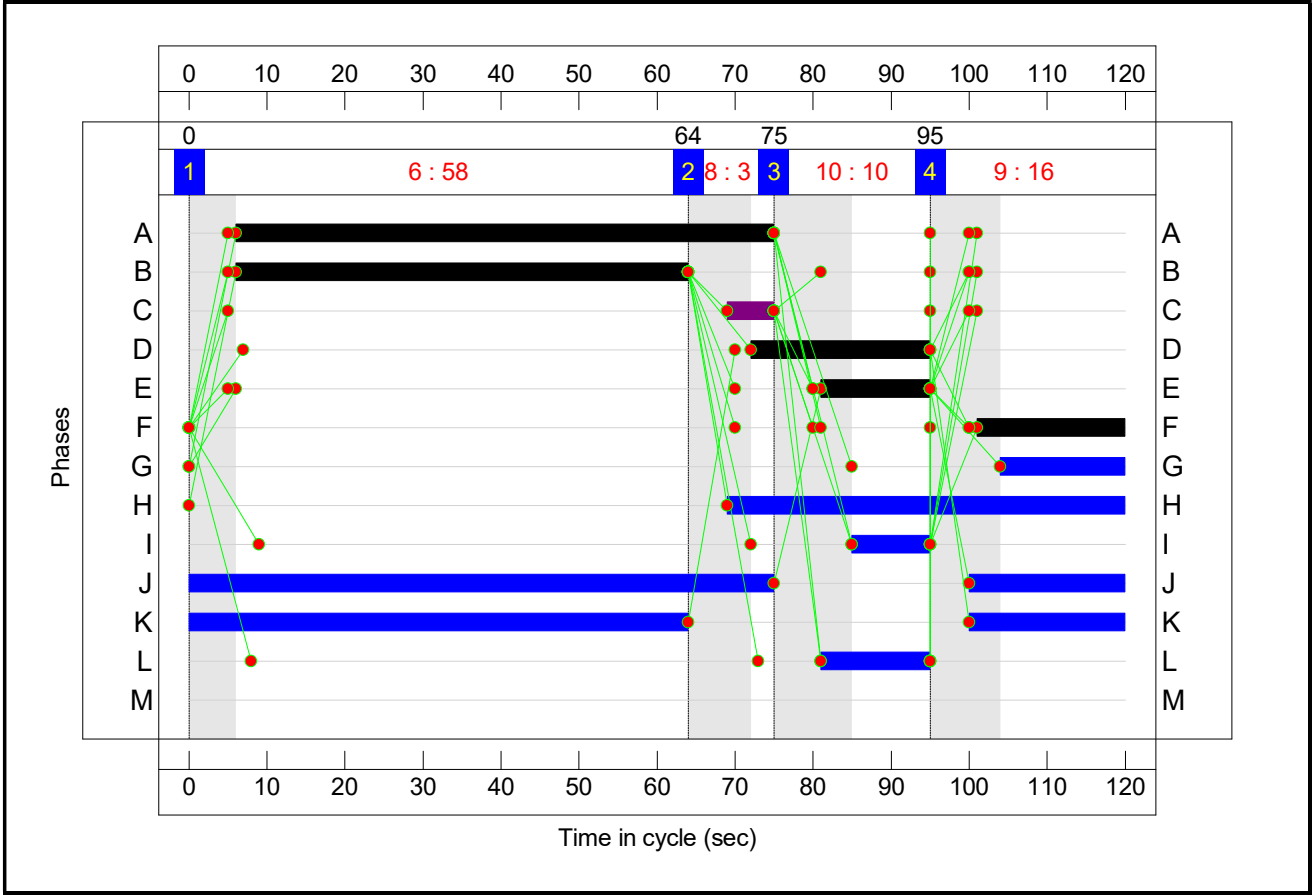
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	58	3	10	16
Change Point	0	64	75	95

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	88.2%
Rugby Rd / Hawley Rd / Westfield Rd	-	-	N/A	-	-		-	-	-	-	-	-	88.2%
1/2+1/1	B590 Rugby Road Left Ahead Right	O+U	N/A	N/A	B		1	58	-	554	1888:1769	758+228	56.2 : 56.2%
2/1	B590 Hawley Road Left	U	N/A	N/A	D		1	23	-	259	1939	388	66.8%
2/2+2/3	B590 Hawley Road Ahead Right	U	N/A	N/A	E		1	14	-	285	1925:1750	221+114	85.1 : 85.1%
3/1+3/2	Rugby Road Right Left Ahead	U+O	N/A	N/A	A	C	1	69	6	999	1863:1646	799+336	88.0 : 88.0%
4/1+4/2	Westfield Road Ahead Right	U	N/A	N/A	F		1	19	-	436	1905:1684	247+247	88.2 : 88.2%
5/1		U	N/A	N/A	-		-	-	-	642	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	893	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	399	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	599	Inf	Inf	0.0%

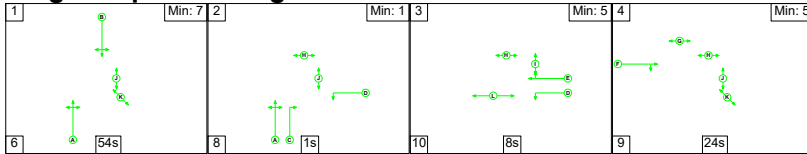
Full Input Data And Results

[illegible]

Full Input Data And Results

Scenario 3: '2030 Do Nothing AM' (FG3: '2030 Do Nothing AM', Plan 1: 'Network Control Plan 1')

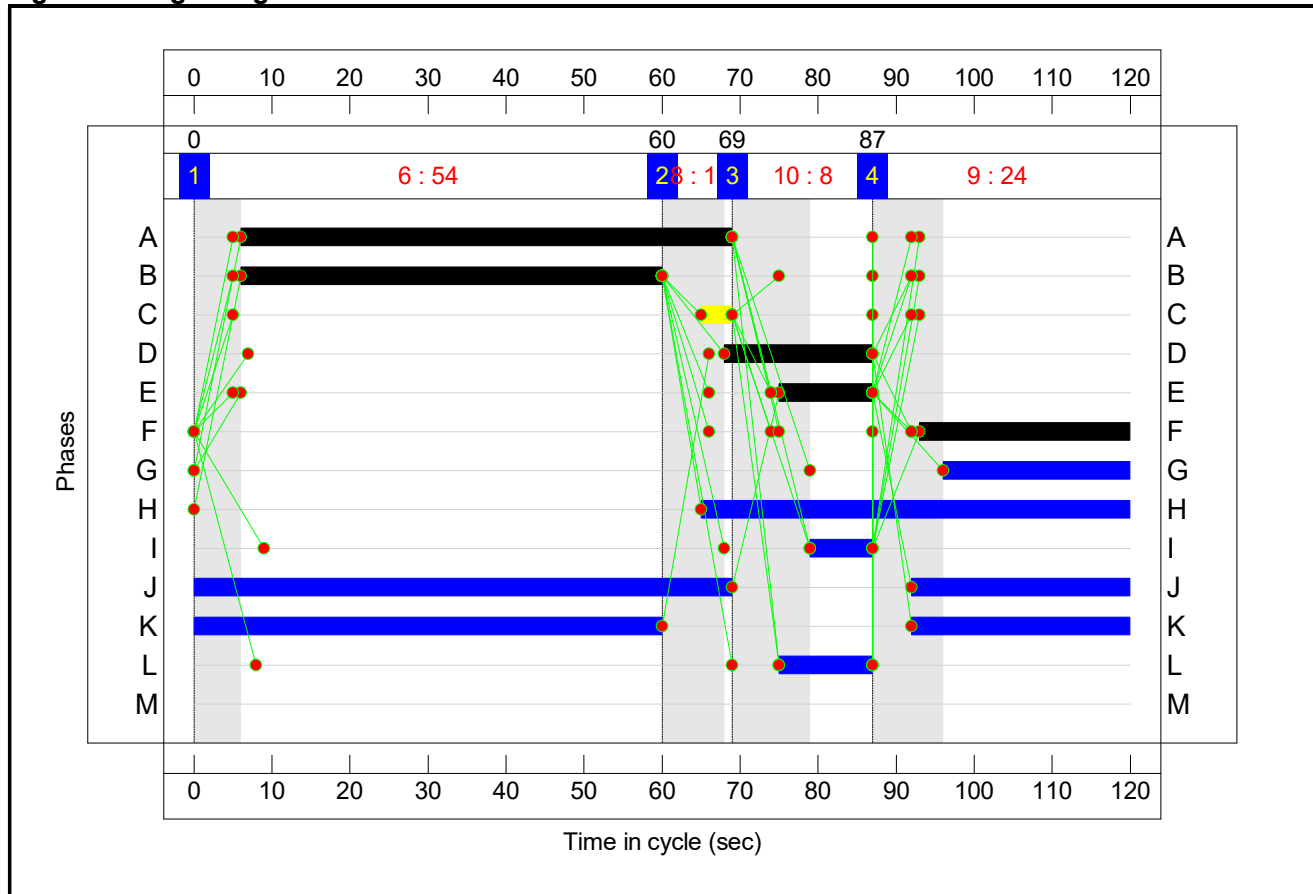
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	54	1	8	24
Change Point	0	60	69	87

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	91.6%
Rugby Rd / Hawley Rd / Westfield Rd	-	-	N/A	-	-		-	-	-	-	-	-	91.6%
1/2+1/1	B590 Rugby Road Left Ahead Right	O+U	N/A	N/A	B		1	54	-	597	1891:1769	788+106	66.7 : 66.7%
2/1	B590 Hawley Road Left	U	N/A	N/A	D		1	19	-	164	1939	323	50.7%
2/2+2/3	B590 Hawley Road Ahead Right	U	N/A	N/A	E		1	12	-	250	1925:1750	203+76	89.8 : 89.8%
3/1+3/2	Rugby Road Right Left Ahead	U+O	N/A	N/A	A	C	1	63	4	932	1842:1646	793+224	91.6 : 91.6%
4/1+4/2	Westfield Road Ahead Right	U	N/A	N/A	F		1	27	-	501	1905:1684	229+322	91.0 : 91.0%
5/1		U	N/A	N/A	-		-	-	-	484	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	976	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	476	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	508	Inf	Inf	0.0%

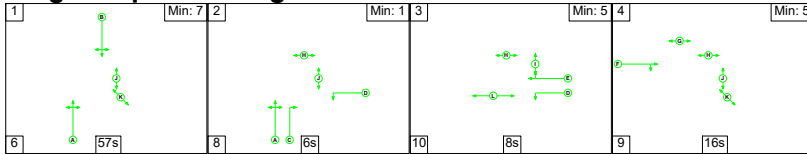
Full Input Data And Results

[illegible]

Full Input Data And Results

Scenario 4: '2030 Do Nothing PM' (FG4: '2030 Do Nothing PM', Plan 1: 'Network Control Plan 1')

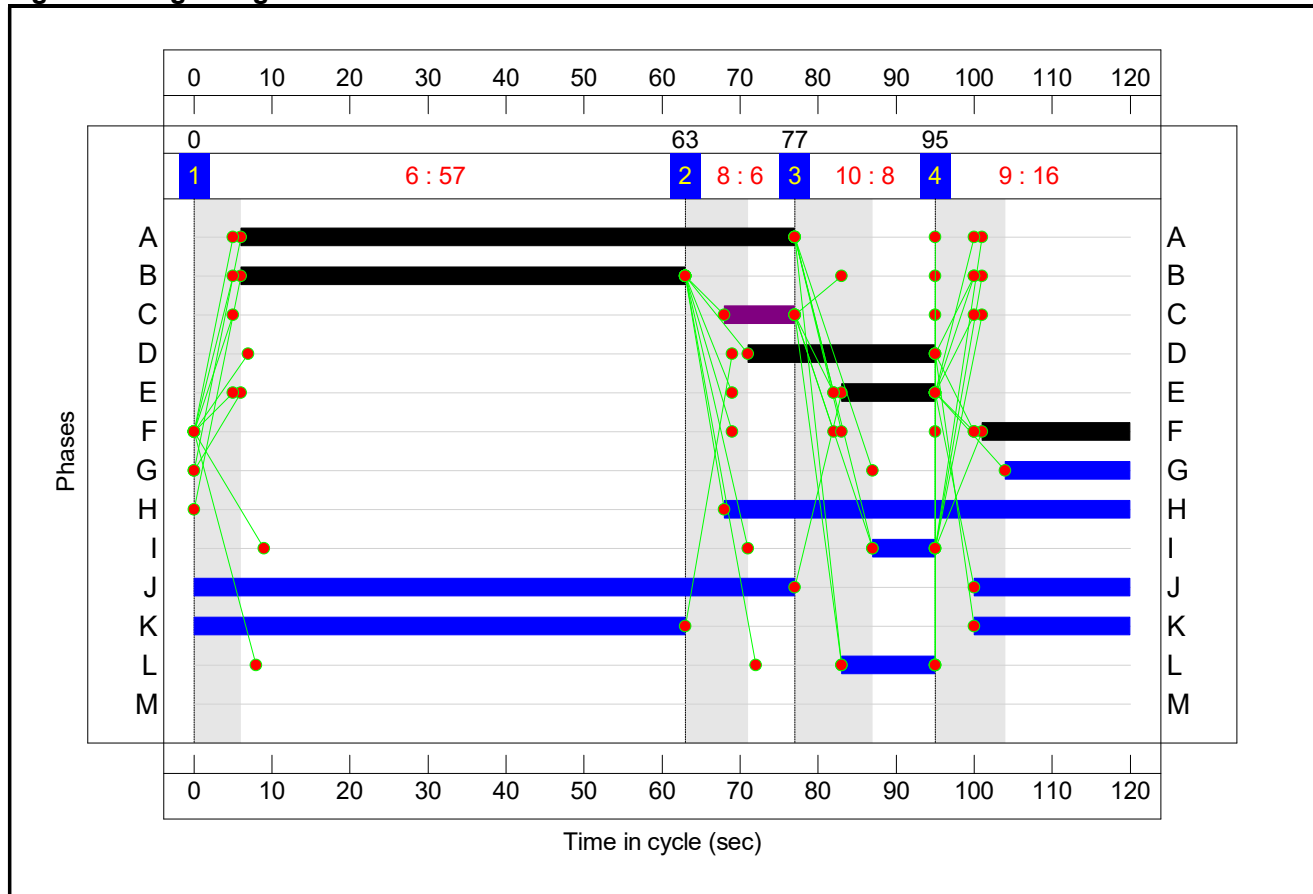
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	57	6	8	16
Change Point	0	63	77	95

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	94.8%
Rugby Rd / Hawley Rd / Westfield Rd	-	-	N/A	-	-		-	-	-	-	-	-	94.8%
1/2+1/1	B590 Rugby Road Left Ahead Right	O+U	N/A	N/A	B		1	57	-	580	1889:1769	753+215	59.9 : 59.9%
2/1	B590 Hawley Road Left	U	N/A	N/A	D		1	24	-	267	1939	404	66.1%
2/2+2/3	B590 Hawley Road Ahead Right	U	N/A	N/A	E		1	12	-	290	1925:1750	200+105	94.8 : 94.8%
3/1+3/2	Rugby Road Right Left Ahead	U+O	N/A	N/A	A	C	1	71	9	1099	1863:1646	827+335	94.5 : 94.5%
4/1+4/2	Westfield Road Ahead Right	U	N/A	N/A	F		1	19	-	454	1905:1684	235+248	93.9 : 93.9%
5/1		U	N/A	N/A	-		-	-	-	667	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	941	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	422	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	660	Inf	Inf	0.0%

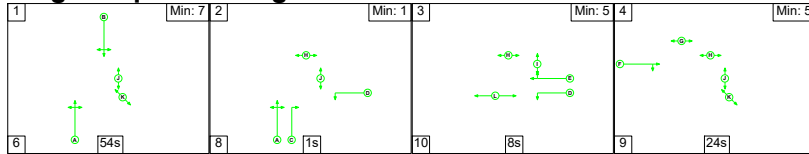
Full Input Data And Results

[illegible]

Full Input Data And Results

Scenario 5: '2030 Do Something AM' (FG5: '2030 Do Something AM', Plan 1: 'Network Control Plan 1')

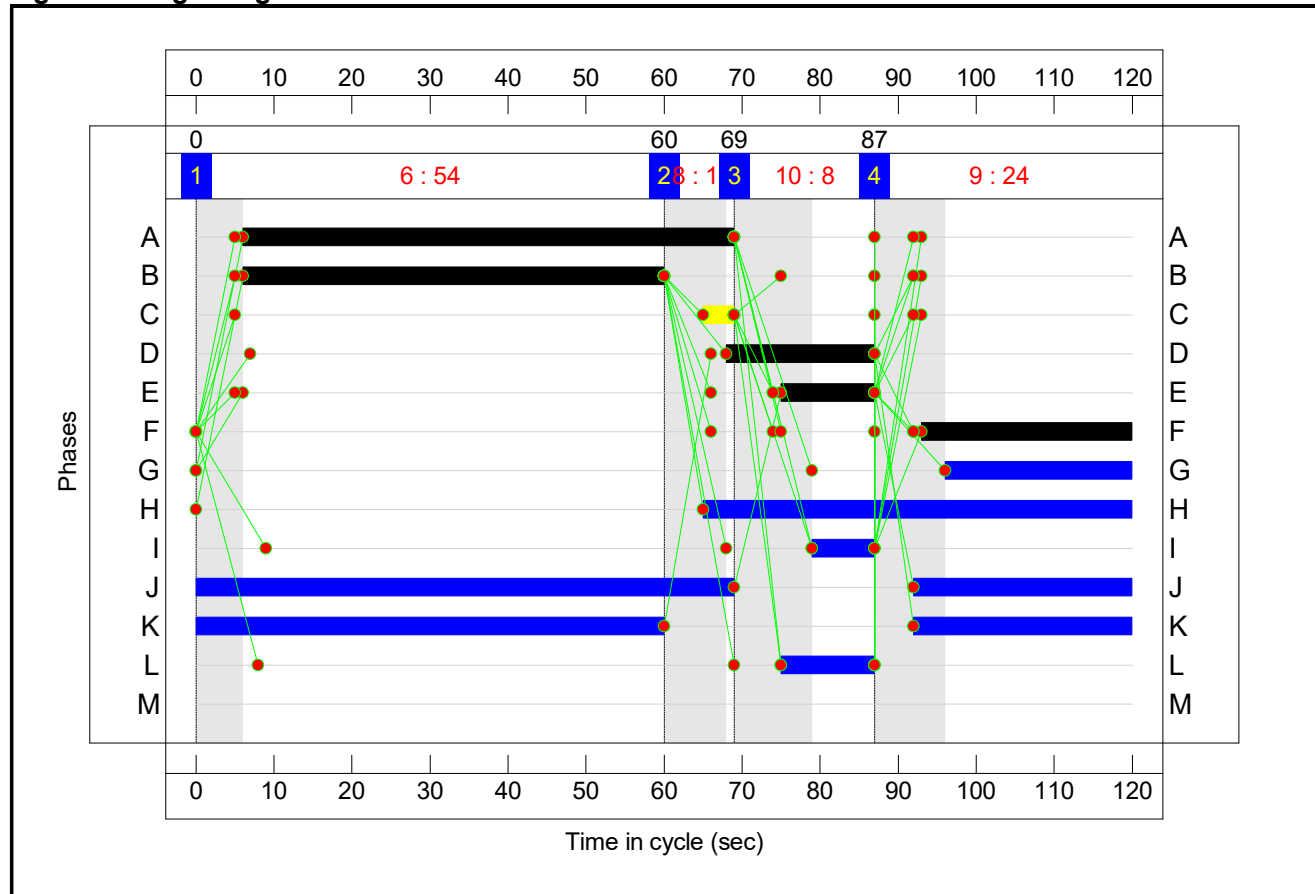
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	54	1	8	24
Change Point	0	60	69	87

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	91.9%
Rugby Rd / Hawley Rd / Westfield Rd	-	-	N/A	-	-		-	-	-	-	-	-	91.9%
1/2+1/1	B590 Rugby Road Left Ahead Right	O+U	N/A	N/A	B		1	54	-	613	1891:1769	789+105	68.5 : 68.5%
2/1	B590 Hawley Road Left	U	N/A	N/A	D		1	19	-	166	1939	323	51.4%
2/2+2/3	B590 Hawley Road Ahead Right	U	N/A	N/A	E		1	12	-	249	1925:1750	203+78	88.9 : 88.9%
3/1+3/2	Rugby Road Right Left Ahead	U+O	N/A	N/A	A	C	1	63	4	935	1843:1646	794+223	91.9 : 91.9%
4/1+4/2	Westfield Road Ahead Right	U	N/A	N/A	F		1	27	-	501	1905:1684	227+322	91.2 : 91.2%
5/1		U	N/A	N/A	-		-	-	-	484	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	994	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	471	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	515	Inf	Inf	0.0%

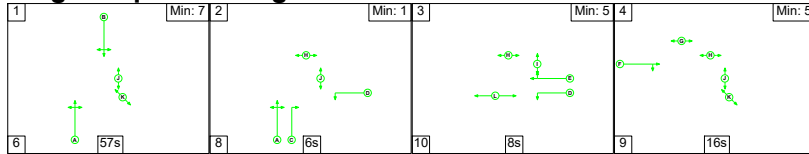
Full Input Data And Results

[illegible]

Full Input Data And Results

Scenario 6: '2030 Do Something PM' (FG6: '2030 Do Something PM', Plan 1: 'Network Control Plan 1')

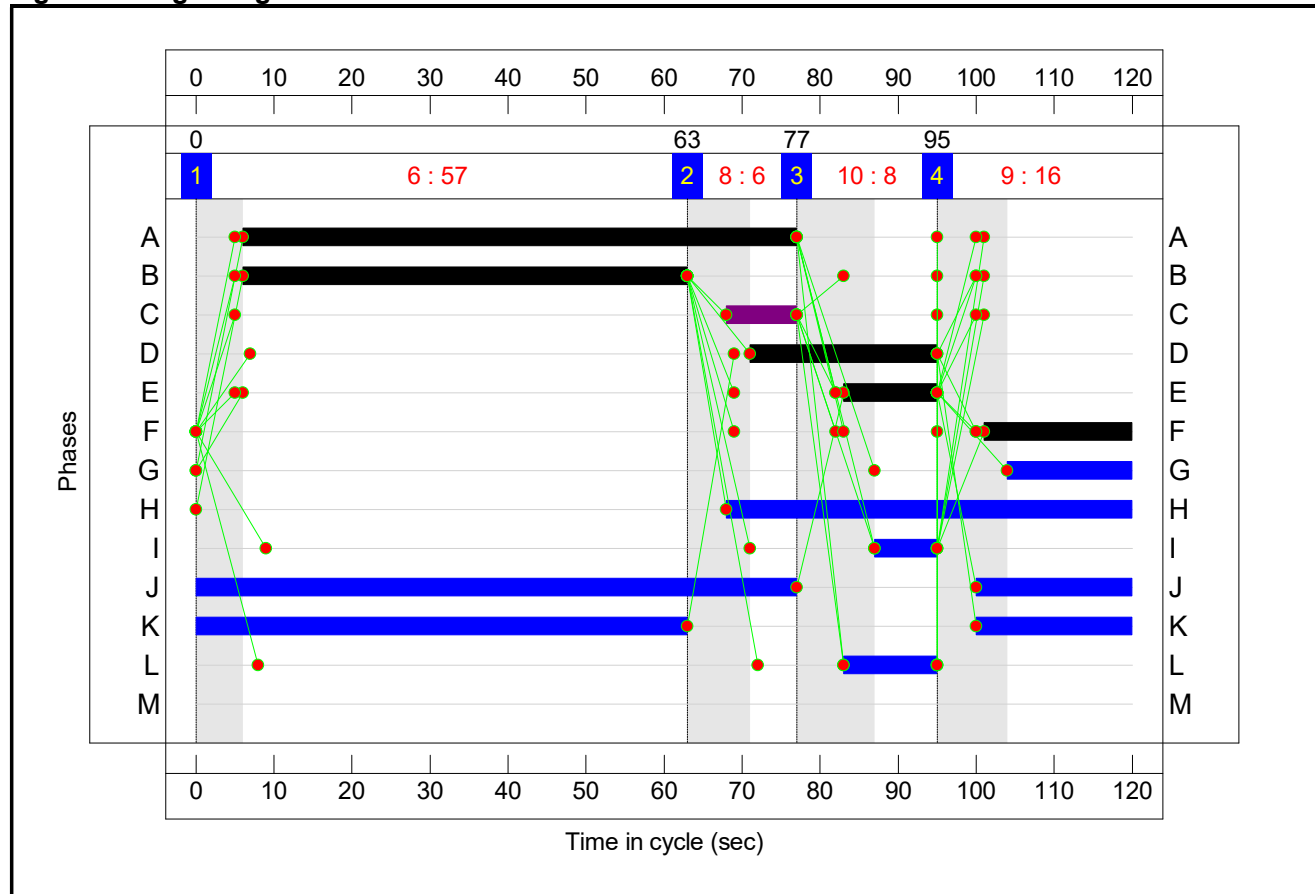
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	57	6	8	16
Change Point	0	63	77	95

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	96.0%
Rugby Rd / Hawley Rd / Westfield Rd	-	-	N/A	-	-		-	-	-	-	-	-	96.0%
1/2+1/1	B590 Rugby Road Left Ahead Right	O+U	N/A	N/A	B		1	57	-	597	1888:1769	756+210	61.8 : 61.8%
2/1	B590 Hawley Road Left	U	N/A	N/A	D		1	24	-	268	1939	404	66.3%
2/2+2/3	B590 Hawley Road Ahead Right	U	N/A	N/A	E		1	12	-	290	1925:1750	200+107	94.4 : 94.4%
3/1+3/2	Rugby Road Right Left Ahead	U+O	N/A	N/A	A	C	1	71	9	1114	1864:1646	834+327	96.0 : 96.0%
4/1+4/2	Westfield Road Ahead Right	U	N/A	N/A	F		1	19	-	454	1905:1684	232+248	94.6 : 94.6%
5/1		U	N/A	N/A	-		-	-	-	663	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	959	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	423	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	678	Inf	Inf	0.0%

Full Input Data And Results

[illegible]