# WILTSHIRE COUNCIL

# TROWBRIDGE TRAFFIC MODEL

# 2026 MODEL FORECASTING 'PROBLEMS & ISSUES'


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engineering the future

# DOCUMENT CONTROL

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### APPENDICES

# 1. INTRODUCTION

1.1. PFA Consulting was commissioned by Wiltshire Council to develop future year traffic model forecasts using the Trowbridge SATURN traffic model to assess the traffic impacts on the highway network from additional transport demand caused by expected new development in Trowbridge up to 2026.

1.2. The traffic modelling provides technical evidence to assist Wiltshire Council in developing its Core Strategy as part of the Local Development Framework (LDF) process.

1.3. This document identifies the 'problems and issues' on the highway network arising from planned future development in Trowbridge. The results from which will enable transport objectives to be defined which will guide the development of a transport strategy for Trowbridge which will support the formulation of the Core Strategy element of the LDF.

**Background**

1.4. A 2009 base year SATURN traffic model of Trowbridge has recently been developed which represents the existing traffic patterns and conditions on the local highway network in both the AM peak hour (08:00-09:00) and PM peak hour (17:00-18:00) weekday time periods.

1.5. The validated 2009 base year traffic model provides the basis from which to develop 2026 future year model forecasts to assess potential development options put forward by Wiltshire Council to meet the housing and employment requirements of Wiltshire's Core Strategy. **Figure 1** identifies the Trowbridge traffic model study area.

**Report Outline**

1.6. This report details the methodology adopted in developing future year traffic model forecasts and presents the results from development scenarios tested. The forecasting has allowed for traffic growth and committed development and highway improvements within the study area.

# 2. POLICY CONTEXT

**Wiltshire's Core Strategy**

2.1. The Wiltshire Core Strategy is part of the Local Development Framework (LDF), a suite of planning policy documents that will eventually replace the four local plans covering Wiltshire, including the West Wiltshire District Local Plan 2011.

2.2. The Core Strategy will outline a sustainable spatial strategy for future development in the County and include:

- Key principles of development
- The location of strategic sites for new housing and employment development
- Policies with which planning applications will be assessed

2.3. The 'Wiltshire Council Core Strategy Consultation Document - Working towards a Core Strategy for Wiltshire' was produced in June 2011. This document sets out draft policies to ensure the sustainable delivery of new development within Wiltshire up to 2026.

2.4. The document identifies Trowbridge as a 'Principal Settlement', a strategically important centre which will be the focus for growth over the plan period.

2.5. The Trowbridge Community Area Spatial Strategy includes for the provision of 30 hectares of employment land and 6,000 new homes within the community area over the plan period (2006 to 2026). It includes a strategic site on land to the south east of Trowbridge, which extends towards the A350 to the south and the railway line to the west, as shown in **Figure 2**.

2.6. The strategic allocation must deliver:

- A high quality, sustainable and mixed-use urban extension that is integrated with the existing town and town centre;
- 30 hectares of employment land; and
- 2,650 new homes including the provision of 40% as affordable.

2.7. Essential infrastructure requirements will include:

- Improvements to the A350, particularly at Yarnbrook and West Ashton, and sustainable transport solutions to through town traffic; and
- Improved public transport connectivity and pedestrian and cycling linkages to the town centre.

2.8. Wiltshire Council is continuing to develop a comprehensive and robust evidence base to support the preparation of the emerging Wiltshire Core Strategy.

2.9. The timetable for preparation of the Wiltshire Core Strategy has been amended in light of the recent changes to the regional policy perspective and the prospect of further legislation in the form of the proposed 'Localism Bill'. It is currently timetabled for adoption in autumn 2012.

# 3. FORECASTING METHODOLOGY

3.1. The model forecasting has assumed an assessment year of 2026 which is consistent with Wiltshire Council's Core Strategy Plan Period.

3.2. The forecasting process has followed the following stages which are represented in the flow chart below.

***2026 Matrix Development***

- Split the 2009 base year matrix into two matrices; an 'external' matrix containing external to external trips only, and an 'internal' matrix which only contains trips with an origin and/or a destination in Trowbridge.
- Take the 2009 'external matrix' and growth the external to external traffic by applying TEMPRO/NTM 2009-2026 growth factors.
- Take the 2009 'internal matrix' and growth the traffic by applying TEMPRO 2009-2026 local growth factors (using alternative planning data facility assuming no new development).
- Estimate traffic generation for committed developments in Trowbridge and Core Strategy strategic allocation to the south east of Trowbridge.
- Distribute development traffic using appropriate comparable zones in the traffic model.
- Add the development traffic to the factored 'internal matrix'
- Add the factored 'external matrix' to the factored 'internal matrix' containing the development traffic to represent the 2026 forecast matrix.

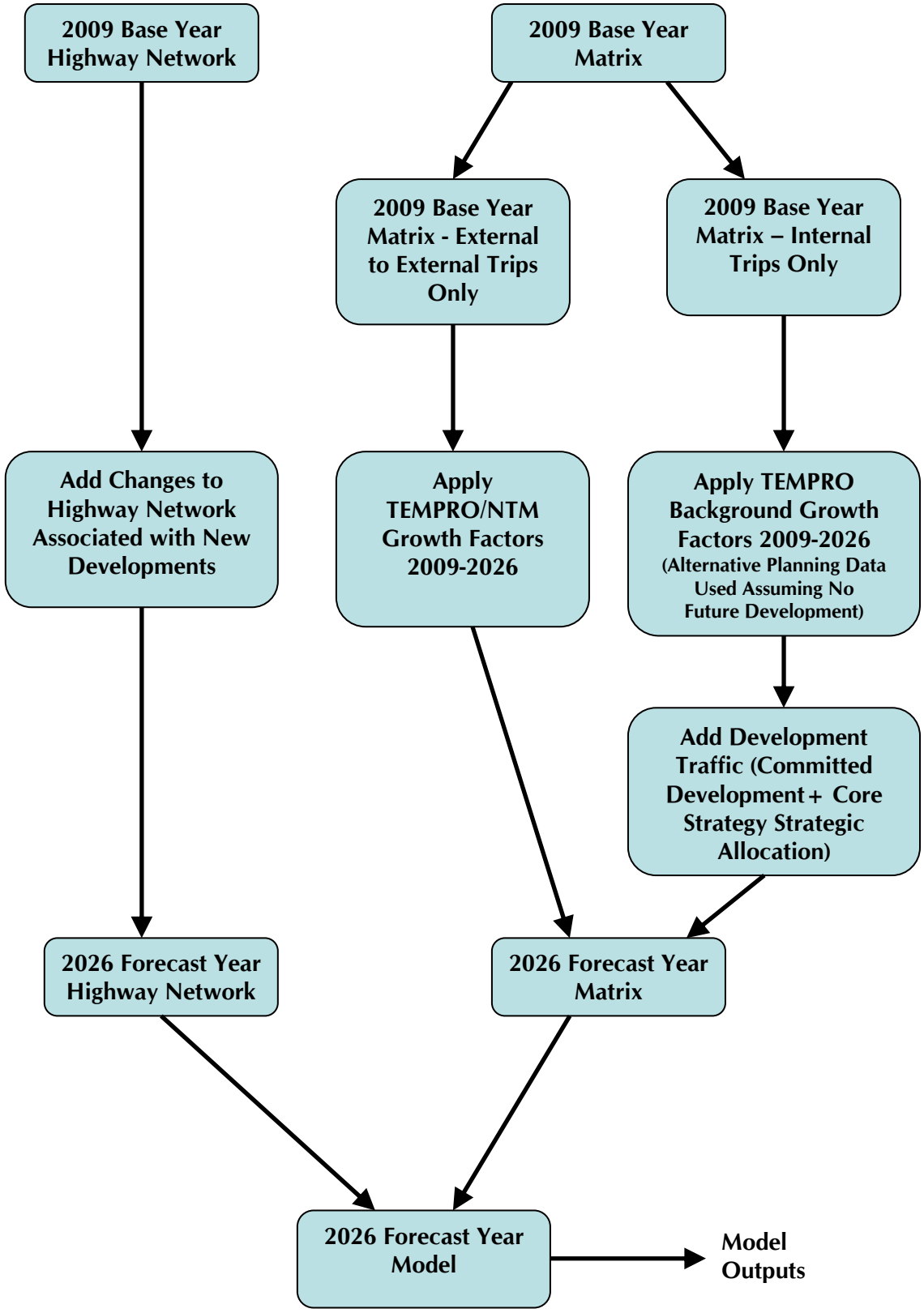
***2026 Network Development***

- Development of a 2026 forecast modelled highway network which includes the proposed highway improvements associated with committed development.

***2026 Model Forecasts***

- The 2026 forecast matrix is assigned to the 2026 forecast highway network to produce 2026 model forecasts.

## 2026 Model Forecasting Methodology



# 4. TRAFFIC GROWTH

4.1. To represent the situation in the 2026 forecast year, traffic growth has been applied to the 2009 base year trip matrices following guidance set out in TAG Unit 3.15.2 'Use of TEMPRO data', this ensures that the model forecasts benefits from nationally and locally derived growth projections in accordance with government guidance.

4.2. TEMPRO was used to calculate growth factors for external to external trips and for trips with an origin and/or a destination within Trowbridge.

***External to External Traffic***

4.3. For the external to external trips the DfT published growth forecasts from the National Trip End Model (NTM) was used as the basis, with TEMPRO factors used to tailor the published traffic forecasts to local circumstances.

4.4. The NTM forecasts give traffic growth by region, road type and whether the area is built up or not.

4.5. For the external to external traffic the NTM traffic growth on 'Urban and Principal Roads in the Wiltshire' was adjusted by applying the ratio of car driver trip end growth for the Wiltshire area for the relevant time period to the average day car driver trip end growth for the South-West Region (both from TEMPRO).

4.6. **Table 1** below shows the external to external growth factors 2009-2026 derived from TEMPRO for both the AM and PM peak periods. Full details of the traffic growth calculations are included at **Appendix A**.

**Table 1: External to External Traffic Growth Factors 2009–2026 (TEMPRO)**

| | External to External Traffic Growth Factor |
|---|---|
| AM Peak | 1.256 |
| PM Peak | 1.266 |

***Internal Trips***

4.7. For trips which have either an origin and/or a destination within Trowbridge TEMPRO has been used to calculate the 2009-2026 traffic growth factors using data for the Trowbridge local TEMPRO zone.

4.8. The set of growth factors extracted from TEMPRO are based on the assumptions of no growth between the base and future years for households or jobs. This provides background growth rather than full growth to avoid overestimating the increase in trips when the future developments are added. The 'alternative planning data' facility within the TEMPRO software was used to set 2026 planning data to 2009 values.

4.9. In accordance with good practice the local TEMPRO growth factors need to be adjusted by applying appropriate global adjustment factors to represent the impact of income growth and fuel cost changes.

4.10. **Table 2** shows the background traffic growth factors derived from TEMPRO for Trowbridge for both origins and destinations between 2009 and 2026 for the AM and PM peaks allowing for adjustments for fuel and income. Full details of the TEMPRO calculations are provided at **Appendix B**.

**Table 2: Trowbridge Background Traffic Growth 2009–2026 (TEMPRO)**

| | Origins | Destinations |
|---|---|---|
| AM Peak | 1.110 | 1.111 |
| PM Peak | 1.097 | 1.098 |

4.11. The trip end growth factors generated were applied to the 2009 base year matrices using a 'Furnessing' process in order to produce background growth 2026 forecast year matrices for internal trips with an origin and/or destination within the study area.

# 5. COMMITTED DEVELOPMENT

5.1. The traffic growth detailed in Chapter 4 does not allow for growth in traffic from future new developments in Trowbridge. The TEMPRO guidance advises that where a development proposal is likely to have a significant impact on demand for transport, it should be explicitly modelled.

5.2. For the 2026 model forecasts, outstanding committed developments in Trowbridge have been explicitly modelled as have a number of sites within Trowbridge Town Centre which 'Trowbridge Vision' considers will be developed through its town centre regeneration project.

5.3. Discussions with Wiltshire Council established those developments to be included in the 2026 model forecasts. The plan at **Appendix C** identifies residential, employment and retail/leisure completions and commitments together with those sites anticipated to be developed through the Trowbridge Vision regeneration project. Reference numbers are provided on the plan with the sites listed at **Appendix D** to enable individual sites to be identified.

***Transport Infrastructure***

5.4. Improvements to the highway network are proposed with some of the committed developments. Those improvements which have been included in the 2026 forecast modelled highway network are described below:

- Hilperton Relief Road – connecting A361 Trowbridge Road with Canal Road/Wyke Road/Horse Road, secured by East Trowbridge residential development (Site Ref. No. 25).
- East Trowbridge Distributor Road – connecting A361 Hilperton Drive with West Ashton Road, secured by East Trowbridge residential development (Site Ref. No. 25) and West Ashton Business Park (Site Ref. No. 29).
- New signal controlled junction on Bythesea Road providing access to mixed-use development on the former Wincanton site (Site Ref. No. 30).
- New roundabout on British Row serving the proposed retail store on the former Ushers Bottling Plant site (Site Ref. No. 31).
- New roundabout on Timbrell Street serving the proposed housing on the former Ushers Bottling Plant site (Site Ref. No. 31).
- New priority junction on Bradford Road providing access to the proposed Bradford Road employment site (Site Ref. No. 28).
- New signal controlled junction on Town Bridge providing access to proposed development on the former Bowyers Factory site (Site Ref. No. 34).
- New priority junction on proposed East Trowbridge Distributor providing access to the proposed West Ashton Business Park (Site Ref. No. 29).

5.5. Both the Hilperton Relief Road (T1) and the East Trowbridge Distributor Road (T2) are considered important committed highway improvements which will result in changing traffic patterns in Trowbridge. The alignments of these proposed new roads are shown on the plan included at **Appendix C**.

***Traffic Generation***

5.6. Traffic generation for the committed developments and 'vision' sites have been estimated from trip rates derived from either locally observed data, the TRICS database or from Transport Assessments (TAs) produced for specific developments.

5.7. Traffic Counts at Staverton Marina and White Horse Business Park established local trip rates to be applied to new residential and employment development.

5.8. **Table 3** shows the residential trip rate per household derived from a 2009 traffic count on Thestfield Drive serving development in Staverton Marina comprising 579 residential units.

**Table 3: Residential Trip Rate per Household**

| | Generations | Attractions | Two-way |
|---|---|---|---|
| AM Peak | 0.461 | 0.176 | 0.637 |
| PM Peak | 0.192 | 0.413 | 0.605 |

5.9. **Table 4** shows the employment trip rate per hectare derived from a 2009 traffic count at White Horse Business Park comprising 29.3 hectares.

**Table 4: Employment Trip Rate per Hectare**

| | Generations | Attractions | Two-way |
|---|---|---|---|
| AM Peak | 4.95 | 31.78 | 36.73 |
| PM Peak | 23.99 | 2.97 | 26.96 |

5.10. Transport Assessments for the mixed-use developments at the former Wincanton site (Site Ref. No. 30) and the formers Ushers Bottling Plant site (Site Ref. No. 31) were used to estimate the traffic generation associated with the non-residential elements of the development proposals.

5.11. The traffic generation calculations for each of the sites, including the trip rates adopted for each land use, are set out in tables at **Appendix D**. The tables provide the traffic generation for both the AM and PM peak hour time periods.

***Traffic Distribution***

5.12. The methodology adopted for the distribution of the committed development traffic was based on the distribution from appropriate existing zones (same land use and location) in the traffic model. **Appendix D** identifies for each committed development the zones adopted for distributing the development traffic, many of which can be seen to be the zone in which the development falls.

# 6. TROWBRIDGE STRATEGIC SITE

6.1. **Figure 2** shows the Trowbridge strategic site included in the 'Wiltshire Council Core Strategy Consultation Document (June 2011)' to fulfil the housing and employment requirements for Trowbridge up to 2026. The site is capable of delivering some 2,650 dwellings and 30 hectares of employment land in addition to those already committed.

6.2. The strategic allocation is considered by Wiltshire Council to offer the opportunity to deliver a coherent sustainable urban extension for Trowbridge with good accessibility to employment land and well located to deliver the transport infrastructure required in Trowbridge.

***Transport Infrastructure***

6.3. At this stage the traffic modelling has not included any off-site highway improvements other than for the purpose of providing access to development comprising the Trowbridge strategic site. To this end a new site access roundabout on the A350 to the east of Yarnbrook Roundabout has been modelled with a new link connecting the roundabout to the proposed roundabout on West Ashton Road at the southern end of the proposed Eastern Distributor Road as shown in **Figure 2**.

***Traffic Generation***

6.4. **Tables 6 & 7** details the traffic generation of the Trowbridge strategic site for both the AM and PM peak hour time periods with a more detailed breakdown provided at **Appendix E**.

**Table 6: Trowbridge Strategic Site Traffic Generation – AM Peak Hour**

| | Generations | Attractions | Two-way |
|---|---|---|---|
| Residential (2650 dwellings) | 1222 | 466 | 1688 |
| Employment (30 Hectares) | 148 | 953 | 1101 |
| Total | 1370 | 1419 | 2789 |

**Table 7: Trowbridge Strategic Site Traffic Generation – PM Peak Hour**

| | Generations | Attractions | Two-way |
|---|---|---|---|
| Residential (2650 dwellings) | 509 | 1094 | 1603 |
| Employment (30 Hectares) | 720 | 89 | 809 |
| Total | 1229 | 1183 | 2412 |

***Traffic Distribution***

6.5. The distribution of the traffic for the Trowbridge strategic site was based on the distribution of traffic from existing comparable zones in the traffic model. **Appendix E** identifies those zones used to derive the traffic distribution for both the housing and employment elements.

***2026 Zone Plan***

6.6. The Trowbridge traffic model zone plan was refined to incorporate the proposed development option. **Appendix F** details the revised 2026 forecasting zone plans highlighting those zones which represent the Trowbridge strategic site.

# 7. MODELLED SCENARIOS AND MODEL OUTPUTS

7.1. The Trowbridge SATURN traffic model provides the only way of determining future highway network performance from planned growth in Trowbridge proposed through Wiltshire's Core Strategy.

***Modelled Scenarios***

7.2. **Table 8** details the model scenarios which have been assessed using the Trowbridge traffic model for both the AM and PM peak hours.

**Table 8: Modelled Scenarios Assessed**

| | |
|---|---|
| 1 | 2009 Base Year |
| 2 | 2026 With Committed Development only (Reference Case) |
| 3 | 2026 Reference Case + Trowbridge Strategic Site |

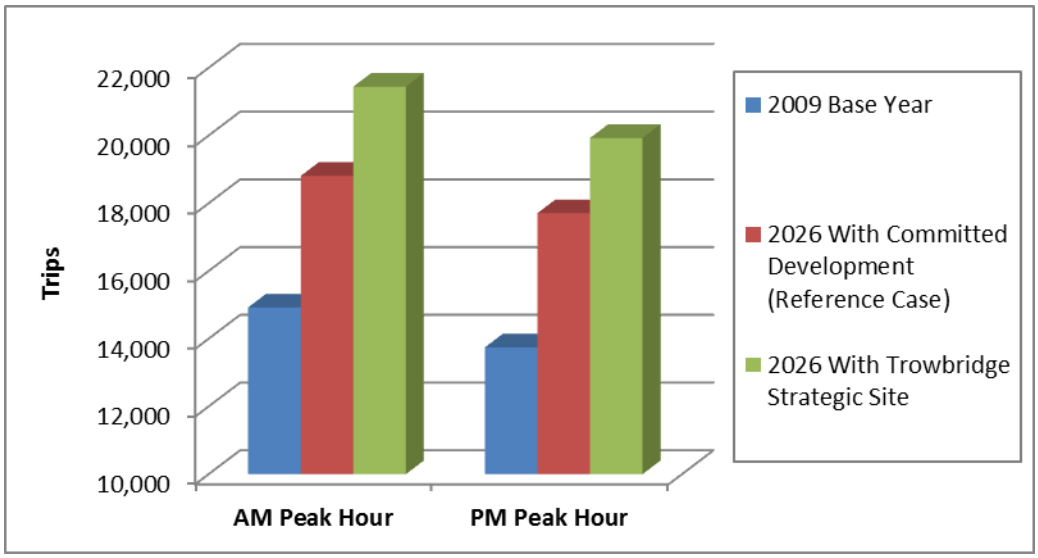
***Trip Matrix Totals***

7.3. The numbers of trips in the matrices for each of the modelled scenarios are shown in **Table 9** and represented in **Graph 1** below.

**Table 9: Trip Matrix Totals**

| Scenario | | AM Peak Hour | PM Peak Hour |
|---|---|---|---|
| 1 | 2009 Base Year | 14,924 | 13,742 |
| 2 | 2026 With Committed Development (Reference Case) | 18,807 | 17,707 |
| 3 | 2026 Reference Case + Trowbridge Strategic Site | 21,444 | 19,926 |

**Graph1: Matrix Totals**




***Modelled Link Flows***

7.4. **Figures 3 & 4** show two-way link traffic flows on key links in Trowbridge derived from the SATURN models for each scenario for the weekday AM peak hour (08:00-09:00) and weekday PM peak hour (17:00-18:00) time periods.

7.5. **Figure 5** details two-way traffic flows representing the Trowbridge strategic site development traffic only. This represents the distribution of the development traffic on the highway network in both the AM and PM peak hour periods. The Trowbridge strategic site development traffic is represented graphically in the SATURN output plots reproduced at **Appendix G**.

***Overall Network Performance – SATURN Simulation Summary Statistics***

7.6. To appraise the relative performance of each of the scenarios assessed the simulation summary statistics output from SATURN have been interrogated to establish the results for the following 'assessment indicators' which best reflects the operational performance of the highway network overall:

- Average journey time (secs)
- Average Journey distance (km)
- Overall average speed (kph)
- CO2 emissions (kg)
- Transient queues (hrs)
- Over-capacity queues (hrs)

7.7. **Tables 10 & 11** provides a summary of the results for each of the 'assessment indicators' for each of the scenarios in both the AM and PM peak hour periods.

**Table 10: SATURN Simulation Summary Statistics – AM Peak Hour (08:00-09:00)**

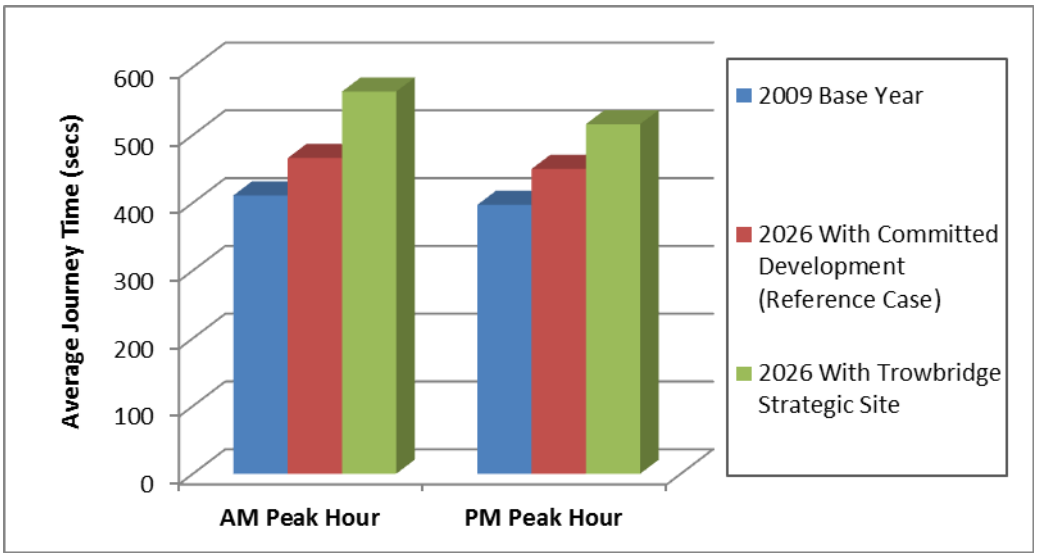
| Scenario | | Average Journey Time (secs) | Average Journey Distance (km) | Overall Average Speed (kph) | $CO^2$ Emissions (kg) | Transient Queues (hrs) | Over-Capacity Queues (hrs) |
|---|---|---|---|---|---|---|---|
| 1 | 2009 Base Year | 411 | 3.73 | 32.6 | 4865 | 382 | 58 |
| 2 | 2026 With Committed Development (Reference Case) | 466 | 3.78 | 29.2 | 6592 | 588 | 249 |
| 3 | 2026 With Trowbridge Strategic Site | 564 | 3.81 | 24.3 | 8128 | 793 | 705 |

**Table 11: SATURN Simulation Summary Statistics – PM Peak Hour (17:00-18:00)**

| Scenario | | Average Journey Time (secs) | Average Journey Distance (km) | Overall Average Speed (kph) | $CO^2$ Emissions (kg) | Transient Queues (hrs) | Over-Capacity Queues (hrs) |
|---|---|---|---|---|---|---|---|
| 1 | 2009 Base Year | 397 | 3.76 | 34.4 | 4447 | 314 | 35 |
| 2 | 2026 With Committed Development (Reference Case) | 450 | 3.79 | 30.3 | 6198 | 535 | 187 |
| 3 | 2026 With Trowbridge Strategic Site | 516 | 3.82 | 26.6 | 7412 | 727 | 432 |

7.8. The average journey time is perhaps the best indicator as to the operational performance of the network overall. **Graphs 2** shows the average journey times for all the scenarios for both the AM and PM peak hour modelled time periods.

**Graph 2: Network Wide Average Journey Time**




7.9. The above tables and graphs show that average journey times and journey distances increase with increasing numbers of trips on the network as a consequence of increased levels of congestion.

**Junction Capacity Performance**

7.10. A total of 20 junctions have been identified as being key junctions on the modelled highway network requiring analysis, these are identified in **Figure 6**. Using the Trowbridge traffic model it is possible to assess the performance of these key junctions for each of the scenarios tested for both the AM and PM peak hour periods.

7.11. The analysis considered total traffic volume against total junction capacity (V/C %) using the following colour coding:

- Green: Junction is operating within 50% of capacity
- Amber: Junction is operating between 50% and 70% capacity
- Red: Junction is operating over 70% capacity

7.12. **Figures 7 - 12** show the results of the junction capacity analysis for all scenarios in both the AM and PM peak hour periods. It represents a good indication as to how a junction performs overall.

7.13. As you would expect a junctions performance deteriorates in the 2026 forecast year as a consequence of background traffic growth and traffic generated from new development.

7.14. **Figures 9 & 12** show the results in both peak hour periods of the 2026 scenario with the inclusion of the Trowbridge strategic site. Those junctions which are shown to have a V/C > 70% are detailed in **Table 12** below.

**Table 12: 2026 with Trowbridge Strategic Site – Junctions with V/C > 70%**

| AM Peak Hour | PM Peak Hour |
|---|---|
| A350/A361 Semington Roundabout | A350 West Ashton Crossroads Signals |
| A350 West Ashton Crossroads Signals | A350/A363 Yarnbrook Roundabout |
| A350/A363 Yarnbrook Roundabout | A361 Hilperton Drive/Leap Gate Roundabout |
| A361 White Horse Business Park/ Westbury Road Roundabout | A361 County Way/West Ashton Rd Roundabout |
| A361 Trowbridge Rd/Hilperton Drive Roundabout | Tesco Signals |
| A361 County Way/West Ashton Rd Roundabout | Longfield Gyratory |
| Tesco Signals | A361 County Way/A363 Bradley Road Roundabout |
| Longfield Gyratory | A363 Stallard Street/Bythesea Rd Roundabout |
| A361 County Way/A363 Bradley Road Roundabout | Holy Trinity Gyratory |
| A363 Stallard Street/Bythesea Rd Roundabout | Staverton Bridge Signals |
| Holy Trinity Gyratory | |
| Staverton Bridge Signals | |

7.15. SATURN output plots are reproduced at **Appendix H** showing for both the AM and PM peak hour periods a graphical representation of overall junction delay for the 2026 scenario including the Trowbridge strategic site. The plots highlight those junctions which experience the greatest levels of delay which can be seen to include the Staverton Bridge Signals (AM & PM), A350 West Ashton Crossroads Signals (AM & PM), A350/A363 Yarnbrook Roundabout (AM & PM) and the Holy Trinity Gyratory (AM).

7.16. The above analysis shows the performance of a junction overall, it is also important to consider how individual approach arms to a junction perform as well.

7.17. Tables in **Appendix I** provide an analysis of each of the 20 key junctions identifying for each those entry arms which have a V/C % >85%, a value generally regarded as the threshold from which 'levels of service' will begin to deteriorate.

7.18. SATURN output plots are reproduced at **Appendix J** showing for both the AM and PM peak hour periods a graphical representation of overall link delay for the 2026 scenario including the Trowbridge strategic site. The plots highlight those links which experience the greatest levels of delay which can be seen to be all approaches at Staverton Bridge Signals (AM & PM), all approaches at A350 West Ashton Crossroads Signals (AM & PM), A350 approaches at Yarnbrook Roundabout (AM & PM), and both the A363 Bath Road approach and A366 Wingfield Road approach to Holy Trinity Gyratory (AM).

# 8. CONCLUSIONS

8.1. This report has described the methodology adopted in developing future year model forecasts to assess the impact on the local highway network of planned development in Trowbridge to be delivered through Wiltshire Council's Core Strategy. The report presents the results of the model forecasting which will help guide the development of a transport strategy for Trowbridge to facilitate the planned growth over the Core Strategy period to 2026.

8.2. The Trowbridge SATURN traffic model was used to forecast the demand for travel in 2026 for both the AM and PM peak hour periods. The model forecasting allowed for traffic growth in accordance with DfT guidance, consented and committed developments in Trowbridge, and committed highway improvement schemes which included the Hilperton Relief Road and Eastern Distributor Road.

8.3. The model outputs were analysed to assess the impact on the operation of the local highway network in Trowbridge in 2026. Scenarios were tested which included the strategic site allocation to the south-east of Trowbridge included in Wiltshire Council's Core Strategy Consultation Document (June 2011). The strategic allocation would deliver an additional 2,650 dwellings and 30 hectares of employment land to those already committed in Trowbridge.

8.4. The traffic modelling has demonstrated that the performance of the highway network would suffer from increased levels of congestion with the planned future developments in Trowbridge resulting in the following:

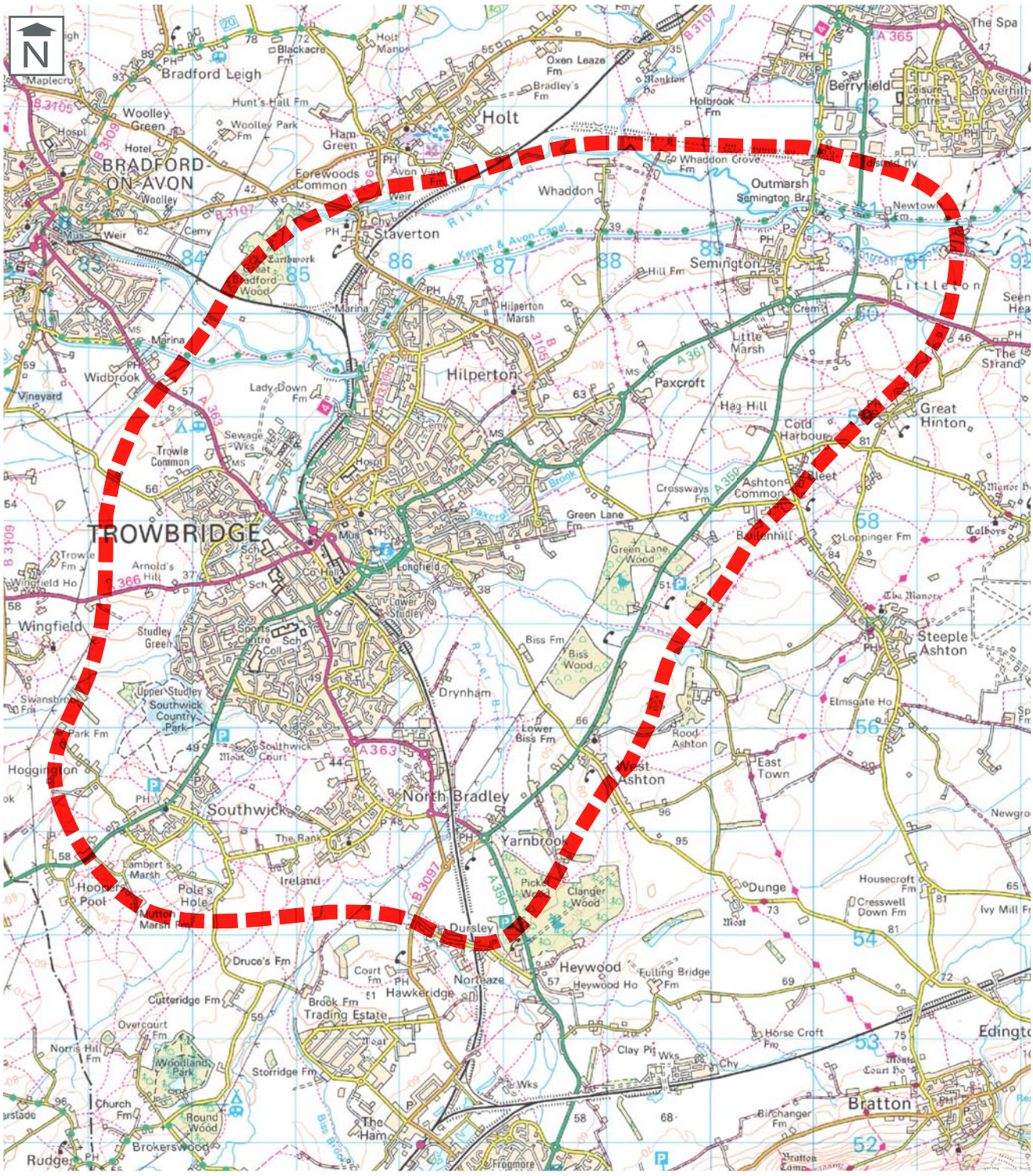
- Reduced reliability for both motorists and bus passengers (given that public transport has no priority over cars);
- Increased journey times and journey distances;
- Reduced traffic speeds;
- Increased car borne pollution.

8.5. Increased traffic volumes and congestion will likely result in increased noise, increased visual intrusion and deter walking and cycling modes of travel. It will also reduce the economic viability and attractiveness of Trowbridge as a place in which to live, work or visit.

8.6. Those key junctions on the local highway network which the modelling has shown to suffer from the greatest levels of queuing and delay include; Staverton Bridge Signals, A350 West Ashton Crossroads Signals, A350/A363 Yarnbrook Roundabout and the A363 Bath Road and A366 Wingfield Road approaches to the Holy Trinity Gyratory.

8.7. The results of the traffic modelling will help guide the development of a transport strategy for Trowbridge which will support the formulation of Wiltshire's Core Strategy. The Trowbridge Transport Strategy will identify infrastructure improvements which best accommodates the planned growth in Trowbridge without unacceptable congestion on the local highway network during peak periods.

# Figures



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Project

2026 Model Forecasting 'Problems and Issues'

Figure Title

Trowbridge Traffic Model Study Area

Figure No

Figure 1

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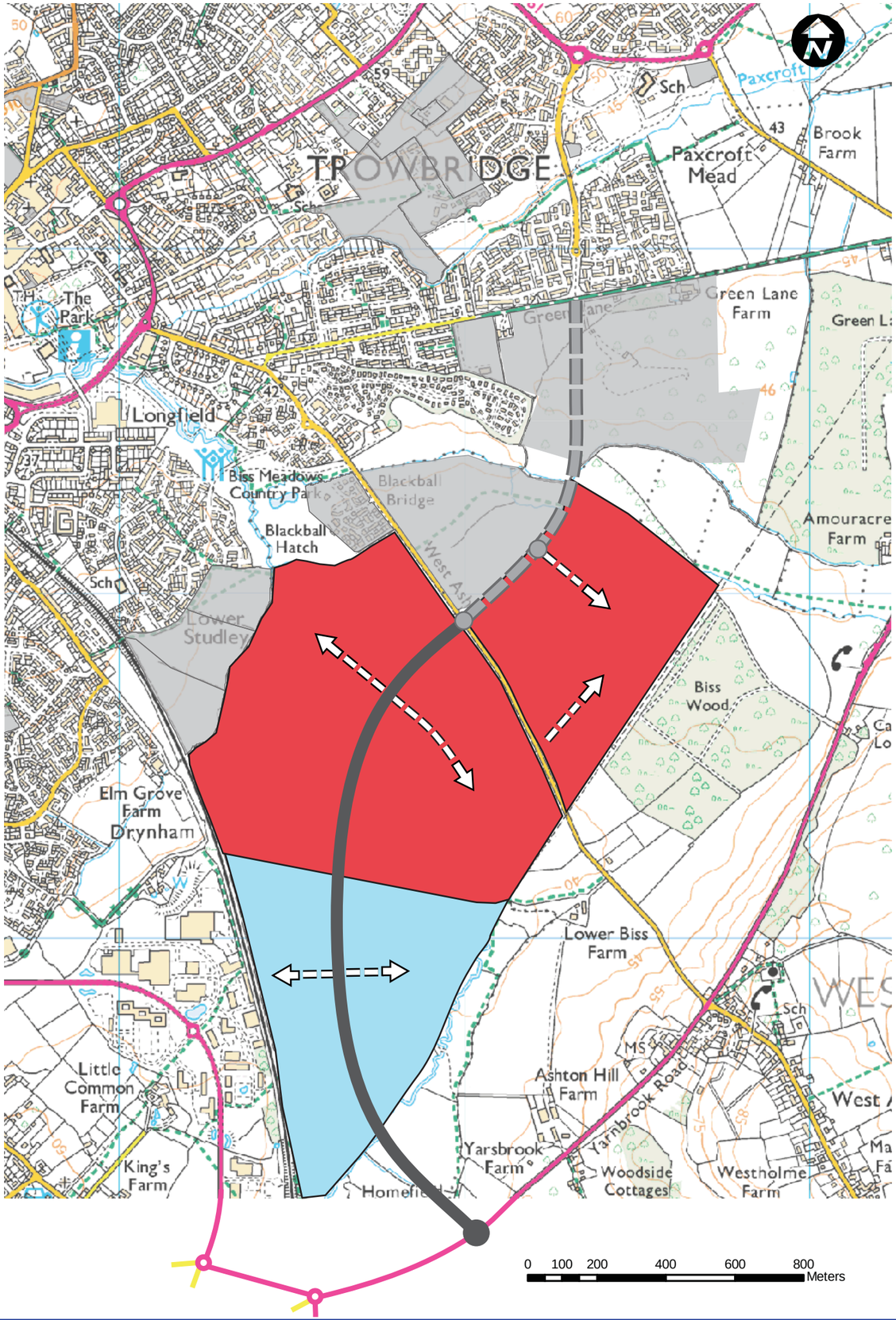


KEY

- Housing and Employment Completions and Commitments
- Committed Roads

Trowbridge Strategic Site

- Mixed-Use Sites (2,650 Units)
- Employment Sites (30 Hectares)
- New Roads
- Site Access



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2026 Model Forecasting 'Problems and Issues'

Figure Title

Trowbridge Strategic Site

Figure No

Figure 2

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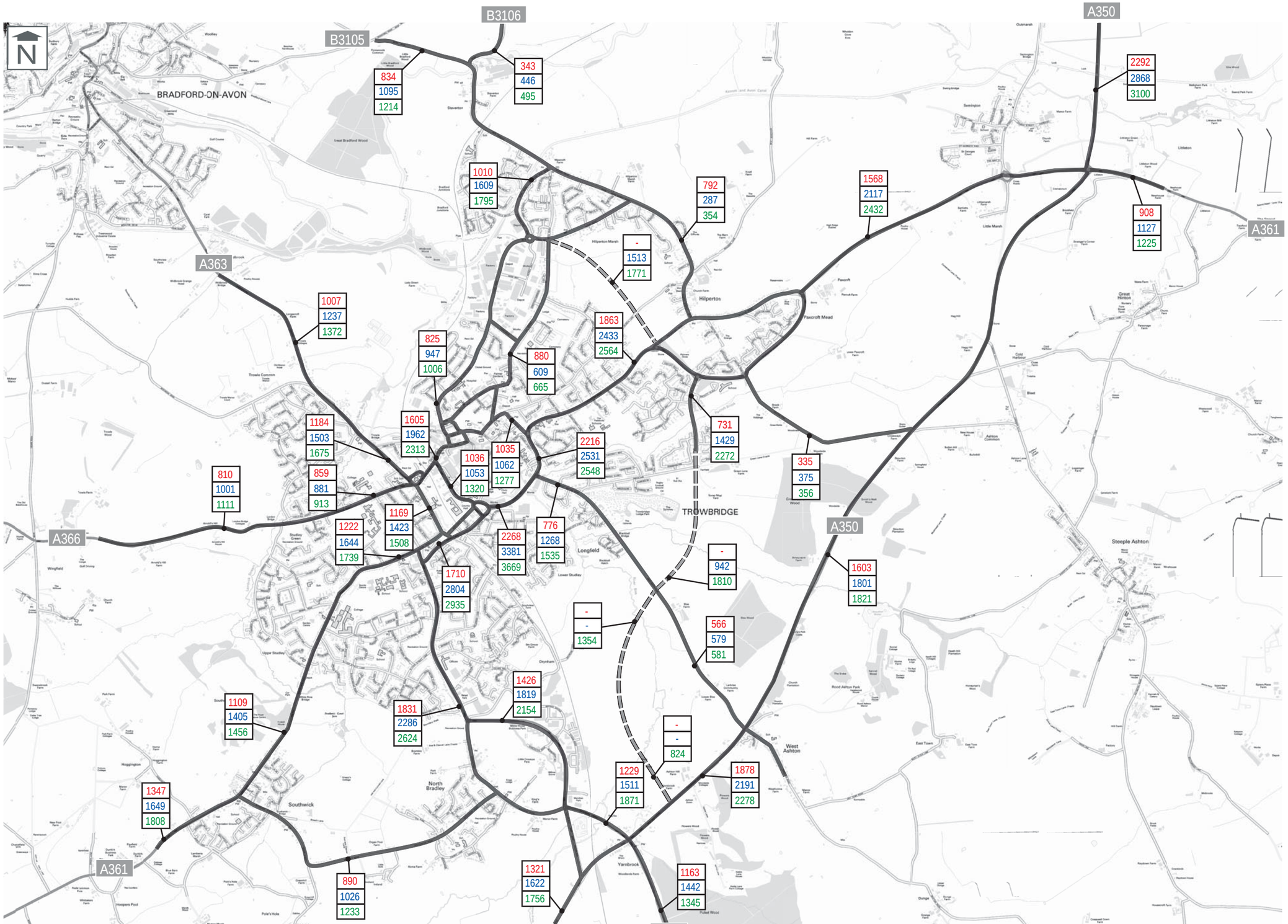
| Doc Ref | W407 Model Forecasting |

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Scenarios

| |
|---|
| 2009 Base |
| 2026 Reference Case |
| 2026 With Trowbridge Strategic Site |

Note
Traffic flows are two-way PCU's derived from SATURN traffic model

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2026 Model Forecasting 'Problems and Issues'

Figure Title

AM Peak Hour Modelled Link Flows

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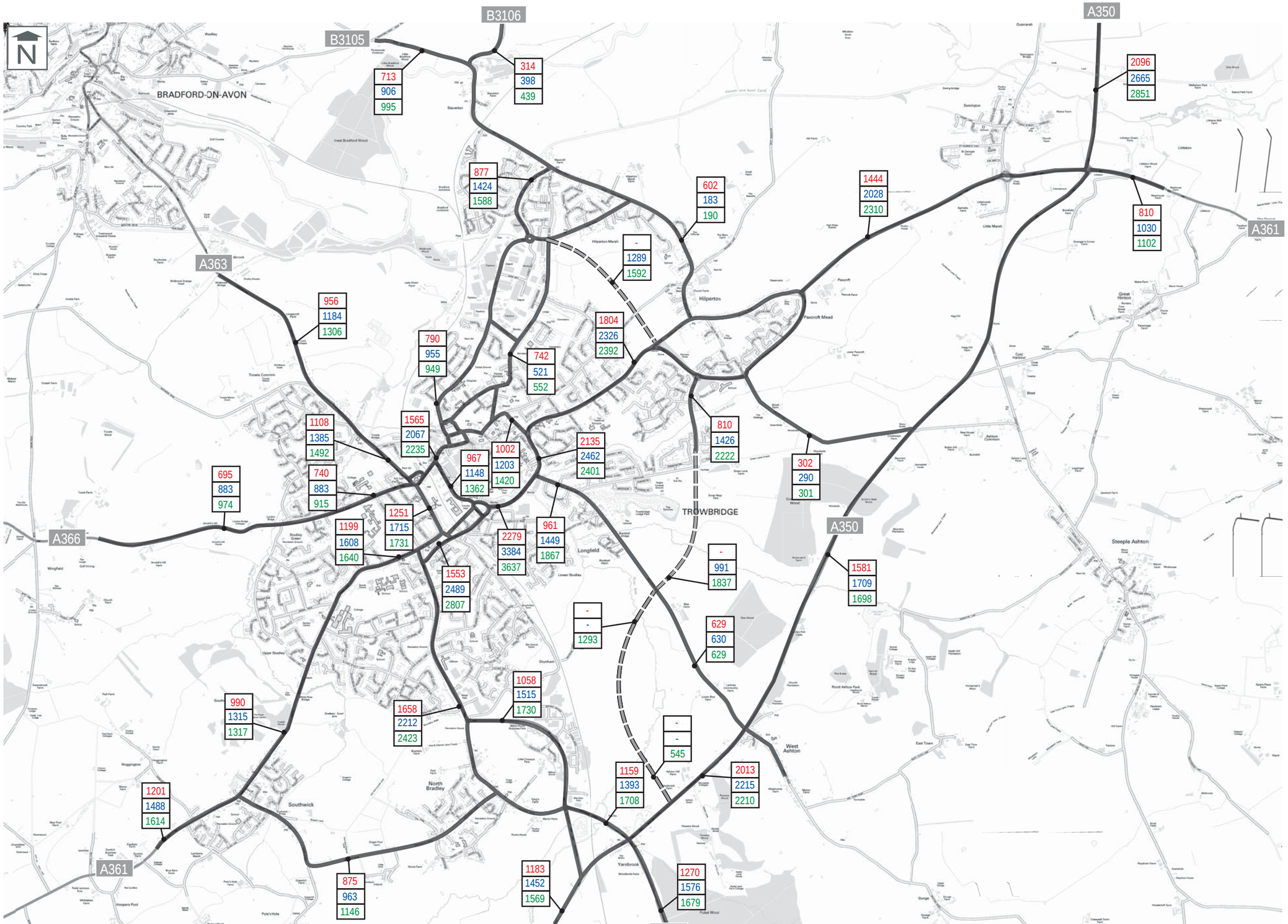
| File Ref | W407/Figures/MF/Fig3.ai |
| Doc Ref | W401 Model Forecasting |

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Scenarios

| |
|---|
| 2009 Base |
| 2026 Reference Case |
| 2026 With Trowbridge Strategic Site |

Note
Traffic flows are two-way PCU's derived from SATURN traffic model

Client

Wiltshire Council

Project

2026 Model Forecasting 'Problems and Issues'

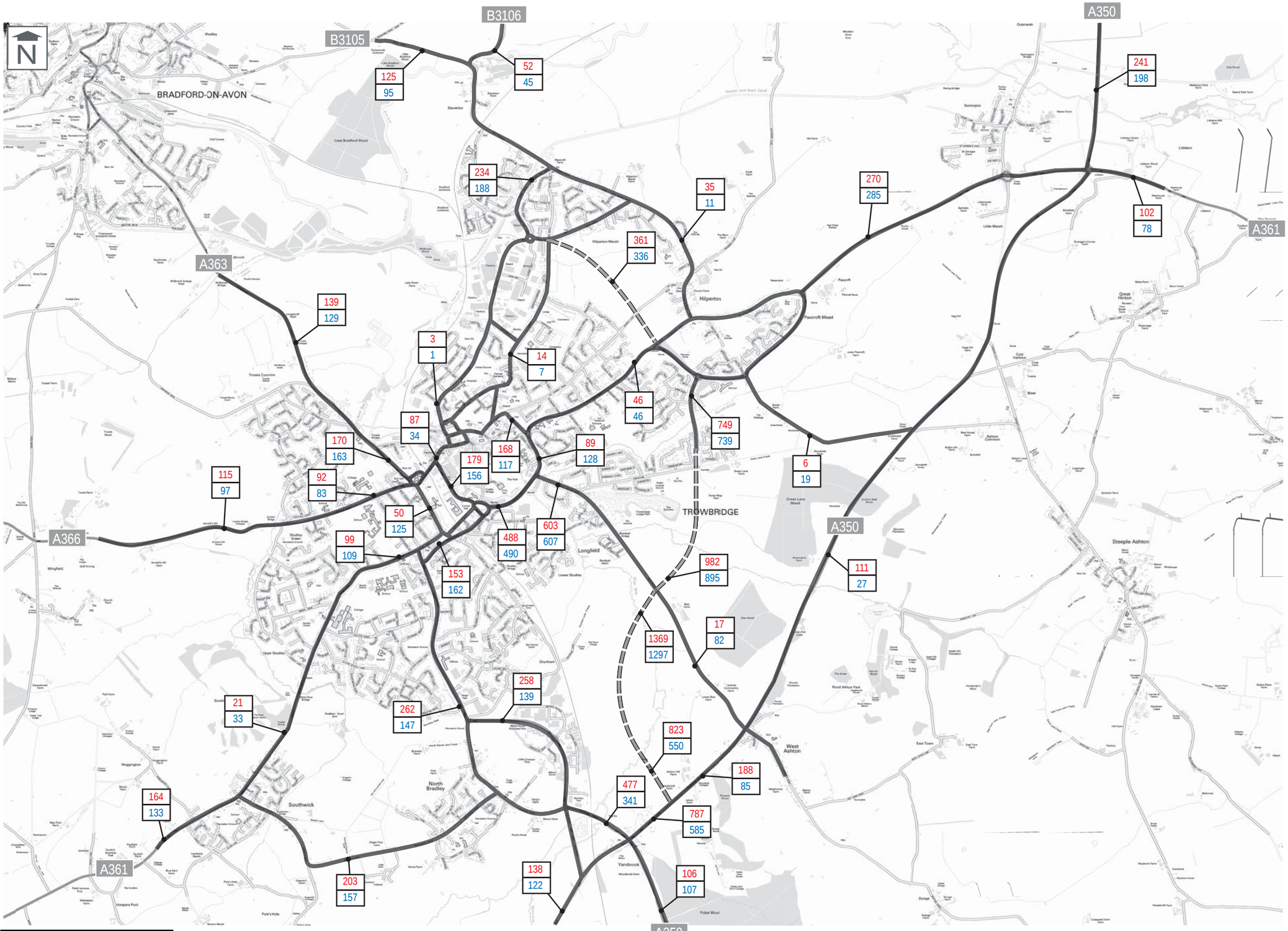
Figure Title

PM Peak Hour Modelled Link Flows

Figure No

Figure 4

| | |
|---|---|
| Date | April 2011 |
| Drawn By | EN |
| Checked By | JA |
| Scale | NTS |
| File Ref | W407/Figures/MF/Fig4.ai |
| Doc Ref | W407 Model Forecasting |

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AM Peak Hour

PM Peak Hour

Note
Traffic flows are two-way demand flows in PCU's derived from SATURN traffic model

Client

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2026 Model Forecasting 'Problems and Issues'

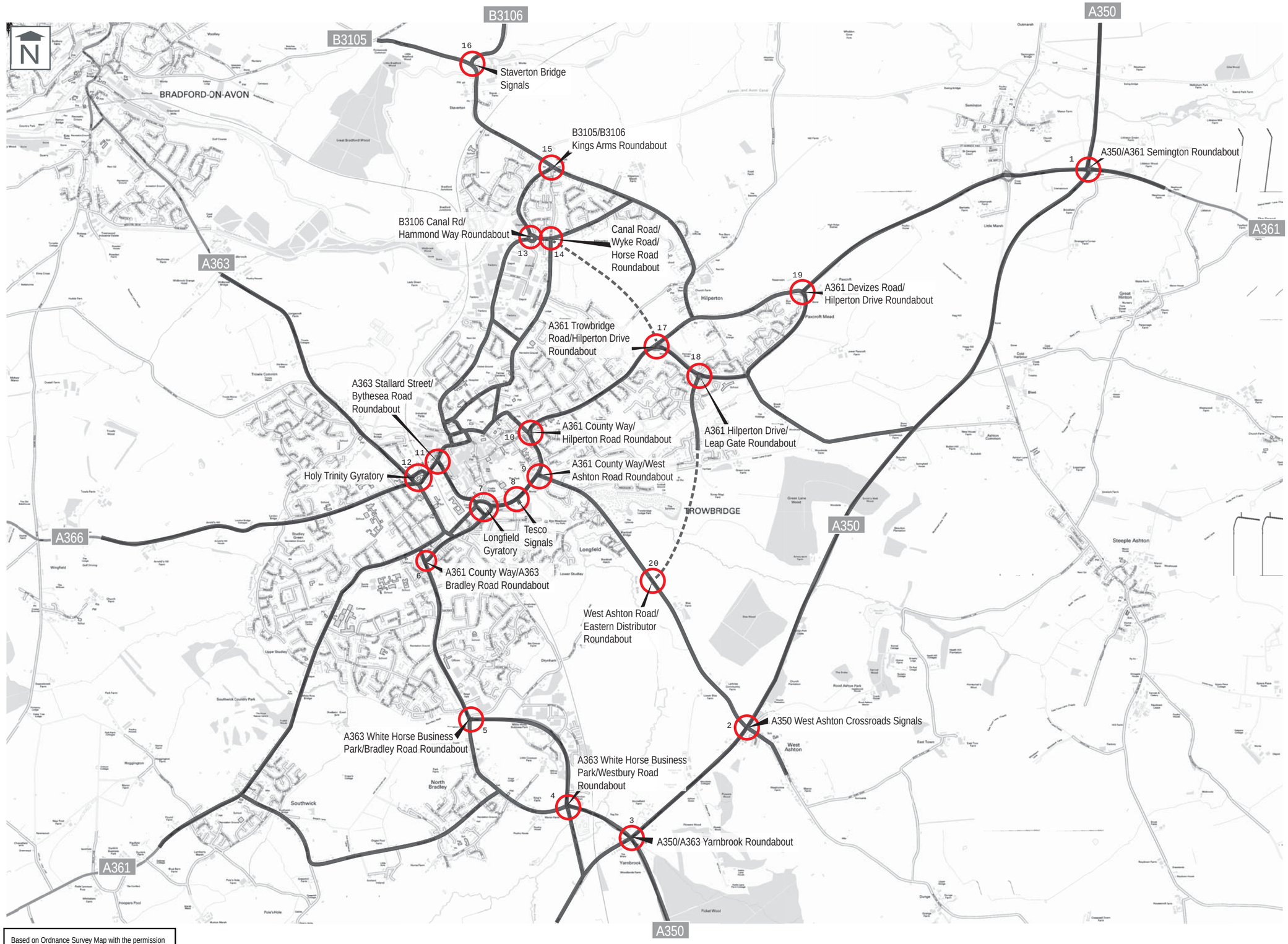
Figure Title

Trowbridge Strategic Site Development Traffic Only

Figure No

Figure 5

| | |
|---|---|
| Date | April 2011 |
| Drawn By | EN |
| Checked By | JA |
| Scale | NTS |
| File Ref | W407/Figures/MF/Fig5.ai |
| Doc Ref | W407 Model Forecasting |



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2026 Model Forecasting 'Problems and Issues'

Figure Title

Key Junctions in Trowbridge

Figure No

Figure 6

| | |
|---|---|
| Date | April 2011 |
| Drawn By | EN |
| Checked By | JA |
| Scale | NTS |
| File Ref | W407/Figures/MF/Fig6.ai |
| Doc Ref | W407 Model Forecasting |


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Overall Junction Performance (V/C%)

- < 50% of capacity
- 50% - 70% of capacity
- > 70% of capacity

Note: The overall junction performance represents total traffic volume against total junction capacity (V/C%)

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2026 Model Forecasting 'Problems and Issues'

Figure Title

Highway Network Performance 2009 Base Year - AM Peak Hour

Figure No

Figure 7

| | |
|---|---|
| Date | April 2011 |
| Drawn By | EN |
| Checked By | JA |
| Scale | NTS |
| File Ref | W407/Figures/MF/Fig7.ai |
| Doc Ref | W407 Model Forecasting |


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Overall Junction Performance (V/C%)

- < 50% of capacity
- 50% - 70% of capacity
- > 70% of capacity

Note: The overall junction performance represents total traffic volume against total junction capacity (V/C%)

Client

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Project

2026 Model Forecasting
'Problems and Issues'

Figure Title

Highway Network Performance
2026 Reference Case - AM Peak Hour

Figure No

Figure 8

| | |
|---|---|
| Date | April 2011 |
| Drawn By | EN |
| Checked By | JA |
| Scale | NTS |
| File Ref | W407/Figures/MF/Fig8.ai |
| Doc Ref | W407 Model Forecasting |


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Overall Junction Performance (V/C%)

- < 50% of capacity
- 50% - 70% of capacity
- > 70% of capacity

Note: The overall junction performance represents total traffic volume against total junction capacity (V/C%)

Client

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Project

2026 Model Forecasting 'Problems and Issues'

Figure Title

Highway Network Performance 2026 with Trowbridge Strategic Site - AM Peak Hour

Figure No

Figure 9

| | |
|---|---|
| Date | April 2011 |
| Drawn By | EN |
| Checked By | JA |
| Scale | NTS |
| File Ref | W407/Figures/MF/Fig9.ai |
| Doc Ref | W407 Model Forecasting |


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Overall Junction Performance (V/C%)

- < 50% of capacity
- 50% - 70% of capacity
- > 70% of capacity

Note: The overall junction performance represents total traffic volume against total junction capacity (V/C%)

Client

Wiltshire Council

Project

2026 Model Forecasting 'Problems and Issues'

Figure Title

Highway Network Performance 2009 Base Year - PM Peak Hour

Figure No

Figure 10

| | |
|---|---|
| Date | April 2011 |
| Drawn By | EN |
| Checked By | JA |
| Scale | NTS |
| File Ref | W407/Figures/MF/Fig10.ai |
| Doc Ref | W407 Model Forecasting |




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Overall Junction Performance (V/C%)

- < 50% of capacity
- 50% - 70% of capacity
- > 70% of capacity

Note: The overall junction performance represents total traffic volume against total junction capacity (V/C%)

Client

Wiltshire Council

Project

2026 Model Forecasting 'Problems and Issues'

Figure Title

Highway Network Performance
2026 Reference Case - PM Peak Hour

Figure No

Figure 11

| | |
|---|---|
| Date | April 2011 |
| Drawn By | EN |
| Checked By | JA |
| Scale | NTS |
| File Ref | W407/Figures/MF/Fig11.ai |
| Doc Ref | W407 Model Forecasting |


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Overall Junction Performance (V/C%)

- < 50% of capacity
- 50% - 70% of capacity
- > 70% of capacity

Note: The overall junction performance represents total traffic volume against total junction capacity (V/C%)

Client

Wiltshire Council

Project

2026 Model Forecasting 'Problems and Issues'

Figure Title

Highway Network Performance 2026 with Trowbridge Strategic Site - PM Peak Hour

Figure No

Figure 12

| | |
|---|---|
| Date | April 2011 |
| Drawn By | EN |
| Checked By | JA |
| Scale | NTS |
| File Ref | W407/Figures/MF/Fig12.ai |
| Doc Ref | W407 Model Forecasting |

# Appendices

# Appendix A

## EXTERNAL TO EXTERNAL TRAFFIC GROWTH CALCULATIONS

**TRAFFIC GROWTH:** 2009 to 2026

Traffic Growth factors to be applied to base traffic using factors derived from TEMPRO (Version 5.4) and NTM.

Local Tempro Zone: Wiltshire

TEMPRO Local AM Peak Hour Factors

Weekday AM Peak Car Driver Trip End Growth for Wiltshire

| | | | |
|---|---|---|---|
| Origin | 1.1962 | | |
| Destination | 1.1842 | Average: | 1.1902 |

TEMPRO Local PM Peak Hour Factors

Weekday PM Peak Car Driver Trip End Growth for Wiltshire

| | | | |
|---|---|---|---|
| Origin | 1.1962 | | |
| Destination | 1.2045 | Average: | 1.2004 |

This local growth factor following good practice setout in WebTAG Unit 3.15.2 should be tailored using the ratio of the relavent regional NTM growth factors to the national average day car driver trip ends derived using TEMPRO v6.1 which performs the calculation automatically as identified in WebTAG.

NTM

| | |
|---|---|
| Area Type: | Urban |
| Road Type: | Principal |

Adjusted Local Peak Period AM Growth Factors to be applied to Base Traffic

2009 to 2026

1.2557

Adjusted Local Peak Period PM Growth Factors to be applied to Base Traffic

2009 to 2026

1.2662

Note: The NTM only models to 2025, to produce growth rates to 2026 growths rates to from 2024-2025 were added to the 2009-2025 growth

# Appendix B

## INTERNAL TRAFFIC GROWTH CALCULATIONS

**TRAFFIC GROWTH:** 2009 to 2026

Traffic Growth factors to be applied to the traffic model using factors derived from TEMPRO (Version 5.4) for highways only models.

Local Tempro Zone: Trowbridge (46UF1) Alternative assumptions used 2009 = 2026

TEMPRO Local AM Peak Hour Factors (Alternative Assumptions)

Weekday AM Peak Car Driver Trip End Growth for Trowbridge (46UF1)

| | | | |
|---|---|---|---|
| Origin | 0.9944 | | |
| Destination | 0.9954 | Average: | 0.9949 |

TEMPRO Local PM Peak Hour Factors (Alternative Assumptions)

Weekday PM Peak Car Driver Trip End Growth for Trowbridge (46UF1)

| | | | |
|---|---|---|---|
| Origin | 0.9828 | | |
| Destination | 0.9837 | Average: | 0.9833 |

This local growth factor following good practice setout in WebTAG Unit 3.15.2, section 5.4 should be tailored using income and cost adjust ment factors taken from Table 1 in the WebTag unit.

Adjustment Factors

| 2009 | | 2026 | |
|---|---|---|---|
| Income | 1.054 | Income | 1.107 |
| Fuel | 0.971 | Fuel | 1.032 |

# AM Peak Hour - Internal Zones Background Growth: 2009-2026 (No Development)

| Zone | 2009 Base Year Row Total | 2009 Base Year Column Total | TEMPRO Growth 2009-2026 | | Fuel & Income Adjustment | | Factors Applied | | Background Growth 2009-2026 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Origin | Destination | Income | Fuel | Rows | Columns | Rows | Columns |
| 1 | 89 | 111 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 99 | 123 |
| 2 | 26 | 282 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 29 | 314 |
| 3 | 60 | 149 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 67 | 166 |
| 4 | 15 | 34 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 17 | 38 |
| 5 | 14 | 26 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 15 | 29 |
| 6 | 52 | 66 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 58 | 74 |
| 7 | 0 | 0 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 0 | 0 |
| 8 | 0 | 0 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 0 | 0 |
| 9 | 5 | 47 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 5 | 52 |
| 10 | 23 | 247 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 26 | 274 |
| 11 | 64 | 178 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 71 | 198 |
| 12 | 33 | 45 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 36 | 50 |
| 13 | 5 | 20 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 6 | 23 |
| 14 | 30 | 30 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 33 | 34 |
| 15 | 30 | 105 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 33 | 117 |
| 16 | 41 | 25 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 46 | 28 |
| 17 | 60 | 212 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 67 | 236 |
| 18 | 27 | 52 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 30 | 58 |
| 19 | 49 | 136 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 54 | 151 |
| 20 | 13 | 22 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 14 | 24 |
| 21 | 3 | 55 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 4 | 61 |
| 22 | 25 | 83 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 28 | 92 |
| 23 | 67 | 112 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 75 | 124 |
| 24 | 32 | 82 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 36 | 91 |
| 25 | 26 | 37 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 29 | 41 |
| 26 | 133 | 87 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 147 | 97 |
| 27 | 50 | 34 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 55 | 37 |
| 28 | 45 | 51 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 50 | 57 |
| 29 | 26 | 9 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 29 | 10 |
| 30 | 254 | 226 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 282 | 252 |
| 31 | 69 | 56 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 77 | 62 |
| 32 | 205 | 263 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 228 | 292 |
| 33 | 97 | 46 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 107 | 51 |
| 34 | 100 | 83 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 111 | 92 |
| 35 | 0 | 0 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 0 | 0 |
| 36 | 48 | 20 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 53 | 22 |
| 37 | 103 | 65 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 114 | 72 |
| 38 | 82 | 34 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 91 | 38 |
| 39 | 170 | 127 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 189 | 141 |
| 40 | 0 | 0 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 0 | 0 |
| 41 | 0 | 0 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 0 | 0 |
| 42 | 0 | 0 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 0 | 0 |
| 43 | 221 | 57 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 246 | 64 |
| 44 | 259 | 67 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 288 | 74 |
| 45 | 127 | 147 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 141 | 163 |
| 46 | 64 | 15 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 71 | 17 |
| 47 | 99 | 20 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 110 | 22 |
| 48 | 47 | 9 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 52 | 10 |
| 49 | 120 | 44 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 133 | 49 |
| 50 | 74 | 29 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 82 | 33 |
| 51 | 77 | 12 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 86 | 14 |
| 52 | 9 | 8 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 10 | 9 |
| 53 | 136 | 92 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 151 | 102 |
| 54 | 90 | 55 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 100 | 61 |
| 55 | 39 | 24 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 43 | 27 |
| 56 | 101 | 90 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 112 | 100 |
| 57 | 178 | 86 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 198 | 96 |
| 58 | 31 | 250 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 35 | 278 |
| 59 | 40 | 94 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 44 | 105 |
| 60 | 3 | 103 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 3 | 114 |
| 61 | 168 | 57 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 186 | 63 |
| 62 | 267 | 102 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 296 | 113 |
| 63 | 24 | 94 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 26 | 105 |
| 64 | 44 | 84 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 49 | 93 |
| 65 | 61 | 86 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 68 | 96 |
| 66 | 44 | 51 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 49 | 56 |
| 67 | 39 | 128 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 43 | 142 |
| 68 | 92 | 161 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 102 | 179 |
| 69 | 244 | 166 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 270 | 185 |
| 70 | 170 | 61 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 189 | 68 |
| 71 | 148 | 58 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 165 | 64 |
| 72 | 120 | 164 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 133 | 182 |
| 73 | 146 | 120 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 162 | 134 |
| 74 | 109 | 60 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 121 | 67 |
| 75 | 141 | 74 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 157 | 82 |
| 76 | 277 | 88 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 307 | 98 |
| 77 | 229 | 197 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 254 | 219 |
| 78 | 40 | 46 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 45 | 52 |
| 79 | 34 | 14 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 37 | 15 |
| 80 | 54 | 97 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | 60 | 108 |

# AM Peak Hour - Internal Zones Background Growth: 2009-2026 (No Development)

| Zone | 2009 Base Year Row Total | 2009 Base Year Column Total | TEMPRO Growth 2009-2026 | | Fuel & Income Adjustment | | Factors Applied | | Background Growth 2009-2026 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Origin | Destination | Income | Fuel | Rows | Columns | Rows | Columns |
| 81 | 174 | 256 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **193** | **284** |
| 82 | 33 | 375 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **37** | **417** |
| 83 | 88 | 40 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **97** | **45** |
| 84 | 159 | 186 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **176** | **207** |
| 85 | 251 | 85 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **278** | **94** |
| 86 | 76 | 125 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **84** | **139** |
| 87 | 163 | 78 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **181** | **86** |
| 88 | 184 | 73 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **205** | **81** |
| 89 | 185 | 65 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **205** | **72** |
| 90 | 49 | 144 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **54** | **160** |
| 91 | 60 | 56 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **67** | **62** |
| 92 | 162 | 108 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **179** | **120** |
| 93 | 35 | 68 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **39** | **76** |
| 94 | 95 | 429 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **105** | **477** |
| 95 | 57 | 502 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **63** | **558** |
| 96 | 5 | 62 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **6** | **69** |
| 97 | 1 | 5 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **1** | **5** |
| 98 | 20 | 138 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **22** | **153** |
| 99 | 0 | 0 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **0** | **0** |
| 100 | 111 | 94 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **124** | **104** |
| 101 | 1 | 1 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **2** | **1** |
| 102 | 0 | 0 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **0** | **0** |
| 103 | 0 | 0 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **0** | **0** |
| 104 | 31 | 15 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **35** | **17** |
| 105 | 148 | 123 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **164** | **136** |
| 106 | 224 | 107 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **249** | **119** |
| 107 | 186 | 102 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **206** | **113** |
| 108 | 243 | 181 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **270** | **201** |
| 109 | 0 | 0 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **0** | **0** |
| 110 | 13 | 72 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **15** | **80** |
| 111 | 1 | 0 | 0.994 | 0.995 | 1.050 | 1.063 | 1.110 | 1.111 | **1** | **0** |
| 200 | 24 | 19 | 0.995 | 0.994 | 1.050 | 1.063 | 1.111 | 1.110 | **26** | **22** |
| 201 | 68 | 47 | 0.995 | 0.994 | 1.050 | 1.063 | 1.111 | 1.110 | **75** | **53** |
| 202 | 109 | 53 | 0.995 | 0.994 | 1.050 | 1.063 | 1.111 | 1.110 | **121** | **59** |
| 203 | 30 | 11 | 0.995 | 0.994 | 1.050 | 1.063 | 1.111 | 1.110 | **33** | **12** |
| 204 | 31 | 30 | 0.995 | 0.994 | 1.050 | 1.063 | 1.111 | 1.110 | **35** | **34** |
| 205 | 740 | 634 | 0.995 | 0.994 | 1.050 | 1.063 | 1.111 | 1.110 | **822** | **704** |
| 206 | 318 | 263 | 0.995 | 0.994 | 1.050 | 1.063 | 1.111 | 1.110 | **353** | **291** |
| 207 | 334 | 270 | 0.995 | 0.994 | 1.050 | 1.063 | 1.111 | 1.110 | **371** | **300** |
| 208 | 486 | 299 | 0.995 | 0.994 | 1.050 | 1.063 | 1.111 | 1.110 | **540** | **332** |
| 209 | 577 | 360 | 0.995 | 0.994 | 1.050 | 1.063 | 1.111 | 1.110 | **641** | **400** |
| 210 | 359 | 299 | 0.995 | 0.994 | 1.050 | 1.063 | 1.111 | 1.110 | **399** | **332** |
| 211 | 390 | 405 | 0.995 | 0.994 | 1.050 | 1.063 | 1.111 | 1.110 | **434** | **449** |
| 212 | 338 | 377 | 0.995 | 0.994 | 1.050 | 1.063 | 1.111 | 1.110 | **375** | **419** |
| 213 | 166 | 133 | 0.995 | 0.994 | 1.050 | 1.063 | 1.111 | 1.110 | **184** | **147** |
| **Total** | **13060** | **13060** | | | | | | | **14501** | **14508** |

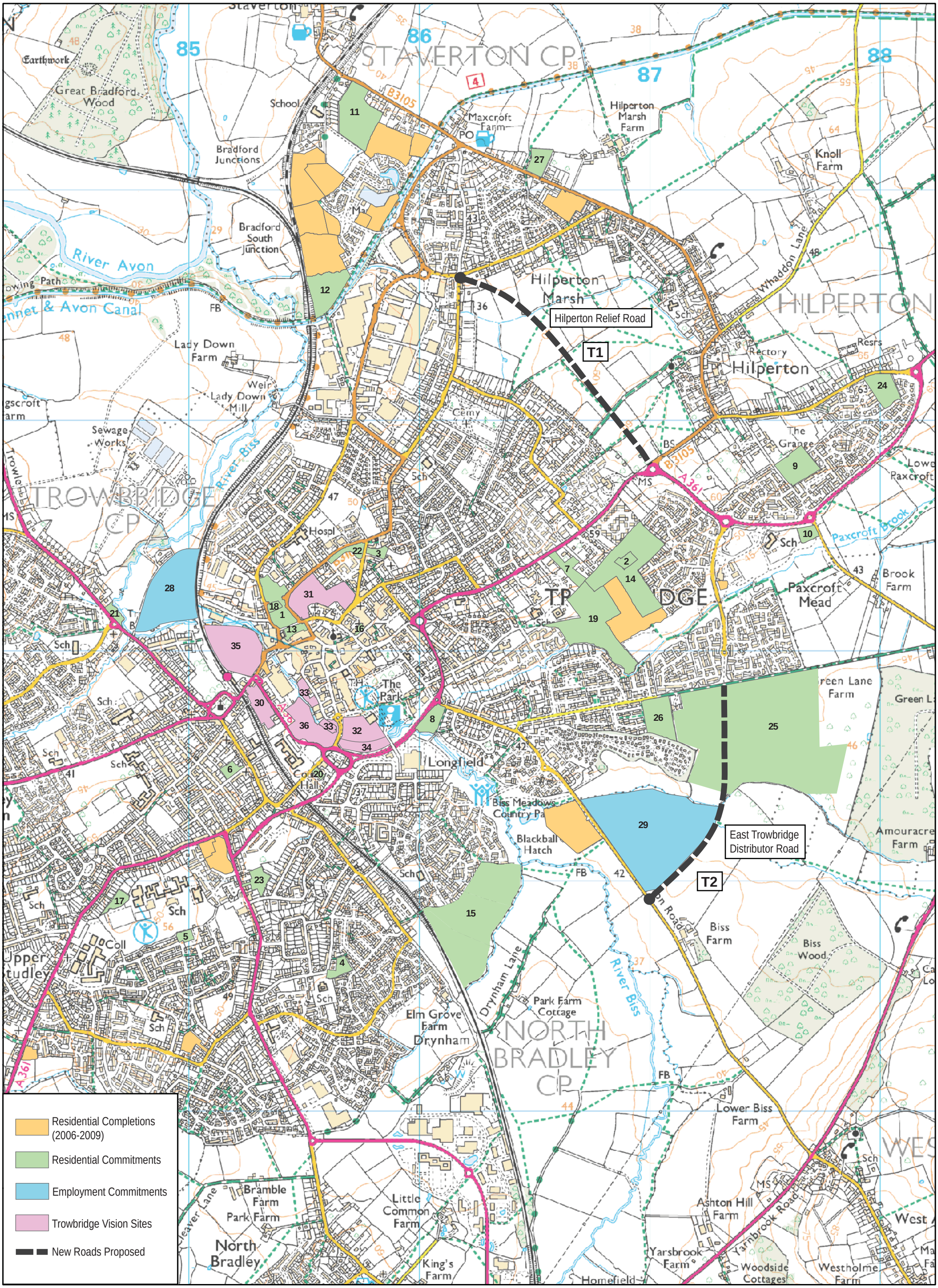
# PM Peak Hour - Internal Zones Background Growth: 2009-2026 (No Development)

| Zone | 2009 Base Year Row Total | 2009 Base Year Column Total | TEMPRO Growth 2009-2026 | | Fuel & Income Adjustment | | Factors Applied | | Background Growth 2009-2026 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Origin | Destination | Income | Fuel | Rows | Columns | Rows | Columns |
| 1 | 129 | 78 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **142** | **86** |
| 2 | 251 | 133 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **275** | **146** |
| 3 | 204 | 52 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **224** | **57** |
| 4 | 41 | 21 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **45** | **23** |
| 5 | 41 | 17 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **45** | **19** |
| 6 | 145 | 88 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **160** | **97** |
| 7 | 0 | 0 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **0** | **0** |
| 8 | 0 | 0 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **0** | **0** |
| 9 | 31 | 12 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **34** | **13** |
| 10 | 181 | 27 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **199** | **30** |
| 11 | 275 | 167 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **302** | **183** |
| 12 | 58 | 27 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **63** | **30** |
| 13 | 28 | 3 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **30** | **3** |
| 14 | 42 | 31 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **46** | **34** |
| 15 | 88 | 31 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **97** | **34** |
| 16 | 27 | 23 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **30** | **25** |
| 17 | 119 | 43 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **131** | **48** |
| 18 | 50 | 9 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **55** | **10** |
| 19 | 67 | 31 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **74** | **34** |
| 20 | 15 | 13 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **16** | **14** |
| 21 | 28 | 6 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **30** | **6** |
| 22 | 34 | 36 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **38** | **40** |
| 23 | 114 | 48 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **126** | **53** |
| 24 | 10 | 37 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **11** | **41** |
| 25 | 19 | 13 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **21** | **14** |
| 26 | 90 | 112 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **99** | **123** |
| 27 | 18 | 59 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **19** | **64** |
| 28 | 47 | 69 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **52** | **75** |
| 29 | 31 | 10 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **35** | **11** |
| 30 | 123 | 171 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **135** | **187** |
| 31 | 73 | 83 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **80** | **91** |
| 32 | 527 | 510 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **578** | **560** |
| 33 | 64 | 77 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **70** | **84** |
| 34 | 64 | 83 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **71** | **91** |
| 35 | 0 | 0 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **0** | **0** |
| 36 | 40 | 58 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **44** | **63** |
| 37 | 97 | 92 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **106** | **101** |
| 38 | 51 | 116 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **56** | **127** |
| 39 | 174 | 247 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **191** | **272** |
| 40 | 0 | 0 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **0** | **0** |
| 41 | 0 | 0 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **0** | **0** |
| 42 | 0 | 0 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **0** | **0** |
| 43 | 83 | 193 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **91** | **212** |
| 44 | 97 | 234 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **106** | **256** |
| 45 | 104 | 141 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **114** | **155** |
| 46 | 28 | 63 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **31** | **69** |
| 47 | 28 | 62 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **31** | **68** |
| 48 | 14 | 30 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **15** | **33** |
| 49 | 48 | 79 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **52** | **87** |
| 50 | 28 | 54 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **31** | **59** |
| 51 | 21 | 48 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **23** | **53** |
| 52 | 10 | 14 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **11** | **16** |
| 53 | 102 | 61 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **112** | **67** |
| 54 | 27 | 94 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **30** | **103** |
| 55 | 22 | 32 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **24** | **35** |
| 56 | 38 | 65 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **41** | **72** |
| 57 | 59 | 170 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **64** | **186** |
| 58 | 233 | 10 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **255** | **11** |
| 59 | 73 | 19 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **80** | **20** |
| 60 | 72 | 3 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **79** | **3** |
| 61 | 57 | 111 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **62** | **122** |
| 62 | 110 | 211 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **121** | **232** |
| 63 | 36 | 49 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **39** | **54** |
| 64 | 113 | 77 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **124** | **85** |
| 65 | 79 | 73 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **86** | **80** |
| 66 | 34 | 83 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **37** | **91** |
| 67 | 53 | 52 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **58** | **57** |
| 68 | 59 | 110 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **65** | **121** |
| 69 | 123 | 157 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **135** | **173** |
| 70 | 73 | 102 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **80** | **112** |
| 71 | 64 | 92 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **71** | **101** |
| 72 | 50 | 50 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **55** | **55** |
| 73 | 106 | 142 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **116** | **155** |
| 74 | 66 | 96 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **72** | **106** |
| 75 | 49 | 134 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **54** | **147** |
| 76 | 105 | 110 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **115** | **121** |
| 77 | 103 | 109 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **113** | **120** |
| 78 | 33 | 50 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **36** | **55** |
| 79 | 20 | 37 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **22** | **41** |
| 80 | 93 | 62 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **102** | **68** |

# PM Peak Hour - Internal Zones Background Growth: 2009-2026 (No Development)

| Zone | 2009 Base Year Row Total | 2009 Base Year Column Total | TEMPRO Growth 2009-2026 | | Fuel & Income Adjustment | | Factors Applied | | Background Growth 2009-2026 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Origin | Destination | Income | Fuel | Rows | Columns | Rows | Columns |
| 81 | 134 | 113 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **147** | **124** |
| 82 | 146 | 103 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **160** | **113** |
| 83 | 41 | 88 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **45** | **96** |
| 84 | 76 | 152 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **83** | **166** |
| 85 | 133 | 166 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **146** | **183** |
| 86 | 37 | 61 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **41** | **68** |
| 87 | 76 | 164 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **83** | **180** |
| 88 | 107 | 176 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **118** | **193** |
| 89 | 102 | 172 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **112** | **189** |
| 90 | 129 | 20 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **142** | **22** |
| 91 | 108 | 103 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **118** | **113** |
| 92 | 82 | 193 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **89** | **211** |
| 93 | 180 | 158 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **197** | **173** |
| 94 | 313 | 35 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **343** | **38** |
| 95 | 390 | 52 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **428** | **57** |
| 96 | 49 | 3 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **53** | **3** |
| 97 | 5 | 1 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **5** | **1** |
| 98 | 93 | 95 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **102** | **104** |
| 99 | 0 | 0 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **0** | **0** |
| 100 | 68 | 136 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **75** | **149** |
| 101 | 0 | 1 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **0** | **1** |
| 102 | 0 | 0 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **0** | **0** |
| 103 | 0 | 0 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **0** | **0** |
| 104 | 18 | 35 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **20** | **39** |
| 105 | 101 | 136 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **110** | **150** |
| 106 | 160 | 242 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **176** | **265** |
| 107 | 130 | 245 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **143** | **269** |
| 108 | 123 | 147 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **135** | **161** |
| 109 | 0 | 0 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **0** | **0** |
| 110 | 70 | 31 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **77** | **35** |
| 111 | 1 | 2 | 0.983 | 0.984 | 1.050 | 1.063 | 1.097 | 1.098 | **1** | **2** |
| 200 | 22 | 25 | 0.984 | 0.983 | 1.050 | 1.063 | 1.098 | 1.097 | **24** | **27** |
| 201 | 67 | 65 | 0.984 | 0.983 | 1.050 | 1.063 | 1.098 | 1.097 | **73** | **71** |
| 202 | 53 | 74 | 0.984 | 0.983 | 1.050 | 1.063 | 1.098 | 1.097 | **58** | **81** |
| 203 | 12 | 21 | 0.984 | 0.983 | 1.050 | 1.063 | 1.098 | 1.097 | **14** | **23** |
| 204 | 33 | 24 | 0.984 | 0.983 | 1.050 | 1.063 | 1.098 | 1.097 | **36** | **27** |
| 205 | 638 | 599 | 0.984 | 0.983 | 1.050 | 1.063 | 1.098 | 1.097 | **701** | **657** |
| 206 | 282 | 202 | 0.984 | 0.983 | 1.050 | 1.063 | 1.098 | 1.097 | **310** | **221** |
| 207 | 297 | 370 | 0.984 | 0.983 | 1.050 | 1.063 | 1.098 | 1.097 | **326** | **406** |
| 208 | 350 | 411 | 0.984 | 0.983 | 1.050 | 1.063 | 1.098 | 1.097 | **385** | **451** |
| 209 | 332 | 494 | 0.984 | 0.983 | 1.050 | 1.063 | 1.098 | 1.097 | **365** | **542** |
| 210 | 323 | 282 | 0.984 | 0.983 | 1.050 | 1.063 | 1.098 | 1.097 | **355** | **310** |
| 211 | 394 | 408 | 0.984 | 0.983 | 1.050 | 1.063 | 1.098 | 1.097 | **433** | **448** |
| 212 | 364 | 228 | 0.984 | 0.983 | 1.050 | 1.063 | 1.098 | 1.097 | **399** | **250** |
| 213 | 136 | 143 | 0.984 | 0.983 | 1.050 | 1.063 | 1.098 | 1.097 | **149** | **157** |
| **Total** | **12087** | **12087** | | | | | | | **13263** | **13269** |

# Appendix C






# Developments Included in Trowbridge Traffic Model Forecasts

File ref: W407/Figures/App_Inc_Dev.ai

0 100 200 400 600 800 Meters

# Appendix D

# Trowbridge Traffic Model - Traffic Forecasting

## Housing Generation

| Ref No. | Site_Name | Outstanding Commitments No. Units | Zone in which development falls | AM Peak Hour | | PM Peak Hour | | Distribution Zones | Allocated Development Zone |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Generations | Attractions | Generations | Attractions | | |
| 1 | Former Brewery Site | 60 | 12 | 28 | 11 | 12 | 25 | 12 | 12 |
| 2 | North of Paxcroft Way | 43 | 44 | 20 | 8 | 8 | 18 | 44 | 44 |
| 3 | Land off York Buildings | 24 | 28 | 11 | 4 | 5 | 10 | 28 | 28 |
| 4 | Holbrook Lane, Trowbridge | 20 | 86 | 9 | 4 | 4 | 8 | 86 | 86 |
| 5 | Cedar Grove, Trowbridge | 15 | 85 | 7 | 3 | 3 | 6 | 85 | 85 |
| 6 | Rear of Wesley Road, Trowbridge | 14 | 76 | 6 | 2 | 3 | 6 | 76 | 76 |
| 7 | Hilperton Road, Trowbridge | 15 | 51 | 7 | 3 | 3 | 6 | 51 | 51 |
| 8 | Ashton Mills, Trowbridge | 40 | 31 | 18 | 7 | 8 | 17 | 31 | 31 |
| 9 | Land R/O The Grange, Ashton Road, Hilperton | 35 | 46 | 16 | 6 | 7 | 14 | 46 | 46 |
| 10 | Land at Hilperton Drive/Ashton Road, Hilperton | 18 | 45 | 8 | 3 | 3 | 7 | 47 | 45 |
| 11 | Land South of New Terrace | 95 | 63 | 44 | 17 | 18 | 39 | 63 | 63 |
| 12 | Staverton Triangle | 74 | 62 | 34 | 13 | 14 | 31 | 62 | 62 |
| 13 | Ushers Brewery Site, Back Street | 94 | 12 | 43 | 17 | 18 | 39 | 12 | 12 |
| 14 | South of the Beeches / Kenton Drive | 38 | 44 | 18 | 7 | 7 | 16 | 44 | 44 |
| 15 | Southview | 300 | 35 | 138 | 53 | 58 | 124 | 34,36,37,38 | 35 |
| 16 | Opposite 5-9 Duke Street | 22 | 98 | 10 | 4 | 4 | 9 | 98 | 98 |
| 17 | Frome Road, Nos 95 - 133 | 14 | 75 | 6 | 2 | 3 | 6 | 75 | 75 |
| 18 | Southside Car Park, Broad Street | 31 | 20 | 14 | 5 | 6 | 13 | 12 | 20 |
| | | | 44 | 0 | 0 | 0 | 0 | 44 | 44 |
| 20 | 112 Mortimer Street | 10 | 18 | 5 | 2 | 2 | 4 | 18 | 18 |
| 21 | Islington Motors Site | 20 | 70 | 9 | 4 | 4 | 8 | 70 | 70 |
| 22 | Land opposite 2 Prospect Place | 49 | 23 | 23 | 9 | 9 | 20 | 23 | 23 |
| 23 | Rutland House | 41 | 80 | 19 | 7 | 8 | 17 | 80 | 80 |
| 24 | Blue Hills, Devizes Road, Trowbridge | 37 | 49 | 17 | 7 | 7 | 15 | 49 | 49 |
| 25 | South of Paxcroft Mead, Trowbridge | 650 | 41 | 300 | 114 | 125 | 268 | 43,44,46,47,48 | 41 |
| 26 | Green Lane, Trowbridge Rugby Club, Trowbridge | 90 | 39 | 41 | 16 | 17 | 37 | 39 | 39 |
| 27 | Land rear of 303-305 Marsh Rd | 17 | 56 | 8 | 3 | 3 | 7 | 56 | 56 |
| | **Vision Sites:** | | | | | | | | |
| 30 | The Gateway (former Wincanton site) | 70 | 16 | 32 | 12 | 13 | 29 | 12 | 16 |
| 31 | Brewery Gate - Former Ushers Bottling Plant | 119 | 21 | 55 | 21 | 23 | 49 | 23 | 22 |
| 32 | Cradle Bridge | 46 | 8 | 21 | 8 | 9 | 19 | 33 | 8 |
| 33 | Court Street | 112 | 6 | 52 | 20 | 22 | 46 | 6 | 6 |
| 34 | St Stephens Place | 100 | 7 | 46 | 18 | 19 | 41 | 33 | 7 |
| | Total | **2313** | | **1066** | **407** | **444** | **955** | | |

| AM Peak Trip Rate | |
|---|---|
| Generations | Attractions |
| 0.461 | 0.176 |

| PM Peak Trip Rate | |
|---|---|
| Generations | Attractions |
| 0.192 | 0.413 |

# Trowbridge Traffic Model - Traffic Forecasting

## Employment Generation

| Ref No. | Site_Name | Site Area (Hectares) | Zone in which development falls | AM Peak Hour | | PM Peak Hour | | Distribution Zones | Allocated Development Zone |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Generations | Attractions | Generations | Attractions | | |
| 28 | Bradford Road | 4.4 | 99 | 22 | 140 | 106 | 13 | 58,59,60,94,95,96 | 99 |
| 29 | West Ashton | 12.1 | 40 | 60 | 384 | 290 | 36 | 58,59,60,94,95,96 | 40 |
| | Total | **16.5** | | **82** | **524** | **396** | **49** | | |

| AM Peak Trip Rate | |
|---|---|
| Generations | Attractions |
| 4.949 | 31.775 |

| PM Peak Trip Rate | |
|---|---|
| Generations | Attractions |
| 23.993 | 2.969 |

# Trowbridge Traffic Model - Traffic Forecasting

## Other - Retail/Leisure Generations

| Ref No. | Site_Name | Description | Zone in which development falls | AM Peak Hour | | PM Peak Hour | | Distribution Zones | Allocated Development Zone |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Generations | Attractions | Generations | Attractions | | |
| | **Vision Sites:** | | | | | | | | |
| 30 | The Gateway (former Wincanton site) 1 | 7,000 sq.m Retail /1,200 sq.m Office | 16 | 31 | 62 | 133 | 58 | 11 | 16 |
| 31 | Brewery Gate - Former Ushers Bottling Plant 1 | 44,000 sq.ft Foodstore | 21 | 11 | 74 | 117 | 91 | 32 | 21 |
| 35 | Pork Farms, Former Bowyer Site | 60,000 sq.ft Foodstore | 13 | 16 | 101 | 160 | 124 | 32 | 13 |
| 36 | East Wing County Hall | 8,000 sq.m Leisure facility | 10 | 39 | 49 | 90 | 129 | 1,2 | 10 |
| | | | | | | | | | |
| | | | | **97** | **286** | **500** | **402** | | |

# Appendix E

# Trowbridge Strategic Site - (2,650 Dwellings + 30 Hectares of Employment)

884 units

883units

883 units

30 Ha

KEY

- Housing and Employment Completions and Commitments
- Committed Roads
- Mixed-Use Sites
- Employment Sites
- New Roads
- Site Access



File ref: W407/Figures/TSS_Rev.ai

0 100 200 400 600 800 Meters

# Trowbridge Traffic Model - Traffic Forecasting

## WILTSHIRE CORE STRATEGY PROPOSED STRATEGIC SITE ALLOCATION - ASHTON PARK (2,650 DWELLING + 30 HECTARES OF EMPLOYMENT)

| Ref No. | Site_Name | No. of Residential Units | Zone in which development falls | AM Peak Hour | | PM Peak Hour | | Distribution Zones | Allocated Development Zone |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Generations | Attractions | Generations | Attractions | | |
| 37 | Ashton Park, Strategic Site - Residential | 883 | 113 | 407 | 155 | 170 | 365 | 43,44,46,47,48 | 113 |
| 38 | Ashton Park, Strategic Site - Residential | 1767 | 114 | 815 | 311 | 339 | 730 | 43,44,46,47,48 | 114 |
| | Total | **2650** | | **1222** | **466** | **509** | **1094** | | |

| AM Peak Trip Rate | |
|---|---|
| Generations | Attractions |
| 0.461 | 0.176 |

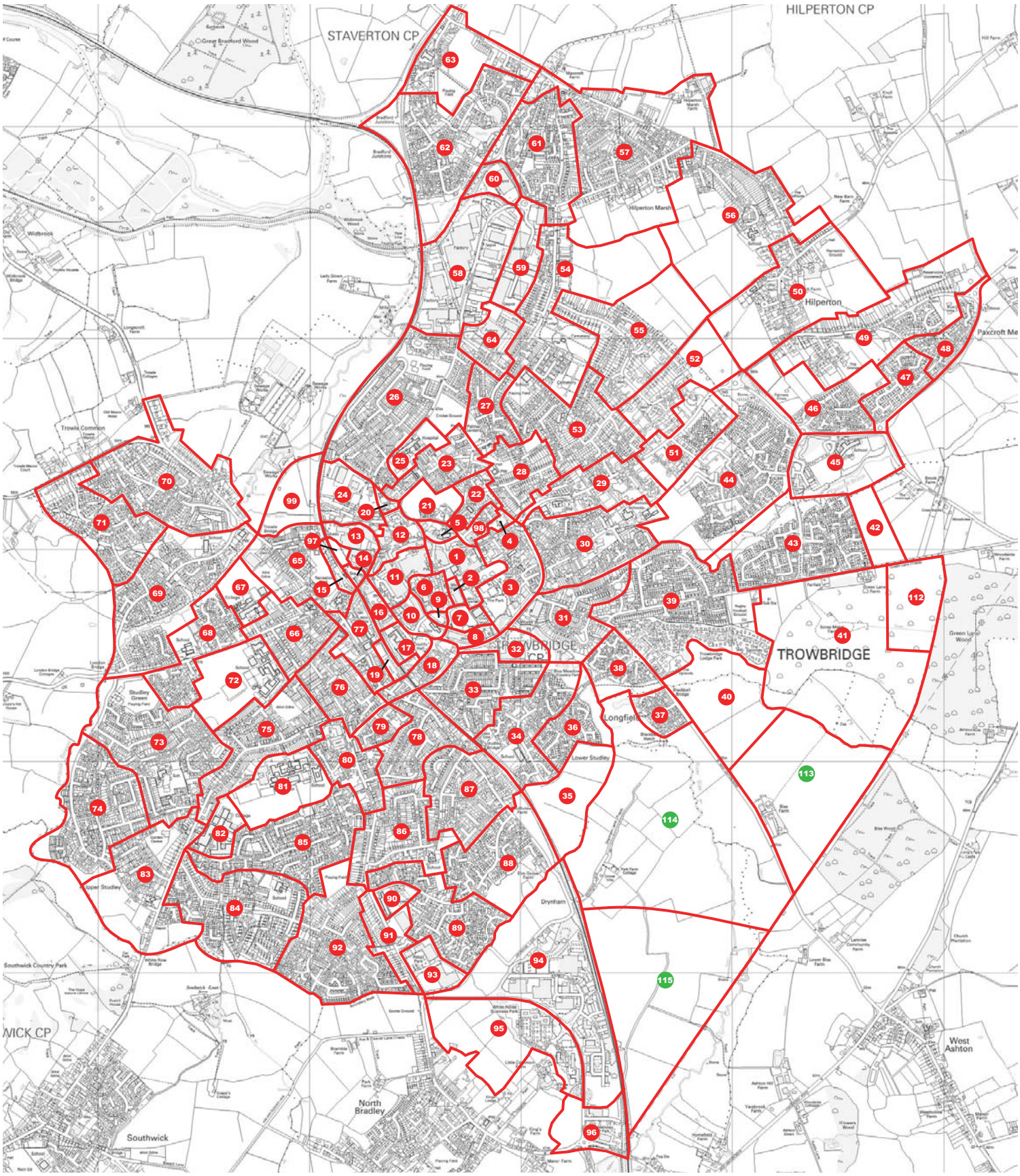
| PM Peak Trip Rate | |
|---|---|
| Generations | Attractions |
| 0.192 | 0.413 |

| Ref No. | Site_Name | Site Area (Hectares) | Zone in which development falls | AM Peak Hour | | PM Peak Hour | | Distribution Zones | Allocated Development Zone |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Generations | Attractions | Generations | Attractions | | |
| 39 | Ashton Park, Strategic Site - Employment | 30 | 115 | 148 | 953 | 720 | 89 | 58,59,60,94,95,96 | 115 |
| | Total | **30** | | **148** | **953** | **720** | **89** | | |

| AM Peak Trip Rate | |
|---|---|
| Generations | Attractions |
| 4.949 | 31.775 |

| PM Peak Trip Rate | |
|---|---|
| Generations | Attractions |
| 23.993 | 2.969 |

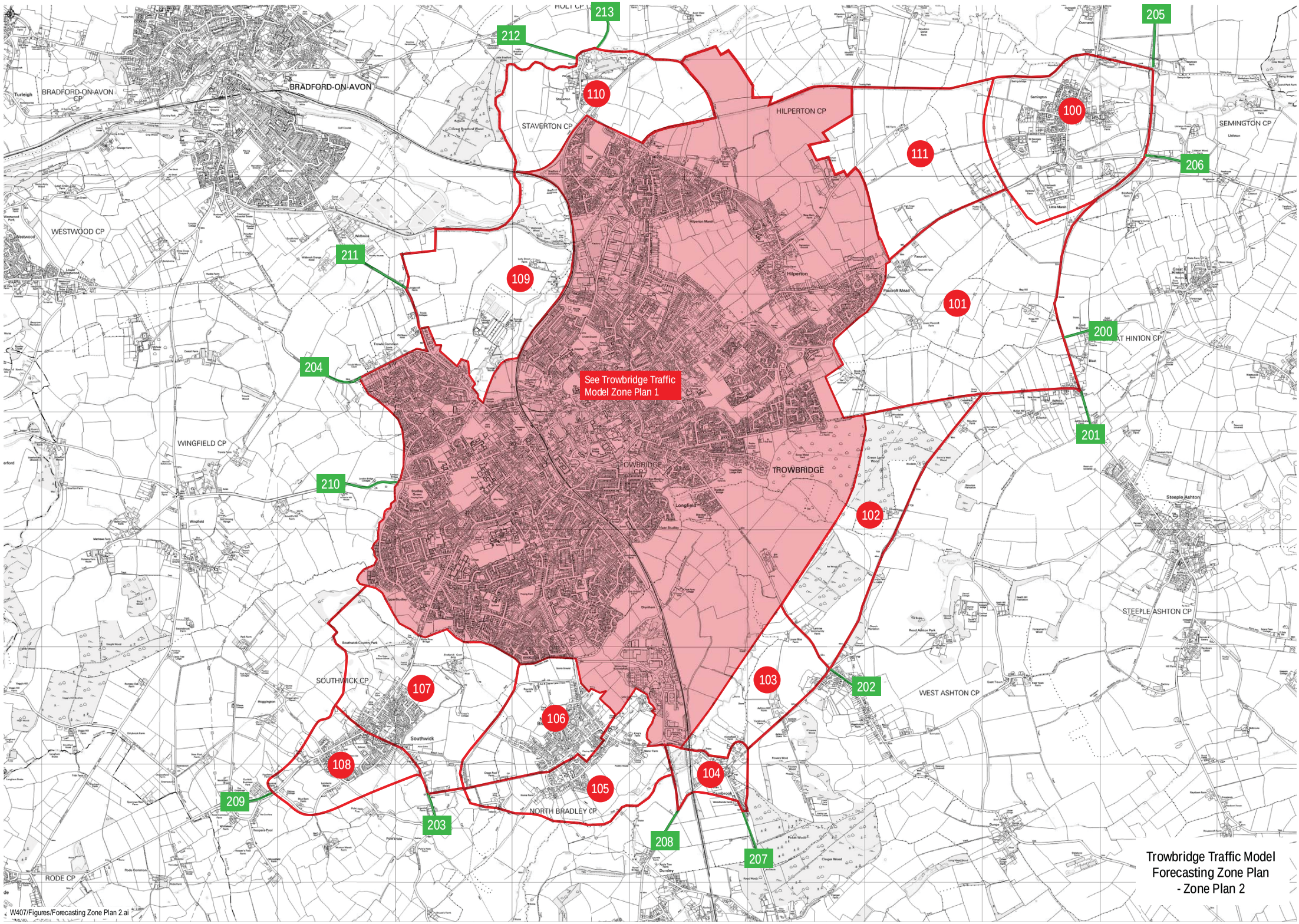
# Appendix F




W407/Figures/Forecasting Zone Plan 1.ai

115 Zones representing Trowbridge strategic site option

# Trowbridge Traffic Model
## Forecasting Zone Plan
## Zone Plan 1


See Trowbridge Traffic Model Zone Plan 1
Trowbridge Traffic Model Forecasting Zone Plan - Zone Plan 2
W407/Figures/Forecasting Zone Plan 2.ai
BRADFORD-ON-AVON
BRADFORD-ON-AVON CP
STAVERTON CP
HILPERTON CP
SEMINGTON CP
WESTWOOD CP
WINGFIELD CP
TROWBRIDGE CP
TROWBRIDGE
STEEPLE ASHTON CP
WEST ASHTON CP
SOUTHWICK CP
NORTH BRADLEY CP
RODE CP
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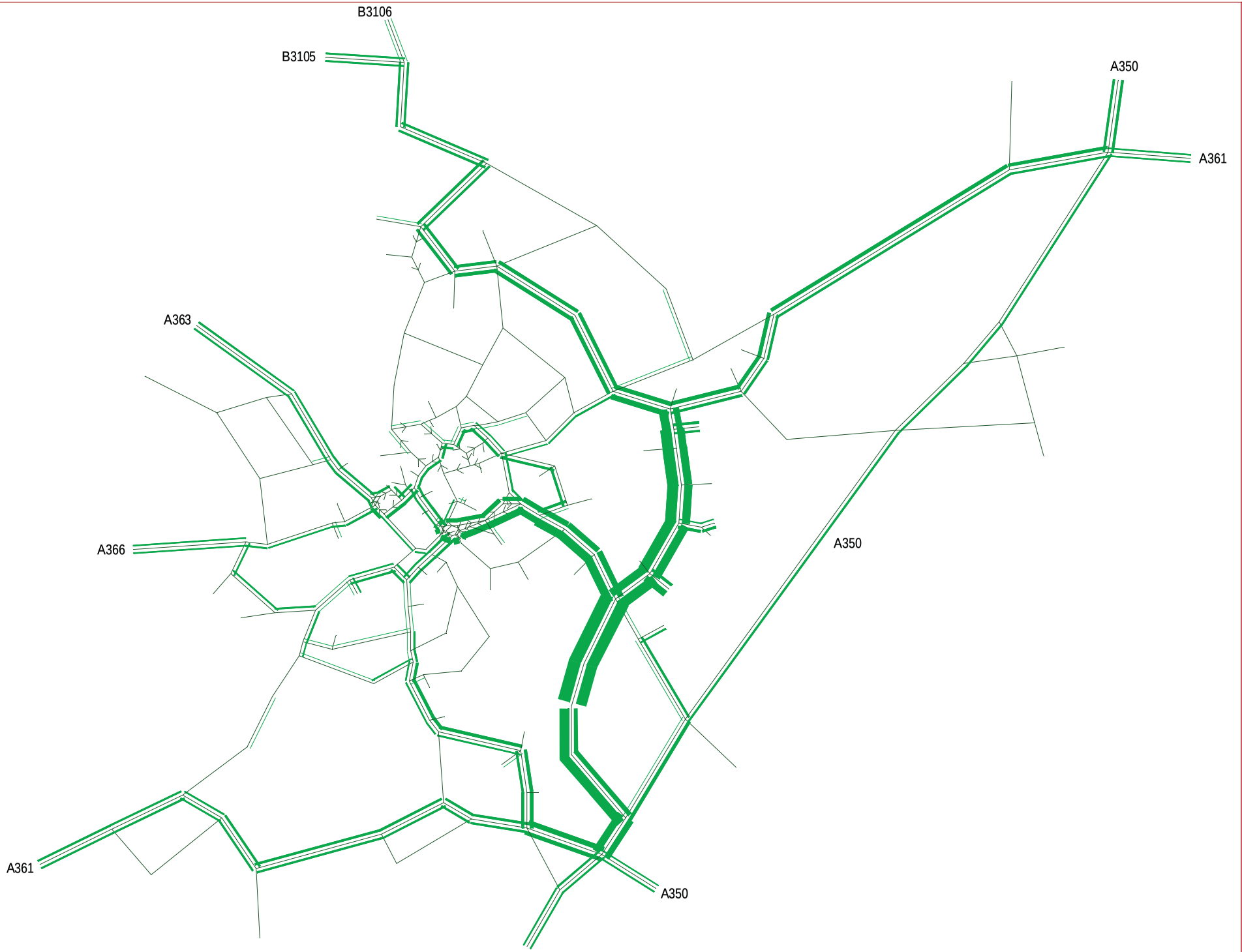
# Appendix G

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.UFS

Scale 2626

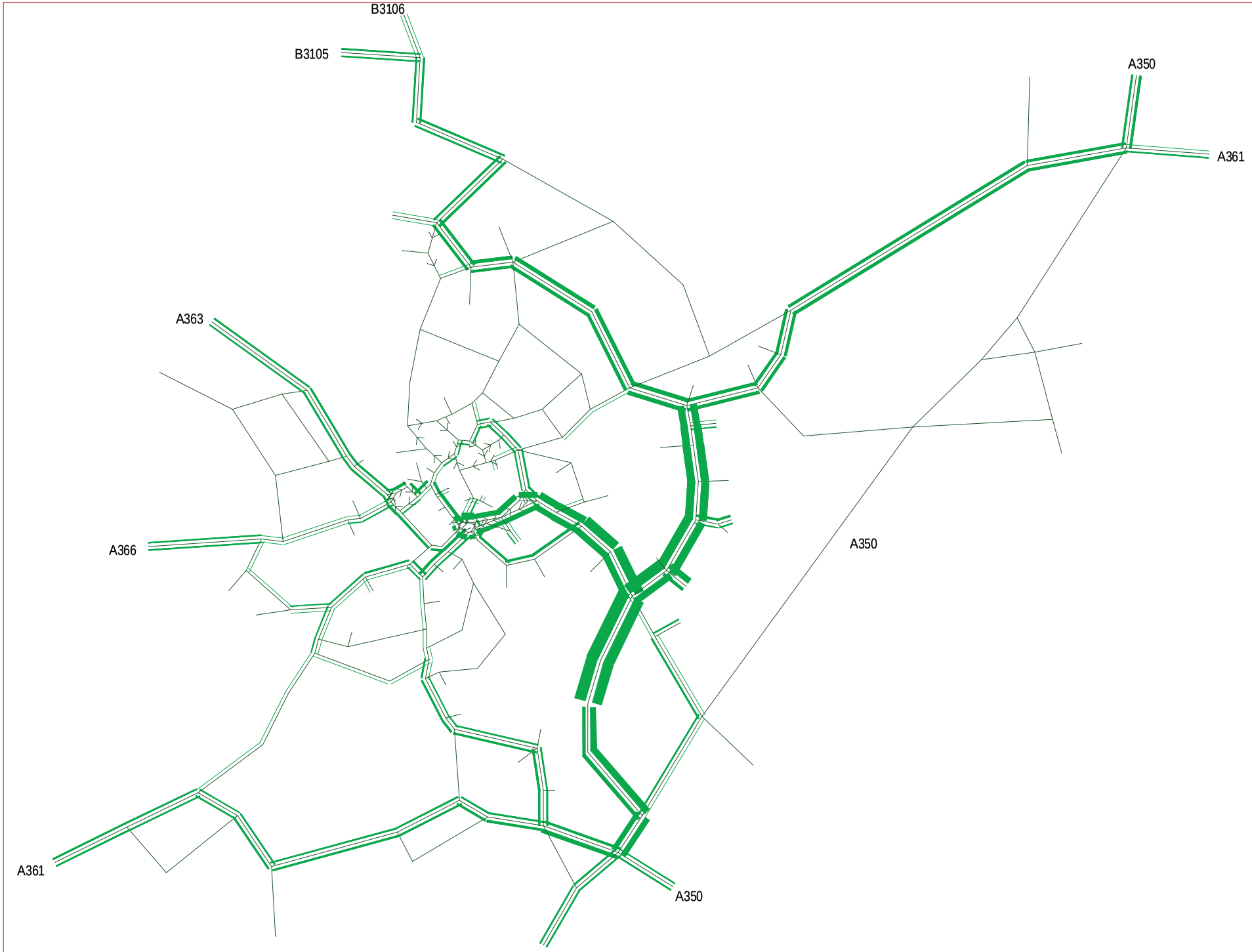
Link Annot:

tss

Bandwidths =
200./mm

27- 4-11
PFA CONSULTI

2026 AM Peak Hour - Trowbridge Strategic Site Development Only Traffic

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.UFS

Scale 2617

Link Annot:

tss

Bandwidths =
200./mm

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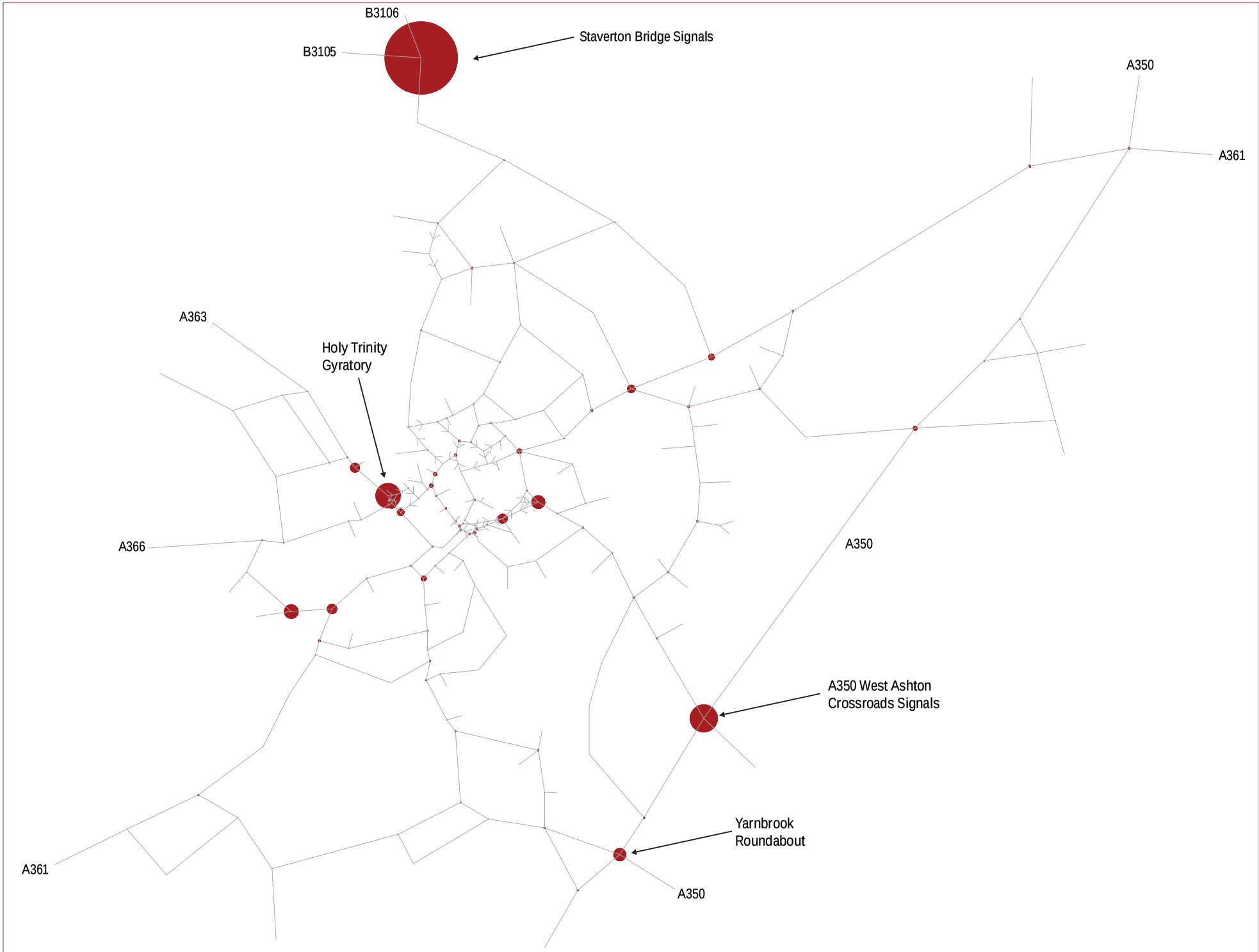
PFA CONSULTI

2026 PM Peak - Trowbridge Strategic Site Development Only Traffic

# Appendix H

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Scale 2617

Node data:
Delay time

Bndwdh units
= 50.00/mm

20- 4-11
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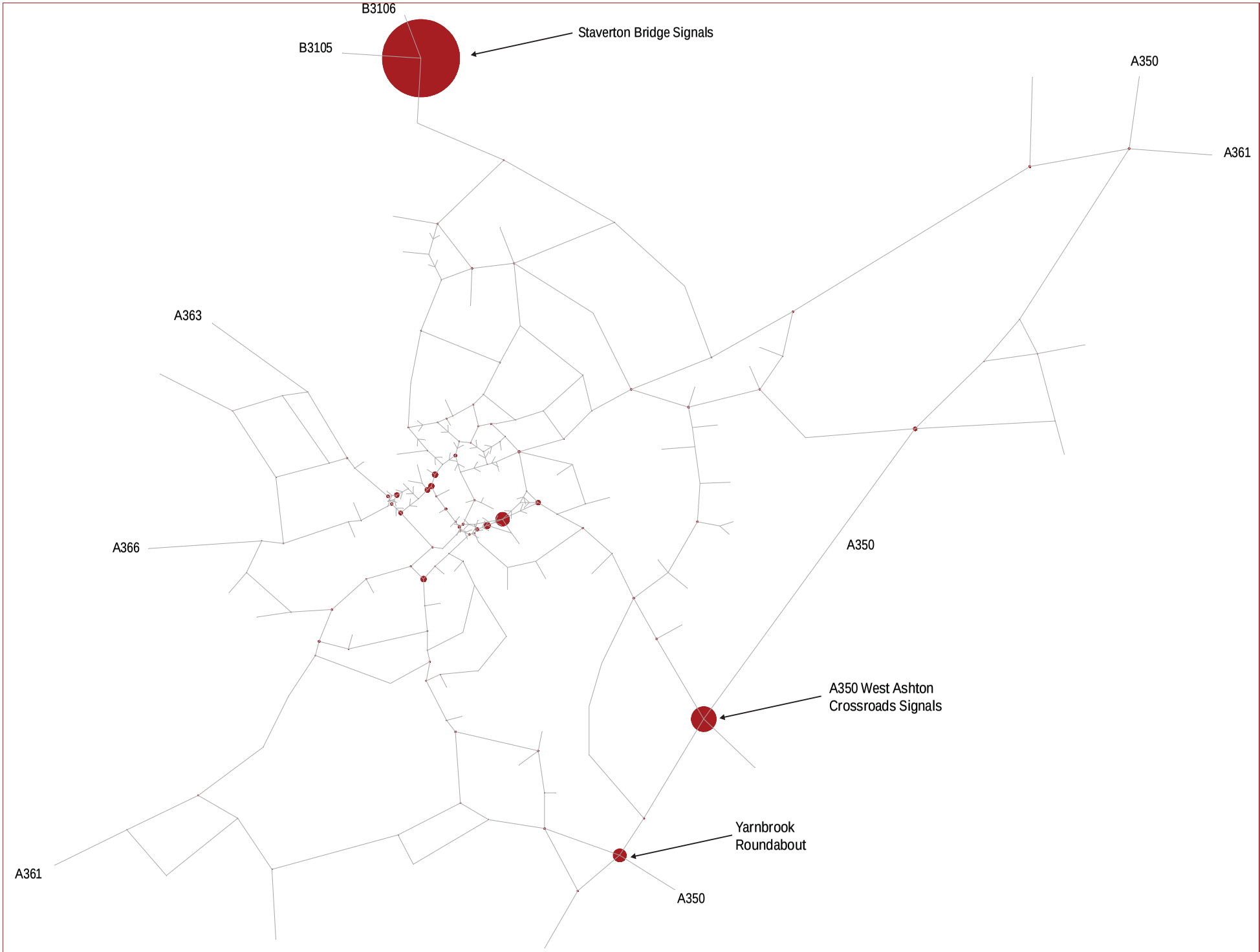
2026 AM Peak With Trowbridge Strategic Site - Overall Junction Delay

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Scale 2617

Node data:
Delay time

Bndwdh units
= 50.00/mm

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2026 PM Peak with Trowbridge Strategic Site - Overall Junction Delay

# Appendix I

# Trowbridge SATURN Traffic Model – Key Junction Capacity Assessment Tables

| Junction | | Scenario | Overall Junction Capacity | | Arms with Capacity > 85% |
|---|---|---|---|---|---|
| | | | AM Peak | PM Peak | |
| 1 | A350/A361 Semington Roundabout | 2009 Base | 52% | 45% | None |
| | | 2026 Ref Case | 67% | 59% | None |
| | | 2026 with Strategic Site | 74% | 65% | A350(N) in AM & PM peaks |
| 2 | A350/ West Ashton Rd Traffic Signals | 2009 Base | 75% | 72% | A350(N) in AM Peak<br>A350(S) in AM & PM peaks<br>West Ashton Rd in PM peak |
| | | 2026 Ref Case | 85% | 78% | A350(N) in AM & PM peaks<br>A350(S) in AM & PM peaks<br>West Ashton Rd in AM & PM peaks |
| | | 2026 with Strategic Site | 86% | 78% | A350(N) in AM & PM peaks<br>A350(S) in AM & PM peaks<br>West Ashton Rd in AM & PM peaks |
| 3 | A350/A363 Yarnbrook Roundabout | 2009 Base | 56% | 55% | A350(S) in AM peak |
| | | 2026 Ref Case | 72% | 69% | A350(S) in AM peak<br>A350(N) in AM & PM peaks |
| | | 2026 with Strategic Site | 98% | 88% | A350(S) in AM & PM peaks<br>A350(N) in AM & PM peaks<br>A363 Westbury Rd in AM & PM peaks |
| 4 | A363 White Horse Business Park/Westbury Rd Roundabout | 2009 Base | 43% | 38% | None |
| | | 2026 Ref Case | 56% | 49% | None |
| | | 2026 with Strategic Site | 70% | 57% | A363(N) in PM peak |
| 5 | A363 White Horse Business Park/Bradley Rd Roundabout | 2009 Base | 39% | 35% | None |
| | | 2026 Ref Case | 50% | 48% | None |
| | | 2026 with Strategic Site | 57% | 53% | None |
| 6 | A361 County Way/A363 Bradley Rd Roundabout | 2009 Base | 67% | 60% | None |
| | | 2026 Ref Case | 97% | 93% | A363 Bradley Rd in AM & PM peaks<br>A361(E) County Way in AM & PM peaks<br>A361(N) in AM & PM peaks |
| | | 2026 with Strategic Site | 99% | 98% | A363 Bradley Rd in AM & PM peaks<br>A361(E) County Way in AM & PM peaks<br>A361(N) in AM & PM peaks |
| 7 | Longfield Gyratory | 2009 Base | 64% | 54% | None |
| | | 2026 Ref Case | 74% | 70% | Brown Street in AM & PM peaks<br>Mortimer Street in AM peak |
| | | 2026 with Strategic Site | 80% | 86% | Brown Street in AM & PM peaks<br>Mortimer Street in AM & PM peaks<br>A361(E) County Way in AM & PM peaks |

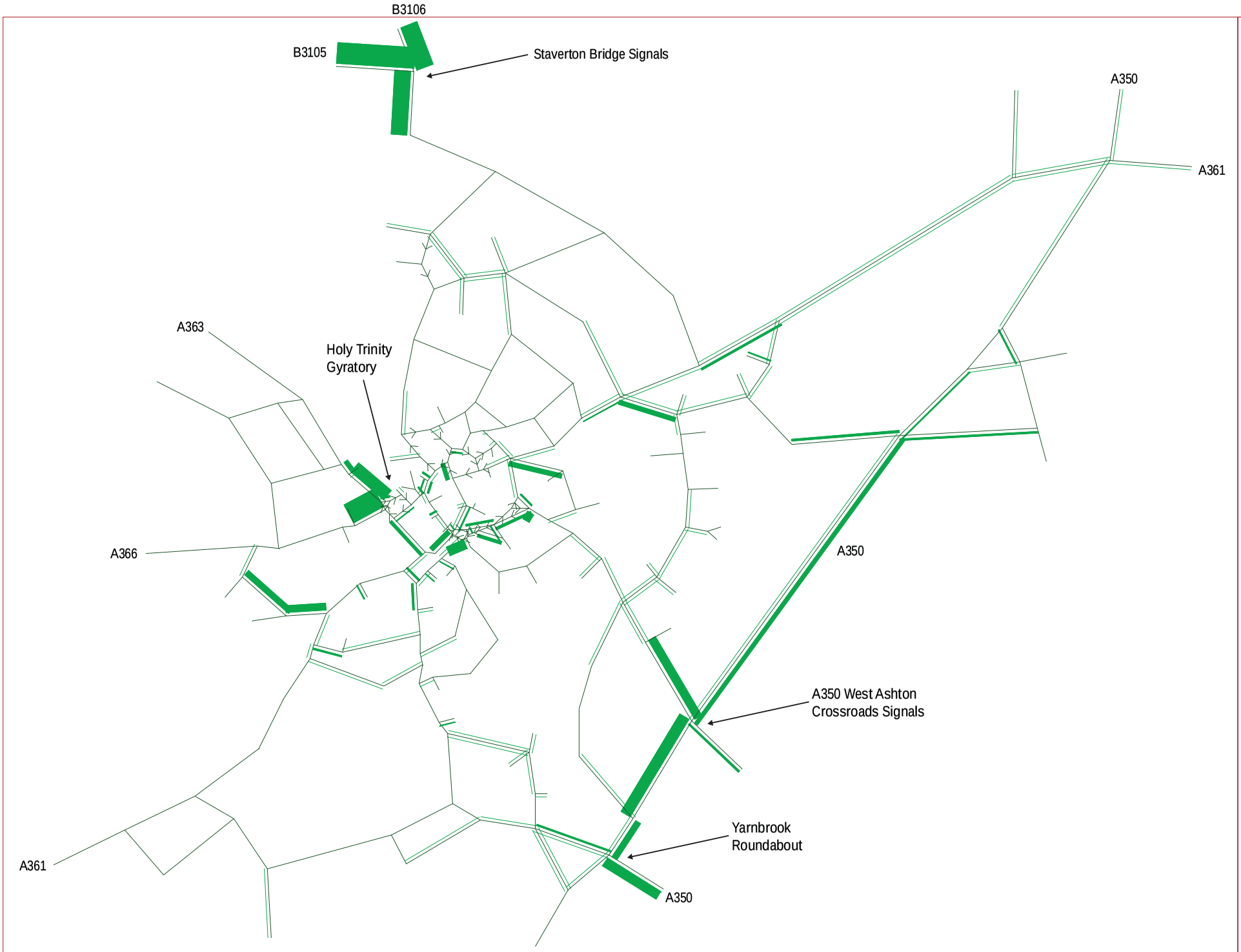
**Trowbridge SATURN Traffic Model – Key Junction Capacity Assessment Tables**

| Junction | | Scenario | Overall Junction Capacity | | Arms with Capacity > 85% |
|---|---|---|---|---|---|
| | | | AM Peak | PM Peak | |
| 8 | A361 County Way/Tesco's Signals | 2009 Base | 57% | 56% | A361(E) County Way in AM peak |
| | | 2026 Ref Case | 78% | 83% | A361(E) County Way in AM & PM peaks<br>A361(W) County Way in AM & PM peaks<br>Tesco Access in PM peak |
| | | 2026 with Strategic Site | 81% | 92% | A361(E) County Way in AM & PM peaks<br>A361(W) County Way in AM & PM peaks<br>Tesco Access in PM peak |
| 9 | A361 County Way/West Ashton Rd Roundabout | 2009 Base | 51% | 46% | A361(W) County Way in PM peak |
| | | 2026 Ref Case | 76% | 78% | A361(N) County Way in AM & PM peaks<br>A361(W) County Way in PM peak<br>West Ashton Rd in AM peak |
| | | 2026 with Strategic Site | 87% | 96% | A361(N) County Way in AM & PM peaks<br>A361(W) County Way in PM peak<br>West Ashton Rd in AM & PM peaks |
| 10 | A361 County Way/Hilperton Rd Roundabout | 2009 Base | 50% | 50% | None |
| | | 2026 Ref Case | 63% | 65% | A361(E) Devizes Rd in AM peak<br>A361(S) County Way in PM peak |
| | | 2026 with Strategic Site | 69% | 68% | A361(E) Devizes Rd in AM peak<br>A361(S) County Way in PM peak<br>Eastbourne Gardens in AM Peak |
| 11 | A363 Stallard Street/Bythesea Rd Roundabout | 2009 Base | 64% | 63% | Stallard Street(S) in AM peak |
| | | 2026 Ref Case | 72% | 81% | Stallard Street(S) in AM & PM peaks<br>Stallard Street(N ) in PM peak |
| | | 2026 with Strategic Site | 86% | 91% | Stallard Street(S) in AM & PM peaks<br>Stallard Street(N ) in AM & PM peak |
| 12 | Holy Trinity Gyratory | 2009 Base | 84% | 73% | A363 Bath Rd in AM & PM peaks<br>A366 Wingfield Rd in AM & PM peaks<br>Newtown in AM & PM peaks |
| | | 2026 Ref Case | 95% | 90% | A363 Bath Rd in AM & PM peaks<br>A366 Wingfield Rd in AM & PM peaks<br>Newtown in AM & PM peaks |
| | | 2026 with Strategic Site | 103% | 90% | A363 Bath Rd in AM & PM peaks<br>A366 Wingfield Rd in AM & PM peaks<br>Newtown in AM & PM peaks |
| 13 | B3106 Canal Rd/Hammond Way Roundabout | 2009 Base | 24% | 19% | None |
| | | 2026 Ref Case | 44% | 36% | None |
| | | 2026 with Strategic Site | 48% | 40% | None |
| 14 | Canal Rd/Wyke Rd/Horse Rd Roundabout | 2009 Base | 21% | 15% | None |
| | | 2026 Ref Case | 33% | 27% | None |
| | | 2026 with Strategic Site | 37% | 32% | None |

**Trowbridge SATURN Traffic Model – Key Junction Capacity Assessment Tables**

| Junction | | Scenario | Overall Junction Capacity | | Arms with Capacity > 85% |
|---|---|---|---|---|---|
| | | | AM Peak | PM Peak | |
| 15 | B3105/B3106 Kings Arms Roundabout | 2009 Base | 40% | 34% | None |
| | | 2026 Ref Case | 46% | 40% | None |
| | | 2026 with Strategic Site | 49% | 43% | None |
| 16 | Staverton Bridge Signals | 2009 Base | 102% | 89% | B3105(N) in AM & PM peaks<br>B3105(S) in AM & PM peaks<br>B3106 in AM * Pm peaks |
| | | 2026 Ref Case | 112% | 113% | B3105(N) in AM & PM peaks<br>B3105(S) in AM & PM peaks<br>B3106 in AM * Pm peaks |
| | | 2026 with Strategic Site | 123% | 124% | B3105(N) in AM & PM peaks<br>B3105(S) in AM & PM peaks<br>B3106 in AM & Pm peaks |
| 17 | A361 Trowbridge Rd/Hilperton Drive Roundabout | 2009 Base | 40% | 38% | None |
| | | 2026 Ref Case | 59% | 55% | A361(S) Hilperton Drive in AM peak |
| | | 2026 with Strategic Site | 72% | 62% | A361(S) Hilperton Drive in AM peak |
| 18 | A361 Hilperton Drive/Leap Gate Roundabout | 2009 Base | 35% | 35% | None |
| | | 2026 Ref Case | 61% | 57% | None |
| | | 2026 with Strategic Site | 62% | 74% | Leap Gate in AM peak<br>A361(S) Hilperton Drive in PM peak |
| 19 | A361 Devizes Rd/Hilperton Drive Roundabout | 2009 Base | 29% | 26% | None |
| | | 2026 Ref Case | 40% | 37% | None |
| | | 2026 with Strategic Site | 52% | 43% | None |
| 20 | West Ashton Road/Eastern Distributor Roundabout | 2009 Base | -- | - | - |
| | | 2026 Ref Case | 21% | 23% | None |
| | | 2026 with Strategic Site | 40% | 42% | None |

# Appendix J

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2026 AM Peak With Trowbridge Strategic Site - Link Delay


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Delay sec

Bandwidths =
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2026 PM Peak With Trowbridge Strategic Site - Link Delay