

# TECHNICAL NOTE

## WEST OXFORDSHIRE LOCAL PLAN 2043 MODELLING

|                                                  |                                             |                |
|--------------------------------------------------|---------------------------------------------|----------------|
| <b>SUBJECT</b>                                   | <b>PROJECT NO.</b>                          | <b>DATE</b>    |
| Strategic Transport Modelling Sensitivity Test 2 | 100124996                                   | 26 August 2026 |
| <b>AUTHOR</b>                                    | <b>DOCUMENT REFERENCE</b>                   |                |
| AtkinsRéalis                                     | WOLP 2043 Sensitivity Test 2 Technical Note |                |

### Document history

| Revision | Purpose description         | Originated | Checked | Reviewed | Authorised | Date       |
|----------|-----------------------------|------------|---------|----------|------------|------------|
| 0.1      | Sensitivity Test 2 TN Draft | CS         | CB      | CLFL     | MA         | 31/07/2027 |
| 1.0      | Sensitivity Test 2 Final TN | CS         | CB      | CLFL     | CB         | 26/08/2026 |

This document and its contents have been prepared and are intended solely as information for Oxfordshire County Council and West Oxfordshire District Council and use in relation to report the strategic transport modelling work completed for the West Oxfordshire Local Plan 2043. This technical note has been prepared to document a sensitivity test of the strategic transport model and should be considered an addendum to the main “West Oxfordshire Local Plan 2043 Strategic Transport Modelling Report”, which remains the primary source of information on the strategic transport modelling work undertaken for the West Oxfordshire Local Plan 2043.

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### Client signoff

|                                |                                                                  |                    |           |
|--------------------------------|------------------------------------------------------------------|--------------------|-----------|
| <b>Client</b>                  | Oxfordshire County Council and West Oxfordshire District Council |                    |           |
| <b>Project</b>                 | WEST OXFORDSHIRE LOCAL PLAN<br>2043 MODELLING                    | <b>Project No.</b> | 100124996 |
| <b>Client signature / date</b> |                                                                  |                    |           |

## 1. Introduction

- 1.1.1 The modelling results presented in the West Oxfordshire Local Plan 2043 Strategic Transport Modelling Report<sup>1</sup> (hereafter the Strategic Transport Modelling Report) are based on the assumptions and information available at the time of model development. As with all forecasts of future travel demand and network performance, there is an inherent degree of uncertainty associated with future growth patterns, travel behaviour and the timing and extent of infrastructure delivery.
- 1.1.2 To provide greater understanding of the findings, a series of sensitivity tests have been undertaken to assess the impact of alternative assumptions relating to highway infrastructure provision, trip demand growth and travel demand. The results of these tests are presented in separate technical notes, which should be read as addendums to the Strategic Transport Modelling Report. Together, they help understand the robustness of the report's conclusions under a range of plausible future scenarios.
- 1.1.3 The following sensitivity test scenarios have been undertaken:
- **Sensitivity Test 1 (ST1)** – WOLP2043 scenario 2 (DS2) without access restrictions on Witney Road to prioritise cycle and bus (Access to Carterton Scheme).
  - **Sensitivity Test 2 (ST2)** – WOLP2043 scenario 2 (DS2) without access restrictions on Witney Road to prioritise cycle and bus (Access to Carterton Scheme), and without A40 Bus Lanes: Witney to Eynsham.
  - **Sensitivity Test 3 (ST3)** – WOLP2043 scenario 2 (DS2) without access restrictions on Witney Road to prioritise cycle and bus (Access to Carterton Scheme), without A40 Bus Lanes: Witney to Eynsham, with high growth local plan demand.
  - **Sensitivity Test 4 (ST4)** – WOLP2043 scenario 2 (DS2) without access restrictions on Witney Road to prioritise cycle and bus (Access to Carterton Scheme), and without A40 Bus Lanes: Witney to Eynsham, with Witney West End Link (Phase 2) and Bridge Street Improvements (Gyratory Operation) (highway only).
  - **Sensitivity Test 5 (ST5)** – WOLP2043 scenario 2 (DS2) without access restrictions on Witney Road to prioritise cycle and bus (Access to Carterton Scheme), and without A40 Bus Lanes: Witney to Eynsham, with reduced travel demand and improved public transport cost.

## 2. Sensitivity Test 2: Scenario

### **Sensitivity Test 2 (ST2): Do Something 2 Scenario without access restrictions on Witney Road to prioritise cycle and bus (Access to Carterton Scheme), and without A40 Bus Lanes: Witney to Eynsham.**

- 2.1.1 This sensitivity test has been undertaken to understand the impact of the proposed bus lanes on the A40 between Witney and Eynsham. The test builds on Sensitivity Test 1 (ST1), as documented in WOLP

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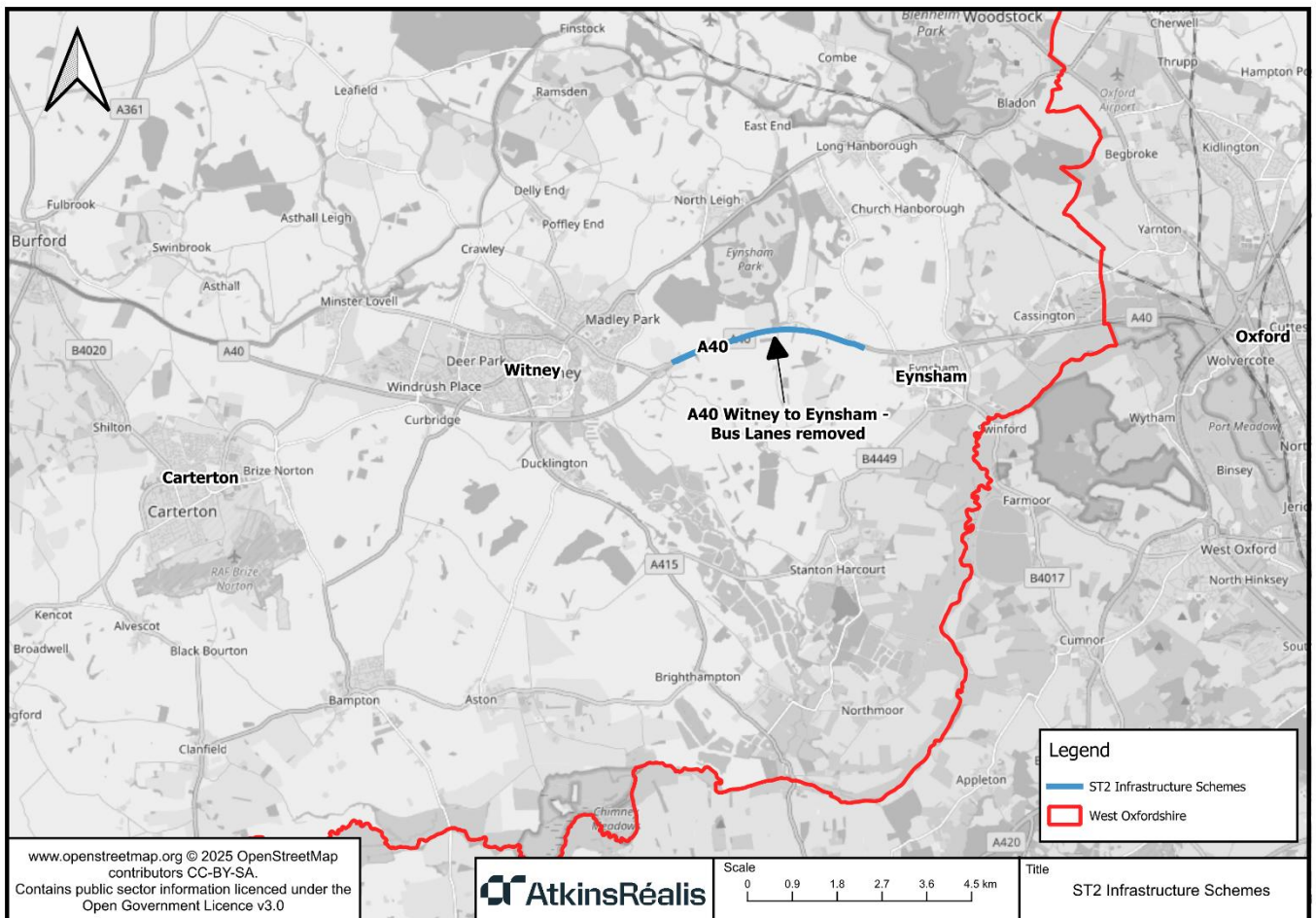
<sup>1</sup> West Oxfordshire Local Plan 2043 Strategic Transport Modelling Report v4.0

# TECHNICAL NOTE

2043 Sensitivity Test 1 Technical Note<sup>2</sup>), 2043 West Oxfordshire Local Plan Do Something 2 (DS2) scenario without access restrictions on Witney Road between Downs Road and Minster Road, which were originally intended to prioritise cycle and bus for the Access to Carterton Scheme.

- 2.1.2 The purpose of this test is to determine whether there would be a material impact to the performance and use of the highway and public transport networks if the proposed bus lanes between Witney and Eynsham are not delivered as currently modelled.
- 2.1.3 This sensitivity test has been implemented by removing inbound and outbound dedicated bus lanes on the A40 between Witney (Shores Green) and West Eynsham/Salt Cross from the highway model, meaning buses are required to operate within the general traffic lanes (shown on Figure 2-1). No changes have been made to the provision of general traffic lanes on the highway network and all other assumptions from ST1 have been retained. Demand assumptions are also unchanged, with the 2043 forecast demand consistent with that used in scenarios ST1 and in the DS2. Results are compared directly with the ST1 scenario to assess the impact of the A40 bus lanes on network performance and overall findings.

**Figure 2-1 – Sensitivity Test 2: Location of intervention for Sensitivity Test 2**



<sup>2</sup> WOLP 2043 Sensitivity Test 1 Technical Note v2.0

## 3. Sensitivity Test 2: Results

### Demand by mode

- 3.1.1 There are no changes in demand assumptions between the two tests. ST2 adopts the same land use assumptions as ST1, any changes in mode share are attributable to the sensitivity test rather than differences in development quantum or distribution.

**Table 3-1 – Modelled flows (person trips), 12-hour period: 07:00-19:00**

| Modelled flows (person trips)                                  | ST2     | % Change from ST1 |
|----------------------------------------------------------------|---------|-------------------|
| Trips by car beginning in West Oxfordshire                     | 211,365 | <1%               |
| Trips by car ending in West Oxfordshire                        | 208,811 | <1%               |
| Trips by car both beginning and ending within West Oxfordshire | 117,775 | <1%               |
| Bus trips beginning in West Oxfordshire                        | 8,344   | 1%                |
| Bus trips ending in West Oxfordshire                           | 9,725   | 1%                |
| Bus trips both beginning and ending in West Oxfordshire        | 4,084   | -1%               |
| Rail trips beginning in West Oxfordshire                       | 4,040   | 1%                |
| Rail trips ending in West Oxfordshire                          | 4,228   | 1%                |
| Rail trips both beginning and ending in West Oxfordshire       | 729     | 1%                |

- 3.1.2 Table 3-1 shows that compared against the 2043 Local Plan: ST1 scenario, removing A40 bus lanes between Witney Shores Green and West Eynsham/Salt Cross results in a negligible impact to person trips. Given the minimal magnitude of these changes, they are considered insignificant and likely reflect normal model variation rather than a material impact on overall travel demand.
- 3.1.3 Table 3-2 provides the modelled mode shares for the trips over the 12 hours starting in West Oxfordshire compared to those in the full model. Mode share is presented as a percentage with changes relative to ST1 presented in percentage points.
- 3.1.4 ST2 mode share is comparable to ST1, with an increase to car from ST1 of 0.04% and a reduction to bus of 0.05%, indicating that the removal of the A40 bus lanes restrictions between Witney and Eynsham has a negligible effect on mode share. The marginal reduction to bus usage is expected given vehicles previously able to travel in the bus lane are now required to use the general traffic lane.

**Table 3-2 – Mode share for trips starting in West Oxfordshire and Full Model, 12 hour – 07:00-19:00**

| Mode    | West Oxfordshire |                      | Full Model |                      |
|---------|------------------|----------------------|------------|----------------------|
|         | ST2 (%)          | Change from ST1 (pp) | ST2 (%)    | Change from ST1 (pp) |
| Car     | 93.4%            | 0.04%                | 89.0%      | 0.01%                |
| Bus P&R | 1.1%             | 0.00%                | 1.0%       | 0.00%                |
| Bus     | 3.7%             | -0.05%               | 7.0%       | -0.01%               |
| Rail    | 1.8%             | 0.01%                | 3.0%       | 0.00%                |
| Total   | 100.0%           | -                    | 100.0%     | -                    |

# TECHNICAL NOTE

- 3.1.5 The Park & Ride site numbers and the change from the ST1 scenario are shown in Table 3-3. There is negligible impact to car arrivals by P&R site in the AM period.

**Table 3-3 – Car arrivals by P&R site in ST2, AM period: 07:00-10:00**

| P&R Site    | ST2   | Change from ST1 |
|-------------|-------|-----------------|
| Redbridge   | 2,279 | 0               |
| Seacourt    | 780   | 2               |
| Peartree    | 417   | 0               |
| Water Eaton | 399   | 0               |
| Thornhill   | 702   | 0               |
| Eynsham     | 1,536 | -2              |
| Airport     | 325   | 0               |

## Travel patterns

- 3.1.6 The interaction between West Oxfordshire, the other districts in Oxfordshire and the rest of the country is shown in Table 3-4. Destination share is presented as a percentage with changes relative to ST1 presented in percentage points. There is very little overall change compared against ST1, less than 0.1% demonstrating that the A40 bus lane has no material impact on destination share.

**Table 3-4 – Destination share for trips starting in West Oxfordshire and Full Model, 12 hour – 07:00-19:00**

| District / area       | Destination share |                      |
|-----------------------|-------------------|----------------------|
|                       | ST2 (%)           | Change from ST1 (pp) |
| Oxford City           | 9.3%              | -0.04%               |
| Cherwell              | 11.6%             | 0.00%                |
| Vale of White Horse   | 9.4%              | 0.00%                |
| South Oxfordshire     | 2.9%              | 0.00%                |
| West Oxfordshire      | 54.2%             | 0.03%                |
| Rest of Great Britain | 12.5%             | 0.01%                |
| Total                 | 100.0%            | -                    |

## Network impacts

- 3.1.7 As with the main Do Something scenario runs, the highway results below include an active travel adjustment. The adjustment reflects a generic assumption that walking and cycling infrastructure is improved across the main settlements of West Oxfordshire and is not intended to represent the direct impact of the scheme being tested. Under this assumption, some shorter car journeys are assumed to transfer to cycling. The resulting reduction in car demand is broadly consistent with that reported for ST1; within 10 trips in the AM peak hour, 6 trips in the interpeak and 18 trips in the PM peak hour. Consequently, although the removal of a scheme such as this could lead to a marginal increase in car

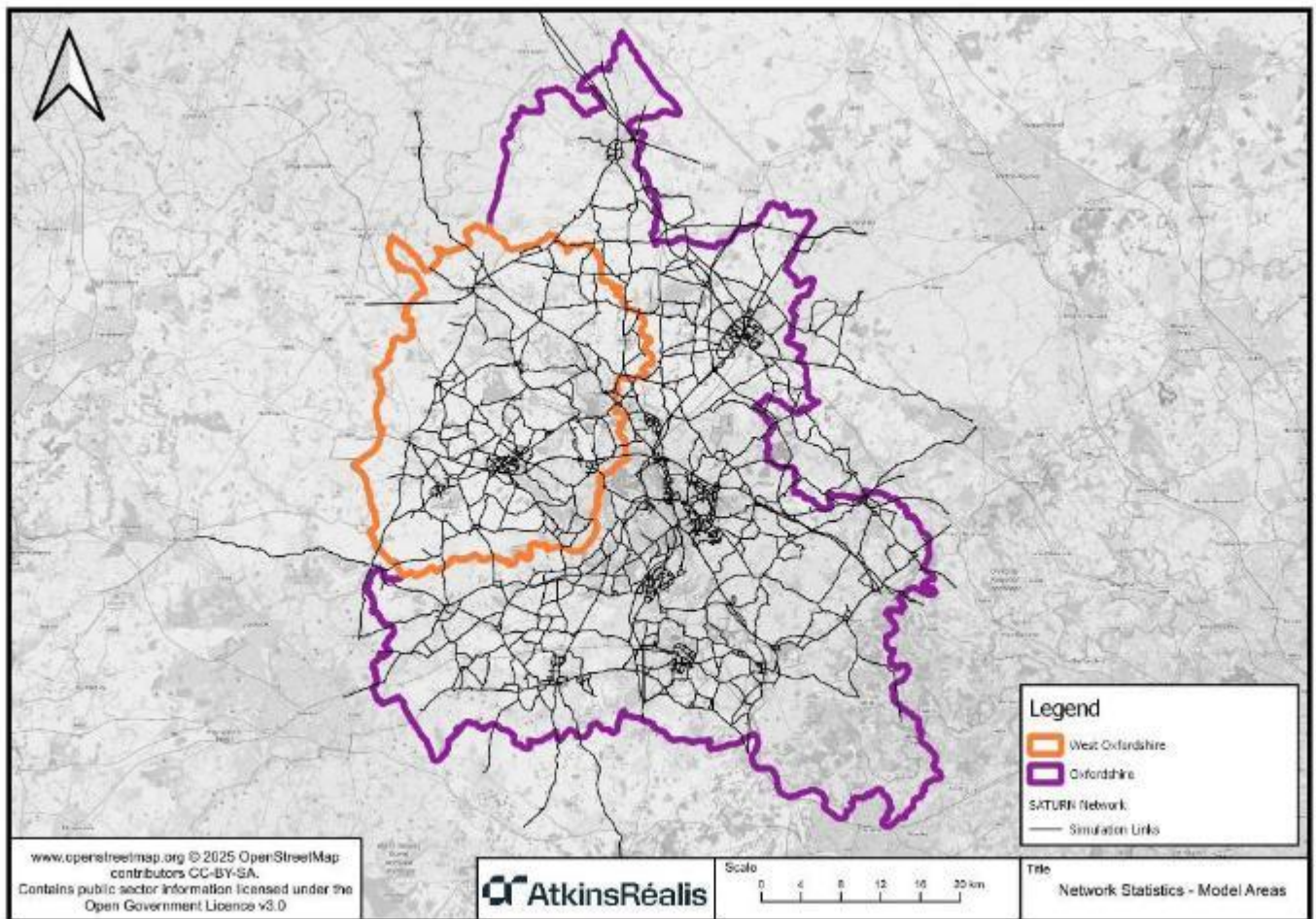
# TECHNICAL NOTE

demand, the modelling suggests that any such effect would be small and would not materially influence the overall assessment of highway network performance.

## Network performance

3.1.8 Table 3-5 presents the forecast year network statistics from the Sensitivity Test 2 scenario, which models the impact of the removal of A40 bus lanes between Witney Shores Green and West Eynsham/Salt Cross, for all modelled roads in Oxfordshire, as shown in Figure 3-1, and the change compared with the ST1 scenario. Table 3-6 presents the corresponding statistics for only the roads modelled in West Oxfordshire, while Table 3-7 presents the same for the A40 Corridor from Burford to the Wolvercote roundabout. These are presented for all car trips in West Oxfordshire across the 12-hour period from 07:00 to 19:00, with the total on the roads also including LGV and HGV trips. Figure 3-1 shows the full extent of the roads considered, with those inside the West Oxfordshire border being used to provide the West Oxfordshire statistics.

Figure 3-1 – Model links included in network statistics



# TECHNICAL NOTE

**Table 3-5 – Key highway network statistics – Full Model**

| Metric                 | ST2        |              | % Change from ST1 |              |
|------------------------|------------|--------------|-------------------|--------------|
|                        | Car        | All vehicles | Car               | All vehicles |
| Total Travel Time (hr) | 365,600    | 445,300      | 0.0%              | 0.0%         |
| Cruise Time (hr)       | 307,900    | 376,600      | 0.0%              | 0.0%         |
| Delay (hr)             | 57,700     | 68,800       | -0.1%             | 0.0%         |
| Delay (sec per km)     | 10.2       | 9.8          | -0.1%             | -0.1%        |
| Total Distance (km)    | 20,327,200 | 25,153,000   | 0.0%              | 0.0%         |
| Average Speed (km/h)   | 55.6       | 56.5         | 0.0%              | 0.0%         |

**Table 3-6 – Key highway network statistics – West Oxfordshire**

| Metric                 | ST2       |              | % Change from ST1 |              |
|------------------------|-----------|--------------|-------------------|--------------|
|                        | Car       | All vehicles | Car               | All vehicles |
| Total Travel Time (hr) | 62,300    | 77,300       | 0.1%              | 0.1%         |
| Cruise Time (hr)       | 54,600    | 67,300       | 0.1%              | 0.1%         |
| Delay (hr)             | 7,700     | 10,000       | 0.4%              | 0.3%         |
| Delay (sec per km)     | 9.2       | 9.7          | 0.3%              | 0.3%         |
| Total Distance (km)    | 3,016,100 | 3,714,400    | 0.0%              | 0.0%         |
| Average Speed (km/h)   | 48.4      | 48.1         | -0.1%             | -0.1%        |

**Table 3-7 – Key highway network statistics – A40 Corridor**

| Metric                 | ST2     |              | % Change from ST1 |              |
|------------------------|---------|--------------|-------------------|--------------|
|                        | Car     | All vehicles | Car               | All vehicles |
| Total Travel Time (hr) | 13,000  | 16,600       | -0.3%             | -0.3%        |
| Cruise Time (hr)       | 11,200  | 14,300       | -0.2%             | -0.2%        |
| Delay (hr)             | 1,800   | 2,300        | -1.0%             | -1.0%        |
| Delay (sec per km)     | 10.5    | 10.4         | -0.7%             | -0.7%        |
| Total Distance (km)    | 630,600 | 800,900      | -0.3%             | -0.3%        |
| Average Speed (km/h)   | 48.4    | 48.3         | 0.0%              | -0.1%        |

- 3.1.9 The statistics indicate that the removal of the A40 bus lanes between Witney Shores Green and West Eynsham/Salt Cross results in negligible change in overall highway demand across the full model area. In West Oxfordshire, the model shows minimal changes to total travel time and delay for cars and all vehicles. The slight increases are between +0.1% and 0.4% across the board except for total distance which sees no change and average speed which decreases by -0.1% and is unlikely to be noticeable to most road users. Overall, the results suggest that removing the dedicated bus lane infrastructure has a negligible impact on highway network performance across the district, despite the adverse impacts on bus journey times and patronage.

# TECHNICAL NOTE

- 3.1.10 The A40 corridor sees the greatest impact, where both cars and all vehicles are benefitting from reduced delays. Total delay decreases by -1.0%, followed by delay in seconds per km decreases by -0.7% for both cars and all vehicles indicating that traffic is moving more efficiently along the corridor as a result of removing the bus lane. There are smaller reductions in total travel time (-0.3%), total distance (-0.3%) and cruise time (-0.2%) however despite this the average speed remains broadly unchanged. This suggests that the benefits along this corridor are associated primarily with delay rather than traffic speeds. Overall, the results show a small improvement across the A40 corridor.

## A40 travel times by section

- 3.1.11 Table 3-8 sets out the average journey time along the A40 in the eastbound direction. Table 3-9 sets out the corresponding data for the westbound direction, with the sections listed in reverse. The results indicate very little change in journey time in all periods in the eastbound direction. As expected, between Witney and Eynsham P&R, where buses are now required to use the general traffic lane for the whole section, journey times increase slightly across all periods (circa 1%). Eynsham P&R to Cassington sees a slight decrease (circa -1%) in the AM peak.
- 3.1.12 Similarly, there is very little change in journey times in the westbound direction across all periods. Between Eynsham P&R and Witney, journey times increase marginally in the interpeak period (circa 1%) and decrease slightly in the PM peak (circa 1%). Overall, the results indicate that removal of the bus lanes has a negligible impact on journey times along the corridor, with changes generally limited to around  $\pm 1\%$ .

**Table 3-8 – A40 Eastbound journey time change from 2043 ST1 to 2043 ST2 (minutes)**

| Journey time route section                       | ST2         |             |             | % Change from ST1 |           |           |
|--------------------------------------------------|-------------|-------------|-------------|-------------------|-----------|-----------|
|                                                  | AM          | IP          | PM          | AM                | IP        | PM        |
| Section 1 - Burford to Witney (Ducklington Lane) | 11.2        | 8.8         | 9.1         | 0%                | 0%        | 0%        |
| Section 2 - Witney to Eynsham P&R                | 10.4        | 8.1         | 8.4         | 1%                | 1%        | 1%        |
| Section 3 - Eynsham P&R to Cassington            | 5.6         | 4.8         | 5.5         | -1%               | 0%        | 0%        |
| Section 4 - Cassington to Wolvercote Rdbt        | 8.1         | 6.9         | 7.2         | 0%                | 0%        | 0%        |
| <b>Full Route</b>                                | <b>35.2</b> | <b>28.6</b> | <b>30.1</b> | <b>0%</b>         | <b>0%</b> | <b>0%</b> |

**Table 3-9 – A40 Westbound journey time change from 2043 ST1 to 2043 ST2 (minutes)**

| Journey time route section                       | ST2         |             |             | % Change from ST1 |           |           |
|--------------------------------------------------|-------------|-------------|-------------|-------------------|-----------|-----------|
|                                                  | AM          | IP          | PM          | AM                | IP        | PM        |
| Section 4 – Wolvercote Rdbt to Cassington        | 6.5         | 6.0         | 6.5         | 0%                | 0%        | 0%        |
| Section 3 - Cassington to Eynsham P&R            | 5.4         | 4.7         | 5.8         | 0%                | 0%        | 0%        |
| Section 2 - Eynsham P&R to Witney                | 8.8         | 8.0         | 9.4         | 0%                | 1%        | -1%       |
| Section 1 - Witney (Ducklington Lane) to Burford | 8.8         | 8.7         | 9.3         | 0%                | 0%        | 0%        |
| <b>Full Route</b>                                | <b>29.5</b> | <b>27.5</b> | <b>30.9</b> | <b>0%</b>         | <b>0%</b> | <b>0%</b> |

# TECHNICAL NOTE

## Highway flow and delay

3.1.13 All figures in this section show the West Oxfordshire district boundary as a red line for context.

### Flow

3.1.14 Figure 3-2 to Figure 3-4 show the change in traffic flow from the ST1 scenario to the ST2 scenario. The ST2 scenario reflects ST1, with the removal of the A40 bus lanes between Witney and West Eynsham/Salt Cross. There is limited change across West Oxfordshire, with the largest increase in car trips along the A40 between Witney and Eynsham as expected, where buses now use the general traffic lane along this stretch of road. The AM sees an increase of +22, 1% eastbound and +29, 2% westbound in PCU/h (passenger car units per hour) and the PM sees an increase of +22, 2% eastbound and +28, 2% westbound in the PM in PCU/h. The plots show some flow change around Botley Interchange, a known area of model noise due to high levels of congestion.

### Delay

3.1.15 Figure 3-5 to Figure 3-7 show the change in link delay from the ST1 scenario to the ST2 scenario. There is limited change across West Oxfordshire, as with the flow change, the largest increase in delay is along the A40 towards Eynsham as a result of buses now sharing the lane with general traffic. In the AM peak the delay is more prominent in the eastbound direction (+41 seconds, 25%) with a small increase westbound (+6 seconds, 5%) aligning with the directionality of traffic towards Oxford in each peak. There is some model noise around Botley Interchange, a result of model instability around delay, and a small increase in delay on Oxford Road southbound out of Eynsham of 13 seconds, 4%.

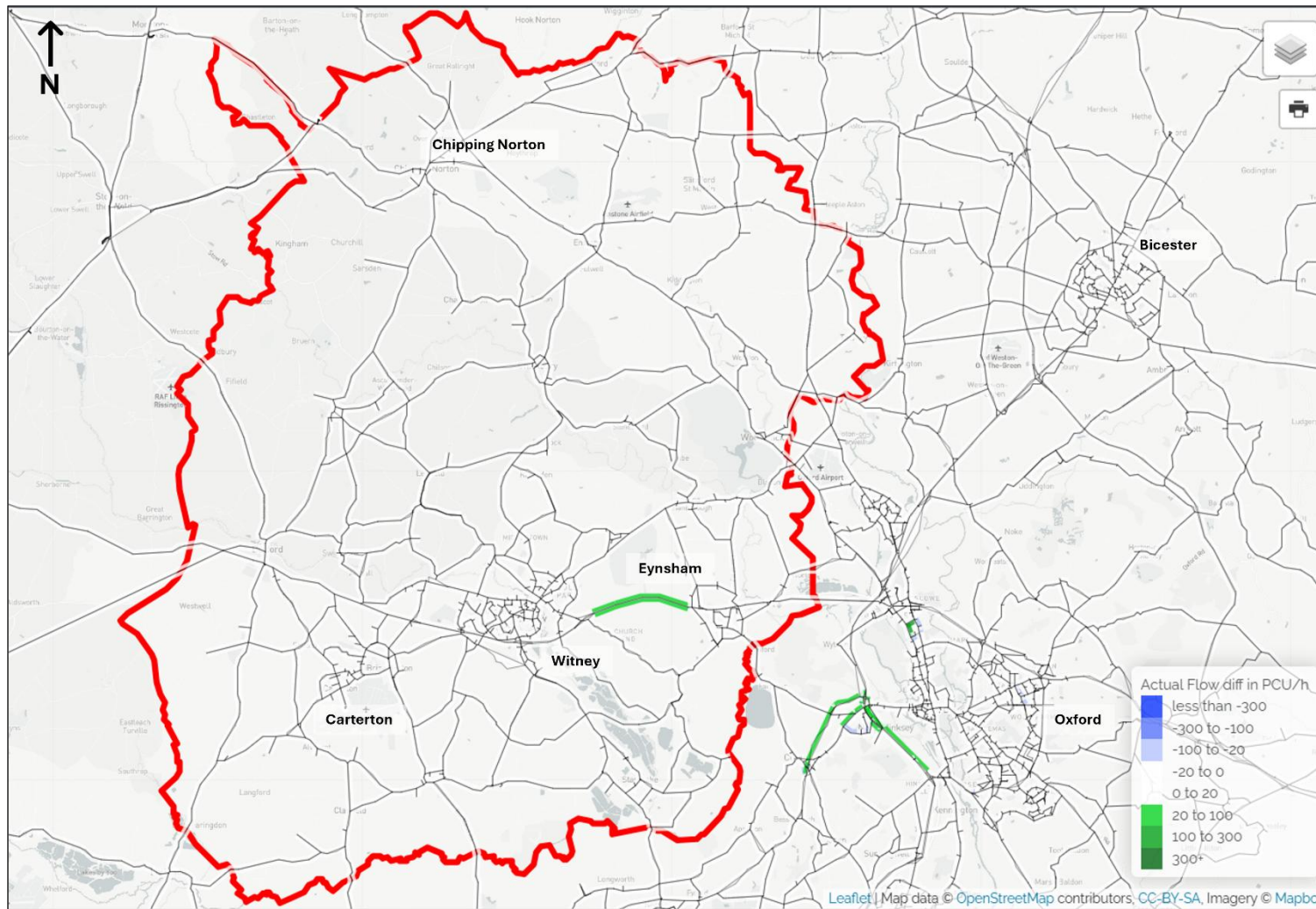
### Junction metrics

- 3.1.16 Junction performance has been assessed for key locations across West Oxfordshire. Performance is reported in terms of average delay and volume-to-capacity (V/C) ratio. Delay represents the flow-weighted average delay across all turning movements, while the V/C ratio indicates the proportion of total demand relative to the combined capacity of the junction entry arms.
- 3.1.17 As seen in Table A-1, the most notable reduction in delay can be seen at the A40 / West Eynsham / Salt Cross junction, with forecast reductions in delay of 14 seconds in the AM peak. This is largely attributable to the junction operating under higher levels of congestion in the AM peak, such that a small reduction in demand (28 PCU/h, approximately 2%) results in a proportionally greater reduction in delay, despite little change in overall junction performance. Other reductions to delay are forecast around the A40 Shores Green slip roads in the area of intervention. There is some model noise around Jubilee Way, up to  $\pm 2$  seconds.
- 3.1.18 Table A-2 shows minor changes along the A40 to V/C ratio, with the biggest forecasted impacts around  $\pm 2\%$ . Changes are primarily forecast across the day around the A40 Shores Green slip roads, and junctions connecting A40 to Witney and Eynsham as expected with the network changes. The forecasted impacts remain small, with minor impact expected on the operational performance of the network.

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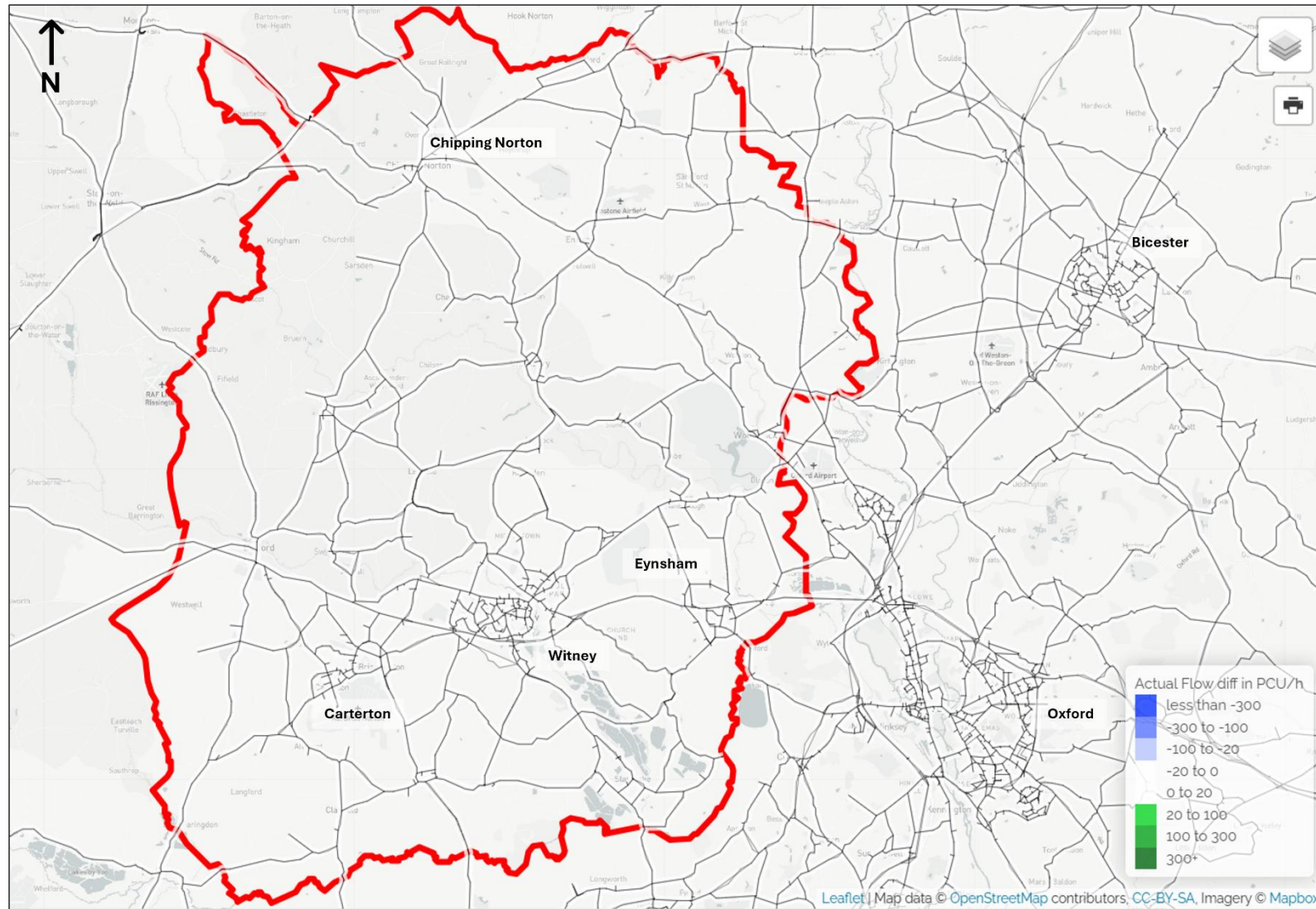
## Plots

Figure 3-2 – AM peak – change in flow from 2043 ST1 to 2043 ST2



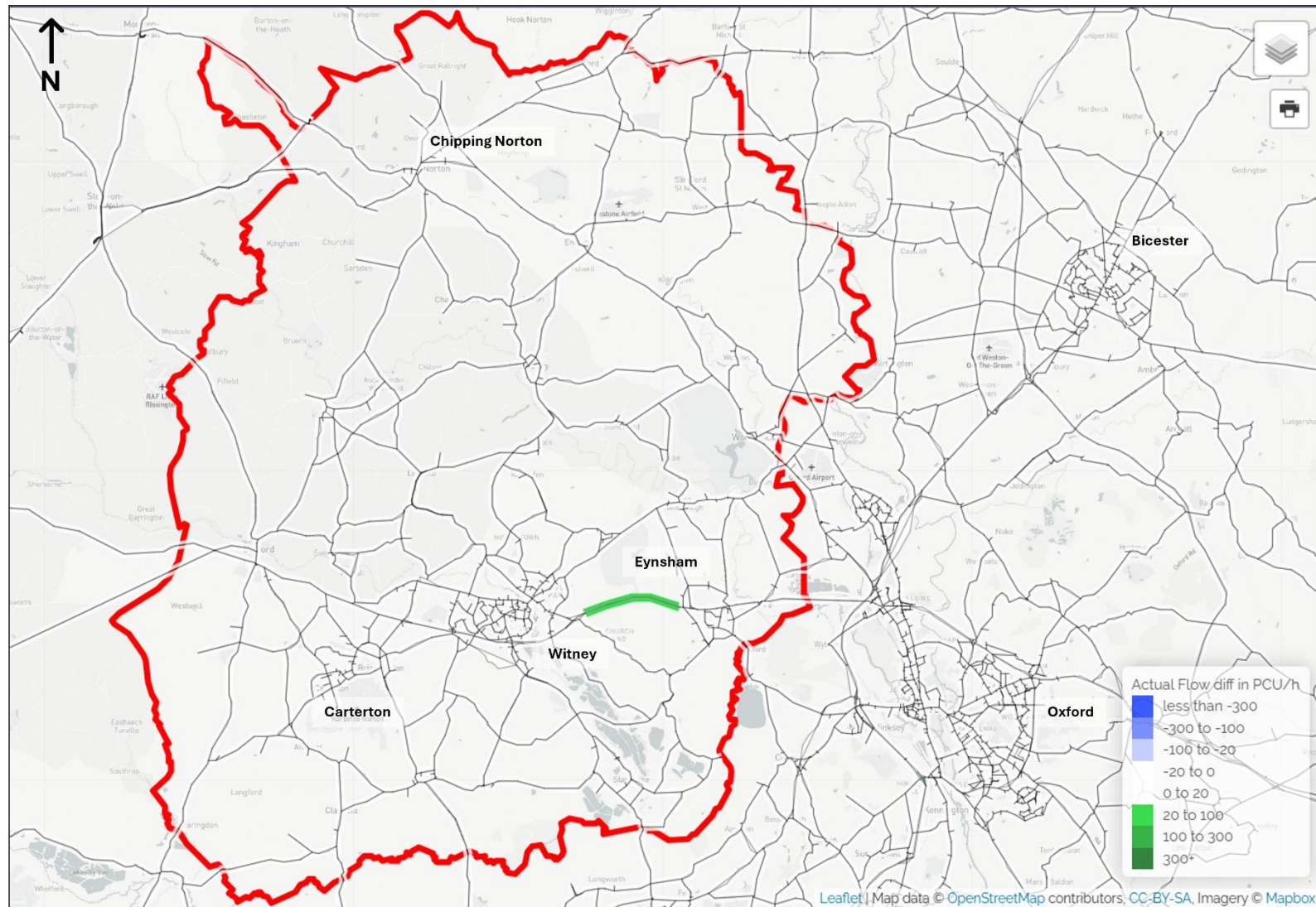
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Figure 3-3 – Interpeak – change in flow from 2043 ST1 to 2043 ST2



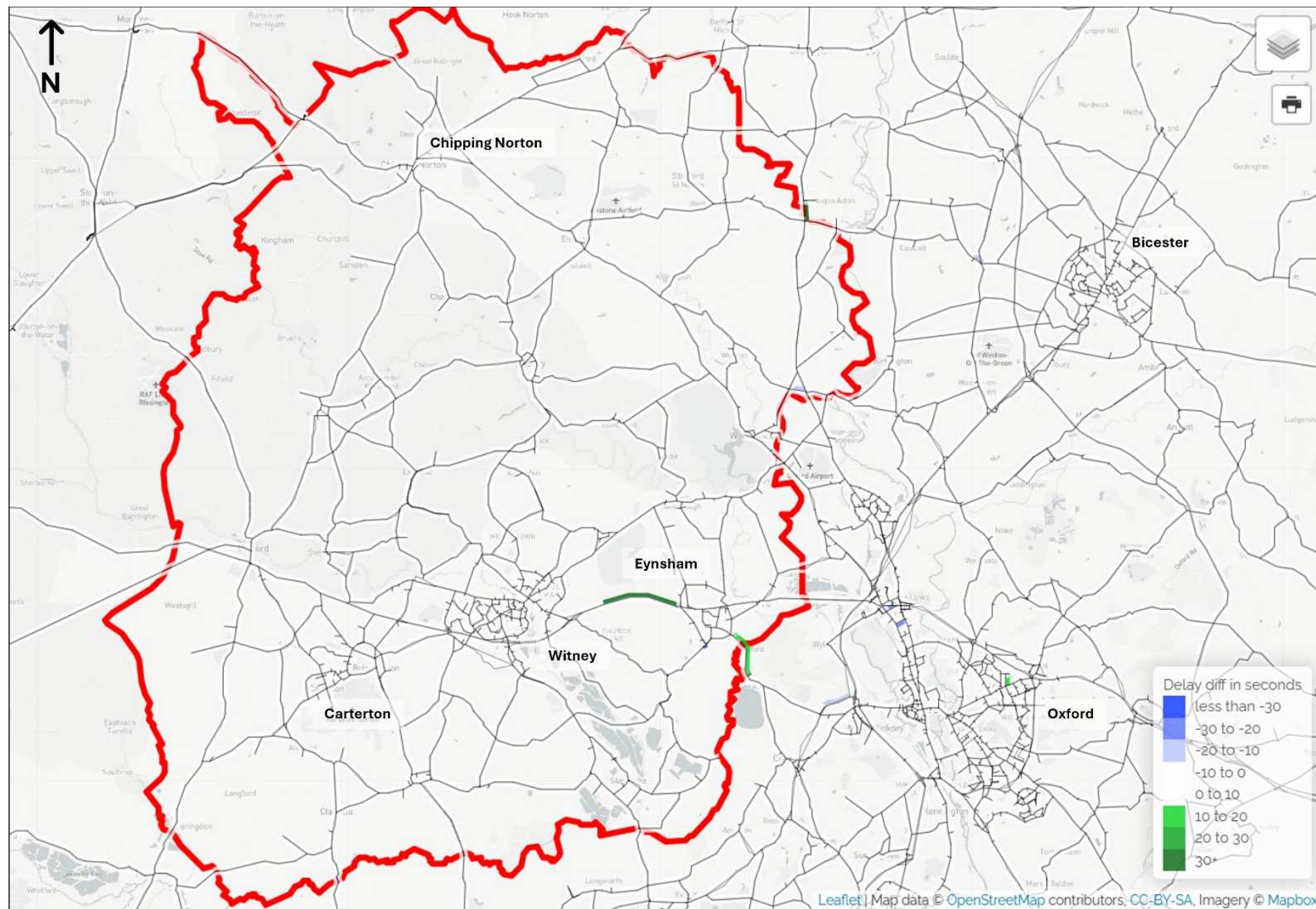
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Figure 3-4 – PM peak – change in flow from 2043 ST1 to 2043 ST2



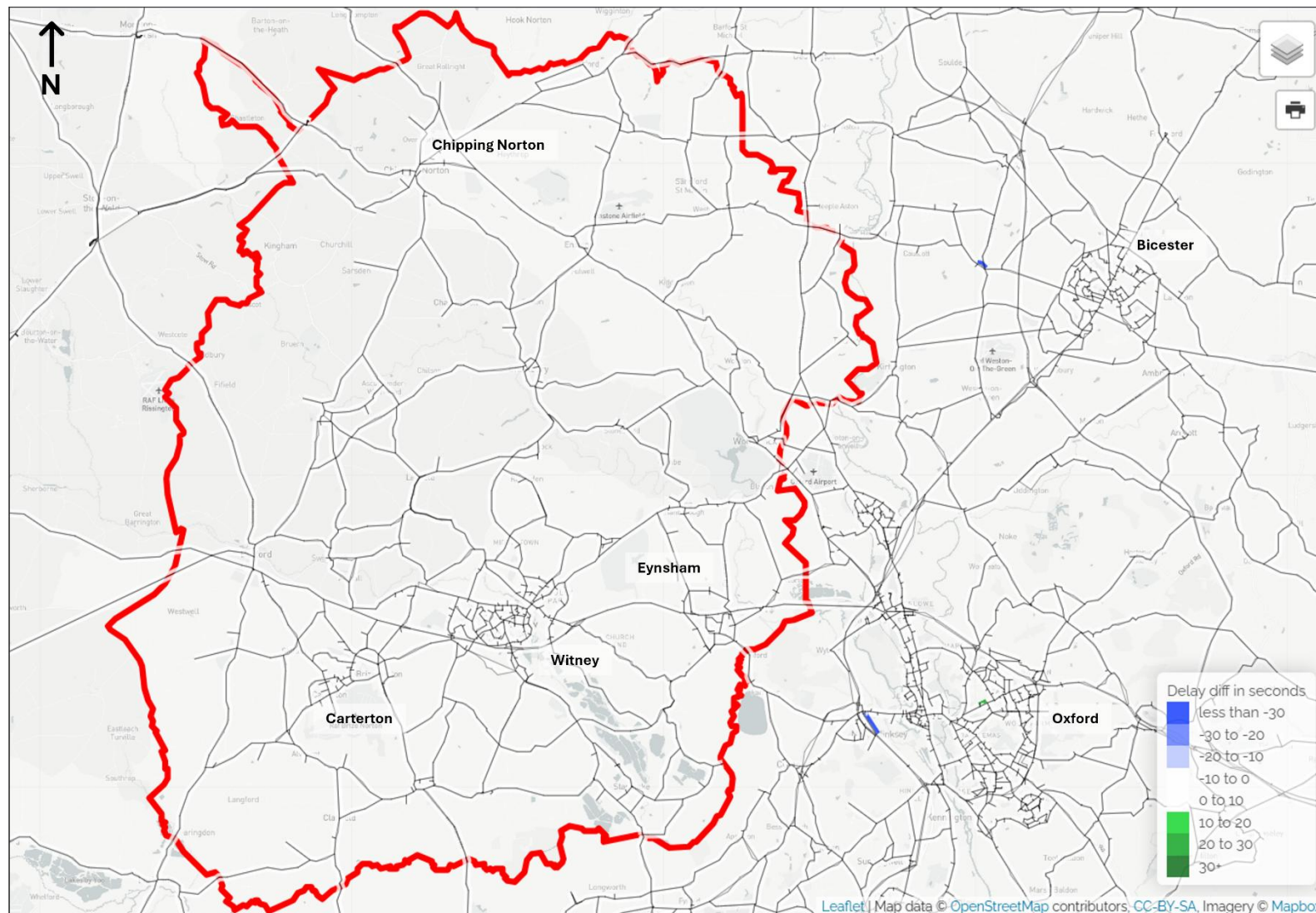
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Figure 3-5 – AM peak – link delay change from 2043 ST1 to 2043 ST2



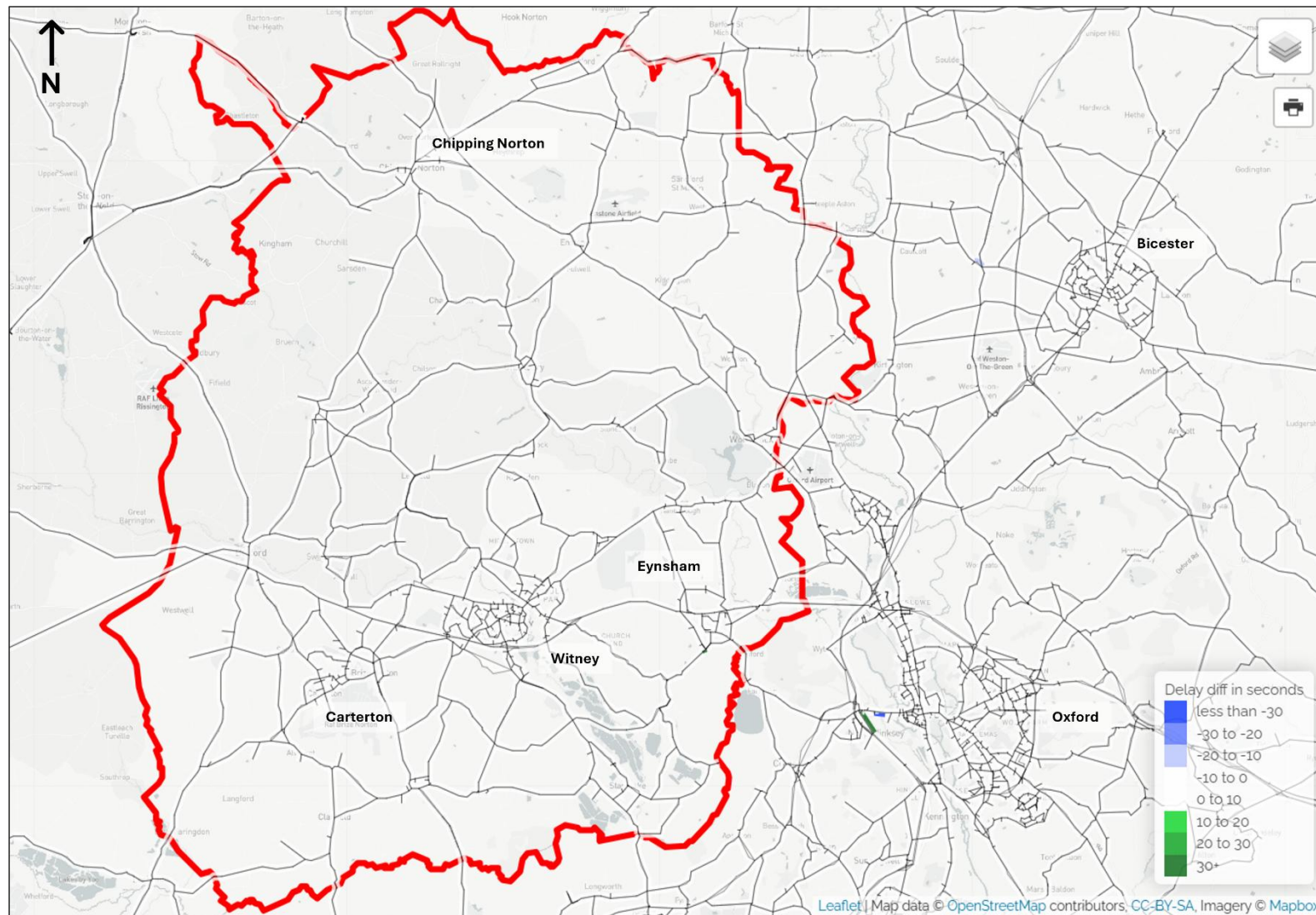
# TECHNICAL NOTE

Figure 3-6 – Interpeak – link delay change from 2043 ST1 to 2043 ST2



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Figure 3-7 – PM peak – link delay change from 2043 ST1 to 2043 ST2



## Bus flows and journey times

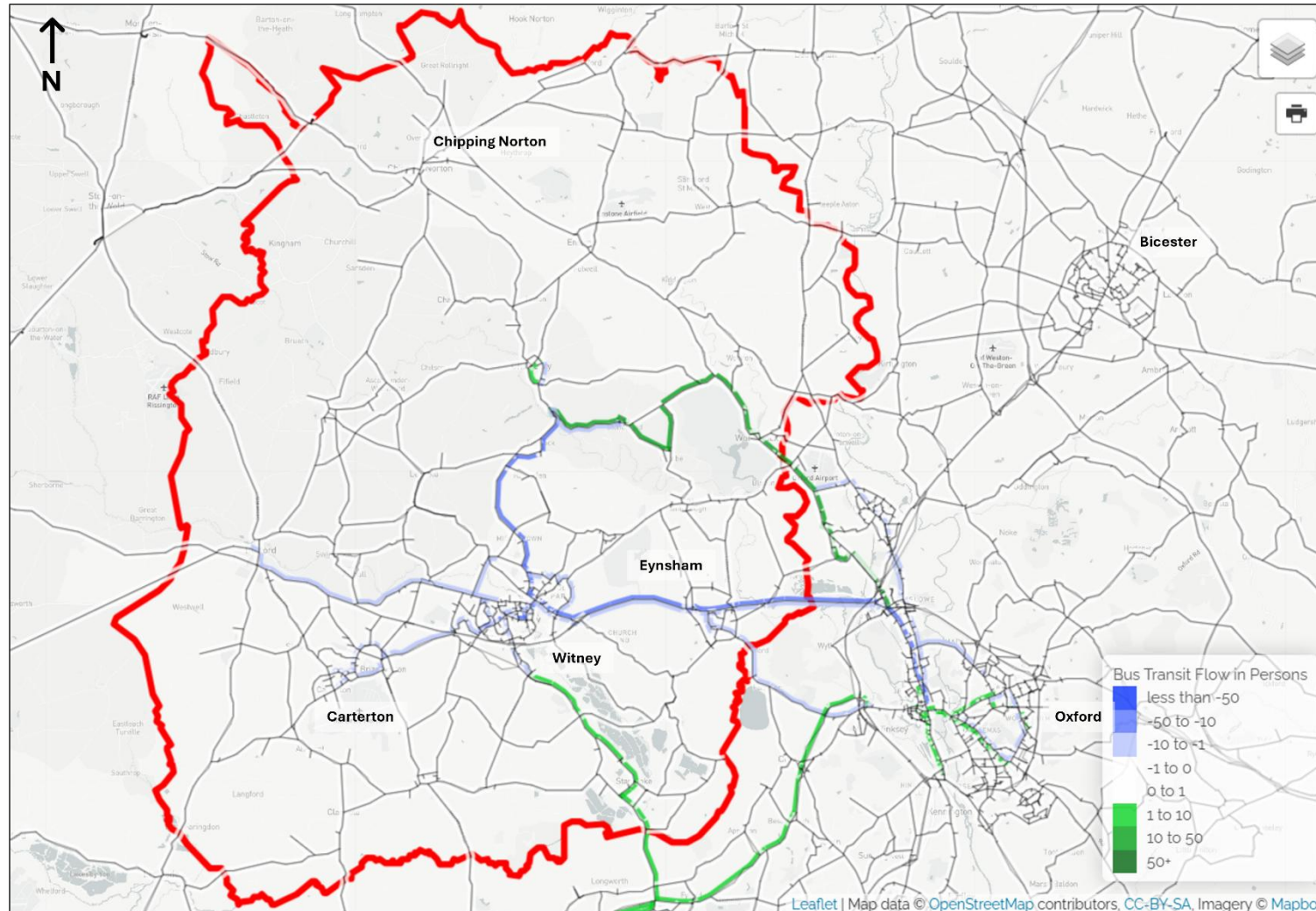
### Patronage

- 3.1.19 Figure 3-8 to Figure 3-10 show the changes in level of bus patronage across West Oxfordshire. Bus patronage decreases along the A40 where bus lanes have been removed between Witney and West Eynsham/Salt Cross (-49, 10% eastbound in the AM peak, -46, 9% westbound in the PM peak). Reductions are largest within this section of the A40 and lessen along the A40 towards Oxford.
- 3.1.20 In the AM peak, there are minor increases (model noise) in patronage south of A40, along A415 towards Standlake, accessing Oxford via an alternate service (1, 16% AM Peak). North of the A40 eastbound patronage sees an increase between Fawler and Combe via Stonesfield in the AM Peak (up to 14, 32%) and interpeak (up to 9, 31%), with passengers continuing into Oxford via the A44. The changes in patronage in the AM peak are weighted towards the eastbound direction, with a reversal of the directionality of the pattern in the PM peak.
- 3.1.21 In the AM peak, there is a reduction in bus patronage of around 5% for trips between Witney and Carterton and Oxford City (approximately 59 passengers in total), together with a reduction of around 8% for trips between Witney and Carterton and Eynsham (approximately 11 passengers in total). These reductions reflect the removal of the bus lanes and the associated increase in bus journey times along the A40 between Witney and Eynsham. As public transport demand on the corridor is predominantly tidal in nature, similar changes are expected to be reflected in the reverse direction during the PM peak. The results indicate that the removal of bus priority reduces the competitiveness of bus travel on the corridor, as longer journey times make bus services less attractive relative to car travel.

# TECHNICAL NOTE

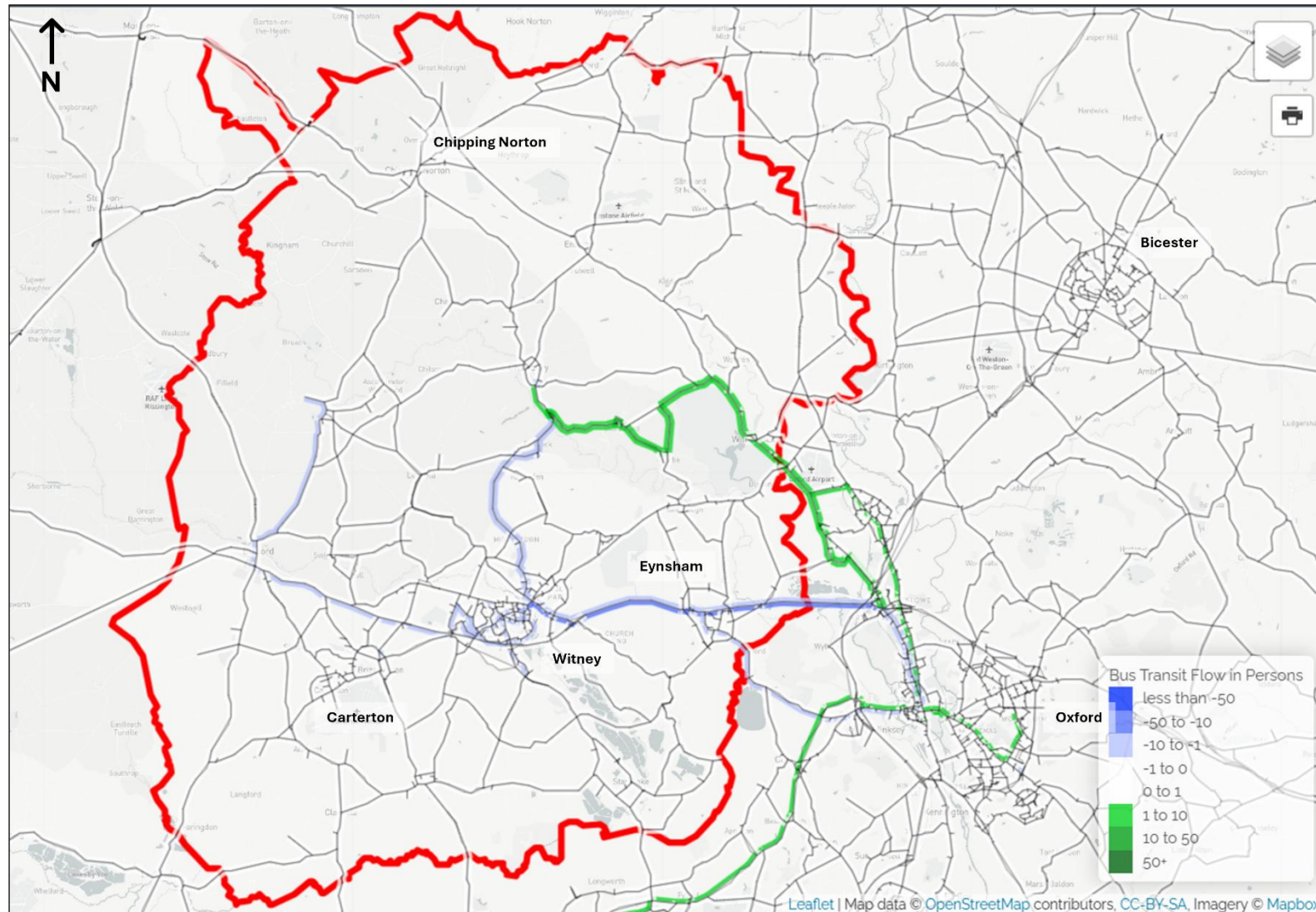
## Plots

Figure 3-8 – AM Peak – bus patronage change from 2043 ST1 to 2043 ST2



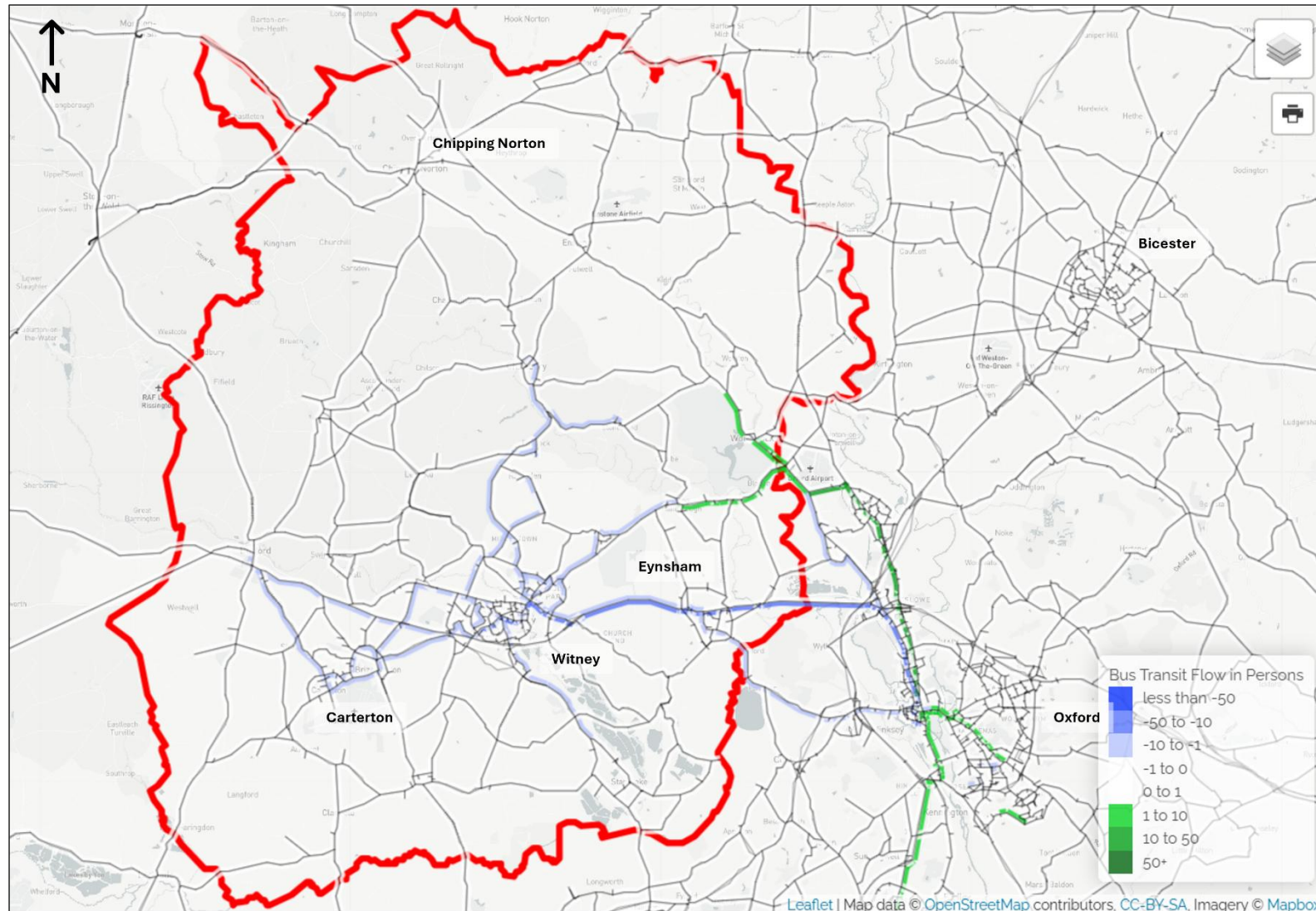
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Figure 3-9 – Interpeak – bus patronage change from 2043 ST1 to 2043 ST2



# TECHNICAL NOTE

Figure 3-10 – PM Peak – bus patronage change from 2043 ST1 to 2043 ST2



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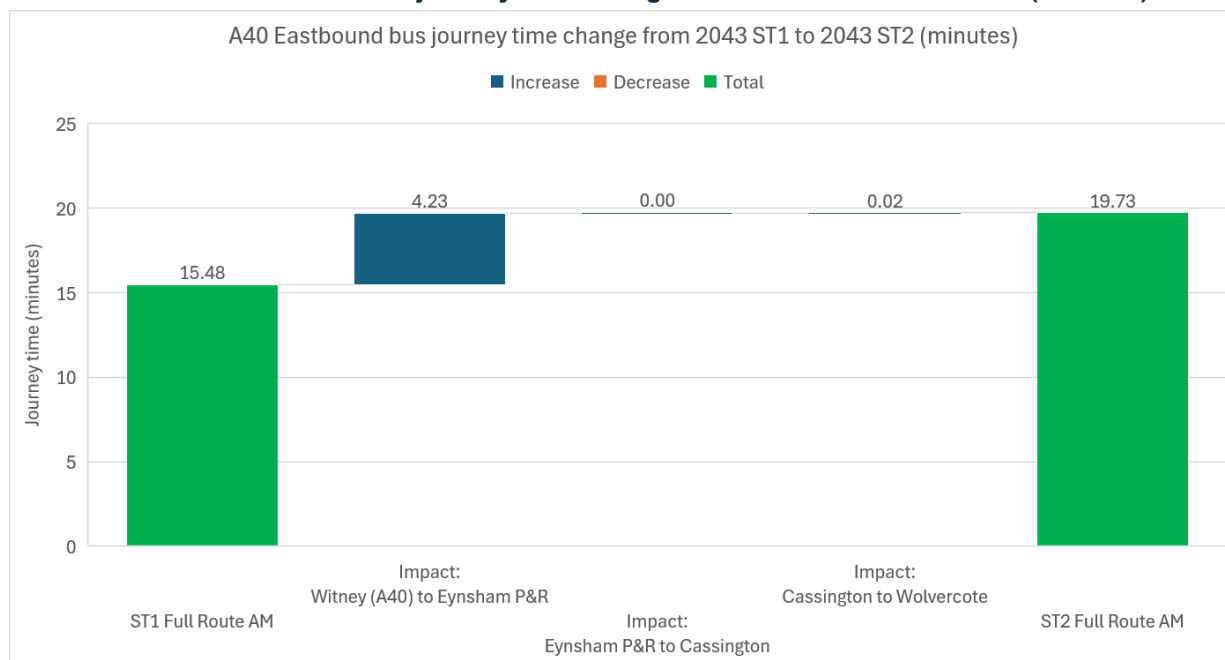
## Journey times

- 3.1.22 The impact of removing the eastbound bus lane along the A40 in ST2 between A40 Witney Shores Green and West Eynsham/Salt Cross can be seen in Table 3-10 and Figure 3-11. As expected, there is no impact to the bus lanes surrounding the network changes. The removal of the bus lane increases bus journey times along the section between Witney (A40) and Eynsham by over 4 minutes in the AM peak for the eastbound flow towards Oxford.
- 3.1.23 The results show that this section of bus lane provides the majority of the journey time benefit for buses along the A40 corridor. Removing it reduces the time advantage that public transport currently has over general traffic, making bus journeys slower and less attractive for commuters travelling into Oxford. The loss of this benefit is most pronounced during the AM peak, when the bus lane helps buses bypass congestion into Oxford and provides a faster and more reliable journey for passengers.

**Table 3-10 – A40 Eastbound bus journey time change from 2043 ST1 to 2043 ST2 (minutes)**

| Bus Lane section            | ST2         |             |             | Change from ST1 |            |            |
|-----------------------------|-------------|-------------|-------------|-----------------|------------|------------|
|                             | AM          | IP          | PM          | AM              | IP         | PM         |
| Witney (A40) to Eynsham P&R | 11.8        | 9.0         | 9.5         | 4.2             | 2.9        | 3.2        |
| Eynsham P&R to Cassington   | 2.2         | 1.8         | 1.8         | 0.0             | 0.0        | 0.0        |
| Cassington to Wolvercote    | 5.8         | 5.9         | 6.7         | 0.0             | 0.0        | 0.0        |
| <b>Full Route</b>           | <b>19.7</b> | <b>16.7</b> | <b>18.0</b> | <b>4.3</b>      | <b>2.9</b> | <b>3.2</b> |

**Figure 3-11 – A40 Eastbound AM bus journey time change from 2043 ST1 to 2043 ST2 (minutes)**



- 3.1.24 The impact of removing the westbound bus lane along the same stretch of A40 can be seen Table 3-11 and Figure 3-12. The impact on the full route is driven by increased journey times along the Eynsham P&R to Witney (A40) section. While westbound journey times are longer overall, the interpeak period shows a similar increase in journey time in both directions. In the peak periods, the magnitude of the

# TECHNICAL NOTE

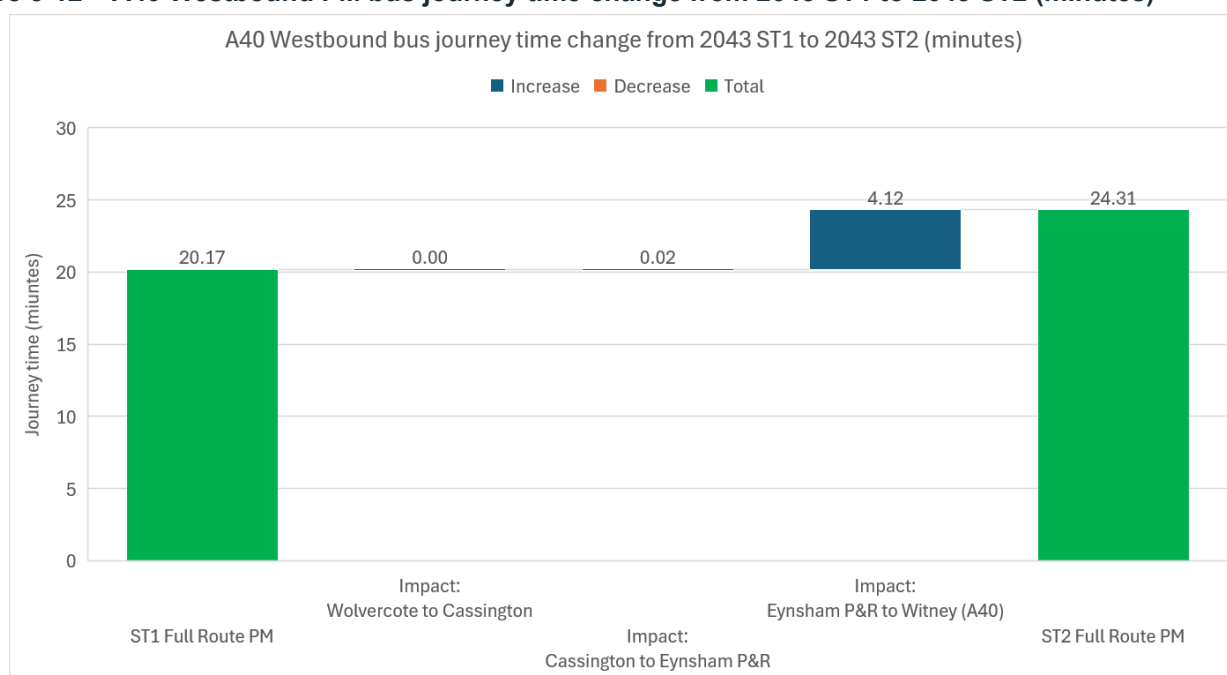
impact is broadly consistent; however, the direction of the delay reflects prevailing travel patterns, occurring predominantly eastbound in the AM peak and westbound in the PM peak as traffic departs Oxford.

- 3.1.25 While the scale of impact on the bus lane section is comparable in both directions, journey times are generally longer in the westbound direction due to higher levels of congestion (consistent with ST1). The removal of the bus lane between Eynsham and Witney increases bus journey times along this section by over 4 minutes in the PM peak for the westbound flow away from Oxford. The results show that this section of bus lane provides the majority of the journey time benefit for buses along the A40 corridor. The loss of this benefit is most pronounced during the PM peak, when the bus lane helps buses bypass congestion leaving Oxford and provides a faster and more reliable journey for passengers.

**Table 3-11 – A40 Westbound bus journey time change from 2043 ST1 to 2043 ST2 (minutes)**

| Bus Lane section            | ST2         |             |             | Change from ST1 |            |            |
|-----------------------------|-------------|-------------|-------------|-----------------|------------|------------|
|                             | AM          | IP          | PM          | AM              | IP         | PM         |
| Wolvercote to Cassington    | 7.5         | 8.5         | 8.7         | 0.0             | 0.0        | 0.0        |
| Cassington to Eynsham P&R   | 4.3         | 4.6         | 5.4         | 0.0             | 0.0        | 0.0        |
| Eynsham P&R to Witney (A40) | 9.7         | 9.3         | 10.2        | 3.5             | 2.8        | 4.1        |
| <b>Full Route</b>           | <b>21.4</b> | <b>22.3</b> | <b>24.3</b> | <b>3.5</b>      | <b>2.8</b> | <b>4.1</b> |

**Figure 3-12 – A40 Westbound PM bus journey time change from 2043 ST1 to 2043 ST2 (minutes)**



# TECHNICAL NOTE

## A40 Segment Detail

- 3.1.26 This analysis compares highway and bus journey times along the A40 corridor, using data extracted from the variable demand model, pre-active mode adjustment, to ensure a consistent journey time baseline across both model runs. It is expected that highway journeys will generally be faster than bus journeys in sections without dedicated bus infrastructure, due to the impacts of intermediate stops, passenger dwell times, and vehicle deceleration/acceleration affecting bus performance.
- 3.1.27 Table 3-12 shows that the principal impact of removing the bus lane in the ST2 scenario occurs on the A40 (Shores Green) to Eynsham P&R section, where bus journey times increase while highway journey times remain largely unchanged. This is consistent with the removal of the bus lane along this section, resulting in buses experiencing greater journey times than in ST1.
- 3.1.28 In the AM peak, bus journey times on this section increase by 4.2 minutes compared with ST1, while highway journey times increase by only 0.2 minutes. Similarly, bus journey times increase by 2.9 minutes in the interpeak and 3.2 minutes in the PM peak, compared with increases of only around 0.1 minutes for highway vehicles. As a result, buses, which were only slightly slower than highway vehicles in ST1, become considerably less competitive in ST2. Along this section, bus journeys are now approximately 4.5 minutes slower than highway vehicles in the AM peak towards Oxford. Outside of the A40 (Shores Green) to Eynsham P&R section, there is very little change between ST1 and ST2.
- 3.1.29 Table 3-13 shows a similar pattern to the eastbound results, with the primary impact of removing the bus lane in the ST2 scenario occurring on the A40 (Shores Green) to Eynsham P&R section. Bus journey times increase on this section while highway journey times remain largely unchanged. The impact is greatest in the PM peak, where bus journey times increase by 4.8 minutes compared with ST1. This is consistent with higher westbound traffic flows from Oxford in the PM peak, resulting in buses experiencing longer journey times once the bus lane is removed. As a result, buses become less competitive relative to highway vehicles.
- 3.1.30 As with the eastbound direction, there is little change in journey times between Carterton and Witney Centre and between Eynsham P&R and Wolvercote, indicating that the increase in overall bus journey times is largely driven by the loss of bus priority on the A40 (Shores Green) to Eynsham P&R section.
- 3.1.31 Consistent with the reference case, buses are modelled to operate faster than general traffic in the AM peak westbound for A40 (Shores Green) for A40 – Witney Centre due to retained base model factors; this does not affect the validity of comparisons between scenarios.
- 3.1.32 Overall, the eastbound and westbound results demonstrate that the A40 bus lane provides a significant journey time benefit for bus services in both directions, while having very little influence on general traffic journey times. Removing the bus lane increases bus journey times by between 3 and 5 minutes, depending on the time period and direction of travel, but results in negligible changes to highway vehicle journey times. This indicates that retaining the bus lane represents an efficient use of road space, supporting faster and more competitive public transport journeys without materially affecting general traffic conditions.
- 3.1.33 These findings are consistent with the objectives of Oxfordshire County Council's Local Transport and Connectivity Plan<sup>3</sup> (LTCP), which seeks to increase the attractiveness of public transport and reduce reliance on private car travel. By providing a substantial journey time advantage for bus services, while

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<sup>3</sup> Oxfordshire Local Transport and Connectivity Plan, adopted July 2022 : [Local Transport and Connectivity Plan](#)

# TECHNICAL NOTE

having minimal impact on general traffic, the bus lane supports the LTCP's user hierarchy and contributes towards the wider ambition of encouraging a shift to more sustainable modes of travel.

- 3.1.34 The results also align with the principles of the 'Decide and Provide'<sup>4</sup> approach, which prioritises investment in sustainable transport infrastructure to achieve desired transport outcomes, rather than responding solely to forecast traffic demand. The demonstrated public transport benefits, coupled with negligible impacts on highway users, provide evidence that the bus lane is helping to deliver the vision-led outcomes promoted through the LTCP and Decide and Provide guidance.

*Note: Journey times throughout this report in relation to A40 segment journey times are rounded to one decimal place; therefore, totals may not equal the sum of the individual A40 segment journey times.*

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<sup>4</sup> [Annex 1\\_OCC\\_Implementing Decide and Provide\\_updated final draft\\_Dec 25.pdf](#)

# TECHNICAL NOTE

Table 3-12 – A40 Eastbound journey time 2043 ST1 to 2043 ST2 (minutes)

| Towards Oxford<br>(eastbound)           | ST2         |             |             |             |             |             | ST1         |             |             |             |             |             | Change from ST1 |            |            |            |            |            |
|-----------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------|------------|------------|------------|------------|------------|
|                                         | AM          |             | IP          |             | PM          |             | AM          |             | IP          |             | PM          |             | AM              |            | IP         |            | PM         |            |
|                                         | HY          | Bus         | HY          | Bus         | HY          | Bus         | HY          | Bus         | HY          | Bus         | HY          | Bus         | HY              | Bus        | HY         | Bus        | HY         | Bus        |
| Carterton - A40<br>(Downs Road)         | 12.5        | 20.7        | 10.9        | 18.7        | 11.2        | 19.0        | 12.6        | 20.7        | 10.9        | 18.7        | 11.2        | 19.0        | 0.0             | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| A40 (Downs Road) -<br>Witney Centre     | 8.6         | 12.1        | 7.4         | 10.0        | 7.4         | 10.1        | 8.6         | 12.1        | 7.4         | 10.0        | 7.5         | 10.1        | 0.0             | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| Witney Centre - A40<br>(Shores Green)   | 8.6         | 9.3         | 6.0         | 8.0         | 9.6         | 7.9         | 8.7         | 9.4         | 6.0         | 8.0         | 9.7         | 7.8         | -0.1            | -0.1       | 0.0        | 0.0        | 0.0        | 0.1        |
| A40 (Shores Green) -<br>Eynsham P&R*    | 7.3         | 11.8        | 5.3         | 9.0         | 5.7         | 9.5         | 7.1         | 7.5         | 5.3         | 6.1         | 5.7         | 6.3         | 0.2             | 4.2        | 0.1        | 2.9        | 0.1        | 3.2        |
| Eynsham P&R -<br>Cassington*            | 5.1         | 2.2         | 4.4         | 1.8         | 4.8         | 1.8         | 5.2         | 2.2         | 4.4         | 1.8         | 4.8         | 1.8         | -0.1            | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| Cassington -<br>Wolvercote*             | 8.8         | 5.8         | 7.6         | 5.9         | 7.8         | 6.7         | 8.8         | 5.8         | 7.6         | 5.9         | 7.8         | 6.7         | 0.0             | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| <b>Total Carterton -<br/>Wolvercote</b> | <b>50.9</b> | <b>61.8</b> | <b>41.6</b> | <b>53.4</b> | <b>46.6</b> | <b>55.0</b> | <b>50.9</b> | <b>57.7</b> | <b>41.6</b> | <b>50.4</b> | <b>46.6</b> | <b>51.7</b> | <b>0.0</b>      | <b>4.1</b> | <b>0.0</b> | <b>3.0</b> | <b>0.0</b> | <b>3.3</b> |

\*Highlight reflects near full bus lane (not through stop line)

# TECHNICAL NOTE

Table 3-13 – A40 Westbound journey time 2043 ST1 to 2043 ST2 (minutes)

| From Oxford<br>(westbound)          | ST2         |             |             |             |             |             | ST1         |             |             |             |             |             | Change from ST1 |            |            |            |            |            |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------|------------|------------|------------|------------|------------|
|                                     | AM          |             | IP          |             | PM          |             | AM          |             | IP          |             | PM          |             | AM              |            | IP         |            | PM         |            |
|                                     | HY          | Bus         | HY          | Bus         | HY          | Bus         | HY          | Bus         | HY          | Bus         | HY          | Bus         | HY              | Bus        | HY         | Bus        | HY         | Bus        |
| Wolvercote - Cassington*            | 6.9         | 7.5         | 6.4         | 8.5         | 7.1         | 8.7         | 6.9         | 7.5         | 6.4         | 8.5         | 7.1         | 8.7         | 0.0             | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| Cassington - Eynsham P&R*           | 4.9         | 4.3         | 4.4         | 4.6         | 5.2         | 5.4         | 5.0         | 4.3         | 4.4         | 4.6         | 5.2         | 5.4         | 0.0             | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| Eynsham P&R - A40 (Shores Green)*   | 5.5         | 9.7         | 4.9         | 9.3         | 5.8         | 10.2        | 5.4         | 6.1         | 4.8         | 6.5         | 5.7         | 6.1         | 0.1             | 3.5        | 0.1        | 2.8        | 0.1        | 4.1        |
| A40 (Shores Green) - Witney Centre  | 10.9        | 8.9         | 7.3         | 8.8         | 8.6         | 9.8         | 10.9        | 8.9         | 7.3         | 8.8         | 8.7         | 9.9         | 0.0             | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| Witney Centre - A40 (Downs Road)    | 7.4         | 10.4        | 7.4         | 10.1        | 8.8         | 12.1        | 7.4         | 10.4        | 7.4         | 10.1        | 8.8         | 12.1        | 0.0             | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| A40 (Downs Road) – Carterton        | 11.5        | 15.0        | 11.4        | 15.1        | 12.1        | 16.4        | 11.5        | 15.0        | 11.4        | 15.1        | 12.1        | 16.5        | 0.0             | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| <b>Total Wolvercote - Carterton</b> | <b>47.2</b> | <b>55.6</b> | <b>41.6</b> | <b>56.3</b> | <b>47.6</b> | <b>62.7</b> | <b>47.1</b> | <b>52.1</b> | <b>41.6</b> | <b>53.5</b> | <b>47.5</b> | <b>58.6</b> | <b>0.0</b>      | <b>3.5</b> | <b>0.1</b> | <b>2.8</b> | <b>0.0</b> | <b>4.1</b> |

\*Highlight reflects near full bus lane (not through stop line)

## 4. Key Findings and Conclusions

- 4.1.1 This sensitivity test has been undertaken to assess the impact of removing the proposed A40 bus lanes between Witney Shores Green and West Eynsham/Salt Cross, while retaining the assumptions tested in Sensitivity Test 1 (ST1). The test assesses whether there would be a material impact to the performance and use of the highway and public transport networks if the proposed bus lanes between Witney and Eynsham are not delivered as currently modelled.

### Highway

- 4.1.2 The results indicate that removing the A40 bus lanes has a negligible impact on overall travel demand and travel patterns. Changes in car, bus and rail trips are generally less than 1%, mode share changes are minimal, and destination patterns remain effectively unchanged. These differences are considered insufficient to materially alter the strategic travel patterns identified in the ST1 scenario.
- 4.1.3 At a network level, the impact on highway performance is also limited. Across West Oxfordshire and the wider model area, changes in travel time, delay, distance travelled and average speed are generally less than 1%, indicating that the removal of the A40 bus lanes does not materially affect overall operation of the highway network.
- 4.1.4 The most noticeable effects are concentrated on the A40 corridor between Witney and Eynsham, where the bus lanes are removed. The assessment indicates:
- Small increases in traffic flows on sections of the A40 between Witney and Eynsham, with buses now sharing lanes with general traffic.
  - Localised increases in delay on the A40, particularly in the eastbound direction during the AM peak.
  - Minor reductions in delay at some junctions along the A40 corridor and around the Shores Green slip roads.
  - Negligible changes in overall junction performance across the wider network.
- 4.1.5 Junction-level analysis indicates only small changes in performance across West Oxfordshire. The largest benefits are observed at selected A40 junctions, including the A40 / West Eynsham / Salt Cross junction and the Shores Green slip roads, where modest reductions in delay are forecast. However, the scale of change remains limited and does not represent a material improvement in overall highway conditions.

### Bus performance

- 4.1.6 In contrast to the highway findings, the removal of the A40 bus lanes has a material impact on bus performance along the corridor. While overall bus demand changes are relatively small, the loss of dedicated bus priority results in noticeably longer bus journey times between Witney and Eynsham P&R.
- 4.1.7 The largest impacts are forecast on the A40 (Shores Green) to Eynsham P&R section, where bus journey times increase by approximately 2 to 4 minutes across all time periods. The largest effects occur in the dominant peak flow direction, with journey times increasing by 4.2 minutes eastbound in the AM peak towards Oxford and 4.1 minutes westbound in the PM peak away from Oxford, reflecting the directional traffic demands on the corridor.

# TECHNICAL NOTE

- 4.1.8 By comparison, highway journey times on the same section change by only around 0.1 to 0.2 minutes, demonstrating that, as expected, the removal of bus priority affects bus services rather than general traffic.
- 4.1.9 Bus patronage changes are largely concentrated on services using the A40 corridor, with reductions in passenger demand observed on sections where the bus lanes are removed, particularly for trips between Carterton/Witney and Eynsham/Oxford. The reductions are generally localised and reflect the reduced attractiveness and competitiveness of bus travel compared with the ST1 scenario. However, the wider public transport network continues to operate in a similar manner to that shown in DS2 and ST1.

## Overall conclusions

- 4.1.10 Overall, the sensitivity test indicates that removing the proposed A40 bus lanes results in only minor changes to travel demand and overall highway performance. Changes to traffic flows, delay and junction operation are generally small and remain highly localised. The most significant impacts are concentrated on bus services using the affected section of the A40 corridor, where the loss of dedicated bus priority increases bus journey times and reduces the competitiveness of bus travel relative to the ST1 scenario.
- 4.1.11 The sensitivity test was undertaken to assess whether the non-delivery of the proposed bus lanes between Witney and Eynsham would materially affect network performance. The results indicate that, despite a reduction in bus service performance on the affected section of the A40 corridor, the overall operation of the transport network and the wider strategic conclusions of the modelling remain broadly unchanged. In particular:
- Strategic travel demand patterns and mode shares remain broadly unchanged.
  - Overall highway performance remains constrained primarily by junction capacity along the A40 corridor rather than the presence of the bus lanes themselves.
  - Removal of the A40 bus lanes delivers modest, localised benefits for general traffic on parts of the A40 corridor, including small reductions in car delay and journey times, but does not materially improve overall network performance.
  - The principal impact of removing the bus lanes is a reduction in the competitiveness of bus travel on the A40 corridor. Removing the time advantage currently provided to public transport makes bus journeys slower and less reliable relative to general traffic, reducing the attractiveness of bus services and resulting in modest reductions in bus patronage.
  - Bus journey times between Witney and Eynsham are predicted to increase significantly (2-4 minutes), reducing the effectiveness of the enhanced public transport offer tested in DS2.
  - The strategic transport conclusions of the West Oxfordshire Local Plan 2043 modelling are not materially affected by uncertainty regarding delivery of the A40 bus lanes; however, the bus lanes make an important contribution to maintaining attractive and reliable bus journey times on the A40 corridor.
  - Findings support the LTCP and Decide and Provide policy objectives by demonstrating that the A40 bus lane delivers meaningful journey time benefits for public transport users with negligible impacts on general traffic, representing an efficient allocation of road space to support sustainable travel choices.

## Appendix A. Junction Metrics

Junction performance has been assessed for key locations across West Oxfordshire, presented in Table A-1 and Table A-2.

**Table A-1 – Junction performance: Delay (seconds)**

| Area            | Junction                                                              | ST2 |    |     | Change from ST1 |    |    |
|-----------------|-----------------------------------------------------------------------|-----|----|-----|-----------------|----|----|
|                 |                                                                       | AM  | IP | PM  | AM              | IP | PM |
| A40             | A40 / Wolvercote Roundabout (West)                                    | 16  | 17 | 16  | 0               | 0  | 0  |
| A40             | A40 / Canalside Quarter Junction                                      | 62  | 46 | 47  | -1              | 0  | -1 |
| A40             | A40 / Eynsham Road                                                    | 14  | 9  | 22  | 0               | 0  | 0  |
| A40             | A40 / Cassington Road                                                 | 7   | 4  | 11  | 0               | 0  | 0  |
| A40             | A40 / Approach to Cassington Road                                     | 20  | 0  | 0   | -2              | 0  | 0  |
| A40             | A40 / Eynsham Roundabout                                              | 24  | 16 | 26  | 0               | 0  | -1 |
| A40             | A40 / Witney Road                                                     | 19  | 8  | 25  | 0               | 0  | 1  |
| A40             | A40 / Eynsham P&R                                                     | 10  | 10 | 20  | 0               | 0  | 0  |
| A40             | A40 / West Eynsham / Salt Cross (New junction)                        | 33  | 19 | 23  | -14             | 0  | 0  |
| A40             | A40 / Shores Green (EB on-slip)                                       | 1   | 1  | 1   | -3              | 0  | 0  |
| A40             | A40 / Shores Green (WB off-slip)                                      | 0   | 0  | 0   | 0               | 0  | 0  |
| A40             | A40 / Shores Green (WB on-slip)                                       | 1   | 1  | 6   | -3              | 0  | -6 |
| A40             | A40 / Shores Green (EB off-slip)                                      | 0   | 0  | 0   | 0               | 0  | 0  |
| A40             | Shores Green (EB off-slip) / B4022                                    | 18  | 16 | 19  | 0               | 0  | 0  |
| A40             | Shores Green (WB on-slip) / B4022                                     | 24  | 9  | 32  | 0               | 0  | -3 |
| A40             | A40 / Ducklington Lane (WB on-slip)                                   | 1   | 1  | 1   | 0               | 0  | 0  |
| A40             | A40 / Downs Road                                                      | 39  | 4  | 5   | 0               | 0  | 0  |
| A40             | A40 / Brize Norton Road                                               | 11  | 11 | 11  | 0               | 0  | 0  |
| A40             | New A40 Roundabout (Carterton Site F)                                 | 10  | 11 | 11  | 0               | 0  | 0  |
| A40             | A40 / Asthall Barrow Roundabout                                       | 15  | 15 | 15  | 0               | 0  | 0  |
| Eynsham*        | Stanton Harcourt Road / West Eynsham (New junction)                   | 3   | 3  | 4   | 0               | 0  | 0  |
| Witney          | Jubilee Way / Cogges Hill Road / Oxford Hill                          | 76  | 46 | 78  | -1              | 0  | -1 |
| Witney          | Jubilee Way / A4095                                                   | 36  | 25 | 29  | 2               | -1 | 0  |
| Witney          | Bridge Street / Newland / Woodgreen Hill                              | 9   | 11 | 13  | 0               | 0  | 0  |
| Witney          | West End / Bridge Street                                              | 60  | 9  | 66  | 0               | 0  | 0  |
| Witney          | Bridge Street / High Street / Mill Street                             | 54  | 7  | 7   | 0               | 0  | 0  |
| Witney          | Burford Road / Deer Park Road                                         | 35  | 29 | 46  | 0               | 0  | 0  |
| Witney          | Deer Park Road / Curbridge Road / Thorney Leys                        | 47  | 10 | 33  | -1              | 0  | 0  |
| Witney          | Ducklington Lane / Station Lane / Thorney Leys                        | 38  | 33 | 48  | 0               | 0  | 0  |
| Carterton       | Burford Road / Alvescot Road / Brize Norton Road / Black Bourton Road | 21  | 21 | 26  | 0               | 0  | 0  |
| Carterton       | Monahan Way / Upavon Way                                              | 24  | 27 | 29  | 0               | 0  | 0  |
| Brize Norton    | B4477 / Burford Road                                                  | 1   | 1  | 1   | 0               | 0  | 0  |
| Brize Norton    | B4477 / Minster Road / Brize Norton Road                              | 9   | 9  | 10  | 0               | 0  | 0  |
| Chipping Norton | Horsefair / London Road / Banbury Road / Over Norton Road             | 96  | 9  | 137 | 0               | 0  | 0  |
| Chipping Norton | Market Place / West Street / New Street                               | 14  | 5  | 33  | 0               | 0  | 0  |

# TECHNICAL NOTE

**Table A-2 – Junction performance: Volume/Capacity (%)**

| Area            | Junction                                                              | ST2 |    |    | Change from ST1 |    |    |
|-----------------|-----------------------------------------------------------------------|-----|----|----|-----------------|----|----|
|                 |                                                                       | AM  | IP | PM | AM              | IP | PM |
| A40             | A40 / Wolvercote Roundabout (West)                                    | 72  | 70 | 69 | 0               | 0  | 0  |
| A40             | A40 / Canalside Quarter Junction                                      | 72  | 65 | 70 | 0               | 0  | 0  |
| A40             | A40 / Eynsham Road                                                    | 63  | 52 | 66 | 0               | 0  | 0  |
| A40             | A40 / Cassington Road                                                 | 57  | 48 | 60 | 0               | 0  | 0  |
| A40             | A40 / Approach to Cassington Road                                     | 87  | 73 | 86 | 0               | 0  | 0  |
| A40             | A40 / Eynsham Roundabout                                              | 81  | 73 | 93 | -1              | 0  | 0  |
| A40             | A40 / Witney Road                                                     | 57  | 59 | 66 | -1              | 0  | -1 |
| A40             | A40 / Eynsham P&R                                                     | 54  | 49 | 53 | 0               | 0  | 0  |
| A40             | A40 / West Eynsham / Salt Cross (New junction)                        | 73  | 56 | 69 | -1              | -1 | -1 |
| A40             | A40 / Shores Green (EB on-slip)                                       | 66  | 56 | 58 | -2              | -1 | -1 |
| A40             | A40 / Shores Green (WB off-slip)                                      | 38  | 36 | 42 | 1               | 1  | 1  |
| A40             | A40 / Shores Green (WB on-slip)                                       | 83  | 64 | 88 | -2              | 0  | 0  |
| A40             | A40 / Shores Green (EB off-slip)                                      | 53  | 38 | 51 | 0               | 0  | 0  |
| A40             | Shores Green (EB off-slip) / B4022                                    | 42  | 35 | 50 | 0               | 1  | 0  |
| A40             | Shores Green (WB on-slip) / B4022                                     | 74  | 54 | 78 | 1               | 2  | 1  |
| A40             | A40 / Ducklington Lane (WB on-slip)                                   | 40  | 31 | 46 | 0               | 0  | 0  |
| A40             | A40 / Downs Road                                                      | 83  | 53 | 75 | 0               | 0  | 0  |
| A40             | A40 / Brize Norton Road                                               | 42  | 37 | 48 | 0               | 0  | 0  |
| A40             | New A40 Roundabout (Carterton Site F)                                 | 27  | 23 | 31 | 0               | 0  | 0  |
| A40             | A40 / Asthall Barrow Roundabout                                       | 46  | 34 | 48 | 0               | 0  | 0  |
| Eynsham*        | Stanton Harcourt Road / West Eynsham (New junction)                   | 62  | 36 | 60 | 1               | 0  | 1  |
| Witney          | Jubilee Way / Cogges Hill Road / Oxford Hill                          | 71  | 62 | 83 | 0               | 0  | 0  |
| Witney          | Jubilee Way / A4095                                                   | 85  | 51 | 58 | 0               | 0  | 0  |
| Witney          | Bridge Street / Newland / Woodgreen Hill                              | 79  | 75 | 83 | 0               | 0  | 0  |
| Witney          | West End / Bridge Street                                              | 97  | 81 | 92 | 0               | 0  | 0  |
| Witney          | Bridge Street / High Street / Mill Street                             | 77  | 66 | 73 | 0               | 0  | 0  |
| Witney          | Burford Road / Deer Park Road                                         | 95  | 63 | 67 | 0               | 0  | 0  |
| Witney          | Deer Park Road / Curbridge Road / Thorney Leys                        | 83  | 41 | 90 | 0               | 0  | 0  |
| Witney          | Ducklington Lane / Station Lane / Thorney Leys                        | 57  | 45 | 70 | 0               | 0  | 0  |
| Carterton       | Burford Road / Alvescot Road / Brize Norton Road / Black Bourton Road | 61  | 45 | 70 | 0               | 0  | 0  |
| Carterton       | Monahan Way / Upavon Way                                              | 32  | 19 | 30 | 0               | 0  | 0  |
| Brize Norton    | B4477 / Burford Road                                                  | 39  | 28 | 42 | 0               | 0  | 0  |
| Brize Norton    | B4477 / Minster Road / Brize Norton Road                              | 38  | 28 | 45 | 0               | 0  | 0  |
| Chipping Norton | Horsefair / London Road / Banbury Road / Over Norton Road             | 82  | 73 | 87 | 0               | 0  | 0  |
| Chipping Norton | Market Place / West Street / New Street                               | 75  | 69 | 89 | 0               | 0  | 0  |

## \*Stub Connector Delay Methodology and Rationale

Consistent with the Strategic Transport Modelling Report, delays reported on the sub-connector representing the wider industrial area at the Stanton Harcourt Road / Eynsham junction have been excluded from the junction performance assessment. Sensitivity testing confirmed that these delays are a modelling artefact arising from the network coding and do not reflect a genuine junction capacity constraint. Their exclusion ensures consistency with the approach adopted in the Strategic Transport Modelling Report.