



**Cabinet
Tuesday, 17 October 2023**

**ADDENDA – EAST OXFORD LOW TRAFFIC
NEIGHBOURHOODS TRAFFIC REGULATION
ORDER – ANNEXES**

**7. Oxford : East Oxford Low Traffic Neighbourhoods (LTNs) - Traffic
Regulation Order (TRO) (Pages 1 - 392)**

Cabinet Member: Transport Management

Forward Plan Ref: 2023/134

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Report by Corporate Director Environment & Place (**CA7**).

Annexes 3, 5 and 8 to the report are included in this addenda.

The other background papers for this report can be accessed via the attached link:-

<<https://www.oxfordshire.gov.uk/residents/roads-and-transport/connecting-oxfordshire/low-traffic-neighbourhoods/east-oxford-ltns>>

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Prepared for:



Experimental Traffic Regulation Order (ETRO) Report

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Contents

1. Executive summary.....	4
1.1 Background to the consultation	4
1.2 Vandalism.....	5
1.3 Views on the three LTN areas.....	5
1.4 Travelling through an LTN area	6
1.5 Modes of transport through an LTN area	6
2. Introduction	7
2.1 Background to the report	7
2.2 Significance testing	7
2.3 Rounding and percentages	7
2.4 About the consultation approach.....	7
2.5 The consultation exercise was promoted as follows:.....	8
3. Demographics.....	9
3.1 Geo-location.....	9
Table 1: Geo-location.....	9
4. Travel habits – travelling to and within an east Oxford LTN	15
4.1 Travelling for personal reasons (e.g., shopping, eating out):	15
4.2 Modes of transport for personal use	16
4.3 Travelling for professional reasons (e.g., business meetings, commuting)	17
4.4 Modes of transport for professional use.....	18
4.5 Comparison of personal and professional transport	19
4.6 Demographic differences	21
5. Travelling through an east Oxford LTN area	24
5.1 Destinations when travelling through an LTN area:	24
5.2 Modes of transport before the east Oxford LTNs were implemented	25
5.3 Comparison of transport modes before and after LTNs	27
6. Response sentiment, concerns, and recommendations.....	29
7. Divinity Road LTN area	31
7.1 Overview	31
7.2 Respondents from the Divinity Road LTN area.....	32
7.3 Respondents' views of the Divinity Road LTN area	33
7.4 Key concerns about the Divinity Road LTN:	34
7.5 Sentiment/feedback	35
8. St Clement's LTN area.....	36
8.1 Overview	36
8.2 Respondents from the St Clement's LTN area	36
8.3 Respondents' views of the. St Clement's LTN area	37
8.4 Key concerns about the St Clement's LTN:	39



8.5	Sentiment/feedback	39
9.	St Mary's LTN area	41
9.1	Overview	41
9.2	Respondents' views of the St Mary's LTN area.....	42
9.3	Key concerns about the St Mary's LTN:.....	44
9.4	Sentiment/feedback	44
10.	Verbatims	46
10.1	Concerns	46
10.2	Positives	47
10.3	Suggestions from respondents	47
11.	Email and letter responses	49
11.1	Key concerns from the email responses include:	49
12.	Appendix	51
12.1	Full tables of responses – Divinity Road	51
12.2	Full tables of responses – St Clement's	56
12.3	Full tables of responses – St Mary's.....	60
12.4	Questionnaire	80



1. Executive summary

Here we summarise the findings from the survey to gather feedback from residents and stakeholders on proposals for the east Oxford low traffic neighbourhoods (LTNs).

1.1 Background to the consultation

Oxfordshire County Council is trialling three low traffic neighbourhoods (LTNs) in the Divinity Road area, St Clement's area, and St Mary's area of east Oxford. Collectively these are known as the east Oxford LTNs. The east Oxford LTNs were provisionally installed under an experimental traffic regulation order (ETRO) beginning on 20 May 2022. Public consultation on these measures began on 20 May 2022 and ended on 30 November 2022.

An LTN is an area where the amount of motorised-traffic in a residential area is reduced. This creates quieter and safer streets with improved air quality, where residents may feel more comfortable when making local journeys by cycling, wheeling or on foot. By encouraging more active travel this may contribute towards healthier lifestyles.

Infrastructure such as planters and/or bollards and/or automatic number plate recognition (ANPR) cameras is used to restrict through-traffic – in particular cars, vans and lorries/trucks. All roads remain accessible, but drivers may have to find alternative routes instead of cutting through some streets.

The three east Oxford LTN areas are:

- **Divinity Road LTN** (with LTN filters on Divinity Road and Southfield Road).
- **St Clement's LTN** (with LTN filters on Rectory Road and Princes Street).
- **St Mary's LTN** (with LTN filters on Circus Street, Temple Street, Stockmore Street, Marston Street, James Street, Bullingdon Street, Leopold Street, Magdalen Street, Barnet Street, and Howard Street).

The recent consultation and survey focused on travel habits in and around the three LTN areas and people's views and reported experiences of each of the 14 filters that are a key part of the LTNs. The consultation results, together with the results from the ongoing monitoring and analysis of traffic and air pollution levels, and data about walking and cycling levels in the area, will help to inform a decision made at a county council meeting later in 2023 to determine whether the scheme should be made permanent or removed entirely. The decision will also be informed by council policy and objectives.

The majority of responses were sent by individuals (3796), with fewer responses from businesses, faith organisations, charity/organisations or education establishments (130), interest groups (9) or parish, town, district or county councillors (3). Where appropriate, individual response groups have been shown.



1.2 Vandalism

The operation of the east Oxford LTNs has been significantly impacted by vandalism; specifically, the removal of and damage to the plastic bollards, and damage to the locking mechanisms and sockets. This has meant that for significant periods of the trial the full set of filters has not been in place. The consultation results should be considered within this context. In March 2023 wooden bollards were installed and the vandalism has since decreased significantly.

1.3 Views on the three LTN areas

The survey received both positive and negative feedback. Positive comments were received from around 33% of respondents, and related to:

- Improved access for cyclists and pedestrians
- Improved safety for cyclists and pedestrians
- Reductions in noise and pollution from traffic
- A stronger community feeling and being more likely to use local shops
- Better pedestrian and cycling links; and
- more use of cycling, walking and public transport.

Roughly 60% of all the respondents raised issues and concerns, including:

- Ease of access to essential locations such as schools, work, and hospitals
- Critical access for emergency vehicles
- Impacts on caring and other access for families, the elderly, and people with disabilities
- LTNs increasing traffic and pollution in different areas of Oxford (traffic displacement)
- Safety impacts due to increased traffic
- Increase in travel times and associated fuel costs when making journeys by car; and
- negative impacts on people's wellbeing and mental health due to stressful journeys.

The answers to three questions asking for views on each LTN area show a similar balance of negative and positive feedback across the areas - with around 60% feeling negatively towards the LTN areas and 33% feeling positively towards them:

- The Divinity Road area LTN received 34% NET¹ positive views and 59% NET negative views.
- St Clement's LTN received 32% NET positive views and 61% NET negative views.
- St Mary's LTN received 33% NET positive views and 59% NET negative views.

There are several recurring issues and sentiments raised by respondents in the comments section of the survey. Many of the comments give feedback on the LTNs in general rather than specific areas. To ensure that the comments are presented clearly and without repetition, they are summarised together later in the report. [#Verbatims](#)

¹ A NET is the combination of one or more figures, i.e., 'NET positive' refers to the sum of 'entirely positive' and 'mostly positive' figures, 'NET negative' refers to the sum of 'mostly negative' and 'entirely negative' – due to rounding, percentages may differ by +/- 1%.



1.4 Travelling through an LTN area

97% of respondents said that they travel through an LTN area for personal reasons. The personal reasons given for travelling through an LTN area include:

- Visiting cafés, takeaways, restaurants, pubs; to go shopping;
- Visiting someone living within an east Oxford LTN area;
- Visiting leisure and community venues;
- Taking a child to daycare, nursery, school or college;
- and providing home care / meals on wheels / nursing, social or health care within an east Oxford LTN area.

56% of respondents said they travel through an LTN area for professional reasons and 51% said they work in an LTN area.

1.5 Modes of transport through an LTN area

The survey showed that walking, driving and cycling are the most popular common transport modes within the LTN areas:

In a personal capacity:

In a personal capacity, walking was reported as the mode most often used to get from A to B within the east Oxford LTN areas: 56% of respondents said they regularly walked to make short trips in the area. Travelling by car as the driver was the next most popular response with 47% driving in the area regularly. Cycling regularly for local trips was reported by 43% of respondents.

19% said they travelled regularly as a car passenger, 17% said they travelled by bus regularly. Taxis were reported as the least regularly used mode of transport at 6%.

In a professional capacity:

In a professional capacity, travelling by car as the driver was reported as the transport mode used most regularly (56%), followed by walking (41%) and cycling (36%).

18% said they travelled regularly as a car passenger, 14% said they travelled by bus regularly. Taxis were the least regularly used mode of transport at 5%.

For comparison, survey respondents were asked how they usually made the same journeys within these east Oxford areas before the east Oxford LTNs were implemented. A slight modal change appears from these responses, showing that car use has reduced by 6% and walking has increased by 7%. Cycling increased by 5% and bus and taxi use increased by 1%.

Respondents living within an LTN area appear less likely to drive a car and therefore more likely to use public transport and cycle, possibly due to being closer to the city centre. The findings are therefore broken down to illustrate differences in travel habits and opinions based on where a respondent is located, and the capacity in which they are responding (individual, business, organisation).



2. Introduction

In this section we provide details of the background and methodology used in the consultation survey.

2.1 Background to the report

Oxfordshire County Council installed the trial east Oxford LTNs in the Divinity Road, St Clement's, and St Mary's areas in May 2022.

The LTNs were implemented through an experimental traffic regulation order (ETRO) which runs for a maximum of 18 months. The ETRO began in May 2022 when the temporary infrastructure to restrict motorised vehicle access at some through-points was installed. From May 2022, a six-month public consultation ran to obtain people's feedback. This report details those findings.

Prior to the implementation of the trial, a public consultation on the proposals was run between March and June 2021, using a series of workshops, engagement activities and a survey in June 2021. Further engagement was undertaken to address specific issues that had been identified. This resulted in some changes to the proposals which were approved in December 2021 to be implemented under the ETRO.

In addition to the consultation taking place throughout 2021 and 2022, the council has also engaged with local partners, such as the emergency services. The feedback from this engagement, as well as the results of ongoing technical work, informed some changes to the LTNs during the trial period.

A decision on the next steps for the scheme will be made by Oxfordshire County Council's Cabinet later in 2023. Officers will make recommendations based on factors including, but not limited to, the feedback received, data collected on traffic levels, annual air pollution data (expected in spring/summer 2023), levels of walking and cycling in these areas and alignment with policy and council priorities.

2.2 Significance testing

Results between groups are highlighted by significance testing which is a statistical technique used in market research to determine whether the differences observed between subgroups are statistically significant or if they are due to random chance. Any significant differences between subgroups are highlighted in blue within the tables. Significance testing has been applied at the 95% confidence level.

2.3 Rounding and percentages

Totals shown within tables may sometimes add up to 99% or 101%, rather than 100%. This is due to rounding up or down from decimal points.

2.4 About the consultation approach

The online survey was posted on the county council's consultation website Let's Talk Oxfordshire from 20 May until 30 November 2022. The council also received feedback on the east Oxford LTNs from a range of sources including emails, phone calls, feedback to councillors, and media monitoring. This report from DJS is a part of the overall reporting



and is specific to the results of the online survey and a small number of emails received during the consultation.

A range of supporting information to the survey was provided, including:

- A description of what an LTN is, why and how they are being trialled, and what consultation and engagement had already happened.
- An explanation of how the east Oxford LTNs might link with wider transport proposals for Oxford city.
- Maps showing the east Oxford LTN areas and the locations of the 14 filters (each comprising a bollard and two planters) and detailed plans of each of the fourteen filter locations.
- Statement of Reasons – which explains the rationale for the proposal to trial the LTNs under a traffic regulation order.
- Three press notices relating to the experimental traffic regulation order.
- Responses to a list of frequently asked questions.

Paper copies of the survey were made available at four libraries located in central and east Oxford and the county council offered a range of alternative formats on request. Paper copies were requested by and supplied to one group and several individuals. A number of paper copy surveys were completed and returned. These copies were given unique reference numbers delineating them as paper responses and entered for analysis alongside the online survey responses.

2.5 The consultation exercise was promoted as follows:

- Letters were sent to c.12,000 residents and businesses within and slightly outside the east Oxford LTNs area. The letters contained a QR code and web link to the survey, and a telephone number and email address for those wishing to request the survey as a hard copy or in another alternative format.
- A notice of the consultation in the county council's regular travel bulletin, which is sent to around 4,000 subscribers, and also in 'Your Oxfordshire' newsletter, which is sent to approximately 36,000 residents in the county.
- Two press releases, the first published on 18 May 2022, and the second, published on 25 May 2022, which included a link to the consultation. There was also additional, wider, third-party coverage through local media channels.
- Posts on social media.
- An email was sent to various stakeholder contacts in May 2022 to notify them of the consultation.

The east Oxford LTNs have generated a high level of interest, which was reflected in a good response rate to the survey. A total of 3,843 online responses and 95 paper copies of the full survey were submitted. A full profile (by respondent type and demographics) of respondents is provided overleaf.

In addition, the council received 269 pieces of feedback in the form of letters and emails. We have provided a summary of this feedback in the final section of the report.

3. Demographics

In total, 3,938 responses to the survey were received. A profile of the respondents is provided in this section.

The survey was open to anyone who wished to respond. Together with the monitoring, analysis and correspondence relating to the consultation, the results of the survey are one element that contributes to the overarching east Oxford LTNs report submitted to Cabinet.

The majority of the survey respondents live within east Oxford and the wider area (east Oxford, Cowley, Littlemore, Rose Hill, Headington, Marston, Blackbird Leys collectively known as the eastern arc of the city). However, the survey was open to everyone and (a smaller number of) responses were received from others living outside the area – in the wider city or county, or outside the county. Such responses typically included people travelling into an east Oxford LTN area for work or family care.

3.1 Geo-location

Table 1: Geo-location

(All responding n=).

Respondent type	No. responses	% Responses
OX1-OX4 postcodes	3274	85%
Other OX postcodes	390	10%
Non-OX postcodes	10	<1%
Unknown	169	4%
Total	3843	100%

Most of the responses were from people replying as an individual (96%). A small percentage of respondents identified themselves as a business, faith / charity organisation or education establishment (3%), and even fewer responded as part of an interest group or as a parish / town councillor (both <1%).

Table 2: Q1. Please select one of the following that best describes the capacity you are completing the survey in:

Respondent type	No. responses	% responses
As an individual	3,796	96%
As a business, faith organisation, charity/ organisation or education establishment	130	3%
As part of an interest group, campaign group or campaign organisation	9	<1%
As a parish, town, district, or county councillor	3	<1%
Total	3,938	100%



The majority of the survey respondents were of working age – with 80% of responses coming from 25-65 year olds (17% from 25-34 year olds; 23% from 35-44 year olds; 20% from 45-54 year olds; and 17% from 55-64 year olds). Less than 1% of the responses were from under 16s (13-16 year olds) or over 85 year olds.

Table 3: Q29. What is your age?

Respondent type	No. responses	% responses
Under 16 (the survey is open to 13 years and over)	7	<1%
16-24	213	5%
25-34	644	17%
35-44	912	23%
45-54	791	20%
55-64	646	17%
65-74	416	11%
75-84	111	3%
85 or over	10	<1%
Prefer not to say	139	4%
Total	3,889²	100%

49% of people responding to the survey were female, and 43% male, with 8% preferring not to say.

Table 4: Q30. What is your sex?

Respondent type	No. responses	% responses
Female	1,892	49%
Male	1,643	43%
Prefer not to say	308	8%
Total	3,858³	100%

Nearly 75% of respondents were White (72%), with a small proportion Asian or Asian British (8%), Mixed or multiple ethnic groups (3%) and Black or Black British (1%), Chinese (1%) and Other ethnic groups or backgrounds (1%).

² Not all respondents answered all questions – base sizes vary by question.

³ Less than 1% (15 respondents) preferred to describe their sex with another term.

**Table 5: Q31. What is your ethnic group or background?**

Respondent type	No. responses	% responses
Asian or Asian British (Indian, Pakistani, Bangladeshi or any other Asian background)	291	8%
Black or Black British (Caribbean, African, or any other Black background)	41	1%
Chinese	26	1%
Mixed or multiple ethnic groups (White and Black Caribbean, White and Black African, White and Asian, and any other mixed background)	106	3%
White (British, Irish, or any other white background)	2,787	72%
Other ethnic group or background	44	1%
Prefer not to say	567	15%
Total	3,862	100%⁴

46% of respondents were of no religion. The most reported religion was Christian (24%). This was followed by Muslim (6%), Buddhist and Jewish both 1%, and Hindu and Sikh less than 1%. 21% of respondents chose not to say.

A local mosque raised the concern that some older members of its congregation found it difficult to access the online survey. So, 200 paper copies were provided to the mosque, of which 62 were returned. These were added to the overall survey analysis.

Table 6: Q32. What is your current religion, if any?

Respondent type	No. responses	% responses
Buddhist	34	1%
Christian (including Church of England, Catholic, Protestant and all other Christian denominations)	911	24%
Hindu	16	<1%
Jewish	31	1%
Muslim	244	6%
Sikh	4	<1%
No religion	1,760	46%
Prefer not to say	796	21%
Any other religion	44	1%
Total	3,840	100%

⁴ Totals may sometimes add up to 99% or 101% due to rounding of the data.



75% of respondents stated that they are not limited by a long-term illness, health problem or disability whereas 6% said that they are limited a lot, and 11% said that they are limited a little.

Table 7: Q33. Are your day-to-day activities limited because of a long-term illness, health problem or disability which has lasted, or is expected to last, at least 12 months?

Respondent type	No. responses	% responses
Yes – limited a lot	230	6%
Yes – limited a little	412	11%
No	2,886	75%
Prefer not to say	324	8%
Total	3,852	100%

Just 3% of respondents said they were a Blue Badge holder, as shown below.

Table 8: Q34. Are you a Blue Badge holder?

Respondent type	No. responses	% responses
Yes	128	3%
No	3,679	97%
Total	3,807	100%

82% of respondents said they were not a carer, 12% said they were and 6% preferred not to say.

Table 9: Q35. Are you a carer?

Respondent type	No. responses	% responses
Yes	477	12%
No	3,156	82%
Prefer not to say	226	6%
Total	3,859	100%

Just over 25% of respondents stated they do not live in any of the three east Oxford LTN areas but live elsewhere in Oxford. Similarly, 37% stated they lived outside of the east Oxford area entirely. The most reported LTN area was St Clement's (18%), followed by Divinity Road (13%) and St Mary's (6%).

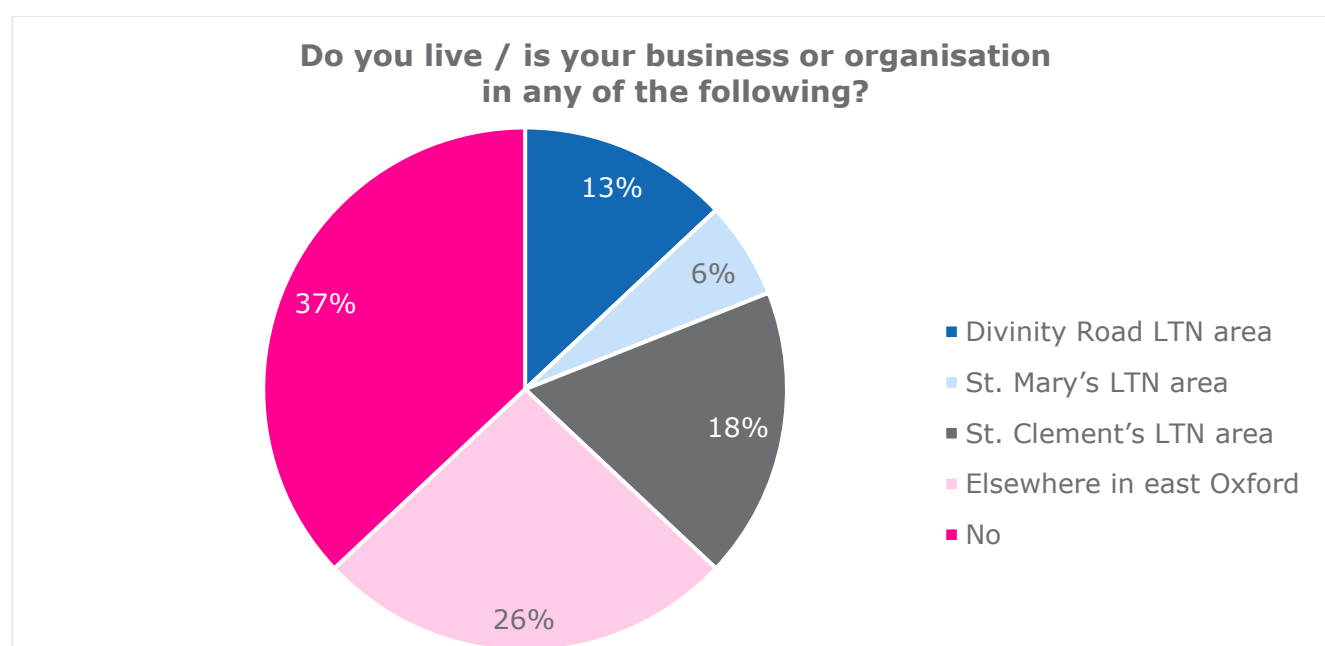
Note: Analysis of the postcode data provided showed that some respondents identified as living within an LTN area when they may have lived on the boundary or outside the area. However, the varying levels of postcode data provided (some full, some partial) means that this cannot be seen as a significant finding and as such we have taken the respondents' answer to whether they live in an LTN at face value. However, it could indicate that for some respondents their perception of the boundaries of an LTN area differ from the council areas that are defined.

Table 10: Q2/Q5. Do you live in any of the following / Is your business, faith organisation, charity/organisation or education establishment in any of the following?

Base: All responding (n)

Respondent type	No. responses	% responses
Divinity Road LTN area	520	13%
St Mary's LTN area	249	6%
St Clement's LTN area	708	18%
Elsewhere in east Oxford	1,023	26%
No	1,443	37%
Total	3,935	100%

Figure 1: Q2/Q5. Do you live in any of the following / Is your business, faith organisation, charity/organisation or education establishment in any of the following? Base: All responding (n)



Nearly a quarter of respondents found out about the consultation through a friend or relative (23%). Facebook (16%), the Oxfordshire County Council website (16%), local community news (16%) and local news items or radio adverts (15%) were also common



sources of information for respondents. It should be noted that respondents were able to select more than one source.

Respondents did not have the option to say they had received a letter; however, the web URL for the Let's Talk consultation page was most widely promoted by letter and analysis showed that there were 11,075 visits to the page using the direct link during the consultation period. Of those, 2,512 contributed to the survey.

Table 11: Q26. How did you find out about this consultation?

Respondent type	No. responses	% responses
Friend / relative	911	23%
Facebook	636	16%
Oxfordshire.gov.uk website	625	16%
Local community news item	624	16%
Local news item (newspaper, online, radio, tv) or radio advert	590	15%
NextDoor	440	11%
Email from Oxfordshire County Council	437	11%
Poster / information in local library local community group / organisation	389	10%
Twitter	200	5%
Oxfordshire County Councillor District Councillor	114	3%
Parish or town councillor	65	2%
Instagram	26	1%
LinkedIn	20	1%
Other	739	19%
Total	3,893	⁵

⁵ Responses add to more than 100% as respondents could select multiple sources.

4. Travel habits – travelling to and within an east Oxford LTN

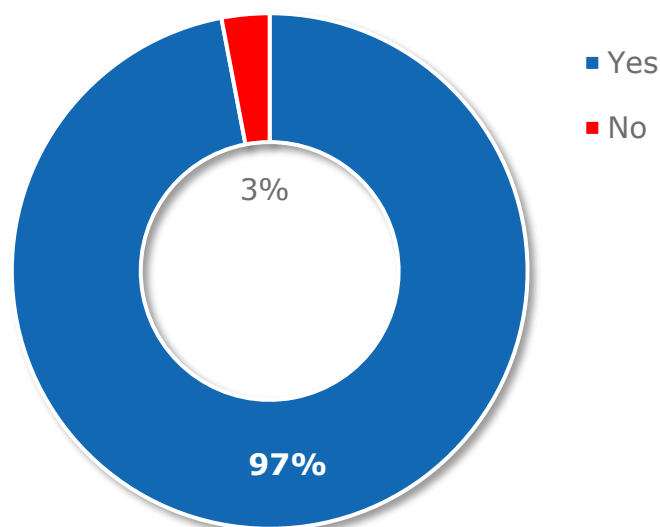
This section details respondents' general travel modes for making short journeys to and within an east Oxford LTN area.

Note: Please note that the following tables show the most reported methods of travel only. There were no, or almost no responses for: van, minibuss, motorbike, mobility scooter, and e-scooter.

4.1 Travelling for personal reasons (e.g., shopping, eating out):

Nearly all respondents travelled to and within one or more of the three east Oxford LTN areas for personal reasons (97%).

Figure 2: Q8. Do you ever travel to and within any of the three east Oxford LTN areas for personal reasons? (All responding n=3,938).



- Respondents living within the St Clement's LTN area reported travelling through an LTN more frequently (99%) than those from elsewhere in east Oxford (94%).
- 98% of respondents aged 25-34 and 96% aged 45-64 said they travelled through an LTN in their personal life.



- Respondents reporting as an individual said they travel through an LTN (98%) more than those reporting as a business (77%)⁶.

4.2 Modes of transport for personal use

When asked about the modes of travel they use for personal activities, 56% of the respondents answering the question said they walk regularly, with 47% driving a car regularly and 43% cycling regularly. Less than 20% said they regularly travel as a passenger in a private car (19%), by bus (17%) or by taxi (6%).

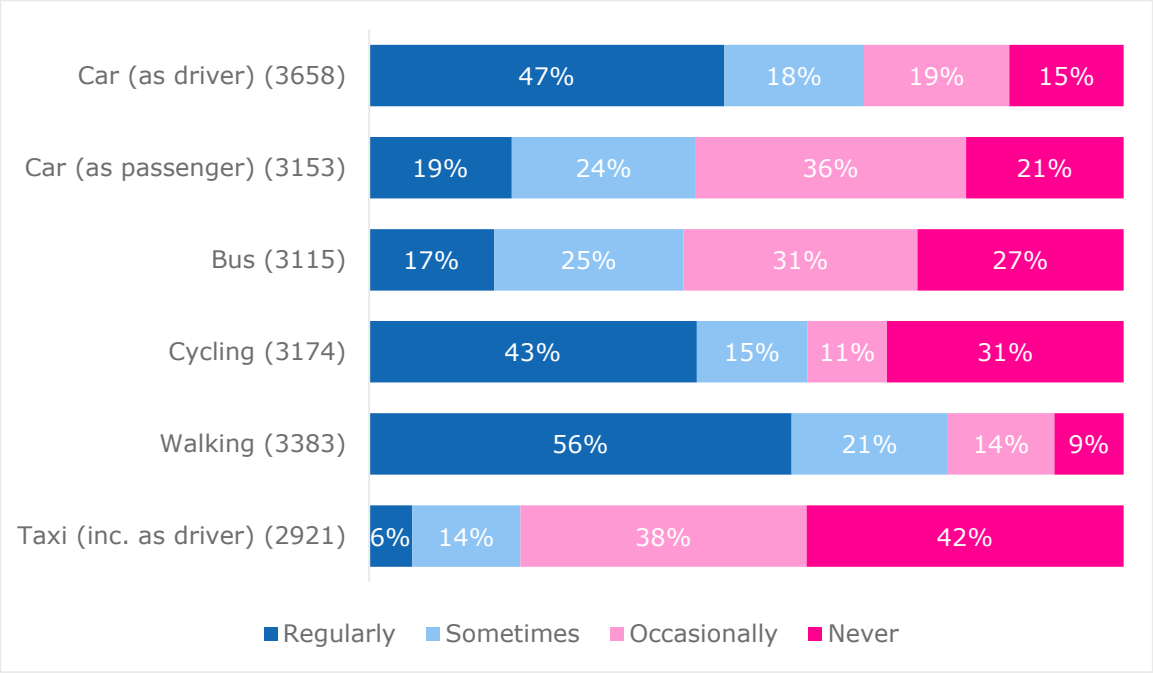
- Of the individual responses, regular car use as a driver was reported significantly more by those from elsewhere in east Oxford (56%) than those in St Clement's (32%), Divinity Road (40%) and St Mary's (47%).
- From responses received from individuals, 27% said they travelled regularly as car passengers within the St Mary's LTN, 20% in the Divinity Road area LTN, and 13% in the St Clement's LTN.
- Regular bus use is significantly lower in replies from individuals outside of the three east Oxford LTNs - at 10% - than it is within them. The figures for people regularly using buses from within the Divinity Road and St Mary's LTN areas is 23% each. Within the St Clement's LTN it is 14%.
- Of the combined responses (individuals and businesses), cycling was reported more often as a mode of transport in St Clement's LTN (62%) than in the other two east Oxford LTNs (Divinity Road (52%) and St Mary's (42%)); or elsewhere in east Oxford (26%).
- From the combined responses, the percentage of people saying they walked regularly in the three east Oxford LTNs ranged from 80% to 85%, compared to 22% of respondents from parts of east Oxford that are not within the LTN areas.

Table 12: Q10. For each of the following ways of travel, please say how often you currently use them for journeys in a personal capacity within an east Oxford LTN area. Base: All responding (n)

	Regularly	Sometimes	Occasionally	Never
Car: as driver (3,658)	47%	18%	19%	15%
Car: as passenger (3,153)	19%	24%	36%	21%
Bus (3,115)	17%	25%	31%	27%
Cycling (3,174)	43%	15%	11%	31%
Walking (3,383)	56%	21%	14%	9%
Taxi: including as driver (2,921)	6%	14%	38%	42%

⁶ Those responding as a business were asked about travelling to and within LTN areas for personal reasons along with those responding as an individual.

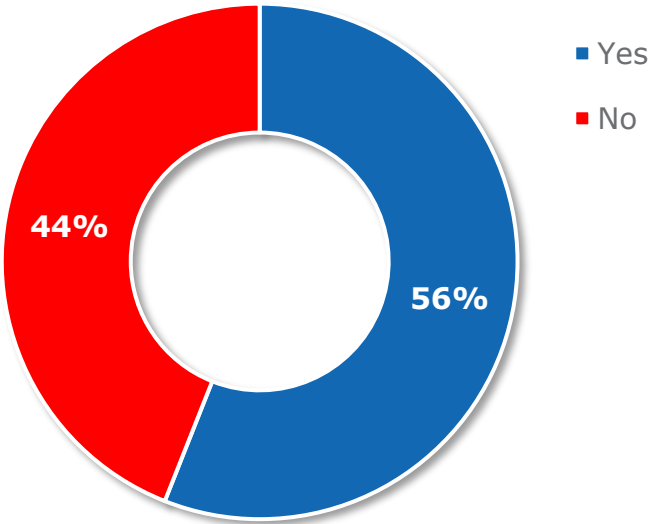
Figure 3: Q10. For each of the following ways of travel, please say how often you currently use them for journeys in a personal capacity within an east Oxford LTN area. Base: All responding (n)



4.3 Travelling for professional reasons (e.g., business meetings, commuting)

More than half (56%) of respondents said they travelled to and within one of the three east Oxford LTN areas for professional reasons.

Figure 4: Q11. And do you ever travel to and within any of the three east Oxford LTN areas for professional reasons (i.e. for your job, business, group or organisation)? (All responding n=3,938).





- Overall, 61% of respondents from St Mary's travel within an LTN for business reasons, 55% from St Clement's and 53% from Divinity Road area.
- Significantly more people aged 16-24 (59%) travel within an LTN than those aged 65-74 and 75+ (36% and 27% respectively).

4.4 Modes of transport for professional use

The top two modes of travel for professional use are reversed compared to how respondents travelled in a personal capacity. 56% of the survey respondents said they drove a car regularly, and 41% said they walked regularly. 36% said they cycled regularly in their professional life.

Table 13: Q13. We now want to know about your travel habits in your professional life, i.e. relating to your job, business, group or organisation.

For each of the following ways of travel, please say how often you use them for these types of journeys within the proposed east Oxford LTN areas.

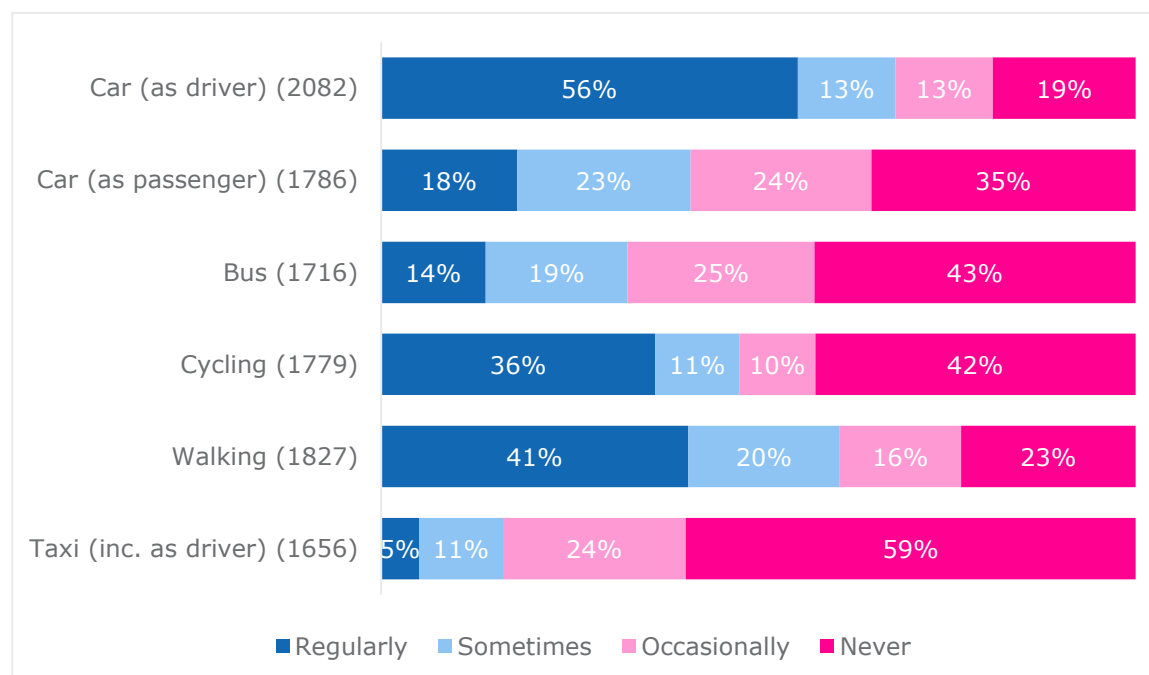
Base: All responding (n)

	Regularly	Sometimes	Occasionally	Never
Car: as driver (2,082)	56%	13%	13%	19%
Car: as passenger (1,786)	18%	23%	24%	35%
Bus (1,716)	14%	19%	25%	43%
Cycling (1,779)	36%	11%	10%	42%
Walking (1,827)	41%	20%	16%	23%
Taxi: including as driver (1,656)	5%	11%	24%	59%

Figure 5: Q13. We now want to know about your travel habits in your professional life, i.e. relating to your job, business, group or organisation.

For each of the following ways of travel, please say how often you use them for these types of journeys within the proposed east Oxford LTN areas.

Base: All responding (n)



4.5 Comparison of personal and professional transport

People responding as individuals and as representatives of a business were given the option to say how often they used a certain mode of transport in both their personal and professional lives. The following table shows the most reported modes of travel that respondents use regularly and compares them across personal and professional travel, and by people responding as an individual and as a business.

Travelling by car:

- Significantly more people reporting as a business travel regularly by car as a passenger (32%) than those reporting as an individual (17%).

Buses:

- More people responding as a business reported never using a bus to get to work (58%) compared to individuals (42% of whom report never using the bus).

Cycling:

- Many more respondents from St Clement's area cycle to work (56%); compared to Divinity Road area (43%). 35% from St Mary's area cycle to work regularly, and 48% from elsewhere in east Oxford said that they cycle regularly.

Walking:

- 41% of people reporting as an individual said that they regularly walk to work compared to 24% of respondents reporting as a business.



The following table looks to compare personal travel and professional travel across those responding as an individual and a business. It is broken down by modes of travel.

Table 14: Q10. AND Q13. For each of the following ways of travel, please say how often you typically use them for journeys in Oxford – % saying regularly.

Base: All responding (n)

Note: Significantly higher values are highlighted in blue.

	Personal travel	Personal travel	Professional travel	Professional travel
Method of travel	Individuals (3,796)	Businesses (130)	Individuals (3,796)	Businesses (130)
Car (as driver)	46%	76%	54%	81%
Car (as passenger)	18%	42%	17%	32%
Van	4%	40%	7%	42%
Bus	17%	9%	14%	9%
Minibus	1%	2%	1%	4%
Cycling	44%	20%	37%	15%
Walking	57%	31%	41%	24%
Taxi (incl. driver)	5%	19%	5%	13%

There were some differences by area:

- All of those respondents who replied as a business/organisation from Divinity Road area regularly travel by car as a driver. This is notably more than the overall totals (from those responding as business/group etc and individuals) of those reporting from St Mary's (74%) and elsewhere in east Oxford (78%). St Clement's had 86% regular drivers.
- People responding as an individual from St Clement's LTN area use a car the least both as the driver and passenger (32% and 13% respectively). Similarly, those from St Clement's also use a van and bus the least (2% and 14%). People also cycle and walk more from St Clement's (63% and 85% respectively).

More respondents from St Clement's walk regularly (59%) compared to elsewhere in east Oxford (17%).



4.6 Demographic differences

The tables that follow highlight the *main* differences by demographics.

Age

Table 15: Q10. For each of the following ways of travel, please say how often you typically use them for journeys in a personal capacity within an east Oxford LTN area '% saying regularly'.

Base: All responding (n)

Method of travel	Under 24 (203)	25-34 (614)	35-44 (852)	45-54 (740)	55-64 (594)	65-74 (377)	75+ (105)
Car (as driver)	49%	45%	46%	50%	44%	43%	55%
Car (as passenger)	41%	21%	18%	16%	13%	14%	18%
Bus	24%	16%	14%	12%	14%	27%	42%
Cycling	38%	43%	44%	44%	46%	49%	34%
Walking	69%	57%	55%	49%	56%	63%	59%

Gender

Table 16: Q10. For each of the following ways of travel, please say how often you typically use them for journeys in a personal capacity within an east Oxford LTN area '% saying regularly'.

Base: All responding (n)

Method of travel	Female (1,892)	Male (1,643)	Prefer not to say (308)	Other (15)
Car (as driver)	47%	45%	55%	40%
Car (as passenger)	21%	15%	27%	23%
Bus	20%	14%	11%	14%
Cycling	40%	49%	36%	43%
Walking	59%	55%	45%	73%



Ethnicity

Table 17: : Q10. For each of the following ways of travel, please say how often you typically use them for journeys in a personal capacity within an east Oxford LTN area '% saying once a week or more'.

Base: All responding (n)

Method of travel	Asian (291)	Black (41)	Chinese (26)	Mixed (106)	White (2,787)	Prefer not to say (567)	Other (44)
Car (as driver)	77%	73%	70%	50%	40%	61%	55%
Car (as passenger)	48%	31%	17%	20%	15%	24%	8%
Bus	20%	22%	18%	8%	17%	14%	17%
Cycling	20%	16%	19%	52%	47%	34%	41%
Walking	33%	21%	44%	55%	61%	43%	59%

*Highlighted differences are significant to at least one other ethnic group

Day-to-day activities limited by long term illness, health problem or disability.

Table 18: Q10. For each of the following ways of travel, please say how often you typically use them for journeys in a personal capacity within an east Oxford LTN area '% regularly'. Base: All responding (n)

Method of travel	Day-to-day activities limited a lot (230)	Day-to-day activities limited a little (412)	Day-to-day activities not limited (2,886)
Car (as driver)	70%	50%	43%
Car (as passenger)	42%	19%	16%
Bus	19%	24%	16%
Cycling	9%	30%	49%
Walking	31%	47%	60%

Blue Badge holders

Table 19: Q10. For each of the following ways of travel, please say how often you typically use them for journeys in a personal capacity within an east Oxford LTN area '% regularly'.

Base: All responding (n)

Method of travel	Blue Badge holder (128)	Non-Blue Badge holder (3,679)
Car (as driver)	73%	46%
Car (as passenger)	47%	18%
Bus	17%	16%
Cycling	14%	44%
Walking	25%	57%



Carers

Table 20: Q10. For each of the following ways of travel, please say how often you typically use them for journeys in a personal capacity within an east Oxford LTN area '% regularly'.

Base: All responding (n)

Method of travel	Carer (477)	Non-carers (3,156)
Car (as driver)	70%	42%
Car (as passenger)	26%	17%
Bus	19%	17%
Cycling	27%	47%
Walking	44%	59%

Location

Table 21: Q10. For each of the following ways of travel, please say how often you typically use them for journeys in a personal capacity within an east Oxford LTN area '% regularly'.

Base: All responding (n)

Method of travel	Divinity Road area LTN (520)	St Clement's LTN (708)	St Mary's LTN (249)	Elsewhere in east Oxford (1,023)
Car (as driver)	41%	33%	49%	57%
Car (as passenger)	21%	14%	28%	18%
Bus	23%	14%	23%	10%
Cycling	52%	62%	42%	26%
Walking	81%	85%	80%	22%

5. Travelling through an east Oxford LTN area

This section details respondents' reasons for travelling through an east Oxford LTN area.

5.1 Destinations when travelling through an LTN area:

79% of all respondents said they travelled through an LTN to reach other destinations; 77% said they travelled through an LTN to visit cafes, restaurants and pubs; and 72% said they did their shopping within an LTN. 53% said they visited someone in an LTN and 52% visited other types of businesses in an LTN.

- More respondents from St Clement's LTN (88%) said they visit a café, restaurant, or pub in an LTN compared to respondents from Divinity Road area LTN (83%) and St Mary's LTN (74%).
- Significantly more respondents from St Clement's LTN (86%) shop within an LTN compared to people elsewhere in east Oxford (52%).

The question below asked respondents to select one or more regular activities for which they travel within or through one of the three east Oxford LTNs.

Table 22: Q9. Which of the following applies to you in your personal life? (All responding n=3,813).

Travel through an east Oxford LTN area to other destinations	79%
Visit cafés, restaurants, pubs in an east Oxford LTN area	77%
Shop within an east Oxford LTN area	72%
Visit someone living in an east Oxford LTN area	53%
Visit other type of businesses in an east Oxford LTN area	52%
Visit leisure / community venues in an east Oxford LTN area	46%
Work within an east Oxford LTN area	30%
Take child to childcare/school/college in an east Oxford LTN area	19%

Lower percentages: Provide care in an LTN (6%); Make deliveries in an LTN (5%); Attend school/college in an LTN (5%); Do not travel within an LTN area (1%); and Other (9%).

As shown in Table 22 below, 79% of respondents said they travelled through an east Oxford LTN area to get to other destinations in their personal life, and 51% said they worked within an east Oxford LTN. 46% travelled through an LTN to visit a café, restaurant, or pub; 44% shopped within an LTN and 40% visited other businesses.



Table 23: Q12. Which of the following applies to you in your professional life? (All responding n=2197).

Travel through an east Oxford LTN area to other destinations	79%
I work within an east Oxford LTN area	51%
Visit cafés, restaurants, pubs in an east Oxford LTN area	46%
Shop within an east Oxford LTN area	44%
Visit other type of businesses in an east Oxford LTN area	40%
Visit someone living in an east Oxford LTN area	36%
Visit leisure / community venues in an east Oxford LTN area	24%
Take child to childcare/school/college in an east Oxford LTN area	15%
Provide nursing, health / home care in an east Oxford LTN area	9%
Make deliveries within an east Oxford LTN	9%
Attend school / college in an east Oxford LTN area	6%
Do not travel within an east Oxford LTN area	1%
Other	6%

Further feedback on travel habits:

In additional comments, 1571 people shared further feedback on their travel habits.

Of these giving further feedback:

- 21% of the respondent base said they cycle regularly and 14% said they walk regularly through or within the east Oxford LTN areas.
- 5% said they use public transport regularly. 2% said they use a taxi regularly.
- 2% said the east Oxford LTNs had not affected them.
- 2% said they avoid the area because of the LTNs.
- 1% said they now made more trips by car.
- 1% said they used car club cars, 1% said they drove an electric or hybrid vehicle, and 1% said they did not own a car.

5.2 Modes of transport before the east Oxford LTNs were implemented

To help understand whether the east Oxford LTNs had influenced any changes in transport choices, the survey asked people to think about how they had made journeys through the LTN areas before May 2022 when the LTNs were implemented.

The most common transport modes before May 2022, according to the responses were private car (53%) and walking (49%).

47% of respondents said they never used taxis during this time.

From all people responding to the survey, 38% of those responding as individuals cycled regularly before the LTNs were in place, compared to 16% of those responding as a business.

There were some differences by area for modes of transport regularly used before the LTNs were in place:

Travelling by car:

- Divinity Road – 58%
- Elsewhere in Oxford – 57%
- St Mary's – 56%
- St Clement's – 42%

Buses:

- St Mary's – 22%
- Divinity Road – 21%
- St Clement's – 13%
- Elsewhere in Oxford – 10%

Walking:

- St Clement's – 78%
- Divinity Road – 72%
- St Mary's – 71%
- Elsewhere in Oxford – 16%

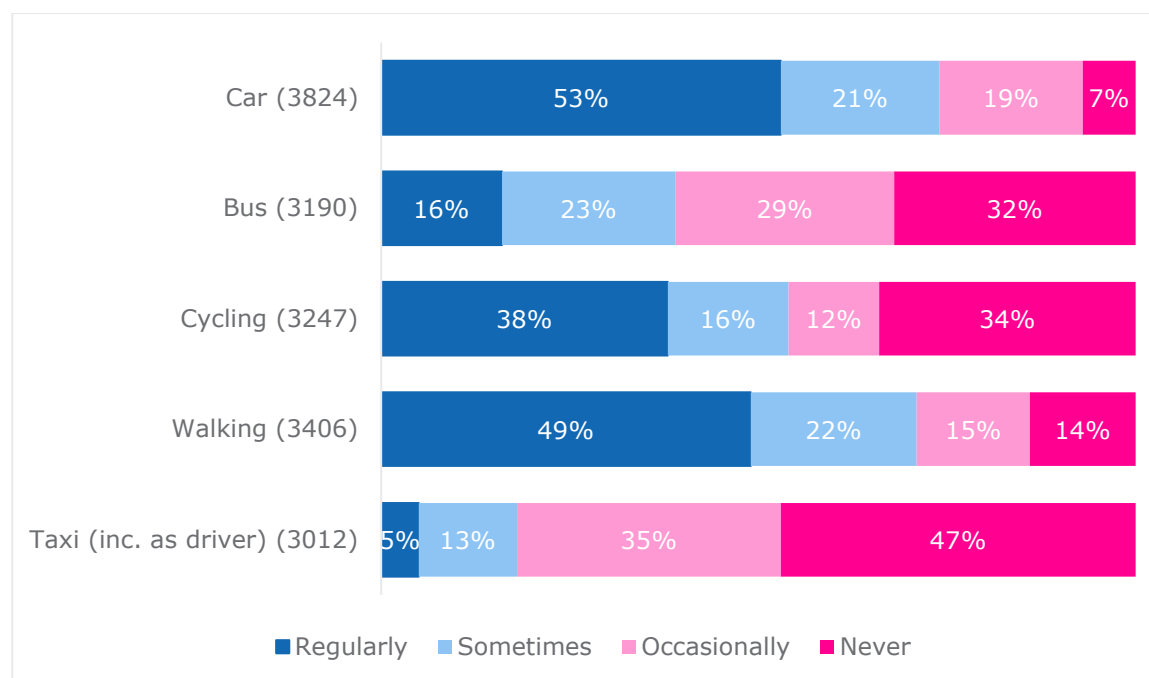
Table 24: Q14. Before the experimental east Oxford LTNs were in place, please say how often you travelled through the east Oxford LTN areas to get to another destination by each of the following modes.

Base: All responding (n)

	Regularly	Sometimes	Occasionally	Never
Car (3,824)	53%	21%	19%	7%
Bus (3,190)	16%	23%	29%	32%
Cycling (3,247)	38%	16%	12%	34%
Walking (3,406)	49%	22%	15%	14%
Taxi: including as driver (3,012)	5%	13%	35%	47%

Figure 6: Q14. Before the experimental east Oxford LTNs were in place, please say how often you travelled through the east Oxford LTN areas to get to another destination by each of the following modes.

Base: All responding (n)



5.3 Comparison of transport modes before and after LTNs⁷

When asked about travel habits before and after the LTNs, respondents report regular use of a car has dropped by 6% since the LTNs were introduced. Bus use and taxi use increased by 1%, cycling increased by 5%, and walking increased by 7%.

Table 25: Q10. For each of the following ways of travel, please say how often you currently use them for journeys in a personal capacity within an east Oxford LTN area AND

Q14. Before the experimental east Oxford LTNs were in place, please say how often you travelled through the east Oxford LTN areas to get to another destination by each of the following modes. Base: All responding (n)

Method of travel (regular use)	Currently	Before
Car (as driver)	47%	53%
Car (as passenger)	19%	N/A
Van	5%	6%
Bus	17%	16%

⁷ Not a precise before and after picture given the before question only asked about travelling 'through' an LTN and not 'to' and 'within'. Also only asked of personal capacity.



Minibus	1%	1%
Cycling	43%	38%
Walking	56%	49%
Taxi (including as a driver)	6%	5%
Motorbike/moped	1%	1%
Mobility scooter	1%	0%
Trial e-scooter	1%	1%

Table 26: Q15. Please add any additional comments about your travel habits (Base: All responding n=1,571)

This is a summary of the most commonly expressed sentiments responding specifically to this question. More detail about information supplied to support these views is at the end of the report.

	No. responses	% responses
I often cycle	328	21%
I often walk/run/jog	214	14%
I often use public transport	79	5%
The east Oxford LTNs have not affected me in any way	34	2%
I often use taxis	30	2%
I now actively avoid the area/Oxford because of the LTNs	27	2%
Don't own a car	20	1%
I use a car less now	19	1%
Use car share / Co-Wheels	17	1%
LTNs have made me drive more	14	1%
I own an EV / hybrid vehicle	9	1%

To summarise, 79% say they have travelled through or within an LTN to reach another destination, including travelling to go to a café, restaurant, or pubs, to visit someone living in an LTN and to go shopping. 51% of respondents said they work in an east Oxford LTN. Prior to the LTNs, 53% said they regularly travelled by car, which has now reduced to 47% regularly travelling by car. Cycling and walking has increased since the LTNs were implemented.

6. Response sentiment, concerns, and recommendations

This section discusses respondents' viewpoints on all three LTN areas in east Oxford. Below is an overview of the recurring themes which emerge in relation to the LTNs.

The table below highlights comments made about the three LTN areas. All of the comments were made in relation to at least two of the LTN areas.

People are concerned about pollution and whether the LTNs will increase pollution or if pollution will be pushed to other parts of the city. Concerns also related to access for emergency services and to local businesses and the effect this will have on the local economy. Further concerns were also raised as residents believe they will be restricted and the LTNs will have a negative impact on their lives.

More positive comments related to improved safety for cyclists and an improvement to pedestrian access. Respondents also support reducing the number of cars in the road, making the area quieter and reducing pollution.

Suggestions to improve the LTNs include implementing a one-way system, improving safety with speed bumps and permanent bollards, and improving the pedestrian/cycling infrastructure. Other suggestions include improving public transport, such as affordability, better routes, and more frequent services. Suggestions were also made about possible exemptions for Blue Badge holders or people with electric vehicles.

Table 27: Q17. Please provide comments to support your view on the Divinity Road area LTN below; Q19. Please provide comments to support your view on the St Clement's area LTN below; Q21. Please provide comments to support your view on the St Mary's area LTN below.

Concerns

Plan will increase traffic/congestion/pollution
Will result in increased journey times and costs
Displacement of traffic and / or pollution to other roads in / areas of the city
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)
Concerns for elderly/(hidden)disabled/young children/those with illnesses
Disagree with restrictions on residents/will cause stress/problems for residents
Concerns about lack of access/disruptions for emergency services
This will split up communities/families/friends



Positive comments

Safer/easier for cyclists/pedestrians

Plan has/will decrease pollution/make the air cleaner

Will/has reduced the amount of cars/traffic on the roads/quieter

They have improved our community spirit/friendliness/no more angry drivers

Suggestions

Public transport needs generally improving (routes, price, times etc.)

Concerns over the bollards (people keep removing/damaging/driving over)

Road safety needs improving (e.g., speed bumps, speed limits, ANPR cameras etc.)

Improve cycling/pedestrian infrastructure (e.g., routes, equipment provision etc.)

There need to be exemptions e.g., electric vehicles, Blue Badge holders, public transport etc.

Improve/have more signs

7. Divinity Road LTN area



7.1 Overview

Oxfordshire County Council is trialling the Divinity Road area LTN, which includes a filter on Divinity Road and one on Southfield Road. The east Oxford LTN filters are made up of two planters with a bollard between them. These are being trialled to complement the existing filters on Union Street, Collins Street and East Avenue. All of the LTN filters allow pedestrian / wheelchair / rollator / kick scooter and cyclist access only with no access for motorised vehicles (except for mobility scooters, the trial e-scooters, and electric bicycles).

Overall, the consultation received 520 responses from people living within the Divinity Road LTN area. This comprises 499 individuals from Divinity Road and 21 responding as a business/organisation or group.



7.2 Respondents from the Divinity Road LTN area

Table 27 below gives a breakdown of the demographic profile of the respondents living within the Divinity Road LTN area.

Table 28: Demographic breakdown of respondents from Divinity Road LTN area (Base: All responding n=520)

	No. responses	% responses
Who is responding		
An individual	499	96%
As a business / organisation	20	4%
As part of an interest group	1	<1%
Age		
Under 24	52	10%
25 - 34	59	12%
35 - 44	94	18%
45 - 54	80	16%
55 - 64	92	18%
65 - 74	98	19%
75+	31	6%
Gender		
Female	247	49%
Male	231	46%
Prefer not to say/Other	29	6%
Ethnicity		
Asian/Asian British	42	8%
Black/Black British	1	<1%
Chinese	3	1%
Mixed/multiple	11	2%
White	401	79%
Prefer not to say/Other	52	10%
Disabilities		
Yes - limited a lot	18	4%
Yes - limited a little	44	9%



No	414	82%
Blue Badge holder		
Yes	10	2%
No	495	98%

7.3 Respondents' views of the Divinity Road LTN area

- All respondents were asked for their views of the Divinity Road LTN area.
- Overall, 60% of all respondents have a negative view about the Divinity Road area LTN, with 49% very negative and 11% mostly negative. 34% are positive about the plan for the area (26% entirely positive, 8% mostly positive). 3% are neutral and a further 4% had no view.
- 59% of respondents reported at a NET level that they have negative views of the LTN compared to 34% of NET positive responses.
- Respondents reporting as a business had significantly more negative views (85%) compared to individual responses (59%).

More detail about information supplied to support these views is at the end of the report.

Table 29: Q16. Which of the following best describes your views on the Divinity Road LTN area, in east Oxford? (Base: All responding n=3,907).

Entirely negative	49%
Mostly negative	11%
Neutral	3%
Mostly positive	8%
Entirely positive	26%
Don't know / No view	4%
NET: Negative	59%
NET: Positive	34%

- Overall, respondents living in the Divinity Road LTN area were more likely to have positive views of the Divinity Road LTN area (59%) than those living in St Clement's (50%) and St Mary's (28%).
- Three-quarters of those living elsewhere in east Oxford had negative views of the Divinity Road LTN compared to 55% of those living in the St Mary's LTN area and 40% each for St Clement's and Divinity Road.



Table 30: Q16. Which of the following best describes your views on the Divinity Road LTN area, in east Oxford? (Base: All responding n=3,907).

	Divinity Road LTN area	St Mary's LTN area	St Clement's area	Elsewhere in east Oxford
Entirely negative	33%	46%	31%	62%
Mostly negative	7%	9%	9%	12%
Neutral	2%	6%	4%	2%
Mostly positive	14%	6%	13%	5%
Entirely positive	44%	22%	38%	15%
Don't know / No view	0%	11%	6%	4%
NET: Negative	40%	55%	40%	74%
NET: Positive	59%	28%	50%	20%

7.4 Key concerns about the Divinity Road LTN:

The below themes are the most frequently reported comments in relation to Divinity Road and Southfield Road LTNs.

- The most frequently reported concern is that the Divinity Road LTN area will increase traffic and congestion (specifically the LTN filters).
- Impacts on journey times are a key concern for being able to get to amenities such as hospitals, workplaces, schools, childcare, and shops – especially in the context of meeting set times such as medical appointments. Respondents also note that longer journeys can be a problem for elderly people and people with disabilities and could discourage them from making trips.
- There were concerns over access to essential locations and the overall restricted access the filters may cause for residents.
- Positive comments relating to the Divinity Road LTN area refer to improved safety for pedestrians and cyclists, with some responses noting that the LTNs improve access for them.
- Respondents also support reducing the number of cars in the road, making the area quieter and improving air quality in the area.
- Respondents provided recommendations for improving the LTN programme/general highway area. These included implementing a one-way system, reducing vehicle speed with speed bumps and permanent bollards to improve safety, and improving pedestrian/cycling infrastructure.



7.5 Sentiment/feedback

Plan will increase traffic / congestion

Will result in increased journey times and costs

Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)

Plan will increase pollution

This will have a negative impact on everyone's lives (less safe)

Displacement of traffic and / or pollution to other roads in / areas of the city

Disagree with restrictions on residents / will cause stress / problems for residents

The bollards need to be more sustainable (people keep removing / damaging / driving over)

Plan is dangerous / chaotic

Concerns about lack of access/disruptions for emergency services

Negative impact on community causing fear / conflict

This is unnecessary / waste of time, money, and resources

This will be bad for people's wellbeing / mental health / will lead to social isolation

This is unnecessary / waste of time, money, and resources

Concerns for elderly / (hidden)disabled / young children / those with illnesses

Concerns about access to other roads

"This has made our life very difficult as a small business and family living on Divinity Road; we must take our son to various activities where it's taking an hour longer every day. I think this is very bad idea of blocking roads. It will be very difficult for emergency services to get to people within LTN areas."

"While it may make life better for the residents on that one street, it makes everyone else's life nearby a nightmare. Morrel Avenue has terrible traffic now which means I can barely leave my house using the car."

"I have had to quit my job due to LTN blocking a quicker route into my place of work."

"No alternative bus routes more fuel consumption and lengthy congestion in other roads."

Further themes are listed in the appendix (appendix 12.1). Verbatim comments to support the above themes can be found on page 46. [#Verbatims](#)

8. St Clement's LTN area



8.1 Overview

The St Clement's LTN area includes two filters which are located on Rectory Road and on Princess Street. All of the LTN filters allow pedestrian / wheelchair / rollator / kick scooter and cyclist access only with no access for motorised vehicles (except mobility scooters, the trial e-scooters, and electric bicycles).

8.2 Respondents from the St Clement's LTN area

Overall, the consultation received 708 responses from within the St Clement's LTN area. This comprises 693 individuals from St Clement's area and 15 responding as a business/organisation or group.

Table 31: Demographic breakdown of respondents from St Clement's LTN area (Base: All responding n=708)

	No. responses	% responses
Who is responding		
An individual	693	98%
As a business / organisation	15	2%



Age		
Under 24	57	8%
25 - 34	138	20%
35 - 44	177	25%
45 - 54	126	18%
55 - 64	95	14%
65 - 74	71	10%
75+	18	3%
Gender		
Female	347	50%
Male	303	44%
Prefer not to say/Other	44	6%
Ethnicity		
Asian/Asian British	59	8%
Black/Black British	7	1%
Chinese	2	<1%
Mixed/multiple	19	3%
White	522	75%
Prefer not to say/Other	87	13%
Disabilities		
Yes - limited a lot	37	5%
Yes - limited a little	45	7%
No	569	82%
Blue Badge holder		
Yes	18	3%
No	664	97%

8.3 Respondents' views of the. St Clement's LTN area

60% of respondents had a negative view about the St Clement's LTN area, with 52% entirely negative and 10% mostly negative. 32% were positive about the plan for the area (23% entirely positive, 9% mostly positive), just 3% were neutral and a further 4% had no view.



Table 32: Q18. Which of the following best describes your views on the St Clement's LTN areas in east Oxford? (Base: All responding n=3,893).

Entirely negative	52%
Mostly negative	10%
Neutral	3%
Mostly positive	9%
Entirely positive	23%
Don't know / No view	4%
NET: Negative	61%
NET: Positive	32%

- Significantly more entirely negative responses were received from people living elsewhere in east Oxford (66%) compared to those actually living in the St Clement's LTN area (33%).
- Respondents in St Clement's area were more positive about the St Clement's LTN than those living elsewhere in Oxford: 47% total positive responses from St Clement's compared 18% from elsewhere in east Oxford.
- Of the negative responses, 69% came from people under 24 years of age, 60% from 25-34 year olds, 58% from 35-44 year olds, 62% from 45-54 year olds, 58% from 55-64 year olds and 56% from 65-74 year olds. There were more negative responses from female respondents (62%) than from male respondents (55%).
- Respondents who are affected by a disability (those answering 'a little' or 'a lot') gave significantly more negative responses (88% and 72% respectively) than those without a disability (54%).
- Similarly, Blue Badge holders were significantly more negative in relation to St Clement's LTN than those without a Blue Badge. 85% of respondents who said they were Blue Badge holders felt negatively about the St Clement's LTN compared to 60% of respondents without a Blue Badge. [for context, 3% of overall respondents said they were Blue Badge holders].

Table 33: Q18. Which of the following best describes your views on the St Clement's LTN areas in east Oxford? (Base: All responding n=3,893).

	Divinity Road LTN area	St Mary's LTN area	St Clement's area	Elsewhere in east Oxford
Entirely negative	30%	55%	33%	66%
Mostly negative	8%	9%	8%	11%
Neutral	5%	1%	5%	1%
Mostly positive	15%	7%	14%	5%



Entirely positive	35%	26%	33%	13%
Don't know / No view	8%	2%	7%	4%
NET: Negative	37%	64%	41%	77%
NET: Positive	50%	33%	47%	18%

8.4 Key concerns about the St Clement's LTN:

The below themes are the most frequently reported comments in relation to Rectory Road and Princes Road filters.

- The most common themes in relation to the St Clement's LTN area were concerns relating to congestion, pollution and increased journey times and costs.
- Concern was also shown for the impact the St Clement's LTN may have on road safety and the number of traffic collisions as some people report that the LTN has caused people to drive dangerously.
- Some respondents are concerned about the effect the LTNs will have on local businesses and are worried the filters may divide the areas and have a negative impact on people's ability to access essential locations or visit friends and family.
- Conflicting views were given in relation to the impact the LTNs would have on cyclists; some believe it will improve the cycle access and safety, while others think it will make journeys more dangerous for cyclists.
- Suggestions include incorporating the cycle infrastructure and pedestrian walkways into the LTN area.
- Other suggestions surround public transport; some respondents would like to see bus routes improved, with improvements made to journey times and fare prices reduced.

8.5 Sentiment/feedback

Plan will increase traffic / congestion

Will result in increased journey times and costs

Displacement of traffic and / or pollution to other roads in / areas of the city

Plan will increase pollution

Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)

Disagree with restrictions on residents / will cause stress / problems for residents

Concerns for local businesses / economy

Concerns about safety for everyone (cyclists / pedestrians / drivers)



A one-way system needs to be implemented / would be better

Improve cycling / pedestrian infrastructure (e.g., routes, equipment provision etc.)

Concerns for elderly / (hidden)disabled / young children / those with illnesses

Infringement on rights / liberties / freedom of movement

This will be bad for people's wellbeing / mental health / will lead to social isolation

A one-way system needs to be implemented

This will cause / has caused more road accidents, dangerous driving etc.

"Too much displacement of traffic to a limited number of roads, journey times will be longer and more pollution as travel routes are longer."

"For both SC1 and SC2, traffic on St Clement's has had a huge negative impact. Traffic jams can make the trip from Brookes University to The Plain as long as 30 minutes or more."

"SC2 has contributed to the grid lock, increased emissions and failure of the objectives with respect to Cowley Road in particular which, because of the increase in volume of traffic and grid lock is now often unsafe for cyclists."

"No access to Cowley Road from this junction. You used to be forced to turn left anyway, but now there is no way of getting through to the Cowley Road on either SC1 or SC2."

Further themes are listed in the appendix (appendix 12.2). Verbatim comments to support the above themes can be on page 46. [#Verbatims](#)

9. St Mary's LTN area



9.1 Overview

The St Mary's LTN area includes ten filters which are located on Circus Street, Temple Street, Stockmore Street, Marston Street, James Street, Bullingdon Road, Leopold Street, Magdalen Road, Barnet Street, and Howard Street. All of the LTN filters allow pedestrian / wheelchair / rollator / kick scooter and cyclist access only with no access for motorised vehicles (except mobility scooters, the trial e-scooters, and electric bicycles).

Overall, the consultation received 249 responses from people living within the St Mary's LTN area. This comprises 224 individuals from St Mary's area, and 25 responding as a business / organisation or group.

Table 34: Demographic breakdown of respondents from St Mary's LTN area (Base: All responding n=249)

	No. responses	% responses
Who is responding		
An individual	224	90%
As a business / organisation	25	10%

Age



Under 24	21	9%
25 - 34	40	16%
35 - 44	44	18%
45 - 54	47	19%
55 - 64	49	20%
65 - 74	24	10%
75+	8	3%

Gender

Female	123	51%
Male	102	42%
Prefer not to say/Other	17	7%

Ethnicity

Asian/Asian British	12	5%
Black/Black British	1	0%
Chinese	2	1%
Mixed/multiple	8	3%
White	178	75%
Prefer not to say/Other	37	15%

Disabilities

Yes - limited a lot	15	6%
Yes - limited a little	18	7%
No	185	77%

Blue Badge holder

Yes	15	6%
No	222	94%

9.2 Respondents' views of the St Mary's LTN area

59% of all respondents had a negative view about the St Mary's LTN area (50% very negative and 9% mostly negative). 33% were positive about it (26% entirely positive, 7% mostly positive), 3% were neutral and a further 6% had no view.



Table 35: Q20. Which of the following best describes your views on the St Mary's LTN area in east Oxford? (Base: All responding n=3,890).

Entirely negative	50%
Mostly negative	9%
Neutral	3%
Mostly positive	7%
Entirely positive	26%
Don't know / No view	6%

- More people from elsewhere in east Oxford have entirely negative views of the St. Mary's LTN (61%) compared to residents living in St. Mary's LTN (46%).
- St Clement's have significantly more positive responses (54%) compared to respondents from Divinity Road (49%) and those elsewhere in east Oxford (18%). St Mary's had 28% positive response rate.
- Under 24 year olds (66%) and 25-34 year olds (61%) had more negative responses compared to 55-64 (55%) and 65-74 (54%) year olds.
- Males were significantly more positive (40%) in their responses compared to females (31%).

Table 36: Q20. Which of the following best describes your views on the St Mary's LTN area in east Oxford? (Base: All responding n=3,890).

	Divinity Road LTN area	St Mary's LTN area	St Clement's area	Elsewhere in east Oxford
Entirely negative	29%	46%	36%	61%
Mostly negative	7%	9%	8%	11%
Neutral	5%	5%	1%	2%
Mostly positive	11%	6%	12%	4%
Entirely positive	38%	21%	42%	14%
Don't know / No view	11%	12%	1%	8%
NET: Negative	36%	55%	44%	72%
NET: Positive	49%	28%	54%	18%



9.3 Key concerns about the St Mary's LTN:

The below themes are the most frequently reported comments in relation to Circus Street, Temple Street, Stockmore Street, Marston Street, James Street, Bullingdon Road, Leopold Street, Magdalen Road, Barnet Street, and Howard Street filters.

- The biggest concerns reported by respondents were that the St Mary's LTNs will result in increased journey times and costs, increased congestion, increased pollution.
- Concerns included local businesses being negatively affected due to access problems, similarly, access to essential locations is of concern.
- Some are concerned about the effect it will have on people's wellbeing as they may struggle to visit friends and family. Concerns were also voiced about a class division.
- Suggestions include consideration to improve public transport and improve road safety.
- Further suggestions include improving cycling infrastructure, road signs, and SATNAV routes to make journeys around the LTNs easier.

9.4 Sentiment/feedback

Displacement of traffic and / or pollution to other roads in / areas of the city

Plan will increase traffic / congestion

Concerns about lack of access / disruptions for emergency services

Concerns for local businesses / economy

Disagree with restrictions on residents / will cause stress / problems for residents

Plan will increase pollution

Will result in increased journey times and costs

Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)

This is unnecessary / waste of time, money, and resources

Concerns about safety for everyone (cyclists / pedestrians / drivers)

A one-way system needs to be implemented

This will only split up communities / families / friends

This will be bad for people's wellbeing / mental health / will lead to social isolation

The bollards need to be more sustainable (people keep removing / damaging / driving over)

Concerns for elderly/(hidden)disabled/young children/those with illnesses



"Oxford is in a grid lock. The air quality is not better, it is worse. Emergency services really struggle to get through."

"Remove closure, make Leopold Street one way towards Hurst St, connecting communities and keeping unnecessary traffic off the Plain and reducing traffic on Hollow Way and on Between Towns Road."

"This road was never a problem but now all traffic goes via the plain or Cowley centre. If you happen to want the wrong side of the barrier. More miles, more pollution just in a different area."

"Cricket Road has become particularly limited for access - with there obviously being no access from Iffley Road-side anymore. The previous access route of Magdalen Road - Ridgefield Rd - Howard St - Cricket Rd does not strike me as a 'rat run' but rather a reduction in driving distance, time spent idling in traffic, and a reasonable access route."

"Howard Street was the best way for me to travel back home. Now I have to drive around through Cowley Road to Iffley Road. I use more petrol and my travel time is longer about 25 min every day."

Further themes are listed in the appendix (appendix 12.3). Verbatim comments to support the above themes can be found on page 46. [#Verbatims](#)

10. Verbatims

This section highlights some of the key themes from the consultation with example verbatims.

10.1 Concerns

Plan will increase traffic/congestion.

"It has caused traffic chaos and life-threatening delays for emergency services trying to get through the traffic. Necessary journeys are now 3 or 4 times longer than before and those journeys are spent queuing in traffic, increasing pollution."

Will result in increased journey times and costs.

"Pushes traffic together, causing more delays, makes route longer travelling around, increases costs significantly. Increases pollution due to lower speeds and being stationary, increases costs for customers."

The traffic/pollution has/will move to other areas of the city.

"Too much displacement of traffic to a limited number of roads, journey times will be longer and more pollution as travel routes are longer."

Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)

"Divisive and destructive of communities, it makes cycling harder, and travelling to essential places such as hospitals and local shops and amenities difficult and unpleasant."

Concerns for elderly/(hidden)disabled/young children/those with illnesses.

"Travel needed for disabled son who is dependent on a car. The LTN is ruining our lives and creating severe problems for my disabled son who is now having to travel an extra 30mins every day due to LTN traffic. We have been blocked into our road and unable to access Iffley Road and this is creating hell for my son with severe disability. This is unfair and morally wrong for disabled people."

Disagree with restrictions on residents/will cause stress/problems for residents.

"You have made Oxford a nightmare, and I do NOT want to live here anymore! I am born and bred in Oxford, so I have lived here for 40 years."



Concerns about lack of access/disruptions for emergency services.

"When calling an ambulance for a resident who collapsed we had to wait longer due to no access and traffic built up on main roads. Same statement for all as it's ridiculous and affects response times of emergency service, no one had any proper logic to think about this."

This will split up communities/families/friends.

"I cannot get to friends, family or clients living in this LTN. I'm losing business and it's costing me more in fuel and time to do my job."

10.2 Positives

Safer/easier for cyclists/pedestrians.

"Regarding all the LTNs it would be nice to have more obvious 20 mph, or even 10mph, plus speed bumps and more signs saying this is a quiet residential road which gives priority to pedestrians and cyclists."

Plan has/will decrease pollution/make the air cleaner.

"Reduced noise pollution. Improved air quality. Safer to walk and cycle, especially with kids. Safer. Better in every way."

Will/has reduced the amount of cars/traffic on the roads/quieter.

"I support LTNs as it helps to reduce the cars on residential streets and discourage people who use them as a shortcut to avoid congestion on the major arteries in the city."

They have improved our community spirit/friendliness/no more angry drivers.

"Children now play on the street, cycling is easier and safer (except for on the new two-way section of Magdalen Road), and my house no longer shakes when lorries drive over the bump outside my house at 30mph. I no longer have to wait for a queue of motorway traffic in order to cross the road outside my house."

10.3 Suggestions from respondents

Public transport needs generally improving (routes, price, times etc.).

"No alternative bus routes more fuel consumption and lengthy congestion in other roads."



Road safety needs improving (e.g., speed bumps, speed limits, ANPR cameras etc.).

"There could have been speed bumps put in. The LTN boxes do not benefit community mixing and lifestyle."

Improve cycling/pedestrian infrastructure (e.g., routes, equipment provision etc.).

"The environment for living, walking and cycling in Princes Street has improved out of all recognition. The right to cycle down Rectory Road towards St Clement's is extremely helpful."

There needs to be exemptions e.g., EVs, Blue Badge holders, public transport etc.

"This was one of my usual filter to be able to get to Jeune Street and get to the Plain roundabout all in electric mode in my hybrid car, now I get stuck in traffic and with all the stop and start I end up using all the electric and am using fuel in a built-up area - surely this goes against what you are trying to achieve (reduce traffic in a built-up area and ease congestion)."

Improve/have more signs.

"Seems to be in the right place. Regarding all the LTNs it would be nice to have more obvious 20 mph, or even 10mph, plus speed bumps and more signs saying this is a quiet residential road which gives priority to pedestrians and cyclists."

11. Email and letter responses

In addition to the feedback received from questionnaire returns, 269 emails and letters were received with comments about the proposals. These responses were not included in the questionnaire survey analysis as feedback was more general overviews of the plans or supplementary to a completed survey.

In summary, the email responses comprised:

- 121 expressing support for the east Oxford LTNs;
- 138 expressing opposition to the east Oxford LTNs; and
- 10 which were neutral.

11.1 Key concerns from the email responses include:

Concern about congestion on main routes

"It appears to me that to travel to or from the south, I will now have to drive about 16 blocks out of my way via the Plain Roundabout (which, incidentally, has a deserved reputation for one of the most dangerous roundabouts)."

"If you currently travel into Oxford, you will be aware that the approaches to Magdalen bridge and the roundabout are currently pretty gridlocked in the morning."

"I live in east Oxford. I do not support the LTNs. I'm a cyclist and driver. I do not see how the LTNs are any sort of solution. Those who live in closed off roads are better off. But the rest of us are much worse off. More congestion, pollution, petrol, miles. I understand that residents voted against the LTNs? So don't understand why the scheme went ahead."

Concerns about local business

"Grundon bins who provide waste service to the company have told them they cannot provide this route due to the LTNs."

"I wish to lodge a complaint with you about the new LTN schemes in east Oxford. The LTN's were installed without the consultation of residents or businesses in the area. My friend REDACTED have been in business in Oxford for over REDACTED years. They have met the local needs of Oxford's residents. They are closing down, due to your foolish LTN scheme. They/we hereby demand the LTN's are removed immediately. It is causing a lot of congestion on Cowley Road and Iffley Road, thereby increasing pollution on these roads. It doesn't help that none of you live in east Oxford. Please let me know, what are you going to do, to stop local businesses like these closing?"



Concerns about access for emergency services and care givers

A respondent that worked within Oxford Health NHS Trust raised concerns about access for emergency services and care givers. Visits to the homes of patients were being negatively impacted by the road scheme which was "doubling travel times" with traffic having increased on alternative routes. Concerns were raised about air pollution as a result of queuing traffic. It was also suggested that the scheme has made it harder to get to the John Radcliffe Hospital for appointments, which in turn has reduced the number of patients the respondent can see in a day.

Mobility issues for those who are physically incapable or disabled

"I have some residual mobility issues. These LTNs significantly affect my life and cut me off from the rest of the city, and with the introduction of the EO LTNs, most of Cowley. I can't walk far enough to meet my friends for a coffee on Magdalen Road. With the footpath closed I can't get to Florence park. Last weekend I tried to take the bus into town. It cost me £4, took a really long time and caused me significant pain. The LTNs only suit young, able bodied, professionals."

"I'm a wheelchair user with care needs living. I have to use taxis when I go out. I have a regular monthly blood test. Before the LTNs, this journey took me 10 minutes. Yesterday it took me 45 minutes there and an hour back, and the taxi was more expensive than usual, and I had to wait a long time to get a taxi back. Also, I have carers 2-3 times a day. Because of the gridlock caused by the LTNs, they are getting delayed anything up to an hour, which is bad for me but also bad for them, they're only trying to do their jobs."

Increase in cost, travel time, congestion and pollution

"In order to leave my house to get to anywhere outside of Oxford I will now be forced to drive to all the way down Cowley Road in order to access Iffley Road via the Plain roundabout. This is much longer than my usual route via several residential streets and will therefore be contributing to making these roads more polluted. Driving on Cowley Road is already dangerous and unpleasant due to the number of cars, bikes and pedestrians sharing the road."

"I am completely opposed to the LTN's because it has simply shifted pollution in the air generated from traffic queues further into east Oxford which is already toxic because of the Mini Factory. I do not drive and often need the use of taxis to get to Cowley Road to shop. Rides which used to cost under £10 have been doubled as has the time it takes the driver to get there."



12. Appendix

12.1 Full tables of responses – Divinity Road

Table 37: Q17. Please provide comments to support your view on the Divinity Road area LTN below. (All responding n=2901).

	Total (2901)
Will result in increased journey times and costs	26%
Plan will increase traffic/congestion	22%
Displacement of traffic and/or pollution to other roads in/areas of the city	20%
Safer/easier for cyclists/pedestrians	18%
Plan will increase pollution	15%
Will/has reduce the number of cars/traffic on the roads/Quieter	12%
Support/agree with/can see the benefits	11%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	11%
Disagree with proposal(s)/can't see the benefits	9%
Negative opinion of LTNs	8%
Positive opinion of LTNs	7%
Disagree with restrictions on residents/will cause stress/problems for residents	7%
Does not think it will work/unrealistic	6%
Plan has/will decrease pollution/make the air cleaner	5%
Concerns for elderly/(hidden)disabled/young children/those with illnesses	4%
Concerns for local businesses/economy	4%
Concerns over safety for everyone (cyclists/pedestrians/drivers)	4%
A one-way system needs to be implemented	4%
Concerns about lack of access/disruptions for emergency services	4%
This will only split up communities/families/friends	4%
Public transport needs improving generally (routes, times etc.)	3%



Cars are sometimes a necessary and essential part of everyday life	3%
This will/has caused more road accidents, dangerous driving etc.	3%
Concerns over the bollards (people keep removing/damaging/driving over)	3%
Negatively impacting public transport/taxis	3%
Cycling/walking isn't an option for everyone	2%
Public transport needs to be affordable/cheaper/free	2%
Not properly thought out	2%
Does not believe consultation will have any impact on the outcome/listen to the voters	2%
This will be bad for people's wellbeing/mental health/stress	2%
Will create a class division between those who can afford electric vehicles and those who can't/preference for richer residents	2%
Road safety needs improving (e.g., speed bumps, speed limits, ANPR cameras etc.)	2%
They have improved our community spirit/friendliness/no more angry drivers	2%
This is unnecessary/waste of time, money, and resources	2%
Difficulty entering Oxford from surrounding/rural areas	1%
Infringement on rights/liberties/freedom of movement	1%
Improve cycling/pedestrian infrastructure (e.g., routes, equipment provision etc.)	1%
The bollards need to more robust/permanent	1%
Negative impact on community causing fear/conflict	1%
There needs to be exemptions e.g., EVs, Blue Badge holders, public transport etc.	1%
Improve/have more signs	1%
Parking problems/lack of parking.	1%



Table 38: Q23a. If you have a comment about the DR1 Divinity Road filter, please use the box below. (All responding n=820).

	Total (820)
Plan will increase traffic/congestion	24%
Will result in increased journey times and costs	20%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	19%
Disagree with proposal(s)/can't see the benefits	16%
Plan will increase pollution	14%
Displacement of traffic and/or pollution to other roads in/areas of the city	13%
Disagree with restrictions on residents/will cause stress/problems for residents	13%
A one-way system needs to be implemented	9%
The bollards need to be more sustainable (people keep removing/damaging/driving over)	9%
Plan is dangerous/chaotic	8%
Negative opinion of LTNs	8%
Concerns for local businesses/economy	7%
This is unnecessary/waste of time, money, and resources	5%
Negative impact on community causing fear/conflict	5%
Support/agree with/can see the benefits	5%
Concerns about lack of access/disruptions for emergency services	5%
Concerns for elderly/(hidden)disabled/young children/those with illnesses	5%
There needs to be exemptions e.g., EVs, Blue Badge holders, public transport etc.	4%
Public transport needs improving generally (routes, times etc.)	4%
Plan has/will reduce the number of cars/traffic on the roads/Quieter	3%
Safer/easier for cyclists/pedestrians	3%
Road safety needs improving (e.g., speed bumps, speed limits, ANPR cameras etc.)	2%
Will require enforcement/policing	2%



Does not believe consultation will have any impact on the outcome/listen to the voters	2%
Improve/have more signs	1%
Plan has/will decrease pollution/make the air cleaner	1%



Table 39: Q23b. If you have a comment about the DR2 Southfield Road filter, please use the box below. (All responding n=656).

	Total (656)
Negative opinion of LTNs	29%
Plan will increase traffic/congestion	19%
Will result in increased journey times and costs	14%
This will have a negative impact on everyone's lives (less safe)	14%
Plan will increase pollution	13%
Positive opinion of LTNs	13%
A one-way system needs to be implemented	10%
Displacement of traffic and/or pollution to other roads in/areas of the city	9%
The bollards need to be more sustainable (people keep removing/damaging/driving over)	8%
Concerns about lack of access/disruptions for emergency services	6%
This will be bad for people's wellbeing/mental health/will lead to social isolation	5%
Concerns for local businesses/economy	5%
Concerns about access to other roads	5%
This is unnecessary/waste of time, money, and resources 1	5%
Road safety needs improving (e.g., speed bumps, cameras etc.)	3%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	3%
There needs to be exemptions e.g., EVs, Blue Badge holders, public transport etc.	3%
Review/move where the roadblocks are placed 1	2%
Will require enforcement/policing	2%
Public transport needs improving generally (routes, times etc.)	1%
Public transport needs to be affordable/cheaper/free	1%



12.2 Full tables of responses – St Clement’s

Table 40: Q19. Please provide comments to support your view on the St Clement’s area LTN below. (All responding n=2638).

	Total (2668)
Plan will increase traffic/congestion	37%
Plan will increase pollution	19%
Will result in increased journey times and costs	19%
Displacement of traffic and/or pollution to other roads in/areas of the city	15%
Negative opinion of LTNs	13%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	12%
Positive opinion of LTNs	11%
Safer for cyclists/pedestrians	11%
This will/has caused more road accidents, dangerous driving etc.	7%
Negatively impacting public transport/taxis	6%
Concerns for local businesses/economy	6%
The scheme would make it more dangerous for cyclists/concerned about their safety	6%
Disagree with proposal(s)/can’t see the benefits	6%
Plan will decrease traffic/congestion	5%
This will be bad for people’s wellbeing/mental health/will lead to social isolation	5%
Concerns about lack of access/disruptions for emergency services	4%
Public transport needs improving generally (routes, times etc.)	3%
Concerns for elderly/(hidden)disabled/young children/those with illnesses	2%
Encouraged people to walk/cycle more	2%
Does not think it will work/unrealistic	2%
Plan has/will decrease pollution/make the air cleaner	2%
Improve cycling/pedestrian infrastructure (e.g., routes, equipment provision etc.)	1%



Public transport needs to be affordable/cheaper/free	1%
Improve signage/have more signs	1%
Plan will/has made residents/visitors avoid the city/shop elsewhere	1%



Table 41: Q24a. If you have a comment about the SC1 Rectory Road (contraflow, cycle way and two-way section) filter, please use the box below. (All responding n=635).

	Total (635)
Negative opinion of LTNs	23%
Displacement of traffic and/or pollution to other roads in/areas of the city	22%
Will result in increased journey times and costs	19%
Plan will increase pollution	13%
Disagree with proposal(s)/can't see the benefits	10%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	9%
Disagree with restrictions on residents/will cause stress/problems for residents	8%
Concerns about safety for everyone (cyclists/pedestrians/drivers)	7%
Concerns for local businesses/economy	7%
A one-way system needs to be implemented/would be better	7%
Plan will increase traffic/congestion	6%
Improve cycling/pedestrian infrastructure (e.g., routes, equipment provision etc.)	6%
Concerns for elderly/(hidden)disabled/young children/those with illnesses	5%
Support/agree with/can see the benefits	4%
Public transport needs improving generally	4%
Positive opinion of LTNs	4%
Improve/have more signs	2%
Road safety needs improving (e.g., speed bumps, speed limits, cameras etc.)	2%
Concerns over the bollards/CCTV is needed to stop vandalism	1%
Concerns about lack of access/disruptions for emergency services	1%
Safer for everyone (cyclists/pedestrians/drivers)	1%
The bollards need to more robust/permanent	1%



Table 42: Q24b. If you have a comment about the SC2 Princes Road filter, please use the box below. (All responding n=519).

	Total (519)
Disagree with proposal(s)/can't see the benefits	43%
Plan will increase traffic/congestion	27%
Will result in increased journey times and costs	22%
Plan will increase pollution	18%
Negative opinion of LTNs	15%
Displacement of traffic and/or pollution to other roads in/areas of the city	14%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	13%
Support/agree with/can see the benefits	10%
Concerns for local businesses/economy	8%
Infringement on rights/liberties/freedom of movement	5%
This will be bad for people's wellbeing/mental health/will lead to social isolation	5%
A one-way system needs to be implemented	5%
This will/has caused more road accidents, dangerous driving etc.	5%
Concerns about lack of access/disruptions for emergency services	4%
This will only split up communities/families/friends	3%
Safer for cyclists/pedestrians	2%
Cars are sometimes a necessary and essential part of everyday life	2%
This is unnecessary/waste of time, money, and resources	2%
Public transport needs improving generally	2%
The bollards need to be more sustainable (people keep removing/damaging/driving over)	1%



12.3 Full tables of responses – St Mary's

Table 43: Q21. Please provide comments to support your view on the St Mary's area LTN below. (All responding n=2,736).

	Total (2736)
Will result in increased journey times and costs	19%
Plan will increase traffic/congestion	19%
Displacement of traffic and/or pollution to other roads in/areas of the city	18%
Safer for cyclists/pedestrians	17%
Plan has/will reduce the number of cars/traffic on the roads/Quieter	14%
Plan will increase pollution	13%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	12%
Concerns about safety for everyone (cyclists/pedestrians/drivers)	10%
Concerns for local businesses/economy	7%
Support/agree with/can see the benefits	7%
Disagree with restrictions on residents/will cause stress/problems for residents	6%
Disagree with proposal(s)/can't see the benefits	6%
Has/will have a negative effect on public transport	5%
This will only split up communities/families/friends	5%
Concerns for elderly/(hidden)disabled/young children/those with illnesses	5%
Plan has/will decrease pollution/make the air cleaner	5%
Does not think it will work/unrealistic	4%
Concerns about lack of access/disruptions for emergency services	4%
Concerns over the bollards (people keep removing/damaging/driving over)	3%
They have improved our community/socialise more at the shops/businesses	3%
Concerns for the mental health/levels of stress of those affected	2%
This has already had a negative impact	2%



Public transport provision needs improving generally	2%
This is unnecessary/waste of time, money, and resources	2%
Does not believe consultation will have any impact on the outcome/listen to the voters	2%
Difficulty entering Oxford from surrounding/rural areas	2%
Improve parking options	1%
Will create a class division between those who can afford electric vehicles and those who can't/preference for richer residents	1%
A one-way system needs to be implemented	1%
Road safety needs improving (e.g., speed bumps, speed limits, ANPR cameras etc.)	1%
Infringement on rights/liberties/freedom of movement	1%
Improve cycling/pedestrian infrastructure (e.g., routes, equipment provision etc.)	1%
The bollards need to more robust/permanent	1%
There needs to be exemptions e.g., EVs, Blue Badge holders, public transport etc.	1%
This will/has had a negative effect on our area in terms of appearance and noise	1%
Improve/have more signs	1%



Table 44: Q25a. If you have a comment about the SM1 Circus Road filter, please use the box below. (All responding n=491).

	Total (491)
Displacement of traffic and/or pollution to other roads in/areas of the city	19%
Will result in increased journey times and costs	16%
Plan will increase traffic/congestion	16%
Plan will increase pollution	12%
Disagree with restrictions on residents/will cause stress/problems for residents	10%
Does not think it will work/unrealistic	10%
Negative opinion of LTNs/remove them	9%
Concerns about safety for everyone (cyclists/pedestrians/drivers)	8%
This will only split up communities/families/friends	7%
Concerns for local businesses/economy	7%
This is unnecessary/waste of time, money, and resources	6%
Concerns about lack of access/disruptions for emergency services	5%
A one-way system needs to be implemented	5%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	5%
Concerns for elderly/(hidden)disabled/young children/those with illnesses	4%
Support/agree with/can see the benefits	4%
This will be bad for people's wellbeing/mental health	4%
Disagree with proposal(s)/can't see the benefits	3%
Cars are sometimes a necessary and essential part of everyday life	3%
Not properly thought out	3%
Does not believe consultation will have any impact on the outcome/listen to the voters	3%
Concerns over causing problems for parking zones (causing hazards, disputes)	3%
LTNs will/are affecting my job/income	2%
The bollards need to be more sustainable (people keep removing/damaging/driving over)	2%
Safer for cyclists/pedestrians	2%



Will/has reduce the number of cars/traffic on the roads/Quieter	2%
Public transport needs improving generally (routes, times etc.)	2%
Improve cycling/pedestrian infrastructure (e.g., routes, equipment provision etc.)	2%
No designated turning space/drivers using people's driveways as turning points	1%
Issues with cyclists (they are dangerous, don't use lights/signals etc.)	1%
Will create a class division between those who can afford electric vehicles and those who can't/preference for richer residents	1%
There needs to be exemptions e.g., EVs, Blue Badge holders, public transport etc.	1%
Review/move where the roadblocks are placed	1%
Public transport needs to be affordable/cheaper/free	1%



Table 45: Q25b. If you have a comment about the SM2 Temple Street filter, please use the box below. (All responding n=480).

	Total (480)
Will result in increased journey times and costs 1	16%
Displacement of traffic and/or pollution to other roads in/areas of the city	15%
Plan will increase traffic/congestion	13%
Plan will increase pollution	13%
Negative opinion of LTNs	11%
Does not think it will work/unrealistic	9%
Disagree with restrictions on residents/will cause stress/problems for residents	8%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	8%
Concerns for local businesses/economy	7%
This will be bad for people's wellbeing/mental health/will lead to social isolation	7%
Concerns about safety for everyone (cyclists/pedestrians/drivers)	6%
This is unnecessary/waste of time, money, and resources	6%
Concerns about lack of access/disruptions for emergency services	5%
A one-way system needs to be implemented	5%
Concerns for elderly/(hidden)disabled/young children/those with illnesses	5%
Disagree with proposal(s)/can't see the benefits 1	4%
Parking problems/lack of parking	4%
Support/agree with/can see the benefits	3%
Not properly thought out	3%
Cars are sometimes a necessary and essential part of everyday life	3%
Negatively impacting public transport/taxis	3%
Safer for cyclists/pedestrians	2%
LTNs will/are affecting my job/income	2%
No designated turning space/drivers using people's driveways as turning points	2%
Review/move where the roadblocks are placed	2%



Will require enforcement/policing	2%
Infringement on rights/liberties/freedom of movement	2%
This will/has caused more road accidents, dangerous driving etc.	2%
Will/has reduce the number of cars/traffic on the roads/Quieter	2%
Does not believe consultation will have any impact on the outcome/listen to the voters	1%
The bollards need to more robust/permanent	1%
Public transport needs improving generally (reliability, routes, cheaper etc.)	1%
Issues with cyclists (they are dangerous, don't use lights/signals etc.)	1%
Will create a class division between those who can afford electric vehicles and those who can't/preference for richer residents	1%
Improve cycling/pedestrian infrastructure (e.g., routes, equipment provision etc.)	1%
This will/has had a negative effect on our area in terms of appearance and noise	1%



Table 46: Q25c. If you have a comment about the SM3 Stockmore Street filter, please use the box below. (All responding n=468).

	Total (468)
Plan will increase traffic/congestion	17%
Will result in increased journey times and costs	15%
Plan will increase pollution	14%
Negative opinion of LTNs/Remove them	14%
Displacement of traffic and/or pollution to other roads in/areas of the city	13%
Does not think it will work/unrealistic	8%
Concerns for local businesses/economy	8%
Disagree with restrictions on residents/will cause stress/problems for residents	8%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	6%
A one-way system needs to be implemented	5%
This is unnecessary/waste of time, money, and resources	5%
Concerns about lack of access/disruptions for emergency services	5%
Support/agree with/can see the benefits	4%
Disagree with proposal(s)/can't see the benefits 1	4%
Parking problems/Enforce parking restrictions	4%
More dangerous for cyclists/pedestrians	4%
This will only split up communities/families/friends	4%
Concerns for elderly/(hidden)disabled/young children/those with illnesses	3%
This will be bad for people's wellbeing/mental health/will lead to social isolation	3%
Will make journeys more difficult	3%
Should improve the infrastructure before implementing anything	3%
This will/has caused more road accidents, dangerous driving etc.	3%
Review/move where the roadblocks are placed	3%



Negatively impacting public transport/taxis	3%
No designated turning space/drivers using peoples' driveways as turning points	2%
The bollards need to more robust/permanent	2%
Safer/easier for cyclists/pedestrians	2%
LTNs will/are affecting my job/income	2%
Cycling/walking isn't an option for everybody	2%
Not properly thought out	1%
Cars are sometimes a necessary and essential part of everyday life	1%
Infringement on rights/liberties/freedom of movement	1%
Will/has reduce the number of cars/traffic on the roads/Quieter	1%
Road safety needs improving (e.g., speed bumps, speed limits, ANPR cameras etc.)	1%
Issues with cyclists (they are dangerous, don't use lights/signals etc.)	1%
Reducing traffic is essential	1%



Table 47: Q25d. If you have a comment about the SM4 Marston Street filter, please use the box below. (All responding n=455).

	Total (455)
Plan will increase traffic/congestion	16%
Plan will increase pollution	16%
Will result in increased journey times and costs	15%
Negative opinion of LTNs/remove them	15%
Displacement of traffic and/or pollution to other roads in/areas of the city	14%
Does not think it will work/unrealistic	10%
Concerns for local businesses/economy	7%
Concerns about safety for everyone (cyclists/pedestrians/drivers)	7%
Disagree with restrictions on residents/will cause stress/problems for residents	6%
This is unnecessary/waste of time, money, and resources	6%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	5%
Concerns about lack of access/disruptions for emergency services	5%
Support/agree with/can see the benefits	5%
This will only split up communities/families/friends	5%
Disagree with proposal(s)/can't see the benefits	4%
A one-way system needs to be implemented/would be better	4%
This will be bad for people's wellbeing/mental health/will lead to social isolation	4%
Concerns for elderly/(hidden)disabled/young children/those with illnesses	3%
Infringement on rights/liberties/freedom of movement	3%
Safer for cyclists/pedestrians	3%
Parking problems/lack of parking	3%
The bollards need to more robust/permanent	3%
LTNs will/are affecting my job/income	2%
Will/has reduce the number of cars/traffic on the roads/Quieter	2%
Review/move where the roadblocks are placed	2%



Negatively impacting public transport/taxis	2%
No designated turning space/drivers using people's driveways as turning points	2%
Cycling/walking isn't an option for everybody	2%
Improve cycling/pedestrian infrastructure (e.g., routes, make safer etc.)	1%
Issues with cyclists (they are dangerous, don't use lights/signals etc.)	1%
Cars are sometimes a necessary and essential part of everyday life	1%



Table 48: Q25e. If you have a comment about the SM5 James Street filter, please use the box below. (All responding n=518).

	Total (518)
Negative opinion of LTNs/remove them	17%
Will result in increased journey times and costs	16%
Plan will increase pollution	15%
Plan will increase traffic/congestion	14%
Displacement of traffic and/or pollution to other roads in/areas of the city	14%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	8%
Does not think it will work/unrealistic	8%
Concerns for local businesses/economy	7%
This will have a negative impact on everyone's lives (less safe)	7%
This will only split up communities/families/friends	6%
This is unnecessary/waste of time, money, and resources	6%
Disagree with proposal(s)/can't see the benefits	6%
Disagree with restrictions on residents/will cause stress/problems for residents	6%
A one-way system needs to be implemented	5%
Concerns about lack of access/disruptions for emergency services	5%
This will be bad for people's wellbeing/mental health/will lead to social isolation	5%
Support/agree with/can see the benefits	4%
Concerns for elderly/(hidden)disabled/young children/those with illnesses	3%
Review/move where the roadblocks are placed	3%
Negatively impacting public transport/taxis	3%
The bollards need to be more sustainable (people keep removing/damaging/driving over)	3%
Infringement on rights/liberties/freedom of movement	3%
Parking problems/lack of parking	3%



LTNs will/are affecting my job/income	2%
Will/has reduce the number of cars/traffic on the roads/Quieter	2%
Safer for cyclists/pedestrians	2%
Does not believe consultation will have any impact on the outcome/listen to the voters	2%
Cycling/walking isn't an option for everybody	2%
There needs to be exemptions e.g., EVs, Blue Badge holders, public transport etc.	2%
Improve cycling/pedestrian infrastructure (e.g., routes, make safer etc.)	1%



Table 49: Q25f. If you have a comment about the SM6 Bullingdon Road filter, please use the box below. (All responding n=511).

	Total (511)
Plan will increase traffic/congestion	19%
Re-open the road	17%
Displacement of traffic and/or pollution to other roads in/areas of the city	16%
Will result in increased journey times and costs	16%
This will be bad for people's wellbeing/mental health/will lead to social isolation	11%
Plan will increase pollution	10%
Disagree with proposal(s)/can't see the benefits	8%
Concerns for local businesses/economy	8%
Concerns about access to other roads	7%
Negative opinion of LTNs	7%
Positive opinion of LTNs	7%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	7%
Concerns about safety for everyone (cyclists/pedestrians/drivers)	7%
Does not think it will work/unrealistic	6%
Concerns about lack of access/disruptions for emergency services	5%
The bollards need to be more sustainable (people keep removing/damaging/driving over)	5%
Disagree with restrictions on residents/will cause stress/problems for residents	5%
This will have a negative impact on everyone's lives (less convenient, wastes time etc.)	5%
A one-way system needs to be implemented	4%
Support/agree with/can see the benefits	4%
This is unnecessary/waste of time, money, and resources	4%
No designated turning space/drivers using people's driveways as turning points	2%



Concerns over causing problems for parking zones (causing hazards, disputes)	2%
Review/move where the roadblocks are placed	2%
Does not believe consultation will have any impact on the outcome/listen to the voters	2%
Road safety needs improving (e.g., speed bumps, speed limits, ANPR cameras etc.)	2%
People are blocking/parking in front of the LTNs causing obstructions	1%
Public transport needs generally improving (routes, times etc.)	1%
There needs to be exemptions e.g., EVs, Blue Badge holders, public transport etc.	1%
Cycling/walking isn't an option for everybody	1%
Public transport needs to be affordable/cheaper/free	1%



Table 50: Q25g. If you have a comment about the SM7 Leopold Street filter, please use the box below. (All responding n=481).

	Total (481)
Negative opinions of LTNs	27%
Plan will increase pollution	16%
Plan will increase traffic/congestion	16%
Will result in increased journey times and costs	15%
Disagree with proposal(s)/can't see the benefits	14%
Disagree with restrictions on residents/will cause stress/problems for residents	11%
Displacement of traffic and/or pollution to other roads in/areas of the city	9%
Concerns for local businesses/economy	8%
Support/agree with/can see the benefits	7%
Does not think it will work/unrealistic	6%
Concerns about lack of access/disruptions for emergency services	5%
Concerns for elderly/(hidden)disabled/young children/those with illnesses	5%
Agree with having fewer cars on the roads	4%
The bollards need to be more sustainable (people keep removing/damaging/driving over)	4%
This will only split up communities/families/friends	4%
The scheme would make it more dangerous for cyclists	4%
This is unnecessary/waste of time, money, and resources	3%
A one-way system needs to be implemented	3%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	2%
Will make journeys more difficult	2%
Improved parking options	2%
Public transport needs to be more reliable/cheaper	2%



Cars are sometimes a necessary and essential part of everyday life	1%
Does not believe consultation will have any impact on the outcome/listen to the voters	1%
Cycling/walking isn't an option for everybody	1%
Difficulty entering Oxford from surrounding/rural areas	1%
Improve cycling/pedestrian infrastructure (e.g., routes, make safer etc.)	1%
Public transport is not an option for everyone	1%
Wants less pollution/congestion in the city/wants better air quality	1%



Table 51: Q25h. If you have a comment about the SM8 Magdalen Road (two way) filter, please use the box below. (All responding n=612).

	Total (612)
Will result in increased journey times and costs	14%
Plan will increase traffic/congestion	14%
Concerns for local businesses/economy	13%
This is unnecessary/waste of time, money, and resources	12%
Plan will increase pollution	12%
Displacement of traffic and/or pollution to other roads in/areas of the city	12%
Negative opinions of LTNs/remove them	11%
Does not think it will work/unrealistic	9%
A one-way system needs to be implemented/would be better	8%
Concerns about safety for everyone (cyclists/pedestrians/drivers)	7%
Disagree with proposal(s)/can't see the benefits	6%
Disagree with restrictions on residents/will cause stress/problems for residents	6%
The bollards need to be more sustainable (people keep removing/damaging/driving over)	6%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	6%
This will only split up communities/families/friends	5%
Concerns about lack of access/disruptions for emergency services	5%
Safer for cyclists/pedestrians	5%
The road isn't big enough for two-way traffic	4%
This will be bad for people's wellbeing/mental health/will lead to social isolation	4%
Concerns for elderly/(hidden)disabled/young children/those with illnesses	4%
Support/agree with/can see the benefits	4%
Will require enforcement/policing	3%



Negatively impacting public transport/taxis	3%
Not properly thought out	3%
Will/has reduce the number of cars/traffic on the roads/Quieter	3%
Does not believe consultation will have any impact on the outcome/listen to the voters	3%
Improve cycling/pedestrian infrastructure (e.g., routes, make safer etc.)	2%
Infringement on rights/liberties/freedom of movement	2%
This will/has caused more road accidents, dangerous driving etc.	2%
Cars are sometimes a necessary and essential part of everyday life	2%
There need to be exemptions e.g., electric vehicles, Blue Badge holders, public transport etc.	2%
Review/move where the roadblocks are placed	1%
Road safety needs improving (e.g., speed bumps, speed limits, ANPR cameras etc.)	1%
LTNs are affecting my job	1%
Parking problems/lack of parking	1%
Issues with cyclists (they are dangerous, don't use lights/signals etc.)	1%
Improve/have more signs	1%



Table 52: Q25i. If you have a comment about the SM9 Barnet Street and SM10 Howard Street (contraflow, cycle way and two-way section) filter, please use the box below. (All responding n=566).

	Total (566)
Negative opinions of LTNs/remove them	23%
Will result in increased journey times and costs	19%
Plan will increase traffic/congestion	17%
Disagree with proposal(s)/can't see the benefits	16%
Plan will increase pollution	16%
Displacement of traffic and/or pollution to other roads in/areas of the city	12%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	11%
Concerns about safety for everyone (cyclists/pedestrians/drivers)	11%
Positive opinion of LTNs/they have already improved safety	10%
This is unnecessary/waste of time, money, and resources	9%
The bollards need to be more sustainable (people keep removing/damaging/driving over)	8%
Concerns for local businesses/economy	8%
Does not think it will work/unrealistic	7%
Disagree with restrictions on residents/will cause stress/problems for residents	7%
A one-way system needs to be implemented	7%
This will be bad for people's wellbeing/mental health/will lead to social isolation	6%
Concerns about lack of access/disruptions for emergency services	5%
Support/agree with/can see the benefits	4%
Safer for cyclists/pedestrians	3%
Review/move where the roadblocks are placed	3%
Does not believe consultation will have any impact on the outcome/listen to the voters	3%
Negatively impacting public transport/taxis	2%



Review the parking in the area	2%
Cars are sometimes a necessary and essential part of everyday life	2%
Public transport needs to be affordable/cheaper/free	1%
Public transport needs improving generally (routes, times etc.)	1%
Better signage is needed e.g., to clearly show where LTNs, new road layouts are etc.	1%
Concerns for elderly/(hidden)disabled/young children/those with illnesses	1%
Improve cycling/pedestrian infrastructure (e.g., routes, make safer etc.)	1%
ANPR cameras would be better	1%
Infringement on rights/liberties/freedom of movement	1%



Survey for the consultation on the East Oxford low traffic neighbourhoods

To find out more about this east Oxford low traffic neighbourhood (LTN) consultation, and to view or download the supporting documents, visit: letstalk.oxfordshire.gov.uk/east-oxford-ltns-2022

You can also request a copy of the consultation survey and any supporting documents by emailing eastoxfordltn@oxfordshire.gov.uk or calling Oxfordshire County Council's customer services team on **01865 792422**.

If you would prefer to complete this survey online, it is available here: letstalk.oxfordshire.gov.uk/east-oxford-ltns-2022

Once you have completed this survey in response to the experimental east Oxford low traffic neighbourhoods, you can return it to us for free (as no stamp is needed) by writing this address as **one line** in the middle of the envelope:

Freepost OXFORDSHIRE COUNTY COUNCIL

Please also write '**East Oxford LTNs**' on the top left corner of the envelope, so we can easily identify what is inside the envelope.

All responses must be received by **30 November 2022** when the consultation closes.

Alternative formats:

We know that some people can't, or find it difficult to, take part in online consultations or need things in a different format such as large print, Easy Read, audio, braille or a different language, to have their say.

If you, or anyone you know needs an alternative format of the survey or consultation document, paper copies of the consultation document or help with sharing their thoughts, please email: eastoxfordltn@oxfordshire.gov.uk or call Oxfordshire County Council's customer services team on **01865 792422**. Please note the council's customer services team are unable to answer any detailed questions about the consultations, but they can take your details and ask an appropriate member of staff to get in touch.

Introduction

We are trialling three low traffic neighbourhoods (LTNs) in the Divinity Road area, St Clement's area, and St Mary's area of east Oxford under an experimental traffic regulation order (ETRO). These LTNs are collectively known as the east Oxford LTNs and you can read more about them on our website here:

<https://www.oxfordshire.gov.uk/residents/roads-and-transport/active-travel/east-oxford-ltns>



As part of the trial a formal consultation opened on 20 May and will run for a period of six months. Changes to the schemes can be made during the course of the experiment, at which time the consultation period will reset and continue for six months from the point of that change.

A decision on whether to make the trial scheme permanent, extend or remove it will be made at a county council cabinet meeting in February 2023. Officers will recommend the decision based on factors including any feedback received, data collected on traffic and air pollution and levels of walking and cycling in these areas.

The survey is open from **20 May to 30 November 2022** and only needs to be completed once. We encourage you to read the supporting information before having your say.

Part 1 – What capacity are you responding in?

In the first part of this survey, we would like to find out a bit more about you and what has motivated you to respond today.

- **Q1. Please select one of the following that best describes the capacity you are completing the survey in:**

- (choose any one option) (required)

- | | |
|--|--------------------------|
| As an individual | <input type="checkbox"/> |
| As a business, faith organisation, charity/organisation or education establishment | <input type="checkbox"/> |
| As part of an interest group, campaign group or campaign organisation | <input type="checkbox"/> |
| As a parish, town, district or County councillor | <input type="checkbox"/> |

Other, please provide further details:

Q2. If you are responding as an individual, do you live in any of the following?

If you are unsure if you live in an east Oxford LTN area please check first by referring to the downloadable maps in the Key documents folder on the Let's Talk Oxfordshire online page.



(Tick one box only) (required)

Divinity Road LTN area ☐

St Mary's LTN area ☐

St Clement's LTN area ☐

Elsewhere in East Oxford ☐

No ☐

Q3. Please enter the road only where you currently live:

Q4. If you are responding as a representative of a business, group, education establishment or organisation, please provide further details:

Please provide your name and the name of the establishment:

Q5. Is your business, faith organisation, charity/organisation or education establishment in any of the following?

If you are unsure if your organisation is based in an east Oxford LTN area please check first by referring to the downloadable maps on the Let's Talk Oxfordshire online page.

(choose any one option) (required)

Divinity Road LTN area ☐

St Mary's LTN area ☐

St Clement's LTN area ☐



Elsewhere in East Oxford ☐

No ☐

Q6. Please enter the road only where the business, faith organisation, charity/organisation or education establishment you are responding on behalf is based

Q7. If you are responding as a councillor, please give your name and the parish or town/ward or division you represent below:

Your name:

Area you represent:

Part 2 – Tell us about your travel habits

The second section of the survey asks questions about your travel habits within any of the experimental east Oxford LTN areas in a personal or professional capacity (ie. relating to your job, business, school, group, organisation etc.).

Q8. Do you ever travel to and within any of the three east Oxford LTN areas for personal reasons?

(choose any one option) (required)

Yes ☐



No

☐

Q9. Which of the following applies to you in your personal life? Tick all that apply.

(choose all that apply)

I work within an east Oxford LTN area ☐

I travel through an east Oxford LTN area to get to another destination ☐

I do not travel within an east Oxford LTN area ☐

I attend a school or college within an east Oxford LTN area ☐

I take a child to childcare, nursery, school or college within an east Oxford LTN area ☐

I shop within an east Oxford LTN area ☐

I visit cafés, takeaways, restaurants, pubs within an east Oxford LTN area ☐

I visit other type of businesses within an east Oxford LTN area ☐

I provide home care / meals on wheels / nursing, social or health care within an east Oxford LTN area ☐

I visit someone living within an east Oxford LTN area ☐

I visit leisure and community venues within east Oxford LTNs area ☐



I make deliveries within an east Oxford LTN area ☐

- Other (please specify)

Q10.

For each of the following ways of travel, please say how often you currently use them for journeys in a personal capacity within an east Oxford LTN area.

Select the most applicable option in each row.

	Regularly	Sometimes	Occasionally	Never
Car (as driver)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Car (as passenger)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Van	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mini-bus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cycling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taxi (including as driver)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motorbike or moped	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mobility scooter/wheelchair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E-scooter or push scooter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Q11. And do you ever travel to and within any of the three east Oxford LTN areas for professional reasons (ie for your job, business, group or organisation)?

(choose any one option) (required)

Yes ☐

No ☐

Q12. Which of the following applies to you in your professional life? Tick all that apply.

(choose all that apply)

I work within an east Oxford LTN area ☐

I travel through an east Oxford LTN area to get to another destination ☐

I do not travel within an east Oxford LTN area ☐

I attend a school or college within an east Oxford LTN area ☐

I take a child to childcare, nursery, school or college within an east Oxford LTN area ☐

I shop within an east Oxford LTN area ☐

I visit cafés, takeaways, restaurants, pubs within an east Oxford LTN area ☐

I visit other type of businesses within an east Oxford LTN area ☐



I provide home care / meals on wheels /
nursing, social or health care within an
east Oxford LTN area ☐

I visit someone living within an east
Oxford LTN area ☐

I visit leisure and community venues
within east Oxford LTNs area ☐

I make deliveries within an east Oxford
LTN area ☐

Other (please specify)

Q13. We now want to know about your travel habits in your professional life, ie. relating to your job, business, group or organisation.

For each of the following ways of travel, please say how often you use them for these types of journeys within the proposed east Oxford LTN areas.

Select the most applicable option in each row.

	Regularly	Sometimes	Occasionally	Never
Car (as driver)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Car (as passenger)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Van	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mini-bus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Cycling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taxi (including as driver)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motorbike or moped	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mobility scooter/wheelchair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E-scooter or push scooter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q14. Before the experimental east Oxford LTNs were in place, please say how often you travelled through the east Oxford LTN areas to get to another destination by each of the following modes:

Select the most applicable option in each row.

	Regularly	Sometimes	Occasionally	Never
Car	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Van	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mini-bus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cycling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taxi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motorbike or moped	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mobility scooter/wheelchair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E-scooter or push scooter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q15. Please add any additional comments about your travel habits

Part 3 – Your views on the experimental east Oxford LTN areas

In part three of the survey we would like to hear your views on the three experimental east Oxford LTN areas. You will also have the opportunity to provide feedback on one or all of the individual traffic 14 filters within the three east Oxford LTN areas.

Q16 Which of the following best describes your views on the Divinity Road LTN area, in east Oxford?

Please look at the plans of filter locations before answering this question.

	Entirely positive	Mostly positive	Neutral	Mostly negative	Entirely negative	Don't know	No view on this LTN area
Divinity Road	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q17. Please provide comments to support your view on the Divinity Road area LTN below:

Q18. Which of the following best describes your views on the St Clement's LTN areas in east Oxford?



Please look at the plans of filter locations before answering this question.

	Entirely positive	Mostly positive	Neutral	Mostly negative	Entirely negative	Don't know	No view on this LTN area
St Clement's	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q19. Please provide comments to support your view on the St Clement's area LTN below:

Q20 Which of the following best describes your views on the St Mary's LTN area in east Oxford?

Please look at the plans of filter locations before answering this question.

	Entirely positive	Mostly positive	Neutral	Mostly negative	Entirely negative	Don't know	No view on this LTN area
St Mary's	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q21. Please provide comments to support your view on the St Mary's area LTN below:



Q22. Do you want to comment on any of the 14 individual traffic filters within the three east Oxford LTN areas?

You will be taken to a list of filters in each area and have the option to comment on one or all of those filters. You will then have the option to do the same for another LTN area until you have provided all of your comments. You do not have to provide comments on all filters.

(choose any one option)

Yes ☐

No ☐

Q23- Do you have any comments to make about the Divinity Road LTN area?

(choose any one option)

Yes ☐

No ☐

Answer this question only if you have chosen Yes for Do you have any comments to make about the Divinity Road LTN area?

If you have a comment about the DR1 Divinity Road filter, please use the box below. (Leave blank if you have no comment to make.)

Answer this question only if you have chosen Yes for Do you have any comments to make about the Divinity Road LTN area?



If you have a comment about the DR2 Southfield Road filter, please use the box below.
(Leave blank if you have no comment to make.)

Q24 Do you have any comments to make about the St Clement's LTN area?

(choose any one option)

Yes ☐

No ☐

Answer this question only if you have chosen Yes for Do you have any comments to make about the St Clement's LTN area?

If you have a comment about the SC1 Rectory Road (contraflow, cycle way and two-way section) filter, please use the box below. (Leave blank if you have no comment to make.)

Answer
this
question
only if
you
have
chosen
Yes for

Do you have any comments to make about the St Clement's LTN area?

If you have a comment about the SC2 Princes Road filter, please use the box below. (Leave blank if you have no comment to make.)

Q25 Do you have any comments to make the St Mary's LTN area?

(choose any one option)



Yes ☐

No ☐

Answer this question only if you have chosen Yes for Do you have any comments to make about the St Mary's LTN area?

If you have a comment about the SM1 Circus Road filter, please use the box below. (Leave blank if you have no comment to make.)

Answer this question only if you have chosen Yes for Do you have any comments to make about the St Mary's LTN area?

If you have a comment about the SM2 Temple Street filter, please use the box below. (Leave blank if you have no comment to make.)

Answer this question only if you have chosen Yes for Do you have any comments to make about the St Mary's LTN area?

If you have a comment about the SM3 Stockmore Street filter, please use the box below. (Leave blank if you have no comment to make.)

Answer this question only if you have chosen Yes for Do you have any comments to make about the St Mary's LTN area?

If you have a comment about the SM4 Marston Street filter, please use the box below. (Leave blank if you have no comment to make.)

Answer this question only if you have chosen Yes for Do you have any comments to make about the St Mary's LTN area?

If you have a comment about the SM5 James Street filter, please use the box below. (Leave blank if you have no comment to make.)

Answer this question only if you have chosen Yes for Do you have any comments to make about the St Mary's LTN area?

If you have a comment about the SM6 Bullingdon Road filter, please use the box below. (Leave blank if you have no comment to make.)



Answer this question only if you have chosen Yes for Do you have any comments to make about the St Mary's LTN area?

If you have a comment about the SM7 Leopold Street filter, please use the box below. (Leave blank if you have no comment to make.)

Answer this question only if you have chosen Yes for Do you have any comments to make about the St Mary's LTN area?

If you have a comment about the SM8 Magdalen Road (two way) filter, please use the box below. (Leave blank if you have no comment to make.)

Answer this question only if you have chosen Yes for Do you have any comments to make about the St Mary's LTN area?

If you have a comment about the SM9 Barnet Street and SM10 Howard Street (contraflow, cycle way and two-way section) filter, please use the box below. (Leave blank if you have no comment to make.)



Thank you for your feedback on the east Oxford LTNs we would now like to ask some questions about you

Q26 How did you find out about this consultation? (Choose all that apply) *

- ☐ Facebook
- ☐ Twitter
- ☐ Instagram
- ☐ LinkedIn
- ☐ NextDoor
- ☐ Oxfordshire.gov.uk website
- ☐ Email from Oxfordshire County Council
- ☐ Local news item (newspaper, online, radio, tv) Radio advert
- ☐ Oxfordshire County Councillor District Councillor
- ☐ Parish or town councillor
- ☐ Local community news item
- ☐ Poster / information in local library Local community group / organisation
- ☐ Friend / relative
- ☐ Other (please specify)

Part 4 – About You

We would like to know more about you so that we can understand more about our customers and residents, as it helps us to know if we are hearing the views of a wide range of people and communities.

If you do not wish to provide any of this information, please select prefer not to say.

All information given is anonymous and is governed by the General Data Protection Regulations 2018 which you can read by going to this website:

<https://www.gov.uk/government/publications/guide-to-the-general-data-protection-regulation>

Q27 What is your postcode?

If you are responding as a resident please provide the first four or five digits of your postcode (but not the letters at the end). e.g. OX1 1 or OX14 5.

Q28 What is your postcode?

If you are responding as a representative of a business or other organisation, please provide the first four or five digits of your premises' postcode (but not the letters at the end). e.g. OX1 1 or OX14 5.

Q29 What is your age? (Choose one option) *

- ☐ Under 16



- ☐ 16 - 24
- ☐ 25 - 34
- ☐ 35 - 44
- ☐ 45 - 54
- ☐ 55 - 64
- ☐ 65 – 74
- ☐ 75 - 84
- ☐ 85 or over
- ☐ Prefer not to say

Q30 What is your sex? (Choose one option) *

- ☐ Female
- ☐ Male
- ☐ Prefer not to say
- ☐ I use another term (please state here)

Q31 What is your ethnic group or background? (Choose one option)*

- ☐ Asian or Asian British (Indian, Pakistani, Bangladeshi or any other Asian background)
- ☐ Black or Black British (Caribbean, African, or any other Black background)
- ☐ Chinese
- ☐ Mixed or multiple ethnic groups (White and Black Caribbean, White and Black African, White and Asian, and any other mixed background)
- ☐ White (British, Irish, or any other white background)
- ☐ Prefer not to say
- ☐ Other ethnic group or background (please specify)

Q32 What is your current religion, if any? (Choose one option)

- ☐ Buddhist
- ☐ Christian (including Church of England, Catholic, Protestant and all other Christian denominations)
- ☐ Hindu
- ☐ Jewish
- ☐ Muslim
- ☐ Sikh
- ☐ No religion
- ☐ Prefer not to say
- ☐ Any other religion (please state below)

Q33 Are your day-to-day activities limited because of a long-term illness, health problem or disability which has lasted, or is expected to last, at least 12 months? (Choose one option) *

- ☐ Yes - limited a lot



- ☐ Yes – limited a little
- ☐ No
- ☐ Prefer not to say

Q34 Are you a blue badge holder?

Yes
No

Q35 Are you a carer? (Choose one option)

A carer is anyone who cares, unpaid, for a friend or family member who, due to illness, disability, a mental health problem or an addiction, cannot cope without their support. Both children and adults can be carers

- ☐ Yes
- ☐ No
- ☐ Prefer not to say

Data protection and privacy *

Under the Data Protection Act 2018, we (Oxfordshire County Council) have a legal duty to protect any personal information we collect from you. Oxfordshire County Council is committed to open government and this may include quoting extracts from your consultation response in our report.

We will not however, disclose the names of people who have responded unless they have provided consent. For this purpose, we ask that you are careful not to disclose personal information in your comments – for example the names of service users or children. If you do not want all or part of your response to be made public, or shared with councillors, please state below which parts you wish us to keep confidential.

View Oxfordshire County Council's privacy notice online at www.oxfordshire.gov.uk/privacy-notice

Q36 Please use this space to tell us if there is any specific part of your response you wish to keep confidential:

Stay in touch

We invite you to sign up to get regular email updates on news, events, and developments from across the county.

Q37 Would you like to sign up?

Yes



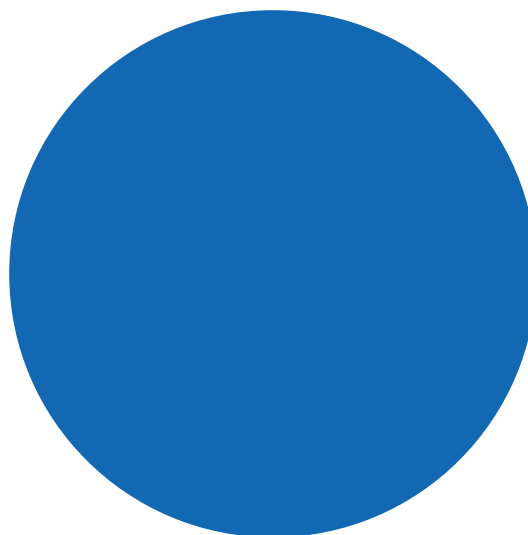
No

Q38 If you have chosen 'Yes' for 'Would you like to sign-up?', please provide your email address below, so we can contact you and send a link to our sign-up page where you can tailor which communications you receive:

Thank you for taking the time to answer these questions



For more information



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ascaife@djsresearch.com

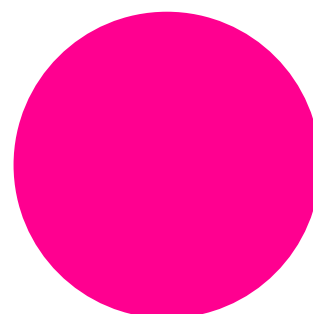
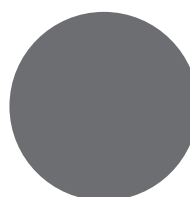
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Prepared for:



East Oxford low traffic neighbourhoods – Traffic Regulation Order (TRO) – report on consultation

September 2023

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Contents

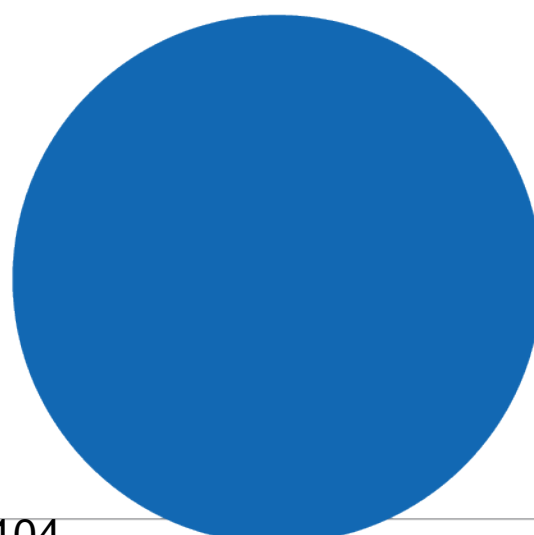
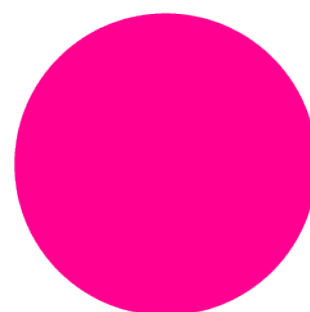
Executive summary	4
Travel habits post LTNs	5
Views on the experimental east Oxford LTN areas	5
Views on the 14 individual traffic filters	7
Views on the proposed changes to the experimental east Oxford LTN areas	8
Introduction	12
Background to this consultation	13
Pre-implementation consultation (2021)	13
Six-month consultation (2022)	13
Impact of vandalism	14
Six-week consultation (2023)	14
Decision on the trial	14
Background and methodology	16
Scope of the consultation	17
Significance testing	18
Pertinent notes on results	18
About the consultation approach	18
Demographics	20
Travel habits-post LTN	26
Overview	27
Differences between respondent types	28
Demographic differences	29
Additional comments	36
Divinity Road LTN area	39
Overview	40
Respondents' views on the Divinity Road LTN area	41
Views on the Divinity Road LTN area by demographic	42
Further comments	44
St. Clement's LTN area	46
Overview	47
Respondents' views on the St. Clement's LTN area	48
Views on the St. Clement's LTN area by demographic	49
Further comments	50
St. Mary's LTN area	52
Overview	53
Respondents' views on the St. Mary's LTN area	54



Views on the St. Mary's LTN area by demographic	55
Further comments	57
Views on the 14 individual experimental road filters	59
Divinity Road LTN area	60
St. Clement's LTN area	62
St. Mary's LTN area	64
Views on the proposed changes to the experimental east Oxford LTN areas.....	72
Overview	73
Divinity Road ANPR cameras	73
Divinity Road ANPR cameras by demographic	74
Further comments	76
Magdalen Road ANPR cameras	78
Magdalen Road ANPR cameras by demographic.....	79
Further comments	80
James Street ANPR cameras	83
James Street ANPR cameras by demographic.....	84
Further comments	85
Bullington Road restrictions	87
Bullington Road restrictions by demographic	88
Further comments	89
Marston Street parking arrangements.....	91
Marston Street parking arrangements by demographic	92
Further comments	93
Jeune Street restrictions.....	94
Jeune Street restrictions by demographic.....	95
Further comments	97
Views on ANPR cameras.....	99
Email and letter responses.....	106
Neutral	107
Support	108
Oppose.....	108
Support / oppose part of the scheme.....	109
Specific stakeholder responses	109
Appendix A:.....	111
Questionnaire	112
Appendix B:.....	132
Summary of proposals broken by responding type	133



Executive summary





Summarising the findings from the statutory Traffic Regulation Order survey for the east Oxford low traffic neighbourhoods.

Oxfordshire County Council has been trialling three low traffic neighbourhoods (LTNs) in the Divinity Road area, St. Clement's area, and St. Mary's area of east Oxford – collectively known as the east Oxford LTNs. The east Oxford LTNs were provisionally installed under an experimental traffic regulation order (ETRO) beginning on 20 May 2022.

Consultations on the east Oxford LTNs took place in 2021 and 2022, and this report outlines the findings from a further consultation which ran from 5 June to 20 July 2023. A wide range of data and information including the consultation findings from the 2022 and 2023 consultations will be drawn upon when the county council cabinet decides on the future of the east Oxford LTNs in October 2023.

Travel habits post LTNs

Respondents were firstly asked whether the trial LTNs had led to a change in travel habits. Around 25% had increased their cycling or walking habits, and a similar proportion had decreased their car use (27%).

Despite this, the main response for each travel mode listed in the question was that the trial LTNs had not caused the respondent to change their habits.

The survey received feedback from a broad range of respondent types. Businesses and other organisations (faith, education) were significantly more likely to say their car use, as a driver or a passenger, had increased than individuals; whereas individuals were significantly more likely to say their cycling had increased.

Respondents' views on each of the LTNs appear to be linked to whether use of a mode of transport had increased or decreased since the beginning of the trial. If a respondent rated each of the LTNs positively, they were significantly less likely to have increased their use of the car, as a driver or a passenger, but more likely to have increased their frequency of walking or cycling.

Businesses and other organisations were significantly more likely to say their car use, as a driver or a passenger, had increased than individuals, whereas individuals were significantly more likely to say their cycling had increased.

Most additional comments mentioned having to drive further/having to make detours/travelling being more difficult during the LTNs trial.

Views on the experimental east Oxford LTN areas

Throughout the survey, individuals were significantly more likely to have positive views on all the LTNs in east Oxford and the proposed changes than businesses, faith, education and charitable organisations. These organisations had significantly more negative views than individuals.

More positive demographic groups were as follows:

- Aged 25-34.
- Males.
- Mixed / multiple and White ethnicities.

- Respondents whose day-to-day activities were not limited by a long-term illness or disability.
- Non-blue badge holders.
- Non-carers.
- Residents in St. Clement's area.

More negative demographic groups were as follows:

- Prefer not to state age or gender.
- Asian / Asian British ethnicities.
- Respondents whose day-to-day activities were limited by a long-term illness or disability.
- Blue badge holders.
- Carers.
- Residents living elsewhere in east Oxford.

Divinity Road LTN area

Fifty two percent of all respondents had negative views on the Divinity Road LTN area. Thirty nine percent of respondents had positive views.

Although more than 50% of respondents have a negative view of the LTN area, the most frequent theme from respondents' answers was that the area had become safer / more pleasant for cyclists and pedestrians. This was closely followed by respondents saying that journey times and cost has increased.

St. Clement's LTN area

Fifty-four percent of all respondents had negative views on the St. Clement's LTN area. Thirty-four percent of respondents had positive views.

The most frequent theme from respondents' answers was that the LTN will or had already resulted in increased traffic and congestion and that the plan will / has increased pollution/worsened air quality, closely followed by increased journey times and costs.

St. Mary's LTN area

Fifty percent of all respondents had negative views on the St. Mary's LTN area in east Oxford. Thirty-six percent of respondents had positive views.

The most frequent theme from respondents' answers was that the LTN will or had already resulted in increased traffic and congestion and that the plan will / has increased journey times and costs.



Views on the 14 individual traffic filters

Respondents were asked whether they wanted to comment on each of the 14 individual traffic filters. Sample sizes varied for each one, and there were a number of respondents who did not then go on to write specific comments about the proposal in question (shown by the proportion saying “not answered” in each table).

The main comments are shown for each filter below:

Location	Top response(s)
DR1 Divinity Road	Disagree with / can't see the benefits / remove it
DR2 Southfield Road	Disagree with / can't see the benefits / remove it
SC1 Rectory Road	Plan will / has increased traffic and congestion
SC2 Princes Road	Disagree with proposal(s) / can't see the benefits / remove them
SM1 Circus Street	Plan will / has increased traffic and congestion
SM2 Temple Street	Disagree with proposal(s) / can't see the benefits / remove them
SM3 Stockmore Street	Disagree with proposal(s) / can't see the benefits / remove them
SM4 Marston Street	Plan will / has increased traffic and congestion Too much risk / remove them Plan will / has increased pollution / worsen air quality
SM5 James Street	Disagree with proposal(s) / can't see the benefits / remove them
SM6 Bullingdon Road	Get rid of LTNs / No benefit from them
SM7 Leopold Street	Disagree with proposal(s) / can't see the benefits / remove them
SM8 Magdalen Road	Should be removed/LTNs should be removed
SM9 Barnet Street and SM10 Howard Street	Disagree with proposal(s) / can't see the benefit

Not all comments were negative, the highest mentioned positive comments for each proposal are shown in the table below:

Location	Top positive responses(s)
DR1 Divinity Road	Fully support / can see benefits / keep them permanently
DR2 Southfield Road	Support / agree with / can see the benefits
SC1 Rectory Road	Safer / more pleasant for cyclists and pedestrians
SC2 Princes Road	Support/ agree with / Can see the benefits
SM1 Circus Street	Support / agree with / can see the benefits
SM2 Temple Street	Support / agree with / can see the benefits
SM3 Stockmore Street	Agree with proposals / can see the benefits/ keep them
SM4 Marston Street	A one-way system should be implemented / is preferable

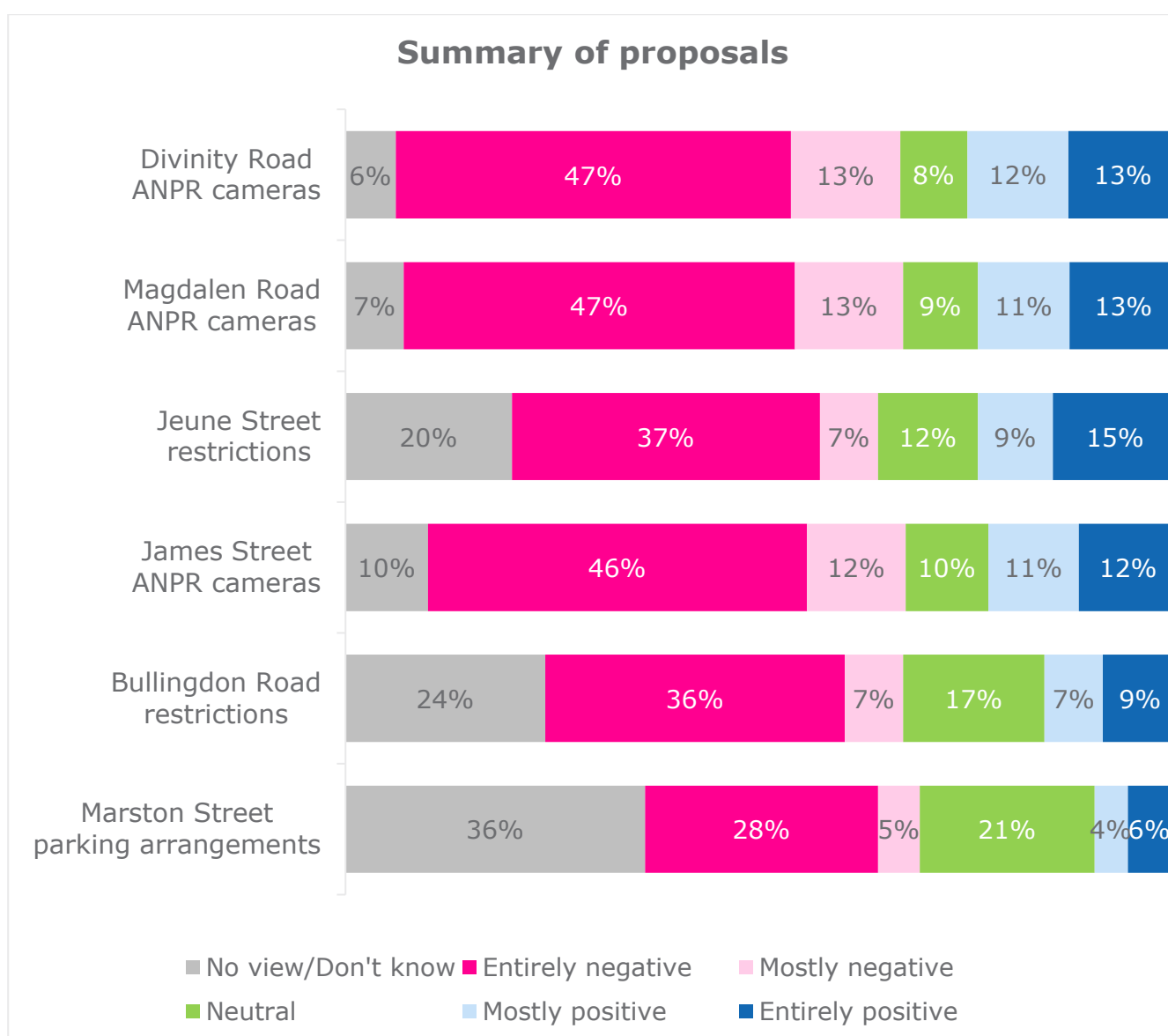


SM5 James Street	Support / agree with / can see the benefits
SM6 Bullingdon Road	Support / agree with / can see the benefits
SM7 Leopold Street	Support / agree with / can see the benefits
SM8 Magdalen Road	A one-way system should be implemented/is preferable
SM9 Barnet Street and SM10 Howard Street	Support / agree with / can see the benefits

Views on the proposed changes to the experimental east Oxford LTN areas

A summary of the views on the proposed changes is shown in the chart below. The Divinity Road ANPR cameras proposal received the most positive views (25%), but also the most negative views (60%), along with the Magdalen Road ANPR cameras proposal (60%).

Figure 1: Summary of proposals. (All responding n=various)





Businesses and other organisations were significantly more negative than individuals towards all proposals, feeling their businesses would be adversely affected by the introduction of the proposed changes. Residents living elsewhere in east Oxford were significantly more negative than residents living or running a business within each of the three LTN areas, due to the impact of travel into and around Oxford. Some example comments are detailed below:

"If our trade is not permitted to be allowed through the ANPR camera along Divinity Road, then our views are negative, and we DO NOT support these proposals. We will only support these proposals if we are granted access through this road if the ANPR camera is installed." – **Entirely negative - Divinity Road ANPR cameras**

"More expense due to extended journey times and less income due to reduced work time as a direct result of increased travel." – **Entirely negative - Divinity Road ANPR cameras**

"If number plate recognition is a possible option to be introduced, would it be possible for local residents with DV parking permits to be permitted to travel on this route to reduce traffic that has increased in Cowley Junction and St. Clement's London Road? There would still be reduced use of Divinity Road by non-local people passing through. Is there any way of putting a small roundabout at Cowley Junction to improve traffic flow? – **Mostly positive - Divinity Road restrictions**

"It is unclear who is allowed to drive through with these cameras, if they are just enforcement cameras enforcing the current LTNs they will only be beneficial financially to the council but will not improve the issue for small independent businesses." - **Mostly negative - Magdalen Road ANPR cameras**

"Having a cycle way on St. Clement's would be great, but make sure all existing bollards are kept in place, no ANPR cameras as those will be abused and the roads will be more dangerous for cyclists. – **Entirely positive - SC1 Rectory Road**

Divinity Road ANPR cameras

Sixty one percent of respondents had negative views of the proposed ANPR cameras for the Divinity Road filter in east Oxford. Twenty-five percent of respondents had positive views.

The most frequent theme from respondents' answers was that the ANPR cameras would be ignored/abused or vandalised, or generally disagreeing with the proposals to install ANPR cameras. Positively, respondents said that it was better for emergency services and generally supported/agreed with the proposals.

Magdalen Road ANPR cameras

Sixty percent of respondents had negative views on the proposed ANPR cameras for the Magdalen Road filter in east Oxford. Twenty-four percent of respondents had positive views.

The most frequent theme from respondents' answers was that exemptions were needed for certain groups, e.g., emergency services, residents, closely followed by general disagreements with the proposal.



James Street ANPR cameras

Fifty eight percent of respondents had negative views on the proposed ANPR cameras for the James Street filter. Twenty three percent of respondents had positive views.

The most frequent theme from respondents' answers was a broad disagreement for the proposal; however, the second most popular view was showing general support for the proposal. This view was held by less than 50% of respondents.

Bullington Road restrictions

Forty three percent of respondents had negative views on the proposed moving of the restrictions on Bullington Road in east Oxford. Sixteen percent of respondents had positive views.

The most frequent theme from respondents' answers was general disagreement for the moving of the restrictions on Bullington Road; more wide-ranging comments were provided, but by fewer respondents.

Marston Street parking arrangements

Thirty three percent of respondents had negative views on the proposed change to the parking arrangements on Marston Street in east Oxford. Only 10% of respondents had positive views; 21% were neutral and 36% didn't have a view or answered 'don't know'.

The most frequent theme from respondents' answers was a general disagreement with the proposed change to parking in Marston Street, but fewer respondents commented on this than for other proposals.

Jeune Street restrictions

Forty four percent of respondents had negative views on the proposal to place a traffic restriction (bollards and / or planters) at the St. Clement's Street end of Jeune Street in east Oxford and make Jeune Street two-way south of the restriction. Twenty four percent of respondents had positive views.

The most frequent theme from respondents' answers was a general disagreement with the proposals; with a slightly lower proportion seeing the benefits of the proposal / supporting it.



We have summarised the main concerns, positive comments and suggestions for the proposals below.

People are concerned about that the changes will be ignored, abused or vandalised. Concerns also related to access for emergency services and to local businesses and the effect this will have on the local economy. The introduction of ANPR cameras was seen as a money spinner or that the fines incurred won't deter bad drivers.

More positive comments included being better for emergency services or that it would help to uphold the rules.

Suggestions to improve the LTNs include implementing a one-way system, having exemptions in place.

Concerns

Disagree with proposals / can't see the benefits / remove them

Increase in dangerous driving e.g. speeding

Extra costs / just a money spinner

Will be ignored / abused / vandalised

Concerned for safety for everyone

Concerns for local businesses / economy

Infringement on rights / liberties / freedom of movement

Plan will / has increased pollution / worsen air quality

Plan will / has increased traffic and congestion

Plan will displace traffic and pollution to surrounding areas

Positive comments

Better for emergency services

Support / agree with / can see the benefits

Will help enforce the rules

Suggestions

A one-way system needs to be implemented

Exemptions needed, e.g., emergency services, taxis, deliveries, etc

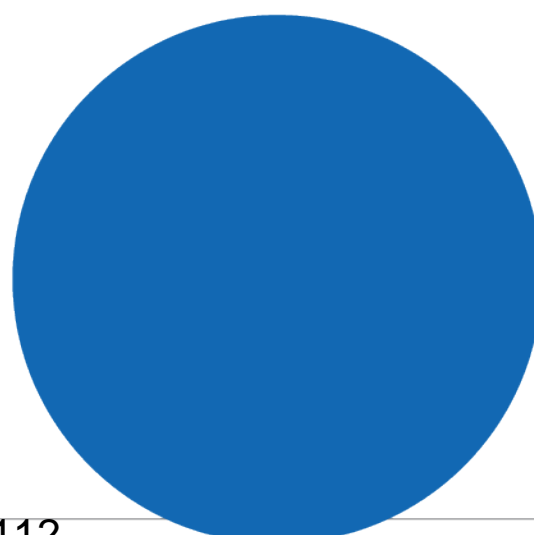
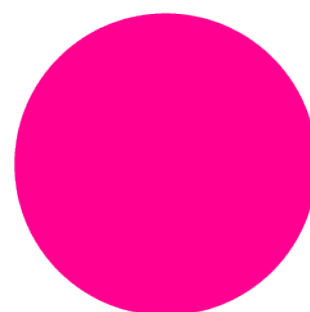
Will require enforcement / policing

Public transport needs improvement

More information needed about exemptions, resident passes



Introduction





Here we provide background information to the various consultation exercises

Background to this consultation

Low Traffic Neighbourhoods (LTNs) are part of Oxfordshire County Council's local transport and connectivity plan, designed to improve travel and transport. They are intended to make residential streets safer and more comfortable for walking, wheeling, and cycling by preventing motorised traffic from using some streets to take shortcuts. As part of the central Oxfordshire travel plan, they are designed to work together with other measures to reduce congestion and improve air quality. By encouraging more active travel this may also contribute towards healthier lifestyles.

Infrastructure such as planters and / or bollards and / or automatic number plate recognition (ANPR) cameras is used to restrict motorised through-traffic – in particular cars, vans and lorries / trucks. All roads remain accessible, but drivers may have to find alternative routes instead of cutting through some streets.

The county council has been trialling three LTNs in the Divinity Road area, St. Clement's area, and St. Mary's area of east Oxford – collectively known as the east Oxford LTNs. The east Oxford LTNs were provisionally installed under an experimental traffic regulation order (ETRO) which began on 20 May 2022.

Pre-implementation consultation (2021)

A public consultation on the proposals was run between March and June 2021, using a series of workshops, engagement activities and a survey in June 2021. The survey received 2,010 responses, 33 letters and a smaller number of statements from workshops. Further engagement was undertaken to address specific issues that had been identified. This resulted in some changes to the proposals which were approved in December 2021 to be implemented under the ETRO.

Six-month consultation (2022)

A six-month public consultation ran between 20 May and 30 November 2022, covering the first six months of the trial. The 2022 consultation received 3,938 survey responses and 269 emails and letters. Feedback included that the LTNs had led to improved access and safety for pedestrians and cyclists; reductions in noise and pollution from traffic; and a stronger community feeling and being more likely to use local shops. However, other feedback stressed concerns about timely access to essential locations like schools, work, and hospitals, critical access for emergency vehicles; and an increase in displaced traffic and air pollution affecting other areas of east Oxford (particularly boundary roads); and increased travel times and fuel costs when making car journeys.

A report outlining the findings can be found by visiting the project web page www.oxfordshire.gov.uk/eastoxfordltns.



Impact of vandalism

The operation of the east Oxford LTNs has been significantly impacted by vandalism; specifically, the removal of, and damage to, the plastic bollards, and damage to the locking mechanisms and sockets. This has meant that for significant periods of the trial the full set of filters has not been in place. In March 2023 wooden bollards were installed and the vandalism has since decreased significantly, however has not stopped completely. The consultation results for both 2022 and 2023 should be considered within this context.

Six-week consultation (2023)

Due in part to the vandalism experienced during the trial, Oxfordshire County Council decided to hold a further six-week consultation this year.

The county council has been gathering and analysing the feedback since the beginning of the trial to understand its impact and to help inform future decision making. As a result of that initial feedback and continued engagement with stakeholders, a number of changes to the east Oxford LTNs were proposed and were the subject of the six-week consultation:

- Replacing the bollards in Divinity Road, James Street and Magdalen Road with automatic number plate recognition (ANPR) cameras.
- Introducing bollards and / or planters at the junction of Jeune Street and St. Clement's Street, and making Jeune Street two-way south of the restriction.
- Relocating a residential parking bay in Marston Street.
- And relocating the current restriction on Bullingdon Road to the southwest.

These changes would only be introduced if the county council decides to continue with the LTNs. This consultation was an opportunity for people to:

- Comment on the east Oxford LTN area as a whole, now that the bollards have been replaced and there is a more consistent experience of how the measures are intended to work.
- Highlight the impact of the proposed changes and to suggest any further changes.

This six-week consultation took place from Monday 5th June to Thursday 20th July 2023, 2,130 survey responses were received (2,086 online and 44 paper responses). This report details the results of the survey, and includes feedback received by other correspondence (139 further submissions received by email).

Decision on the trial

It is anticipated that a decision on the next steps for the scheme will be made by Oxfordshire County Council's Cabinet in October 2023. Officers will make recommendations based on factors including, but not limited to, the feedback received, data collected on traffic levels, annual air pollution data (published in spring / summer 2023), levels of walking and cycling in these areas and alignment with policy and council priorities.

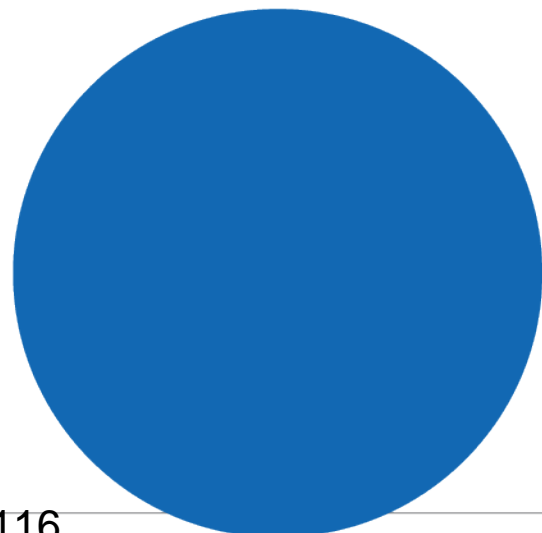
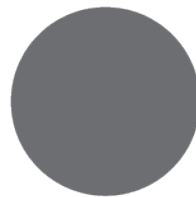
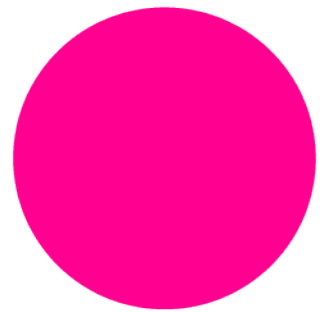
In addition to the consultations taking place throughout 2021, 2022 and 2023, the county council has also engaged with local partners, such as the emergency services, health



services and transport operators. The feedback from this engagement, as well as the results of ongoing technical work, informed some changes to the LTNs during the trial period and continues to be recorded as the trial reaches its conclusion.



Background and methodology



In this section we provide details of the background and the objectives and methodology used in the six-week consultation survey.

Scope of the consultation

Oxfordshire County Council asked for feedback on the three east Oxford low traffic neighbourhood (LTN) areas, the 14 individual filters within the areas and the proposed changes to those LTNs.

The three east Oxford LTN areas are:

- Divinity Road.
- St. Clement's.
- St. Mary's.

The 14 individual filters within the east Oxford LTNs are:

- DR1 Divinity Road filter.
- DR2 Southfield Road filter.
- SC1 Rectory Road filter.
- SC2 Princes Road filter.
- SM1 Circus Street filter.
- SM2 Temple Street filter.
- SM3 Stockmore Street filter.
- SM4 Marston Street filter.
- SM5 James Street filter.
- SM6 Bullingdon Road filter.
- SM7 Leopold Street filter.
- SM8 Magdalen Road filter.
- SM9 Barnet Street and SM10 Howard Street filter.

The proposed changes are to:

- install ANPR cameras at the restriction in Divinity Road.
- install ANPR cameras at the restriction in Magdalen Road.
- install ANPR cameras at the restriction in James Street.
- move the restriction point on Bullingdon Road to a location east of the junction with Hurst Street.
- change the location of a parking bay in Marston Street.
- place a traffic restriction (bollards and / or planters) at the St. Clement's Street end of Jeune Street in east Oxford and make Jeune Street two-way south of the restriction.



Significance testing

Results between groups are highlighted by significance testing which is a statistical technique used to determine whether the differences observed between subgroups are statistically significant or if they are due to random chance. Any significant differences between subgroups are highlighted in blue within the tables. Significance testing has been applied at the 95% confidence level. Significant differences are noted throughout using blue highlight in the tables, for example when listing a table of opinions on different LTN areas from different age groups, blue is used to show that the percentage of 35-44 year olds saying they support the proposal is significantly higher than any others giving an opinion on that LTN area.

Pertinent notes on results

Totals shown within tables may sometimes add up to 99% or 101%, rather than 100%. This is due to rounding up or down from decimal points.

Throughout the survey, questions weren't compulsory to answer. Therefore, some base sizes do not equal the entire sample size.

There are some multiple response questions where respondents can choose as many or as few options as they wish. As a result, these tables do not add to 100%.

The number of respondents answering each question has been added to each table, represented as (n=). Where the table is based on the total number of respondents answering the question, the figure answering is represented in the table title, e.g., (n=2,130). Where sub-groups are examined, the number is represented in the body of the table and (n=) will appear in the table header..

Feedback from the qualitative questions in the consultation survey was analysed and coded into themes. Generally speaking, only themes that have three or more mentions are referenced and explored in this report. The responses listed will reflect the dominant sentiment of the answers. Some complete lists of themes are included in some tables and the appendix. Many individual respondent comments contained more than one theme and "no. responses" refers to the total number of comments that contained this theme, rather than this equating the number of comments made in total by all respondents. Therefore, number of responses will equate to more than 100% due to comments being broken down or coded into more than one theme.

About the consultation approach

The county council hosted the online survey on their consultation website Let's Talk Oxfordshire¹ from Monday 5th June to Thursday 20th July 2023. A wide range of supporting material was provided including:

- Maps of the LTN areas, filter locations and proposed changes.
- Legal documents.
- A report from the 2022 six-month consultation.

¹ <https://letstalk.oxfordshire.gov.uk/east-oxford-ltns-2023>



- A snapshot monitoring and evaluation report.

Paper copies of the survey were made available at two libraries located in central and east Oxford and the county council offered a range of alternative formats on request. Paper copies were requested by and supplied to one group and several individuals. A number of paper copy surveys were completed and returned. These copies were given unique reference numbers identifying them as paper responses and entered for analysis alongside the online survey responses.

The consultation exercise was promoted as follows:

- Letters were sent to just over 9,000² residents and businesses within and slightly outside the east Oxford LTNs area. The letters contained a QR code and web link to the survey, and a telephone number and email address for those wishing to request the survey as a hard copy or in another alternative format.
- A notice of the consultation in the county council's regular travel bulletin, which is sent to around 4,000 subscribers.
- A press release issued on 5 June, which generated some third-party coverage through local media channels.
- Posts on social media.
- An email was sent to various stakeholder contacts to notify them of the consultation.

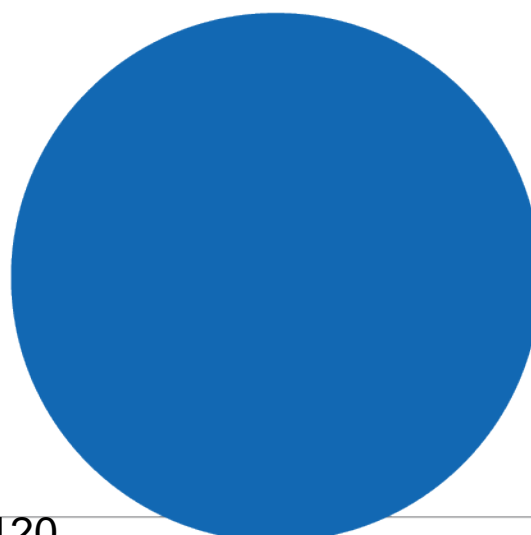
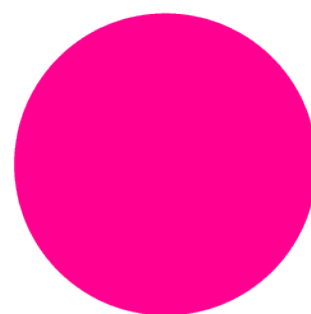
The east Oxford LTNs continue to generate a high level of interest, which was reflected in the response rate to the survey. A total of 2,086 online responses and 44 paper copies of the full survey were submitted. A full profile (by respondent type and demographics) of respondents is provided in the next section.

In addition, the council received 149 pieces of feedback in the form of letters and emails. We have provided a summary of this feedback in the final section of the report.

² This figure is the number of deliverable letters as verified by a courier company.



Demographics





In total, 2,130 responses to the survey were received. A profile of the respondents who completed the consultation is provided in this section.

The majority of responses were received from people completing the survey as individuals (97%), with just 62 responses from businesses, faith and other organisations, 5 responses from interest groups, and 7 from councillors.

Table 1: Q01. Please select one of the following that best describes the capacity you are completing the survey in: (All responding n=).

Respondent type	No. Responses	% Responses
As an individual	2056	97%
As a business, faith organisation, charity / organisation, or education establishment	62	3%
As part of an interest group, campaign group or campaign organisation	5	<1%
As a parish, town, district, or county councillor	7	<1%
Total	2130	100%

There were similar numbers of responses from people aged 35-44, 45-54, and 55-64 – together comprising 62% of total responses, but fewer from people aged 65 or over, or under 35.

Table 2: Q49. What is your age? (All responding n=).

Age	No. Responses	% Responses
Under 16	4	<1%
16-24	48	2%
25-34	253	12%
35-44	438	21%
45-54	457	22%
55-64	404	19%
65-74	314	15%
75-84	90	4%
85 or over	14	1%
Prefer not to say	75	4%
Total	2097³	100%

³ All questions were optional and not compulsory; therefore some totals do not equal the overall sample size. Percentages are based on the proportion answering.



Responses from males and females were similar with slightly more responses being received from males (46%) compared to females (43%). Eleven responses (1%) were recorded from people who describe their gender in another way, and 11% of respondents chose not to disclose their gender.

Table 3: Q50. What is your sex? (All responding n=).

Sex	No. responses	% Responses
Female	887	43%
Male	953	46%
Other	11	1%
Prefer not to say	231	11%
Total	2082	100%

The majority of responses were received from people who describe their ethnicity as being from a White British, Irish or other white background (71%). Five percent of responses were from people who are Asian or Asian British, 2% of respondents were from mixed or multiple ethnic groups; Black or Black British and Chinese ethnic backgrounds each received less than 1% of responses. Nineteen percent of respondents chose not to disclose their ethnicity.

Table 4: Q51. What is your ethnic group or background?

(All responding n=).

Ethnicity	No. Responses	% Responses
Asian or Asian British (Indian, Pakistani, Bangladeshi or any other Asian background)	113	5%
Black or Black British (Caribbean, African, or any other Black background)	7	<1%
Chinese	10	<1%
Mixed or multiple ethnic groups (White and Black Caribbean, White and Black African, White, and Asian, and any other mixed background)	35	2%
White (British, Irish, or any other white background)	1489	71%
Other ethnic group or background	38	2%
Prefer not to say	396	19%
Total	2088	100%



Almost 50% of respondents said they were of no religion (46%), 22% of respondents identified as Christian; 4% as Muslim, 1% each as Buddhist and Jewish, and Hindu and Sikh accounted for less than 1% of responses. Twenty five percent of respondents preferred not to disclose their religion and just 1% described their religion as 'other'.

Table 5: Q52. What is your current religion, if any? (All responding n=).

Religion	No. Responses	% Responses
Buddhist	21	1%
Christian (including Church of England, Catholic, Protestant and all other Christian denominations)	460	22%
Hindu	10	<1%
Jewish	16	1%
Muslim	85	4%
Sikh	4	<1%
No religion	947	46%
Prefer not to say	511	25%
Any other religion	24	1%
Total	2078	100%

Seventy three percent of respondents said they are not limited by a long-term illness, however 6% said they are limited a lot, and 11% said they are limited a little. Eleven percent of respondents preferred not to say.

Table 6: Q53. Are your day-to-day activities limited because of a long-term illness?

(All responding n=).

Long-term illness	No. Responses	% Responses
Yes – limited a lot	121	6%
Yes – limited a little	224	11%
No	1517	73%
Prefer not to say	222	11%
Total	2084	100%

Just 3% of responses were received from people who are blue badge holders (compared to 97% who said they were not blue badge holders).

Table 7: Q54. Are you a blue badge holder? (All responding n=).

Blue badge holder	No. Responses	% Responses
Yes	71	3%
No	1989	97%
Total	2060	100%



Eighty percent of respondents said they are not a carer, whereas 13% said they are; 7% preferred not to say.

Table 8: Q55. Are you a carer?⁴ (All responding n=).

Carer	No. Responses	% Responses
Yes	270	13%
No	1672	80%
Prefer not to say	147	7%
Total	2089	100%

Fifty six percent of responses from individuals were received either from those responding from elsewhere in east Oxford (31%), or not in east Oxford at all (25%).

Of responses received from within an LTN area: St. Clement's LTN area accounted for 21% of overall individual responses, Divinity Road for 15%, and St. Mary's for 8%.

Only 3% of the responses received were from businesses or organisations. Of the 3%: 29% of responses were from elsewhere in east Oxford, 27% were from within St. Mary's LTN area, 14% from St. Clement's and 13% from Divinity Road. Seventeen percent of responses from businesses or organisations received were from outside east Oxford.

Table 9: Q02. / Q05. Geo-location (All responding n=).

Location	Individual No. responses	Individual % Responses	Business/organisation No. responses	Business/organisation % Responses
Divinity Road LTN area	314	15%	9	13%
St. Mary's LTN area	166	8%	19	27%
St. Clement's LTN area	438	21%	10	14%
Elsewhere in east Oxford	633	31%	20	29%
No	507	25%	12	17%
Total	2058	100%	70	100%

⁴ A carer is anyone who cares, unpaid, for a friend or family member who, due to illness, disability, a mental health problem or an addiction, cannot cope without their support. Both children and adults can be carers.



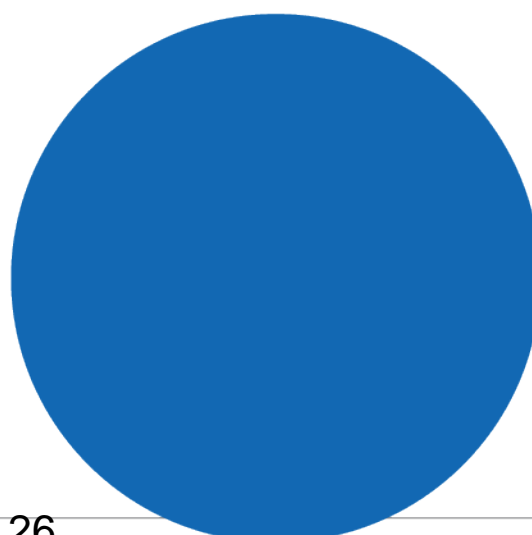
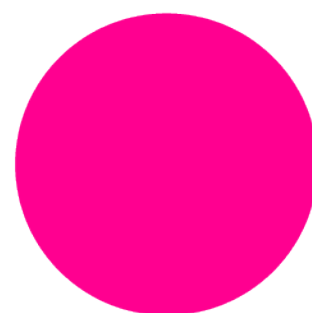
Thirty three percent of respondents found out about the consultation by letter, whilst 15% found out from a friend / relative, 14% from a local community group / organisation, and 13% from local news. Other sources were (each) mentioned by less than 10% of respondents. This question was a multi-response question – respondents could select as many options as they wanted – as a result, the table below does not add to 100%.

Table 10: Q46. How did you find out about this consultation? (All responding n=2,130).

	No. Responses	% Responses
Letter	693	33%
Friend / relative	315	15%
Local community group / organisation	288	14%
Local news item (newspaper, online, radio, tv)	268	13%
NextDoor	205	10%
Local community news item	170	8%
Email from Oxfordshire County Council	169	8%
Oxfordshire.gov.uk website	165	8%
Facebook	153	7%
Other	113	5%
Twitter	93	4%
Oxfordshire County Councillor or District Councillor	23	1%
Poster / information in local library	23	1%
Parish or town councillor	19	1%
Radio advert	19	1%
Instagram	6	<1%
LinkedIn	6	<1%
N.B. Multi-response question		



Travel habits-post LTN



This section details respondents' changes to travel habits since the experimental LTNs were installed

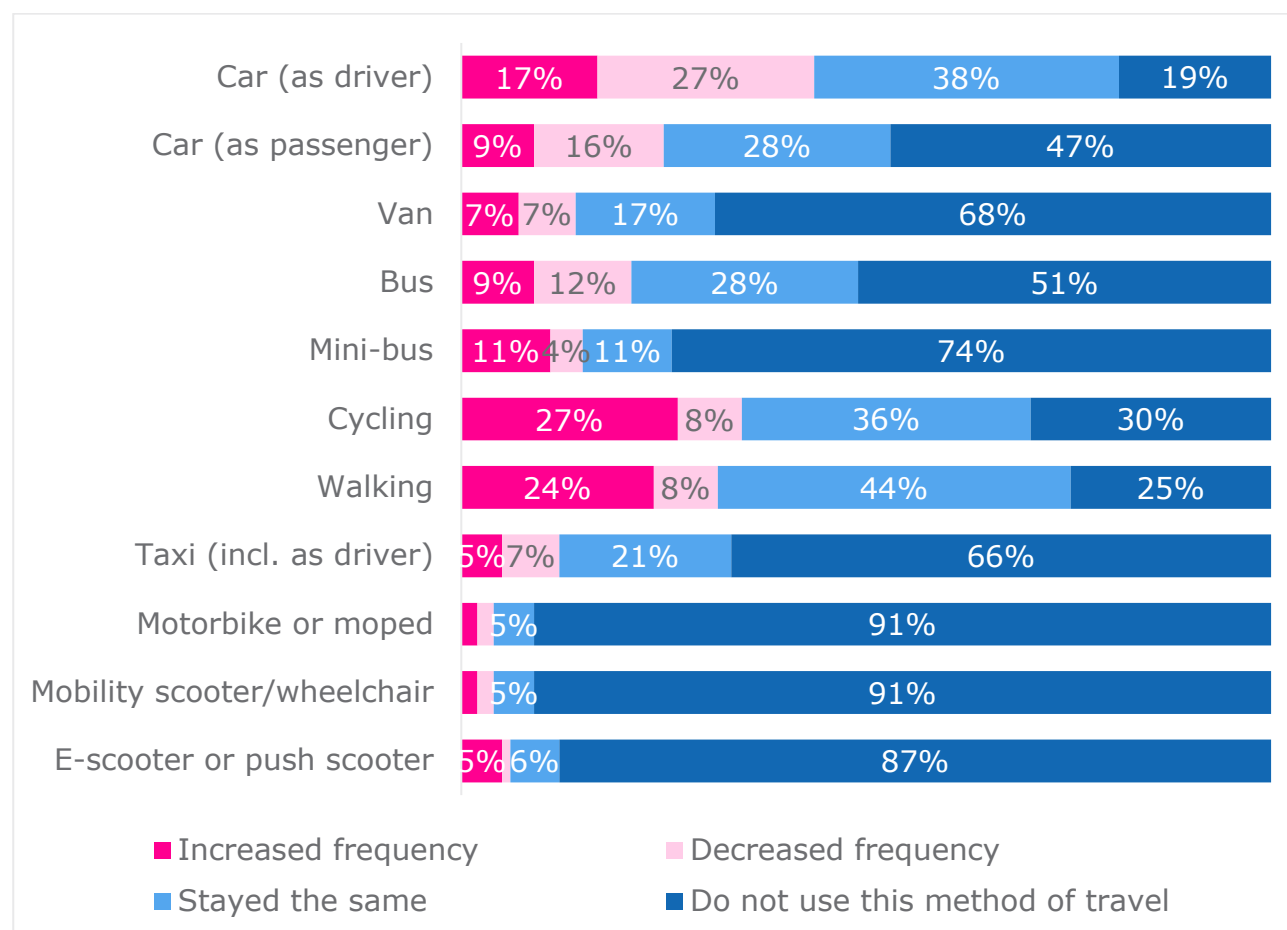
Overview

Respondents were firstly asked whether the experimental trial LTNs had led to a change in travel habits. As shown in Figure 2 below, around 25% had increased their cycling or walking habits (27% and 24% respectively), whilst a similar proportion had decreased their car use (as a driver) (27%).

However, the main response for each travel mode in the question was that the trial LTNs had not caused them to change their habits. No changes were reported most notably for:

- Walking = 44%.
- Car (as driver) = 38%.
- Cycling = 36%.
- Car (as passenger) = 28%.
- Bus = 28%.

Figure 2: Q09. We would like to know if the experimental trial LTNs have led to a change in your travel habits. (All responding n=2,130).

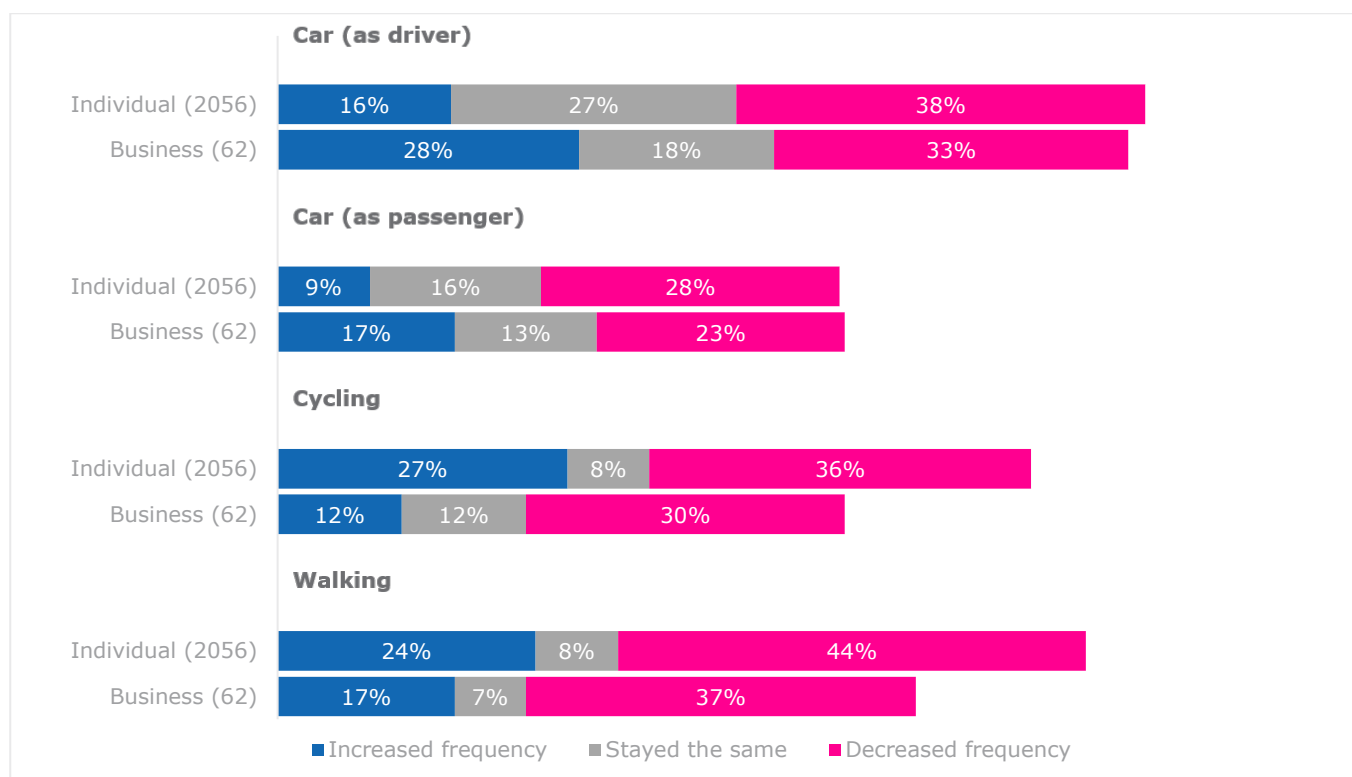


Responses of 3% or less are not shown on the chart above.

Differences between respondent types

There were numerous differences between the respondent types, as shown in the figure below. Businesses and other organisations were significantly more likely to say their car use, as a driver or a passenger, had increased than individuals, whereas individuals were significantly more likely to say their cycling had increased.

Figure 3: Q09. We would like to know if the experimental trial LTNs have led to a change in your travel habits – Respondent type



Businesses and other organisations (faith, education) were significantly more likely to say their car use, as a driver or a passenger, had increased than individuals, some example quotes from businesses / organisations were:

"The buses that go down Iffley Road, Cowley Road, and St. Clements are much more unreliable, and cannot guarantee you'll get to work on time. It is more reliable to drive, despite an increase in traffic. It is not safe to cycle as the increase in traffic on the main roads means there are too many vehicles on the main road. The side streets are quiet at the expense of those who live and work on the main road."

"I would rather be in my own car than on public transport which is stuck in the same traffic. I walk less because of the exhaust fumes from the extra traffic on the main boundary roads i.e., Cowley Road Iffley road the plane rounder-bout and St. Clements."

"They have made an increase in cost to our customers due to the deliveries of materials that we now cannot get and delayed time to travel to site it is a complete shambles."



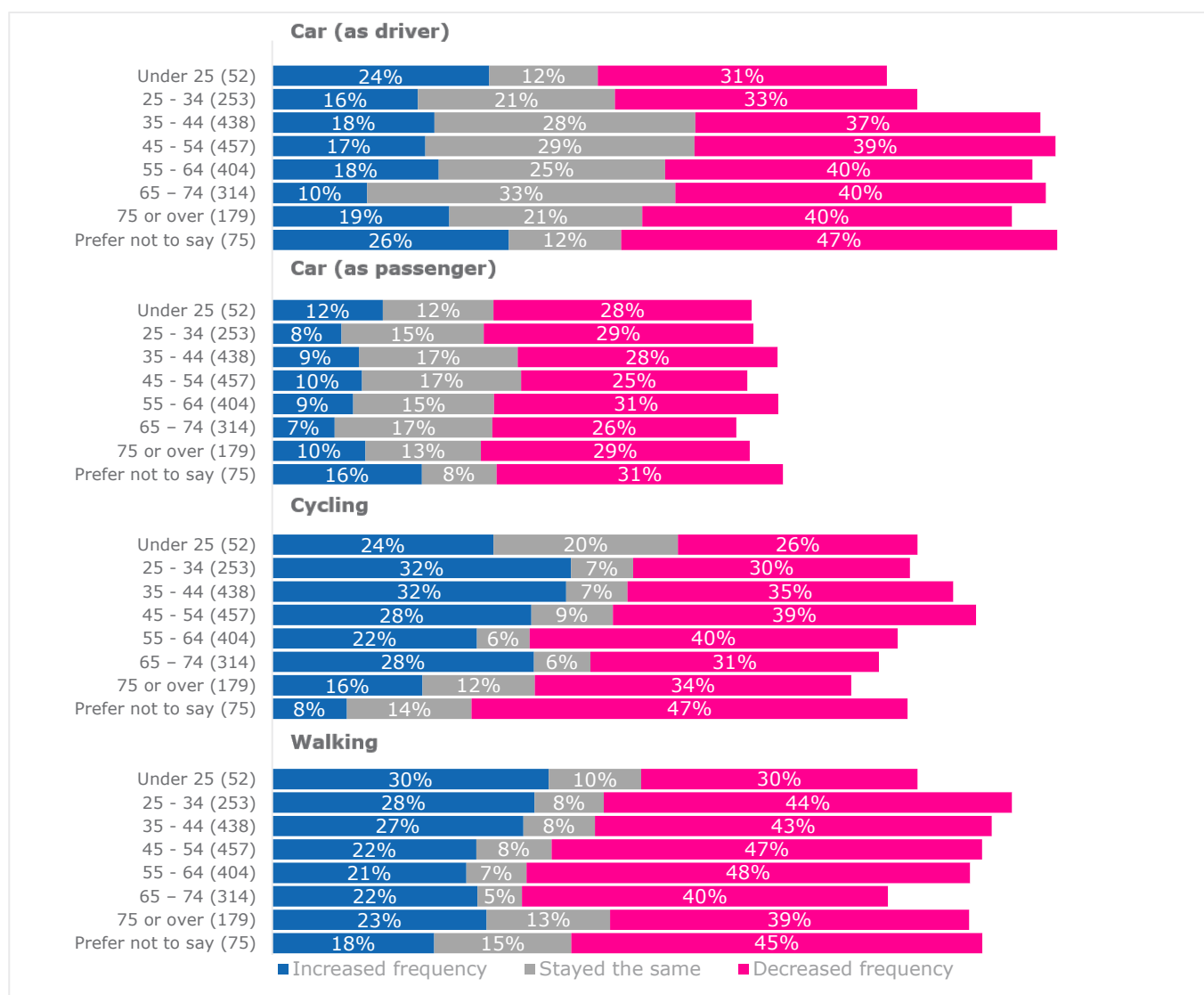
Demographic differences

Key demographic differences are highlighted in the bullet points below, followed by a full breakdown in each figure.

Age

- Car (as driver): Respondents aged 65-74 were significantly less likely than all other age groups (apart from 25-34) to have increased driving a car since the experimental LTN trials.
- Cycling: Respondents aged 25-54 and 65-74 said their cycling frequency had increased since the inception of the experimental trial.
- Walking: Respondents aged 25-44 are most likely to have walked more than other age groups.

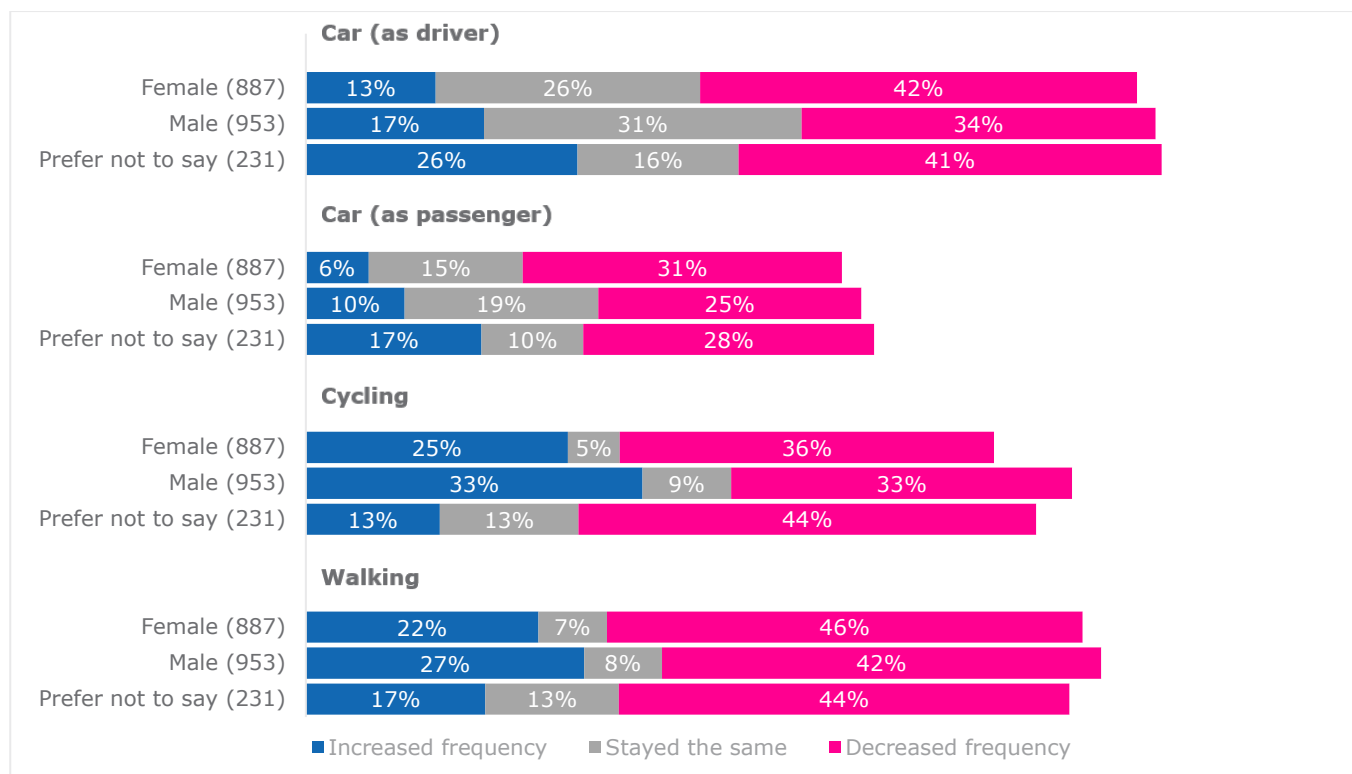
Figure 4: Q09. We would like to know if the experimental trial LTNs have led to a change in your travel habits – Age



Gender

- Respondents who preferred not to state their gender significantly increased their use of the car (as a driver) following the introduction of the experimental LTNs.
- The same group said their use of the car (as a passenger) had increased in frequency, significantly more than females and males.
- Significantly more males than the other two groups said their walking and cycling frequency had increased.

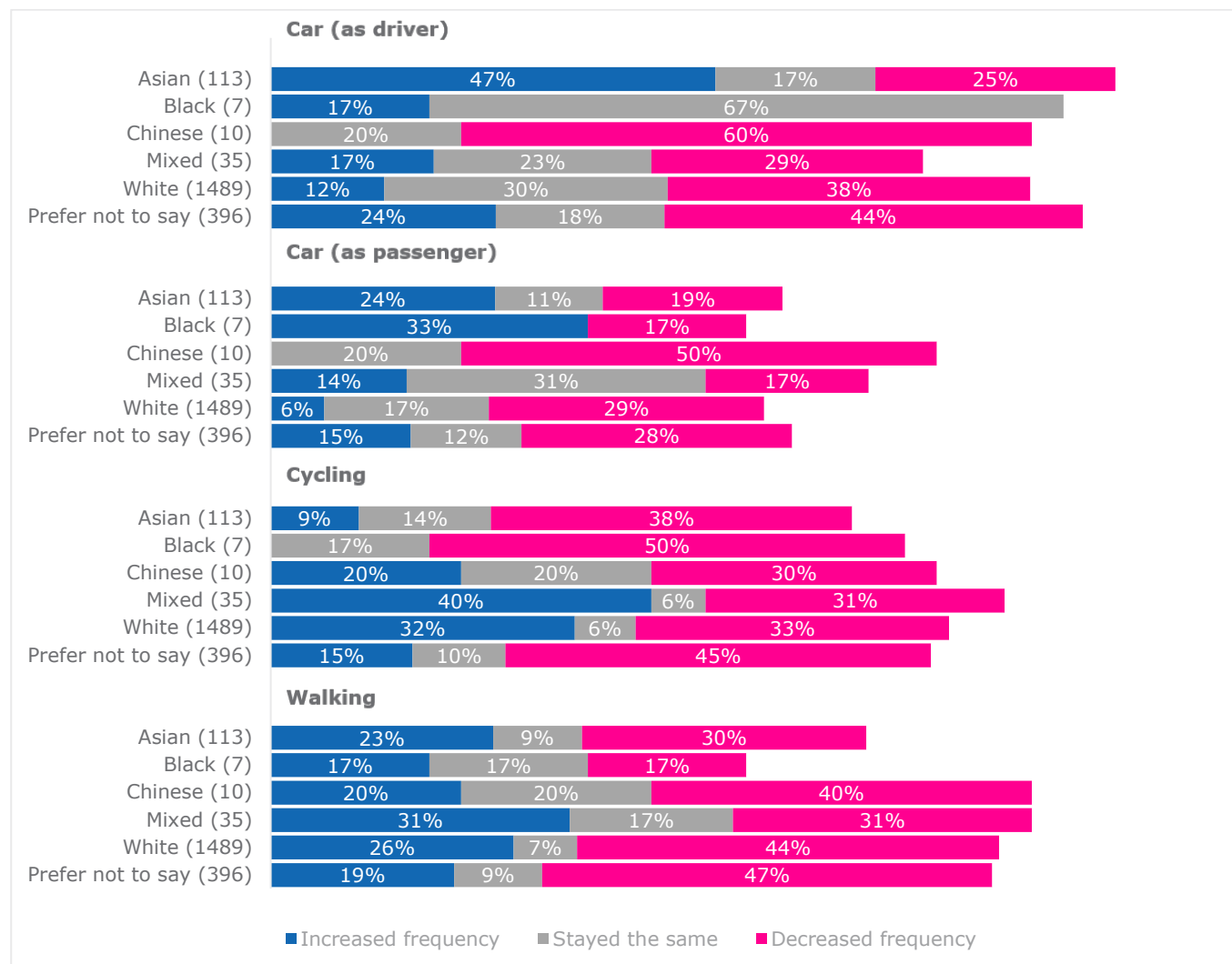
Figure 5: Q09. We would like to know if the experimental trial LTNs have led to a change in your travel habits – Gender



Ethnicity

- Increased frequency of car use (as a driver) was most prevalent amongst Asian respondents.
- Whilst increased car use (as a passenger) was reported most by Black respondents, compared to other ethnicities.
- Frequency of cycling had increased most among Mixed and White respondents.
- Frequency of walking had increased most among White respondents.

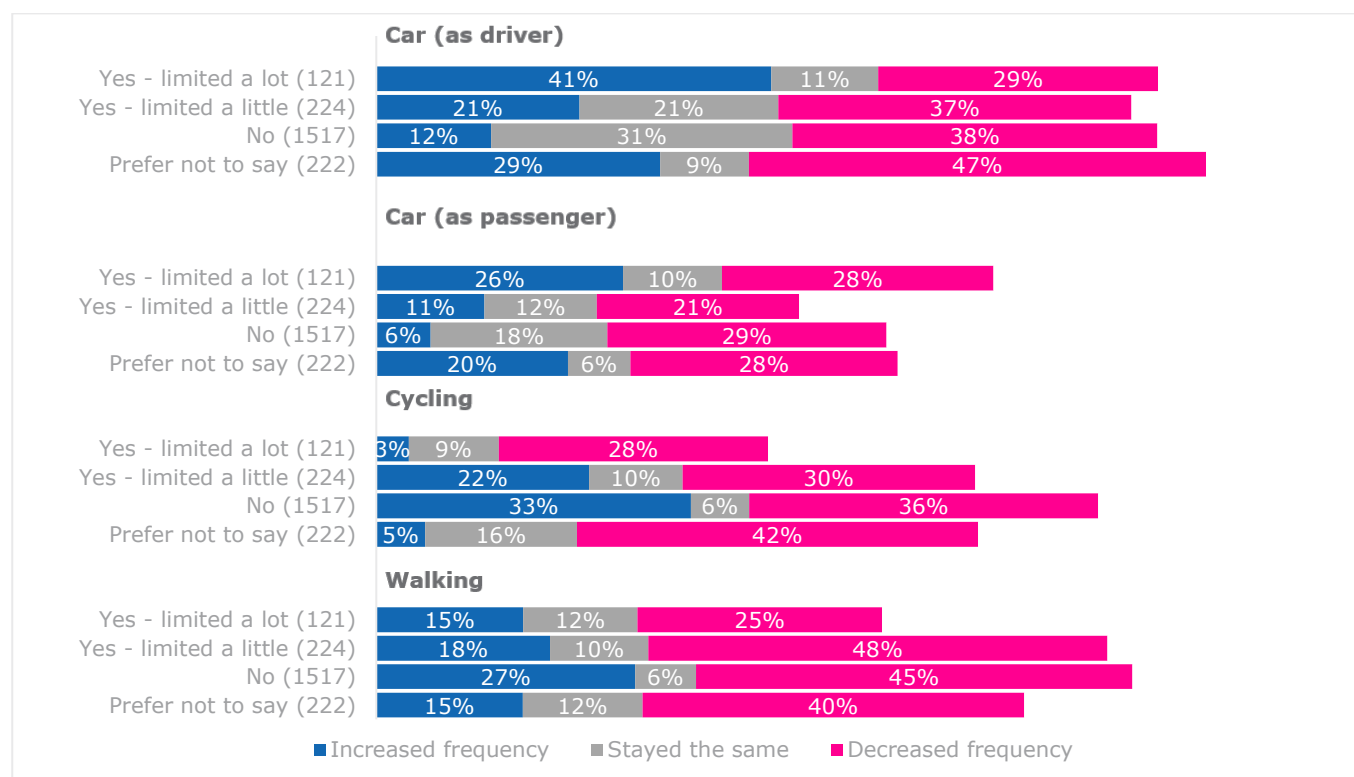
Figure 6: Q09. We would like to know if the experimental trial LTNs have led to a change in your travel habits – Ethnicity



Limited activities

- Respondents who said their day-to-day activities were limited a lot were significantly more likely to have increased their use of the car (as a driver), car (as a passenger), Taxi (incl. as a driver), than respondents whose day-to-day activities weren't limited.
- Respondents whose day-to-day activities weren't limited were significantly more likely to have increased their cycling and walking than among respondents whose day-to-day activities were limited.

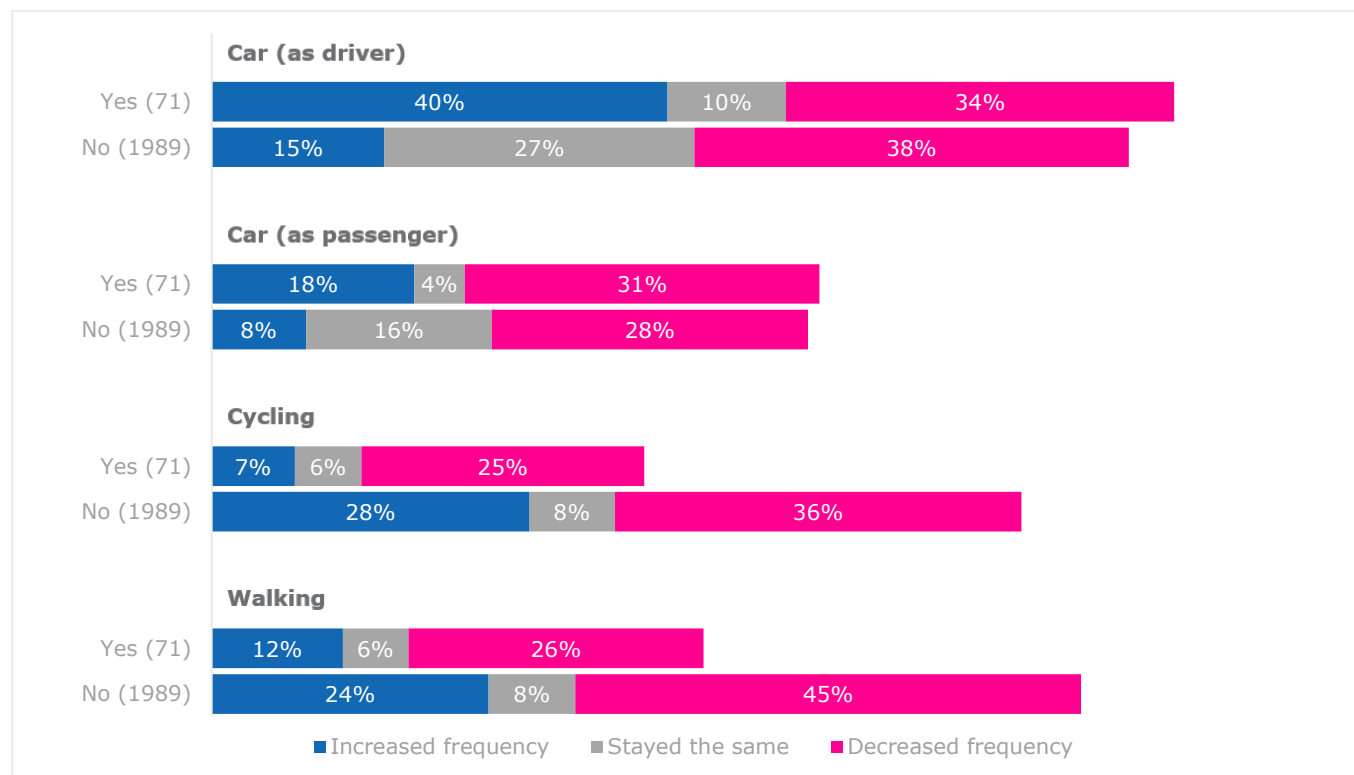
Figure 7: Q09. We would like to know if the experimental trial LTNs have led to a change in your travel habits – Limited activities



Blue badge holders

- Blue badge holders were significantly more likely to have increased their use of the car than non-blue badge holders:
 - as a driver (40% cf. 15%)
 - as passenger (18% cf. 8%)
- Non-blue badge holders were significantly more likely to have increased their walking and cycling.

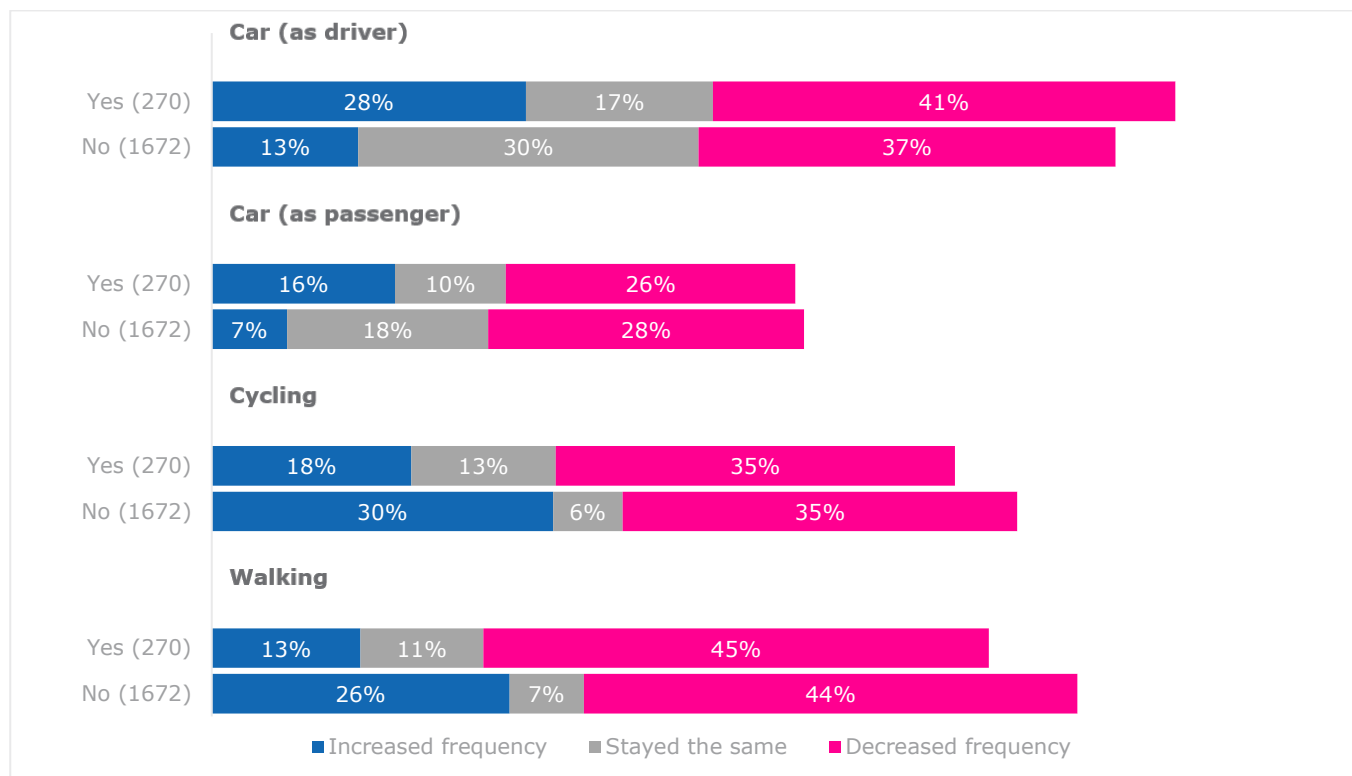
Figure 8: Q09. We would like to know if the experimental trial LTNs have led to a change in your travel habits – Blue badge holders



Carers

- Carers were significantly more likely to have increased their use of the car (either as a driver or a passenger) than non-carers.
- Whereas non-carers were significantly more likely to have increased their walking and cycling.

Figure 9: Q09. We would like to know if the experimental trial LTNs have led to a change in your travel habits – Carers⁵



⁵ A carer is anyone who cares, unpaid, for a friend or family member who, due to illness, disability, a mental health problem or an addiction, cannot cope without their support. Both children and adults can be carers.

Location

- Respondents living elsewhere in Oxford were significantly more likely to say that their use of a car, either as a driver or a passenger had increased than respondents living within the three LTN areas of Divinity Road, St. Mary's, and St. Clement's.
- Respondents living in the Divinity Road LTN area had increased their cycling more than the other areas.
- Respondents living within the three LTN areas were significantly more likely to have increased walking than those living elsewhere in Oxford.

Figure 10: Q09. We would like to know if the experimental trial LTNs have led to a change in your travel habits – Location





There appears to be a relationship between respondents' views on each of the LTNs and whether their use of a mode of transport had increased or decreased since the inception of the trial LTNs. If a respondent rated each of the LTNs positively, they were significantly less likely to have increased their use of the car, as a driver or a passenger, but more likely to have increased their frequency of walking or cycling.

Table 11: Q09. We would like to know if the experimental trial LTNs have led to a change in your travel habits – % saying increased frequency (All responding n=)

Location by whether positive or negative	Divinity Rd Positive (831)	Divinity Rd Negative (1110)	St. Clement's Positive (721)	St. Clement's Negative (1150)	St. Mary's Positive (749)	St. Mary's Negative (1046)
Car (as driver)	1%	30%	1%	29%	0%	30%
Car (as passenger)	1%	16%	1%	15%	1%	16%
Cycling	61%	3%	63%	4%	62%	4%
Walking	45%	8%	46%	9%	45%	9%

Additional comments

- Most additional comments mentioned having to drive further / having to make detours / travelling being more difficult during the LTNs trial.
- This was followed by more traffic / congestion on their routes.
- With some respondents saying that it was now safer to walk or cycle.

Table 12: Q10. Please add any additional comments about your travel habits during the LTNs trial (All responding n=1,486).

	No. Responses	% Responses
Have to drive further / detours / more difficult	542	36%
More traffic / congestion	425	29%
Safer to walk / cycle (inc. for children)	201	14%
Worse air quality / more pollution	171	12%
I now cycle more	166	11%
I use the bus less as it takes longer/is slower/needs improvements	131	9%
Travel habits / frequency of car use not changed	121	8%
Quieter / more pleasant and safe	102	7%
I now walk more	91	6%
Concerns over lack of access to essential locations (e.g. hospital, work, shopping, schools etc.)	91	6%
More difficult / unpleasant / dangerous to cycle	73	5%
Disagree with proposal(s) / can't see the benefits / remove them	73	5%
Cars are sometimes a necessary and essential part of everyday life	69	5%



	No. Responses	% Responses
I now use my car less	67	5%
I now have to plan / adjust my travel times / re-plan my daily life	59	4%
I now need to drive / use the car more	54	4%
I now avoid Oxford / visit other places instead	43	3%
Decreased quality of life	39	3%
Plan will displace traffic and pollution to surrounding areas	38	3%
I will walk / cycle / bus to avoid using my car if possible	36	2%
Concerns for elderly / (hidden) disabled /young children / those with illnesses	36	2%
Fully support the LTNs	32	2%
Concerns for local businesses / economy	29	2%
Concerned about increase in dangerous driving e.g., speeding	25	2%
Cars are sometimes a necessary and essential part of everyday life	24	2%
I now cycle less	23	2%
Quieter	23	2%
Increased quality of life	20	1%
Concerns for the mental health / levels of stress of those affected	19	1%
This will only split up communities / families / friends	19	1%
Family / taxis / tradesmen won't visit our area due to congestion / parking	15	1%
Improve cycling infrastructure (e.g., routes, make safer etc.)	15	1%
I avoid travel at peak times	14	1%
Unable to active travel due to old age, health etc.	14	1%
I only use my car for journeys out of Oxford	11	1%
I now walk less	11	1%
I now use public transport more	10	1%
Concerns about lack of access / disruptions for emergency services	9	1%
I now use taxis more	7	<1%
Enforce parking restrictions (bus lanes, yellow lines etc.)	7	<1%
I now use a scooter / moped more	6	<1%
I now use taxis less	6	<1%
Use car share / Co-wheels more	5	<1%
Other	106	7%
Not answered	27	2%



"The LTNs have made life a permanent gridlock in my area around east Oxford. Most of my journeys are longer now and involve a lot more traffic. I have 2 kids that both cycle and I cycle too but my daughter will only use her bike on certain journeys now because of the danger of all the gridlock in St. Clement's and my son uses it as an obstacle course as he weaves in and out of the gridlock. I'm also aware of the total hate for cyclists that the LTNs seem to have caused. Please, please, please, remove these restrictive and divisive draconian measures."

"The East Oxford LTNs have significantly increased our family's quality of life. We have a son with additional needs who has recently learned to ride a bike, and the quiet environment of the LTNs has enabled us to travel to his favourite playgrounds and open spaces safely and swiftly on our bikes."

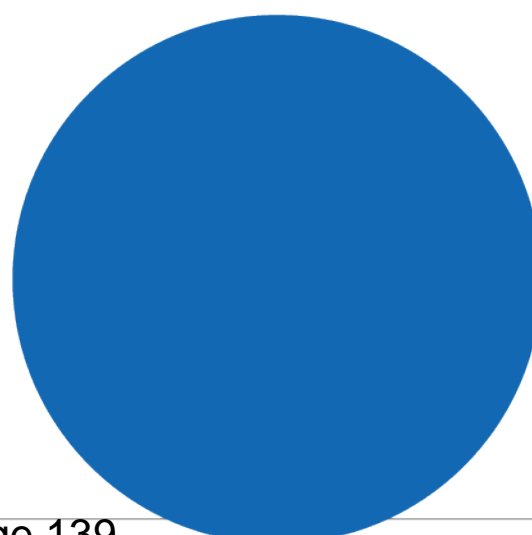
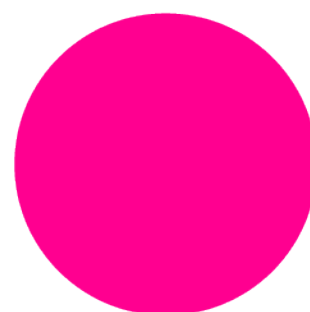
"The tailbacks of traffic have been so bad in this area that I have had to drive a different, longer route to get places. This means that I'm using my car for longer, using more fuel, etc."

"While I do agree with some of the LTNs, many of them are pointless. I am forced to take the roundabout every time I need to use my car because of the bollard on [REDACTED]. I park in [REDACTED], however I must use Cowley Road. This creates a pointless detour. I think that instead of a bollard, ANPR should be introduced where residents can apply for permits to travel through the road. This will ease the congestion on the roundabout and not increase traffic in [REDACTED] as it will be just residents traveling."

"LTN's have not changed my travel habits at all, only to have longer and more difficult journeys. I am not able to change my travel habits due to work commitments etc. I can't use a bike as I am fearful of the traffic and potholes on the roads I would need to use and would be unable to use a scooter. I have family in rural areas of Oxfordshire, so need my car to see them, so continue to drive when I need to. They will no longer come to visit me as it's too problematic getting into Oxford and takes too long with all the extra traffic. If funding is to be withdrawn from central government for more LTN's, then to continue in east Oxford is persecution of the population of east Oxford and not equitable. To inflict LTN's on just one area with impunity is grossly unfair and penalizing one area of Oxford that needs more support. Without further infrastructure to support LTNs to allow people to move around more easily then there will continue to be problems with this."



Divinity Road LTN area



This section asked respondents about their views on the experimental Divinity Road LTN area

Overview



Oxfordshire County Council is trialling the Divinity Road area LTN, which includes a filter on Divinity Road and one on Southfield Road. The east Oxford LTN filters are generally made up of two planters with at least one bollard between them.

All of the LTN filters allow pedestrian / wheelchair / rollator / kick scooter and cyclist access only with no access for motorised vehicles (except for mobility scooters, the trial e-scooters, and electric bicycles).

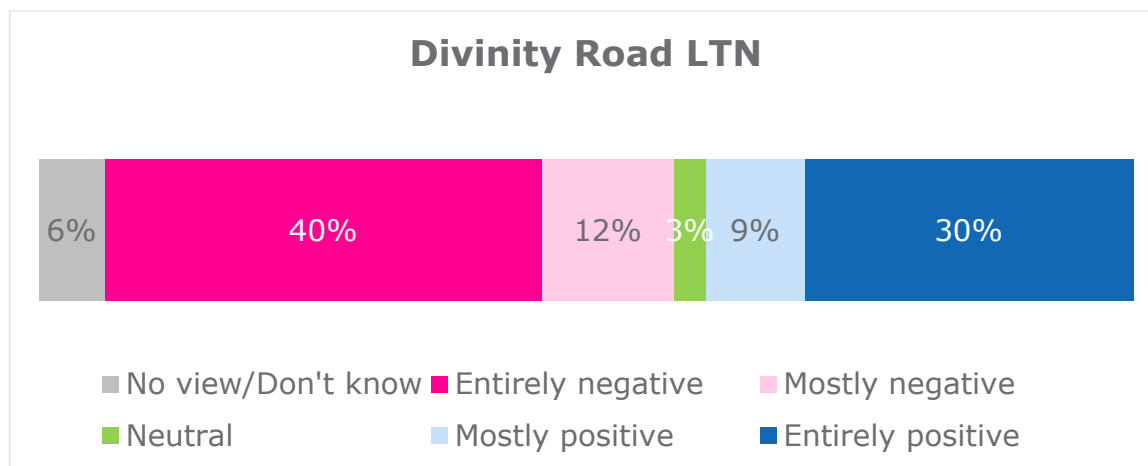
As part of the six-week consultation the county council asked for views on the Divinity Road area and also on a proposal that the filter at Divinity Road be replaced with an ANPR camera which would allow a small number of motorised vehicles through such as emergency services and refuse vehicles.

Overall, the six-week consultation received 314 responses from residents within the Divinity Road LTN area. All respondents were given the opportunity to comment on the Divinity Road LTN area.

Respondents' views on the Divinity Road LTN area

Almost 40% of respondents had positive views on the Divinity Road LTN area in east Oxford (30% entirely positive, 9% mostly positive). Over 50% of respondents had negative views (12% mostly negative, 40% entirely negative). Just 3% were neutral about the Divinity Road LTN area and 6% didn't have a view.

Figure 11: Q11. Which of the following best describes your views on the Divinity Road LTN area, in east Oxford? (All responding n=2,122)



Individuals were significantly more likely to have positive views than businesses and other organisations (40% individuals, 5% organisations), whereas they had significantly more negative views than individuals (51% individuals, 87% organisations), as shown in the table below.

Table 13: Q11. Which of the following best describes your views on the Divinity Road LTN area, in east Oxford? (All responding n=).

Respondent type	Individuals (2048)	Businesses (62)
Entirely positive	30%	5%
Mostly positive	10%	0%
Neutral	3%	0%
Mostly negative	12%	15%
Entirely negative	40%	73%
Don't know	1%	3%
No view on this LTN area	5%	5%
NET: Positive	40%	5%
NET: Negative	51%	87%



Views on the Divinity Road LTN area by demographic

Results for the different demographics are summarised below.

Age

- Respondents aged 25-34 were most positive (45%) about the Divinity Road LTN, closely followed by those in the 35-44 age bracket (44%), whereas respondents who preferred not to say what their age was were most negative (80%), as shown below, although this was one of the smaller group sizes.

	<25 (52)	25-34 (252)	35-44 (438)	45-54 (457)	55-64 (403)	65-74 (310)	75+ (177)	PNTS (75)
NET: Positive	33%	45%	44%	39%	34%	43%	31%	15%
NET: Negative	52%	46%	50%	54%	57%	46%	56%	80%

Gender

- All genders were more negative in their views than positive, but male respondents' views were split almost equally between negative and positive.
- Respondents who preferred not to say what their gender was (74%) were significantly more negative than both females (50%) and males (48%).

	Female (884)	Male (948)	Prefer not to say (231)
NET: Positive	39%	46%	17%
NET: Negative	50%	48%	74%

Ethnicity

- Respondents of Asian, Black, Chinese ethnicities and those who preferred not to say were more negative in their views about the Divinity Road LTN area than they were positive.
- Respondents of Mixed and White ethnicities were similar in their positive and negative views.

	Asian / Asian British (113)	Black / Black British (7)	Chinese (10)	Mixed / multiple (35)	White (1482)	PNTS (395)
NET: Positive	12%	0%	30%	46%	47%	19%
NET: Negative	86%	100%	60%	46%	44%	73%



Day-to-day activities

- Respondents whose day-to-day activities were limited either a little or a lot were significantly more likely to be negative in their views than those whose activities weren't limited (83% and 65% compared with 43%).

	Day to day activities limited a lot (121)	Day to day activities limited a little (223)	Day to day activities not limited (1511)
NET: Positive	11%	28%	48%
NET: Negative	83%	65%	43%

Blue badge holders

- Blue badge holders were significantly more negative (77%) than non-blue badge holders (51%) in their views on the Divinity Road LTN area.

	Blue Badge holder (71)	Non-Blue Badge holder (1982)
NET: Positive	15%	41%
NET: Negative	77%	51%

Carers

- Carers (73%) were significantly more negative than non-carers (46%) in their views on the Divinity Road LTN area.

	Carer (270)	Non-carer (1665)
NET: Positive	21%	45%
NET: Negative	73%	46%

Location

- Respondents living within the Divinity Road LTN area were most positive in their views (72%), closely followed by the St. Clement's LTN area (56%).
- Respondents living elsewhere in east Oxford were significantly more negative than those living within the LTN area (64% compared with Divinity Road 25%, St. Mary's 48%, and St. Clement's 32%).

	Divinity Road LTN area (314)	St. Mary's LTN area (163)	St. Clement's LTN area (437)	Elsewhere in east Oxford (631)
NET: Positive	72%	34%	56%	28%
NET: Negative	25%	48%	32%	64%



Further comments

- Respondents said that the area had become safer/more pleasant for cyclists and pedestrians (23%), closely followed by it being quieter (20%).
- However, a similar proportion said that the LTNs will or had already resulted in increased journey times and costs (20%).

Table 14: Q12. Please provide comments to support your view on the Divinity Road area LTN below? (All responding n=1,590).

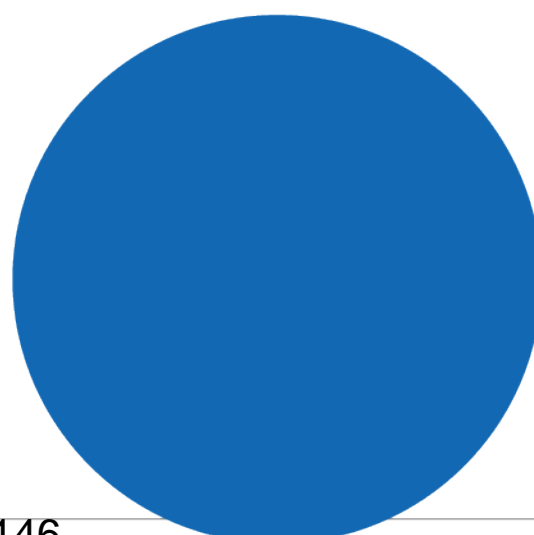
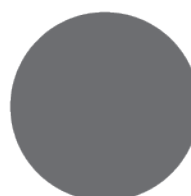
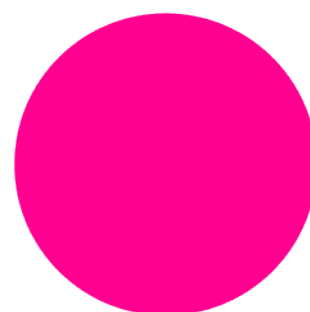
	No. Responses	% Responses
Safer / more pleasant for cyclists and pedestrians	367	23%
Will / has already resulted in increased journey times and costs	321	20%
Quieter	321	20%
Plan will / has increased traffic and congestion	268	17%
Plan will displace traffic and pollution to surrounding areas	227	14%
Plan will / has increased pollution / worsen air quality	163	10%
Plan has / will decrease pollution / make the air cleaner	109	7%
They have been life changing/improved our community/no more angry drivers or neighbours	107	7%
Concerns over lack of access to essential locations (e.g. hospital, work, shopping, schools etc.)	98	6%
Disagree with proposal(s) / can't see the benefits / remove them	81	5%
Does not think it will work / unrealistic	73	5%
Support / agree with / can see the benefits	69	4%
Concerns for local businesses / economy	63	4%
This will / has encouraged people to walk / cycle more (Incl. myself)	62	4%
Concerns about lack of access / disruptions for emergency services	53	3%
This will only split up communities / families / friends	53	3%
Benefits a few while disadvantages most (Inc. only benefits the wealthy)	51	3%
Concerns about safety for everyone (cyclists / pedestrians / drivers)	50	3%
Plan is dangerous / chaotic	47	3%
This is unnecessary / waste of time, money, and resources	47	3%
A one-way system needs to be implemented	44	3%
Has / will have a negative effect on public transport	43	3%
Cars are sometimes a necessary and essential part of everyday life	38	2%
Concerns for the mental health / levels of stress of those affected	33	2%



	No. Responses	% Responses
Concerns for elderly / (hidden)disabled / young children / those with illnesses	32	2%
Don't live there or use the area often	31	2%
Public transport needs general improvement	29	2%
Infringement on rights / liberties / freedom of movement	28	2%
Not properly thought out	27	2%
ANPR cameras would be a better option	26	2%
Disagree with restrictions on residents	25	2%
LTNs will / are affecting my job / income	23	1%
Concerns over the bollards (people keep removing / damaging / driving over)	20	1%
Will require enforcement / policing	20	1%
Plan will result / has already resulted in parking difficulties	18	1%
Taxis should not be exempt	18	1%
Difficulty entering Oxford from surrounding / rural areas	12	1%
Improve cycling / pedestrian infrastructure (e.g., routes, equipment provision etc.)	10	1%
The bollards need to more robust / permanent	10	1%
Signage / maps needs to be improved e.g., made clearer	6	<1%
Bollards should not be replaced by ANPR cameras	6	<1%
Other	33	2%
Not answered	21	1%

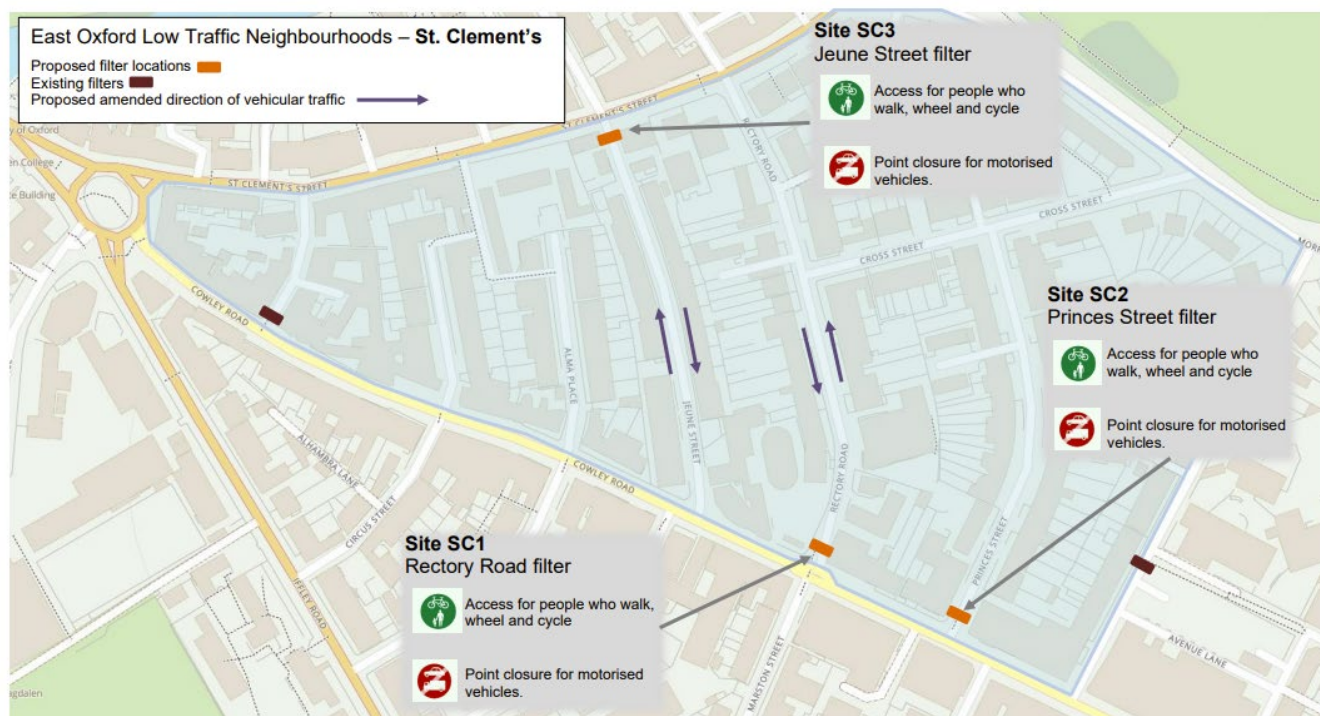


St. Clement's LTN area



This section asked respondents about their views on the experimental St. Clement's LTN area

Overview



The St. Clement's LTN area includes two filters which are located on Rectory Road and on Princes Street respectively. All of the LTN filters allow pedestrian / wheelchair / rollator / kick scooter and cyclist access only with no access for motorised vehicles (except mobility scooters, the trial e-scooters, and electric bicycles).

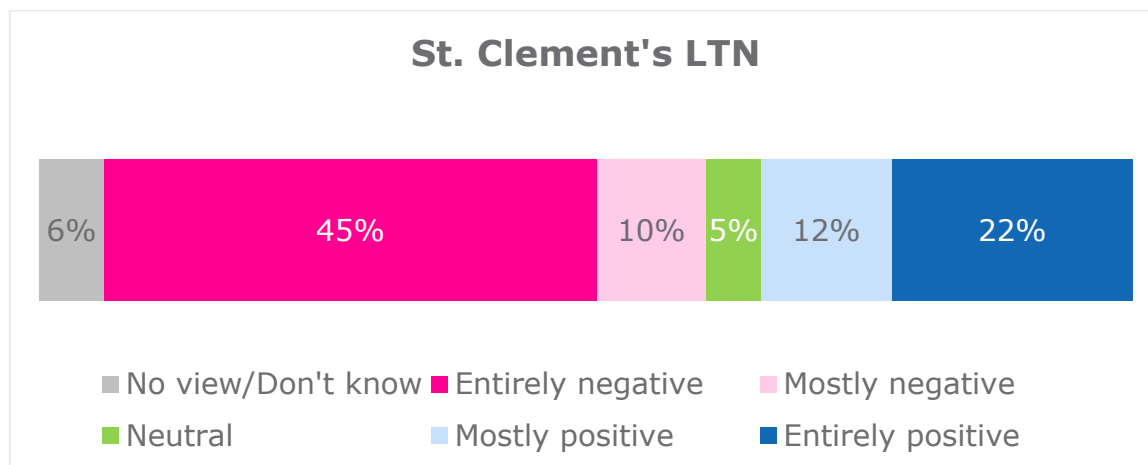
As part of this six-week consultation the county council asked for views on the St. Clement's area LTN and also on a proposal that bollards and / or planters be introduced at Jeune Street at the junction with St. Clement's Street, and Jeune Street be made two-way south of the restriction.

Overall, the six-week consultation received 438 responses from residents within the St. Clement's LTN area. All respondents were given the opportunity to comment on the St. Clement's LTN area.

Respondents' views on the St. Clement's LTN area

Thirty four percent of respondents had positive views on the St. Clement's LTN area in east Oxford (22% entirely positive, 12% mostly positive). More than 50% of respondents had negative views (10% mostly negative, 45% entirely negative). Five percent were neutral and the remaining 6% didn't have a view.

Figure 12: Q13. Which of the following best describes your views on the St. Clement's LTN area, in east Oxford? (All responding n=2,116)



Individuals were significantly more likely to have positive views than businesses and other organisations (35% individuals, 5% organisations), whereas they had significantly more negative views than individuals (53% individuals, 90% organisations), as shown in the table below.

Table 15: Q13. Which of the following best describes your views on the St. Clement's LTN area, in east Oxford? (All responding n=).

Respondent type	Individuals (2042)	Businesses, other organisations (62)
Entirely positive	23%	3%
Mostly positive	12%	2%
Neutral	5%	0%
Mostly negative	10%	10%
Entirely negative	44%	81%
Don't know	1%	2%
No view on this LTN area	5%	3%
NET: Positive	35%	5%
NET: Negative	53%	90%



Views on the St. Clement's LTN area by demographic

Results for the different demographics are summarised below.

Age

- Respondents aged 25-34 were most positive (42%), closely followed by those in the 35-44 age bracket (41%), whereas respondents who preferred not to say what their age was were most negative (83%), as shown below.

	<25 (52)	25-34 (253)	35-44 (437)	45-54 (455)	55-64 (402)	65-74 (309)	75+ (175)	PNTS (75)
NET: Positive	33%	42%	41%	33%	29%	35%	20%	9%
NET: Negative	58%	47%	50%	56%	59%	50%	63%	83%

Gender

- All genders expressed mainly negative views.
- Respondents who preferred not to say what their gender was were significantly more negative (77%) than both females (54%) and males (48%).

	Female (884)	Male (943)	Prefer not to say (230)
NET: Positive	33%	41%	15%
NET: Negative	54%	48%	77%

Ethnicity

- Respondents of Asian, Black, Chinese ethnicities and those who preferred not to say were more negative in their views about the St. Clement's LTN area than they were positive.
- Respondents of Mixed and White ethnicities were similar in their positive and negative views.

	Asian / Asian British (113)	Black / Black British (7)	Chinese (10)	Mixed / multiple (35)	White (1477)	PNTS (394)
NET: Positive	10%	0%	30%	46%	41%	18%
NET: Negative	84%	100%	70%	46%	46%	76%



Day-to-day activities

- Respondents whose day-to-day activities were limited either a little or a lot were significantly more likely to be negative in their views than those whose activities weren't limited (83%, 67% compared with 46% respectively).

	Day to day activities limited a lot (120)	Day to day activities limited a little (222)	Day to day activities not limited (1507)
NET: Positive	8%	24%	42%
NET: Negative	83%	67%	46%

Blue badge holders

- Blue badge holders were significantly more negative (81%) than non-blue badge holders (53%) in their views on the St. Clement's LTN area.

	Blue Badge holder (70)	Non-Blue Badge holder (1977)
NET: Positive	11%	35%
NET: Negative	81%	53%

Carers

- Carers were significantly more negative (74%) than non-carers (48%) in their views on the St. Clement's LTN area.

	Carer (270)	Non-carer (1659)
NET: Positive	19%	39%
NET: Negative	74%	48%

Location

- Respondents living within the Divinity Road LTN area were most positive in their views (54%), closely followed by the St. Clement's LTN area (50%).
- Respondents living elsewhere in east Oxford were significantly more negative than those living within the LTN area (66% compared with Divinity Road 25%, St. Mary's 57%, and St. Clement's 33%).

	Divinity Road LTN area (309)	St. Mary's LTN area (166)	St. Clement's LTN area (435)	Elsewhere in east Oxford (629)
NET: Positive	54%	38%	50%	25%
NET: Negative	25%	57%	33%	66%

Further comments

- The most frequently occurring point in the responses for the St. Clement's LTN area was that the LTNs will or had already resulted in increased traffic and congestion (39%) and that the plan will / has increased pollution / worsened air quality (18%), closely followed by increased journey times and costs (16%).

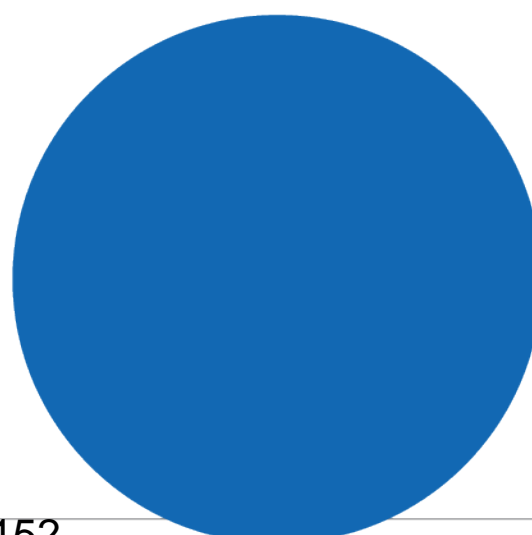
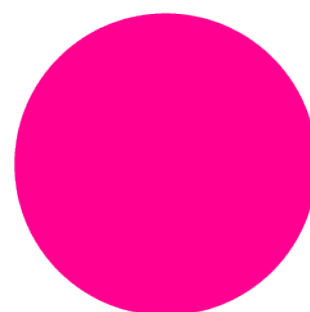


Table 16: Q14. Please provide comments to support your view on the St. Clement's area LTN below? (All responding n=1,460).

	No. Responses	% Responses
Plan will / has increased traffic and congestion	574	39%
Plan will / has increased pollution / worsen air quality	259	18%
Will / has already resulted in increased journey times and costs	228	16%
Plan will displace traffic and pollution to surrounding areas	154	11%
Safer / more pleasant for cyclists and pedestrians	129	9%
Disagree with proposal(s) / remove them	116	8%
Concerns about safety for everyone (cyclists / pedestrians / drivers)	102	7%
Support / agree with / can see the benefits	93	6%
Has / will have a negative effect on public transport	85	6%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	79	5%
Concerns for local businesses / economy	74	5%
This will negatively impact people's lives e.g., bad for wellbeing, mental health etc.	73	5%
Quieter / more pleasant and safe	62	4%
Plan has / will decrease traffic and congestion	49	3%
Concerned about increase in dangerous driving e.g., speeding	48	3%
Don't live there or use the area often	44	3%
This is unnecessary / waste of time, money, and resources	35	2%
Concerns about lack of access / disruptions for emergency services	31	2%
Plan has / will decrease pollution / make the air cleaner	31	2%
Public transport needs general improvement	24	2%
There has been no improvement since the LTNs were installed	22	2%
LTNs have had a positive impact on daily life	22	2%
Avoid the area since LTNs have been put in place	17	1%
This will / has increased noise pollution	17	1%
ANPR cameras would be a better option	13	1%
Concerns about how this will be enforced	13	1%
Other	102	7%
Not answered	98	7%

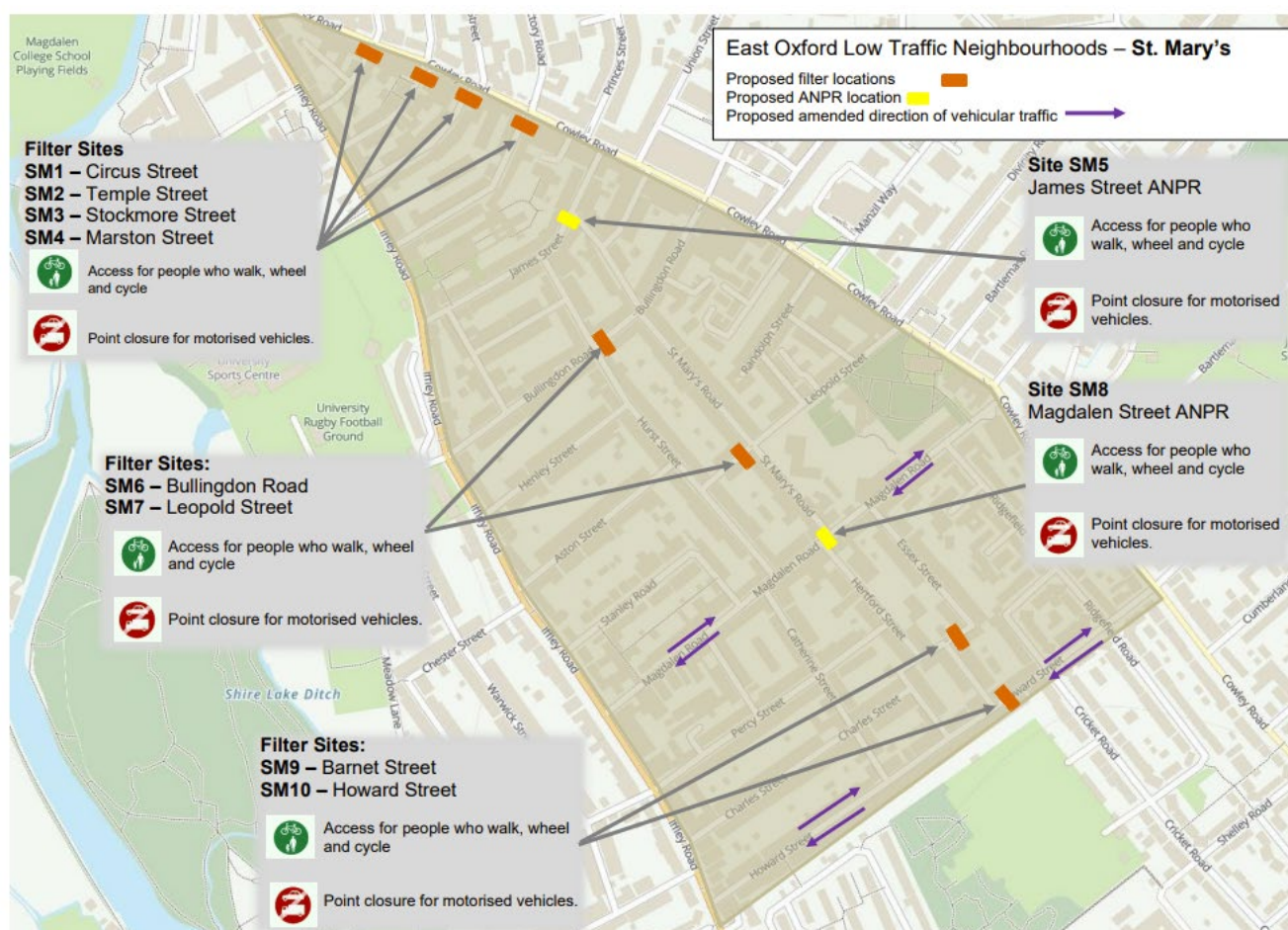


St. Mary's LTN area



This section asked respondents about their views on the experimental St. Mary's LTN area

Overview



The St. Mary's LTN area includes ten filters which are located on Circus Street, Temple Street, Stockmore Street, Marston Street, James Street, Bullingdon Road, Leopold Street, Magdalen Road, Barnet Street, and Howard Street. All of the LTN filters allow pedestrian / wheelchair / rollator / kick scooter and cyclist access only with no access for motorised vehicles (except mobility scooters, the trial e-scooters, and electric bicycles).

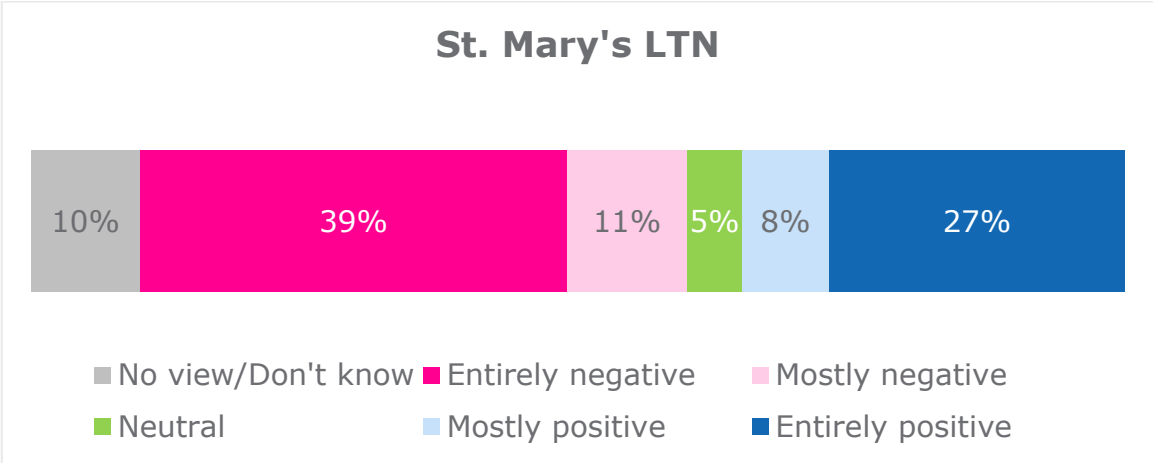
As part of this six-week consultation the county council asked for views on the St. Mary's area LTN and also on a proposal that the filters at James Street and Magdalen Road be replaced with an ANPR camera which would allow a small number of motorised vehicles through such as emergency services and refuse vehicles. It was also proposed that a residential parking bay in Marston Street be moved and the existing restriction in Bullingdon Road be moved southwest, so it is east of the junction with Hurst Street.

Overall, the six-week consultation received 166 responses from residents within the St. Mary's LTN area. All respondents were given the opportunity to comment on the St. Mary's LTN area.

Respondents' views on the St. Mary's LTN area

Thirty five percent of respondents had positive views on the St. Clement's LTN area in east Oxford (27% entirely positive, 8% mostly positive). Exactly 50% percent of respondents had negative views (11% mostly negative, 39% entirely negative). Five percent were neutral and the remaining 10% didn't have a view.

Figure 13: Q15. Which of the following best describes your views on the St. Mary's LTN area, in east Oxford? (All responding n=2,108)



Individuals were significantly more likely to have positive views than businesses and other organisations (36% individuals, 5% organisations), whereas they had significantly more negative views than individuals (49% individuals, 90% organisations), as shown in the table below.

Table 17: Q15. Which of the following best describes your views on the St. Mary's LTN area, in east Oxford? (All responding n=).

Respondent type	Individuals (2034)	Businesses (62)
Entirely positive	28%	3%
Mostly positive	9%	2%
Neutral	5%	0%
Mostly negative	11%	16%
Entirely negative	38%	74%
Don't know	3%	0%
No view on this LTN area	8%	5%
NET: Positive	36%	5%
NET: Negative	49%	90%



Views on the St. Mary's LTN area by demographic

Results for the different demographics are summarised below.

Age

- Respondents aged 25-34 were most positive (44%), closely followed by those in the 35-44 age bracket (42%), whereas respondents who preferred not to say what their age was were most negative (73%), as shown below.

	<25 (52)	25-34 (252)	35-44 (438)	45-54 (454)	55-64 (402)	65-74 (304)	75+ (173)	PNTS (74)
NET: Positive	31%	44%	42%	37%	32%	34%	20%	11%
NET: Negative	54%	46%	47%	50%	52%	46%	53%	73%

Gender

- All genders were more negative in their views than positive, although males were equally split between positive and negative views.
- Respondents who preferred not to say what their gender was (69%) were significantly more negative than both females (49%) and males (44%).

	Female (880)	Male (941)	Prefer not to say (229)
NET: Positive	34%	43%	14%
NET: Negative	49%	44%	69%

Ethnicity

- Respondents of Asian and Black ethnicities and those who preferred not to say were more negative in their views about the St. Mary's LTN area than they were positive.
- Respondents of Mixed and White ethnicities were similar in their positive and negative views.

	Asian / Asian British (110)	Black / Black British (6)	Chinese (10)	Mixed / multiple (35)	White (1475)	PNTS (392)
NET: Positive	11%	0%	20%	43%	43%	17%
NET: Negative	77%	83%	50%	46%	42%	69%



Day-to-day activities

- Respondents whose day-to-day activities were limited either a little or a lot were significantly more likely to be negative in their views than those whose activities weren't limited (74%, 60% compared with 42% respectively).

	Day to day activities limited a lot (120)	Day to day activities limited a little (220)	Day to day activities not limited (1501)
NET: Positive	9%	26%	43%
NET: Negative	74%	60%	42%

Blue badge holders

- Blue badge holders were significantly more negative (64%) than non-blue badge holders (48%) in their views on the St. Mary's LTN area.

	Blue Badge holder (69)	Non-Blue Badge holder (1970)
NET: Positive	13%	37%
NET: Negative	64%	48%

Carers

- Carers were significantly more negative (69%) than non-carers (44%) in their views on the St. Mary's LTN area.

	Carer (267)	Non-carer (1654)
NET: Positive	18%	41%
NET: Negative	69%	44%

Location

- Respondents living within the Divinity Road LTN area were most positive in their views (54%), closely followed by the St. Clement's LTN area (50%).
- Respondents living elsewhere in east Oxford were significantly more negative than the locations within the LTN area (66% compared with Divinity Road 25%, St. Mary's 57%, and St. Clement's 33%).

	Divinity Road LTN area (306)	St. Mary's LTN area (162)	St. Clement's LTN area (437)	Elsewhere in east Oxford (629)
NET: Positive	54%	38%	50%	25%
NET: Negative	25%	57%	33%	66%



Further comments

- The most frequent comment from respondents was that the LTNs will or had already resulted in increased traffic and congestion (21%) followed by that the plan will / has increased journey times and costs (17%).
- Positively, respondents said that it had improved local road safety (17%).

Table 18: Q16. Please provide comments to support your view on the St. Mary's area LTN below? (All responding n=1,383)

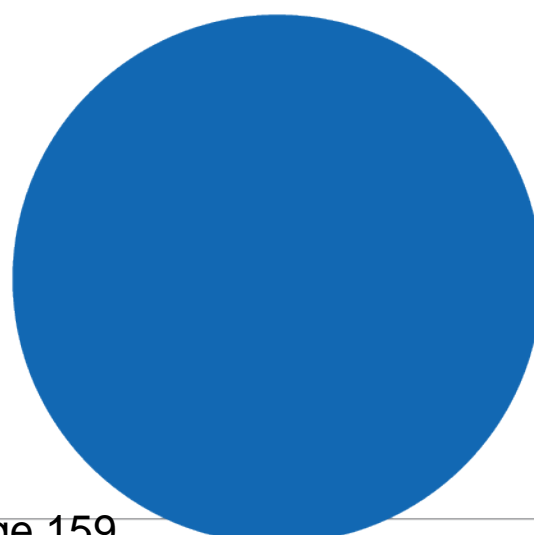
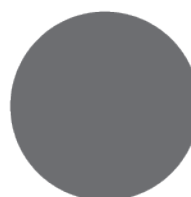
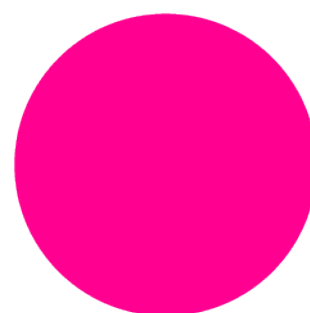
	No. Responses	% Responses
Plan will / has increased traffic and congestion	287	21%
Will / has already resulted in increased journey times and costs	240	17%
Has improved local road safety (for cyclists / pedestrians etc.)	240	17%
Support / agree with / can see the benefits	225	16%
Disagree with proposal(s) / can't see the benefits / get rid of them	215	16%
Plan will displace traffic and pollution to surrounding areas	181	13%
Plan will / has increased pollution / worsen air quality	179	13%
Encourages people to walk / cycle more	120	9%
Has made the area quieter	119	9%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	115	8%
Concerns for local businesses / economy	112	8%
Has reduced traffic / congestion	107	8%
Concerns about safety for everyone (cyclists / pedestrians / drivers)	90	7%
Residents are trapped / segregated / it's difficult to travel around / see family / friends	73	5%
This is unnecessary / waste of time, money, and resources	52	4%
Concerns about lack of access / disruptions for emergency services	42	3%
Has / will have a negative effect on public transport	42	3%
Concerns over the bollards / they are a bad idea (people keep removing/damaging/driving over)	40	3%
Plan has / will decrease pollution / make the air cleaner	40	3%
I am not affected by this LTN/ No experience with it	38	3%
Concerns for elderly / (hidden)disabled / young children / those with illnesses	35	3%
Cars are sometimes necessary	35	3%
Difficulty entering Oxford from surrounding / rural areas	31	2%
This will negatively impact people's lives e.g., bad for wellbeing, mental health etc.	25	2%
Disagree with ANPR cameras	25	2%



	No. Responses	% Responses
Needs to be enforced / policed more	23	2%
Has made the air cleaner / reduced pollution	23	2%
Local economy / businesses benefitting	23	2%
Difficulties finding parking	22	2%
Listen to what citizens want / we did not agree to this	22	2%
Infringement on rights / freedom of movement / invasion of privacy	22	2%
Public transport needs improving	21	2%
A one-way system needs to be implemented	21	2%
Support ANPR	15	1%
Taxis should not be exempt	15	1%
Will / has already caused conflict in the community	8	1%
Improve / have more signs	6	<1%
Other	21	2%
Not answered	139	10%



Views on the 14 individual experimental road filters





This section asked respondents about their views on the 14 individual traffic filters within the three east Oxford LTN areas

Sixty percent of all respondents said they wanted to comment about the Divinity Road LTN area (551 respondents). Not all respondents then went on to comment on both filters. Response levels for each filter are shown above Tables 19 and 20 that follow.

Divinity Road LTN area

DR1 Divinity Road

Most of the comments were showing either support or opposition to the filter in general (17%, and 26% respectively). In addition, respondents said that the filter had already resulted in increased journey times (16%), that the plan will / has increased traffic and congestions (15%) and that it will displace traffic and pollution to surrounding areas (15%).

Table 19: Q19. If you have a comment about the DR1 Divinity Road filter, please use the box below. (All responding n=523)

	No. Responses	% Responses
Disagree with / can't see the benefits / remove it	138	26%
Fully support / can see benefits / keep them permanently	87	17%
Will / has already resulted in increased journey times and costs	83	16%
Plan will / has increased traffic and congestion	79	15%
Plan will displace traffic and pollution to surrounding areas	76	15%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	62	12%
Plan will / has increased pollution / worsen air quality	55	11%
Against changing the filter to ANPR – could be ignored/abused/vandalised	43	8%
Concerns over road safety for everyone (e.g., dangerous driving, speeding etc.)	36	7%
ANPR and resident passes should be used instead	34	7%
This is an important through road that should remain open	30	6%
A one-way system needs to be implemented	29	6%
Unnecessary / waste of time / money	27	5%
It's safer	26	5%
Bollard should remain / prefer them / more effective	26	5%
Will have/has had a negative effect on people's lives (e.g., stress, wellbeing, extra costs etc.)	23	4%
Concerns for elderly / (hidden)disabled / young children / those with illnesses	22	4%



	No. Responses	% Responses
This will / has already split up communities / families / friends	21	4%
Infringement on rights / freedom of movement / privacy	19	4%
Taxis shouldn't be allowed through here/will be used as a rat-run for taxis	19	4%
Benefits only a few while disadvantages most	17	3%
Has reduced the number of cars on the road	17	3%
Quieter / more pleasant	16	3%
Exemptions need to be very limited/too many exemptions undermine the LTN	16	3%
Concerns over disruptions/access for emergency services	16	3%
Concerns over negative effect on business/economy/trades	14	3%
Exemptions needed if ANPR is introduced	13	2%
More dangerous to walk / cycle	12	2%
Negatively affects public transport services	8	2%
Cars are sometimes a necessary and essential part of everyday life	5	1%
Enforce parking restrictions	5	1%
Public transport needs general improvement	5	1%
Other	92	18%
Not answered	8	2%

DR2 Southfield Road

The most commonly occurring sentiments showed opposition to the filter in general (20%). In addition, respondents said that the plan will / has increased traffic and congestions (14%).

Table 20: Q20. If you have a comment about the DR2 Southfield Road filter, please use the box below. (All responding n=406)

	No. Responses	% Responses
Disagree with proposal(s) / can't see the benefits / remove them	83	20%
Plan will / has increased traffic and congestion	55	14%
Support / agree with / can see the benefits	49	12%
Will / has already resulted in increased journey times and costs	45	11%
Plan will / has increased pollution / worsen air quality	44	11%
Plan will displace traffic and pollution to surrounding areas	42	10%
This is unnecessary / waste of time, money, and resources	37	9%
Will cause them stress / issues	27	7%
Concerns about safety for everyone (cyclists / pedestrians / drivers)	26	6%
LTNs have made roads safer for everyone	25	6%



	No. Responses	% Responses
A one-way system needs to be implemented	23	6%
Will make journeys more difficult	19	5%
Concerns for local businesses / economy	17	4%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	16	4%
Negative opinion of ANPR / object to it	15	4%
This will only split up communities / families / friends	13	3%
Taxis should not be exempt	12	3%
Infringement on rights / liberties / freedom of movement	11	3%
Needs to be narrower	10	2%
Concerns about lack of access/disruptions for emergency services	9	2%
Quieter	9	2%
Has / will have a negative effect on public transport	8	2%
ANPR cameras would be a better option	7	2%
Other	21	5%
Not answered	50	12%

St. Clement's LTN area

Twenty percent of all respondents said they wanted to comment about the St. Clement's LTN area (447 respondents) (although not all of these respondents then went on to comment on both filters). Response levels for each filter are shown above Tables 21 and 22 that follow.

SC1 Rectory Road

The most regularly recurring comment given was that the plan will / has increased traffic and congestion (24%) and will / has increased pollution / worsen air quality (18%), closely followed by the plan will displace traffic and pollution to surrounding areas (17%).

Table 21: Q22. If you have a comment about the SC1 Rectory Road (contraflow, cycle way and two-way section) filter, please use the box below.

(All responding n=389)

	No. Responses	% Responses
Plan will / has increased traffic and congestion	94	24%
Plan will / has increased pollution / worsen air quality	71	18%
Plan will displace traffic and pollution to surrounding areas	65	17%
Will / has already resulted in increased journey times and costs	61	16%
Disagree with proposal(s) / can't see the benefits / remove them	58	15%
Concerns about safety for everyone (cyclists / pedestrians / drivers)	35	9%



	No. Responses	% Responses
Keep it as it is	21	5%
Concerns for local businesses / economy	20	5%
This is unnecessary/ Waste of time, money, and resources	20	5%
Does not think it will work / unrealistic	18	5%
Safer / more pleasant for cyclists and pedestrians	17	4%
Support/ Agree with / Can see the benefits	13	3%
Infringement on rights / liberties / freedom of movement	12	3%
Concerns over lack of access to essential locations, e.g. hospital, work	10	3%
Concerned about increase in dangerous driving, e.g. speeding	8	2%
Plan has / will disrupt residents daily life / cause residents stress	8	2%
Signage / maps needs to be improved e.g., made clearer	7	2%
Concerns about lack of access/disruptions for emergency services	5	1%
Taxis should not be exempt	5	1%
Other	24	6%
Not answered	15	4%

SC2 Princes Street

The main sentiment expressed in comments was a general disagreement with the proposal (35%), with the main reason being that the plan will / has increased traffic and congestion (27%) and will / has already resulted in increased journey times and costs (19%).

Table 22: Q23. If you have a comment about the SC2 Princes Road filter, please use the box below. (All responding n=313)

	No. Responses	% Responses
Disagree with proposal(s) / can't see the benefits / remove them	108	35%
Plan will / has increased traffic and congestion	85	27%
Will / has already resulted in increased journey times and costs	61	19%
Plan will / has increased pollution / worsen air quality	36	12%
Support / Agree with / Can see the benefits	25	8%
Concerns about safety for everyone (cyclists / pedestrians / drivers)	17	5%
Concerns for local businesses / economy	9	3%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	9	3%
Has improved local road safety (for cyclists / pedestrians etc.)	8	3%
Should be a one-way system	7	2%



	No. Responses	% Responses
This is unnecessary / Waste of time, money, and resources	6	2%
Taxis should not be exempt	6	2%
Concerns about lack of access / disruptions for emergency services	6	2%
Other	20	6%
Not answered	19	6%

St. Mary's LTN area

Fifty six percent of all respondents said they wanted to comment about the St. Mary's LTN area (495 respondents). Not all respondents then went on to comment on all filters. Response levels for each filter are shown above the tables that follow.

SM1 Circus Street

The main comment was that the plan will / has increased traffic and congestion (20%) and general disagreement with the proposal (16%), closely followed by the plan will / has increased pollution / worsen air quality (15%), negative views on / objection to ANPRs (15%) and the plan will / has already resulted in increased journey times and costs (15%).

Table 23: Q25. If you have a comment about the SM1 Circus Street filter, please use the box below. (All responding n=322)

	No. Responses	% Responses
Plan will / has increased traffic and congestion	66	20%
Disagree with proposal(s) / Can't see the benefits/ Get rid of them	53	16%
Plan will / has increased pollution / worsen air quality	48	15%
Will / has already resulted in increased journey times and costs	48	15%
Negative opinion of ANPRs / object to them	47	15%
Plan will displace traffic and pollution to surrounding areas	35	11%
Support / agree with / can see the benefits	31	10%
Concerns about safety for everyone (cyclists / pedestrians / drivers)	25	8%
This is unnecessary / waste of time, money, and resources	25	8%
Concerns about causing stress for residents	18	6%
Concerns for local businesses / economy	18	6%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	13	4%
Plan will result / has already resulted in parking difficulties	11	3%
A one-way system should be implemented / is preferable	10	3%
Concerns about lack of access / disruptions for emergency services	10	3%
This will only split up communities / families / friends	9	3%



	No. Responses	% Responses
Concerned about increase in dangerous driving e.g., speeding	7	2%
Concerns for public transport	6	2%
Safer / more pleasant for cyclists and pedestrians	6	2%
Other	23	7%
Not answered	14	4%

SM2 Temple Street

The main sentiment in comments was a general disagreement with the proposal (33%) and that the plan will / has increased traffic and congestion (25%).

Table 24: Q26. If you have a comment about the SM2 Temple Street filter, please use the box below. (All responding n=308)

	No. Responses	% Responses
Disagree with proposal(s) / can't see the benefits / remove them	103	33%
Plan will / has increased traffic and congestion	76	25%
Plan will / has increased pollution / worsen air quality	52	17%
Will / has already resulted in increased journey times and costs	38	12%
Plan will displace traffic and pollution to surrounding areas	36	12%
Support / agree with / can see the benefits	33	11%
This will negatively impact people's lives e.g., bad for wellbeing, mental health etc.	26	8%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	23	7%
Concerns for local businesses / economy	22	7%
Concerns about safety for everyone (cyclists / pedestrians / drivers)	21	7%
This is unnecessary / waste of time, money, and resources	17	6%
Concerns regarding parking	13	4%
Concerns about lack of access/disruptions for emergency services	11	4%
Needs to be enforced / policed more	7	2%
Listen to what citizens want / We did not agree to this	7	2%
Public transport needs improving	5	2%
Negative opinion of ANPR	5	2%
Other	18	6%
Not answered	26	8%



SM3 Stockmore Street

The main sentiment in comments was a general disagreement with the proposal (32%), followed by the plan will / has increased traffic and congestion (26%).

Table 25: Q27. If you have a comment about the SM3 Stockmore Street filter, please use the box below. (All responding n=307)

	No. Responses	% Responses
Disagree with proposal(s) / can't see the benefits / remove them	97	32%
Plan will / has increased traffic and congestion	80	26%
Plan will / has increased pollution / worsen air quality	56	18%
Increased journey times and cost	42	14%
Concerns about safety for everyone (cyclists / pedestrians / drivers)	24	8%
Agree with proposals/ can see the benefits/ keep them	23	7%
Plan will result / has already resulted in parking difficulties	19	6%
Negative effect on businesses	13	4%
Emergency services response times are negatively impacted	7	2%
Council should be using funding prioritising other services	6	2%
Other	22	7%
Not answered	40	13%

SM4 Marston Street

The main comments were that the plan will / has increased traffic and congestion (16%), there was too much risk (16%), and the plan will / has increased pollution / worsen air quality (16%).

Table 26: Q28. If you have a comment about the SM4 Marston Street filter, please use the box below. (All responding n=329)

	No. Responses	% Responses
Plan will / has increased traffic and congestion	54	16%
Too much risk / remove them	54	16%
Plan will / has increased pollution / worsen air quality	51	16%
Plan will increase journey times and costs	36	11%
Plan will displace traffic and pollution to surrounding areas	29	9%
Plan has / will disrupt residents daily life / cause residents stress	25	8%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	22	7%
Support / agree with / can see the benefits	22	7%
Concerns about safety for everyone (cyclists / pedestrians / drivers)	20	6%
This is unnecessary / waste of time, money, and resources	20	6%



	No. Responses	% Responses
Negative opinion of ANPR / object to them	16	5%
Plan will result / has already resulted in parking difficulties	14	4%
Does not think it will work / unrealistic	14	4%
Concerns for local businesses / economy	12	4%
Concerns about lack of access/disruptions for emergency services	10	3%
A one-way system should be implemented/is preferable	8	2%
This will only split up communities / families / friends	7	2%
Safer / more pleasant for cyclists and pedestrians	6	2%
Disagree with exemptions/too many exemptions will undermine the scheme	6	2%
Concerns for public transport	5	2%
Infringement on rights / liberties / freedom of movement	5	2%
Quieter	5	2%
LTNs will / are affecting my job / income	5	2%
Other	25	8%
Not answered	42	13%

SM5 James Street

The main sentiment in the comments was a general disagreement with the proposal (29%), followed by the plan will / has increased traffic and congestion (22%).

Table 27: Q29. If you have a comment about the SM5 James Street filter, please use the box below. (All responding n=336)

	No. Responses	% Responses
Disagree with proposal(s) / can't see the benefits / remove them	98	29%
Plan will / has increased traffic and congestion	75	22%
Plan will / has increased pollution / worsen air quality	50	15%
Will / has already resulted in increased journey times and costs	33	10%
Support / agree with / can see the benefits	31	9%
Concerns about safety for everyone (cyclists / pedestrians / drivers)	14	4%
Taxis should not be exempt	13	4%
Concerns for local businesses / economy	9	3%
Plan will displace traffic and pollution to surrounding areas	9	3%
Negative opinion of ANPR / object to them	9	3%
This is unnecessary / waste of time / money / resources	6	2%
Other	49	15%
Not answered	33	10%



SM6 Bullingdon Road

The main comments given were to get rid of LTNs / no benefit from them (31%), followed by the Plan will / has increased traffic and congestion (23%).

Table 28: Q30. If you have a comment about the SM6 Bullingdon Road filter, please use the box below. (All responding n=329)

	No. Responses	% Responses
Get rid of LTNs / No benefit from them	101	31%
Plan will / has increased traffic and congestion	75	23%
Plan will / has increased pollution / worsen air quality	49	15%
Will / has already resulted in increased journey times and costs	43	13%
Negative impact on residents/causing problems	41	12%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	34	10%
Support / agree with/can see the benefits	34	10%
Plan will displace traffic and pollution to surrounding areas	28	9%
Concerns for local businesses / economy	23	7%
Concerns about safety for everyone (cyclists / pedestrians / drivers)	19	6%
This is unnecessary / waste of time / money / resources	19	6%
Safer / more pleasant for cyclists and pedestrians	13	4%
Concerns about lack of access/disruptions for emergency services	10	3%
A one-way system needs to be implemented	10	3%
Concerns over causing problems for parking zones (causing hazards / disputes / lack of parking)	9	3%
Taxis should not be exempt	6	2%
Concerns over vandalism	6	2%
Negatively affects public transport services	6	2%
Listen to what citizens want / we did not agree to this	5	2%
Other	34	10%
Not answered	32	10%



SM7 Leopold Street

The main comments disagreed with the proposal in general (31%), followed by the plan will / has increased traffic and congestion (25%).

Table 29: Q31. If you have a comment about the SM7 Leopold Street filter, please use the box below. (All responding n=300)

	No. Responses	% Responses
Disagree with proposal(s) / can't see the benefits / remove them	92	31%
Plan will / has increased traffic and congestion	74	25%
Plan will / has increased pollution / worsen air quality	54	18%
Will / has already resulted in increased journey times and costs	45	15%
Support / agree with / can see the benefits	40	13%
Plan has / will disrupt residents daily life / cause residents stress	38	13%
This is unnecessary / waste of time, money, and resources	26	9%
Plan will displace traffic and pollution to surrounding areas	24	8%
Another solution is needed	14	5%
Concerns for local businesses / economy	13	4%
Too much risk	11	4%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	9	3%
Infringement on rights / liberties / freedom of movement	9	3%
Concerns about lack of access/disruptions for emergency services	8	3%
Negative opinion of bollards	7	2%
LTNs will / are affecting my job / income	5	2%
Not answered	28	9%



SM8 Magdalen Road

The main comments given were that the LTNs should be removed (24%), followed by the plan will / has increased traffic and congestion (21%).

Table 30: Q32. If you have a comment about the SM8 Magdalen Road (two-way) filter, please use the box below. (All responding n=371)

	No. Responses	% Responses
Should be removed/LTNs should be removed	88	24%
Plan will / has increased traffic and congestion	77	21%
Will / has already resulted in increased journey times and costs	63	17%
Concerns about safety for everyone (cyclists / pedestrians / drivers)	54	15%
Plan will / has increased pollution / worsen air quality	52	14%
A one-way system should be implemented/is preferable	47	13%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	44	12%
Negative opinion of ANPR / object to them	43	12%
Concerns for local businesses / economy	42	11%
Restrictive/unfair/inconvenient for residents	40	11%
Plan will displace traffic and pollution to surrounding areas	38	10%
This will negatively impact people's lives e.g., bad for wellbeing, mental health etc.	29	8%
Support / can see the benefits/positive response	26	7%
Not answered	25	7%
This is unnecessary / waste of time, money, and resources	24	6%
Safer / more pleasant for cyclists and pedestrians	23	6%
Prefer a physical barrier / keep the bollards	22	6%
Undemocratic / infringement on rights / privacy / freedom of movement	19	5%
Other	19	5%
Concerns about lack of access / disruptions for emergency services	14	4%
Divisive – divides community/benefits few at expense of many	14	4%
Taxis shouldn't be exempt	12	3%
Concerns for elderly / (hidden)disabled /young children / those with illnesses	11	3%
Concern over vandalised bollards / damage increasing	10	3%
Public transport needs general improvement		2%
Support ANPR	8	2%
Difficulty entering Oxford from surrounding / rural areas	8	1%
Disabled/blue badge holders should be exempt	5	1%



SM9 Barnet Street and SM10 Howard Street

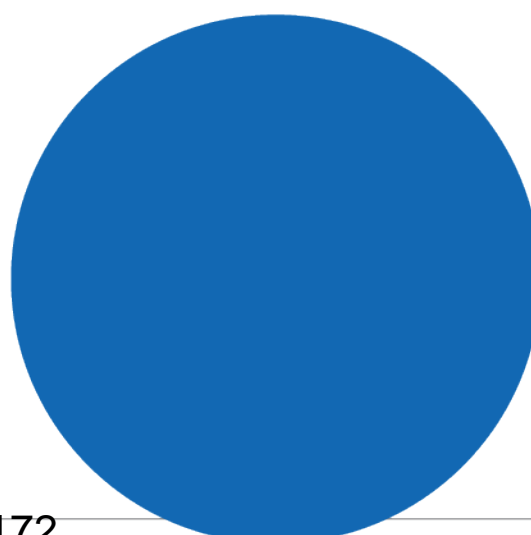
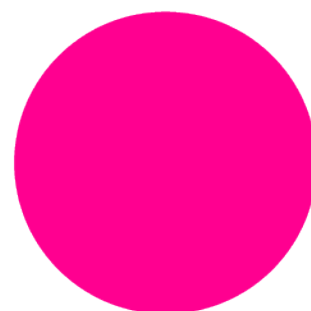
The main sentiment of the comments was a general disagreement with the proposals (24%), followed by the plan will / has increased traffic and congestion (18%).

Table 31: Q33. If you have a comment about the SM9 Barnet Street and SM10 Howard Street (contraflow, cycle way and two-way section) filter, please use the box below. (All responding n=326)

	No. Responses	% Responses
Disagree with proposal(s) / can't see the benefit	77	24%
Plan will / has increased traffic and congestion	59	18%
Will / has already resulted in increased journey	50	15%
Plan will / has increased pollution / worsen air quality	47	14%
Support/agree with/can see the benefits	44	13%
Plan will displace traffic and pollution to surrounding areas	40	12%
Concerns about safety for everyone (cyclists / pedestrians / drivers)	35	11%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	27	8%
A one-way system needs to be implemented	26	8%
Disagree with restrictions on residents	23	7%
This is unnecessary / waste of time / money / resources	23	7%
Safer / more pleasant for cyclists and pedestrians	21	6%
Concerns for local businesses / economy	19	6%
This will negatively impact people's lives e.g., bad for wellbeing, mental health etc.	19	6%
Infringement on rights / liberties / freedom of movement	16	5%
Discriminatory/divisive/only benefits a minority	16	5%
Has reduced noise/air pollution/traffic	11	3%
Against installing ANPR – fears it could be abuse	9	3%
Would like to see ANPR introduced	9	3%
Concerns about lack of access/disruptions for emergency services	8	2%
Would like the bollards to remain	8	2%
Negatively affects public transport services	5	2%
Other	75	23%
Not answered	24	7%



Views on the proposed changes to the experimental east Oxford LTN areas



This section asked respondents about their views on the proposed changes to the experimental east Oxford LTN areas

Overview

Oxfordshire County Council used feedback from the trial to date and meetings with various stakeholders and partners to review the impact of the east Oxford LTNs and propose some changes as part of the summer 2023 consultation.

These changes would only be implemented if the decision was made to make the LTNs permanent.

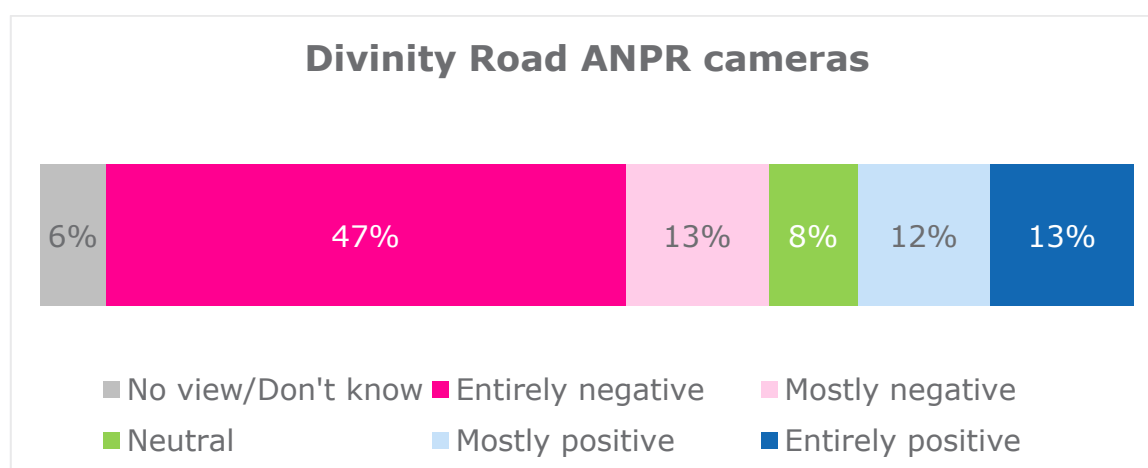
The council is proposing to:

- replace the bollards in Divinity Road, James Street and Magdalen Road with ANPR cameras.
- introduce bollards and / or planters at the junction of Jeune Street and St. Clement's Street and make Jeune Street two-way south of the restriction.
- relocate a residential parking bay in Marston Street.
- and move the restriction on Bullingdon Road to the southwest.

Divinity Road ANPR cameras

Twenty five percent of respondents had positive views on the proposed ANPR cameras for the Divinity Road filter in east Oxford (13% entirely positive, 12% mostly positive). Sixty percent of respondents had negative views (13% mostly negative, 47% entirely negative). Eight percent were neutral about the proposal and 4% didn't have a view.

Figure 14: Q34. Which of the following best describes your view on the ANPR cameras proposed for the Divinity Road filter in east Oxford? (All responding n=2,043)



Individuals were significantly more likely to have positive views than businesses and other organisations (26% individuals, 10% organisations), whereas they had significantly more



negative views than individuals (60% individuals, 84% organisations), as shown in the table below.

Table 32: Q34. Which of the following best describes your view on the ANPR cameras proposed for the Divinity Road filter in east Oxford? (All responding n=)

Respondent type	Individuals (1970)	Businesses (61)
Entirely positive	14%	7%
Mostly positive	12%	3%
Neutral	9%	0%
Mostly negative	13%	13%
Entirely negative	47%	70%
Don't know	2%	5%
No view on this LTN area	4%	2%
NET: Positive	26%	10%
NET: Negative	60%	84%

Divinity Road ANPR cameras by demographic

Results for the different demographics are summarised below.

Age

- Respondents aged <25 (29%) and 25-34 were most positive (29%), whereas respondents who preferred not to say what their age was were most negative (80%), as shown below.

	<25 (51)	25-34 (250)	35-44 (428)	45-54 (432)	55-64 (386)	65-74 (296)	75+ (170)	PNTS (71)
NET: Positive	29%	29%	28%	22%	22%	28%	25%	13%
NET: Negative	59%	55%	58%	64%	63%	59%	64%	80%

Gender

- All genders were more negative in their views than positive, although males (31%) were significantly more positive than females (25%) and those who preferred not to say (11%).
- Respondents who preferred not to say what their gender was (78%) were significantly more negative than both females (59%) and males (57%).

	Female (850)	Male (916)	Prefer not to say (218)
NET: Positive	25%	31%	11%
NET: Negative	59%	57%	78%



Ethnicity

- Respondents of Asian and Black ethnicities were most negative in their views about the ANPR cameras proposed for the Divinity Road filter.

	Asian / Asian British (104)	Black / Black British (6)	Chinese (10)	Mixed / multiple (35)	White (1432)	PNTS (379)
NET: Positive	15%	0%	30%	31%	30%	11%
NET: Negative	81%	83%	70%	57%	55%	77%

Day-to-day activities

- Respondents whose day-to-day activities were limited either a little or a lot were significantly more likely to be negative in their views than those whose activities weren't limited (78%, 71% compared with 55% respectively).

	Day to day activities limited a lot (114)	Day to day activities limited a little (215)	Day to day activities not limited (1455)
NET: Positive	15%	21%	29%
NET: Negative	78%	71%	55%

Blue badge holders

- Blue badge holders were significantly more negative (73%) than non-blue badge holders (60%) in their views on the ANPR cameras proposed for the Divinity Road filter.

	Blue Badge holder (71)	Non-Blue Badge holder (1905)
NET: Positive	18%	26%
NET: Negative	73%	60%

Carers

- Carers were significantly more negative (75%) than non-carers (56%) in their views on the ANPR cameras proposed for the Divinity Road filter.

	Carer (257)	Non-carer (1606)
NET: Positive	15%	29%
NET: Negative	75%	56%

Location

- Respondents living elsewhere in east Oxford were significantly more negative than the locations within the LTN area (68% compared with Divinity Road: 57%, St. Mary's: 54%, and St. Clement's: 40%).
- Respondents living within the St. Clement's LTN area were most positive in their views (37%), closely followed by the Divinity Road LTN area (34%), however views were more negative than positive for residents living in all areas.



	Divinity Road LTN area (309)	St. Mary's LTN area (158)	St. Clement's LTN area (425)	Elsewhere in east Oxford (597)
NET: Positive	34%	27%	37%	20%
NET: Negative	57%	54%	40%	68%

Further comments

- The most frequent theme coming from respondents was concern that the ANPR cameras would be ignored/abused or vandalised (16%) or generally disagreed with the proposals (15%).
- Positively, respondents said that it was better for emergency services (14%) and generally supported/agreed with the proposals (14%).

Table 33: Q35. Please provide comments to support your view on the proposal to install ANPR cameras at Divinity Road below (All responding n=1478)

	No. Responses	% Responses
Concerned that it will be ignored / abused / vandalised	237	16%
Disagree with proposal(s) / cannot see the benefits	223	15%
Better for emergency services	210	14%
Support / agree with / can see the benefits	207	14%
Prefer bollards/physical barrier over ANPR (more effective/feel safer etc.)	164	11%
Just a money spinner / negative view of extra income for the council	150	10%
Plan will / has increased traffic and congestion	147	10%
Concerns about safety for everyone (cyclists / pedestrians / drivers)	125	8%
Taxis should not be exempt	117	8%
Remove all restrictions and return to normal with no LTNs	106	7%
Will require enforcement / policing	99	7%
Concerned people will get caught out if they don't know the area	94	6%
Infringement on rights / liberties / freedom of movement	94	6%
Concerned about increase in dangerous driving e.g., speeding	88	6%
Concerned over extra costs involved	79	5%
Disagree with exemptions / too many exemptions will undermine the scheme	77	5%
Disagree with extra surveillance	75	5%
Exemptions needed (e.g., taxis, deliveries etc.)	70	5%
Does not believe the plan will work / fines won't deter bad drivers	69	5%
Plan will / has increased pollution / worsen air quality	67	5%
Plan will displace traffic and pollution to surrounding areas	66	4%

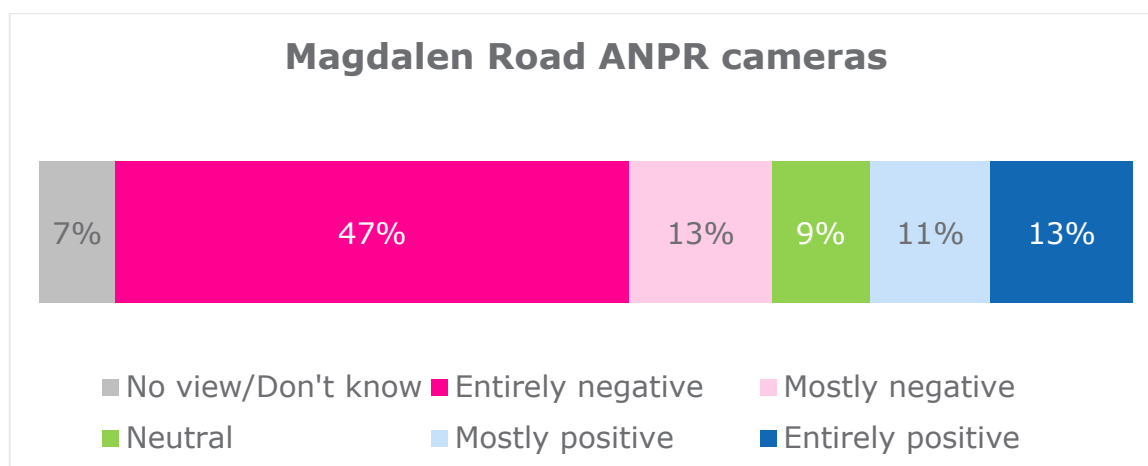


	No. Responses	% Responses
Waste of time / money	64	4%
Increased journey time	57	4%
Divisive / benefits few at expense of many	54	4%
ANPR will make no difference/there would be no change	54	4%
Will help enforce the rules	52	4%
Traffic should be allowed to flow freely	49	3%
Residents should be exempt	48	3%
Will have a negative effect on people's lives (e.g., extra costs/inconvenience/wellbeing etc.)	44	3%
More general information required	43	3%
Blue badge holders / carers should be exempt	42	3%
More information needed about exemptions	34	2%
Concerns over negative effect on local businesses	33	2%
Clear and visible signage needed alongside ANPR	33	2%
Public transport needs general improvement	32	2%
Will help the bollards from being damaged / they won't have to keep being replaced	30	2%
Funds would be better spent on other council services (e.g., potholes/housing etc.)	30	2%
Concerns about the negative effect of restrictions on disabled / elderly people	22	1%
A one-way system needs to be implemented	20	1%
ANPR should be supported by remote controlled/electric bollards that can be lowered for emergency access etc.	20	1%
Better infrastructure needed	15	1%
Switching to ANPR will result in an increase in anti-social behaviour / conflict	15	1%
Will discourage/reduce active travel / will increase car use	15	1%
Cars are sometimes a necessary and essential part of everyday life	14	1%
More information needed about residents passes	11	1%
Concerned residents will be fined for using their road / accessing their properties	9	1%
Council could easily abuse / change the system for the worse	8	1%
Positive view of extra income for the council	8	1%
Will enable residents to have full access to Divinity Road	8	1%
Will increase noise pollution	8	1%
Other	138	9%
Not answered	31	2%

Magdalen Road ANPR cameras

Twenty four percent of respondents had positive views on the proposed ANPR cameras for the Magdalen Road filter in east Oxford (13% entirely positive, 11% mostly positive). Sixty percent of respondents had negative views (13% mostly negative, 47% entirely negative). Nine percent were neutral about the proposal and 7% didn't have a view.

Figure 15: Q36. Which of the following best describes your view on the ANPR cameras proposed for the Magdalen Road filter in east Oxford? (All responding n=2,023)



Individuals were significantly more likely to have positive views than businesses and other organisations (26% individuals, 10% organisations), whereas they had significantly more negative views than individuals (60% individuals, 84% organisations), as shown in the table below.

Table 34: Q36. Which of the following best describes your view on the ANPR cameras proposed for the Magdalen Road filter in east Oxford? (All responding n=).

Respondent type	Individuals (1953)	Businesses (58)
Entirely positive	13%	7%
Mostly positive	12%	2%
Neutral	9%	0%
Mostly negative	13%	12%
Entirely negative	46%	76%
Don't know	2%	3%
No view on this LTN area	5%	0%
NET: Positive	24%	9%
NET: Negative	59%	88%



Magdalen Road ANPR cameras by demographic

Results for the different demographics are summarised below.

Age

- Respondents aged 25-34 were most positive (31%), whereas respondents who preferred not to say what their age was were most negative (80%), as shown below.

	<25 (51)	25-34 (248)	35-44 (427)	45-54 (431)	55-64 (382)	65-74 (291)	75+ (164)	PNTS (71)
NET: Positive	27%	31%	27%	21%	19%	24%	23%	11%
NET: Negative	59%	53%	58%	64%	63%	57%	62%	80%

Gender

- All genders were more negative in their views than positive.
- Respondents who preferred not to say what their gender was (78%) were significantly more negative than both females (57%) and males (57%).

	Female (843)	Male (906)	Prefer not to say (216)
NET: Positive	24%	28%	11%
NET: Negative	57%	57%	78%

Ethnicity

- Respondents of Asian ethnicities and those who preferred not to say were most negative in their views about the ANPR cameras proposed for the Magdalen Road filter.

	Asian / Asian British (103)	Black / Black British (6)	Chinese (10)	Mixed / multiple (35)	White (1416)	PNTS (376)
NET: Positive	15%	0%	30%	29%	28%	11%
NET: Negative	80%	67%	70%	60%	54%	77%

Day-to-day activities

- Respondents whose day-to-day activities were limited either a little or a lot were significantly more likely to be negative in their views than those whose activities weren't limited (78%, 68% compared with 54% respectively).

	Day to day activities limited a lot (114)	Day to day activities limited a little (211)	Day to day activities not limited (1442)
NET: Positive	16%	20%	28%
NET: Negative	78%	68%	54%



Blue badge holders

- Blue badge holders were significantly more negative (72%) than non-blue badge holders (59%) in their views on the ANPR cameras proposed for the Magdalen Road filter.

	Blue Badge holder (69)	Non-Blue Badge holder (1889)
NET: Positive	19%	25%
NET: Negative	72%	59%

Carers

- Carers were significantly more negative (76%) than non-carers (55%) in their views on the ANPR cameras proposed for the Magdalen Road filter.

	Carer (254)	Non-carer (1592)
NET: Positive	12%	28%
NET: Negative	76%	55%

Location

- Respondents living within the St. Clement's LTN area were most positive in their views (37%), however views were more negative than positive for residents living in all areas.
- Respondents living elsewhere in east Oxford were significantly more negative than those living in the locations within the LTN area (68% compared with Divinity Road 46%, St. Mary's 53%, and St. Clement's 43%).

	Divinity Road LTN area (300)	St. Mary's LTN area (154)	St. Clement's LTN area (424)	Elsewhere in east Oxford (600)
NET: Positive	27%	27%	37%	20%
NET: Negative	46%	53%	43%	68%

Further comments

- The most frequent theme in respondents' comments was that exemptions were needed for certain groups, e.g., emergency services, residents (16%), closely followed by general disagreements with the proposal (15%).

Table 35: Q37. Please provide comments to support your view on the proposal to install ANPR cameras in Magdalen Road below: (All responding n=1,301)

	No. Responses	% Responses
Exemptions needed e.g., emergency services, residents etc.	210	16%
Disagree with proposal(s) / can't see the benefits / remove them	191	15%



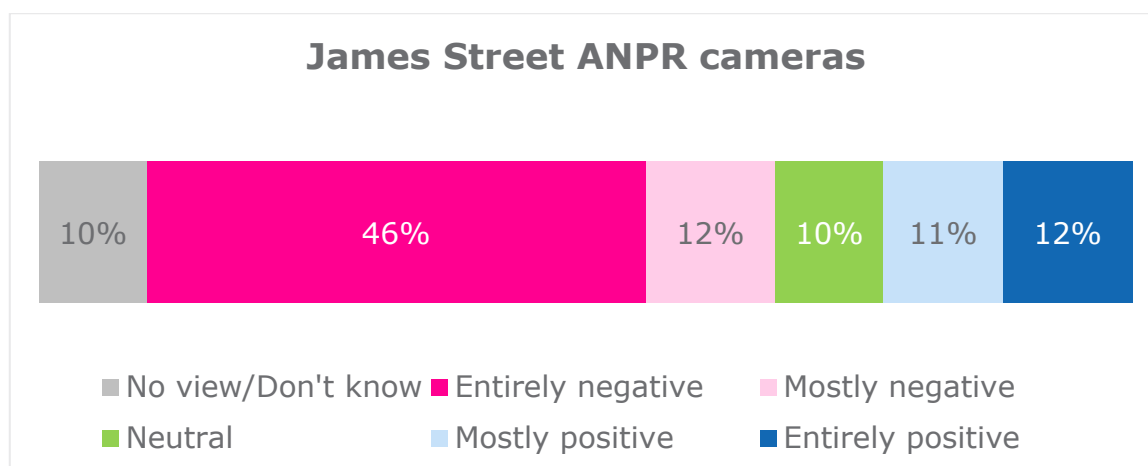
	No. Responses	% Responses
Support / agree with / can see the benefits	113	9%
This is unnecessary / waste of time, money, and resources	111	9%
Plan will / has increased traffic and congestion	103	8%
will cause them stress / issues	99	8%
Just a money spinner / negative view of extra income for the council	93	7%
Concerns about safety for everyone (cyclists / pedestrians / drivers)	74	6%
Will require enforcement / policing	70	5%
Concerns people could abuse the system e.g., illegal plates / obscuring plates etc.	68	5%
The bollards need to more robust / permanent	63	5%
Concerns for local businesses / economy	62	5%
Plan will / has increased pollution / worsen air quality	58	4%
Infringement on rights / liberties / freedom of movement	57	4%
Concerned about increase in dangerous driving e.g., speeding	55	4%
Plan will displace traffic and pollution to surrounding areas	50	4%
ANPR cameras could cause confusion	48	4%
ANPR cameras would be better than physical barriers / bollards	47	4%
Will / has already resulted in increased journey times and costs	41	3%
This is an important route / Traffic should be allowed to flow freely	40	3%
Concerns that the bollards will be vandalised	36	3%
rich will pay fines and poor will sit in traffic	24	2%
Signage needs to be improved e.g., made clearer	24	2%
A one-way system needs to be implemented	21	2%
Lack of faith in the council / doesn't believe results from the survey will be listened to	21	2%
This could discourage / stop vandalism	20	2%
Improve the road infrastructure e.g., speed bumps, potholes etc.	19	1%
Public transport needs general improvement	16	1%
Other	7	1%
Not answered	250	19%



James Street ANPR cameras

Less than 25% of respondents had positive views on the proposed ANPR cameras for the James Street filter in east Oxford (12% entirely positive, 11% mostly positive). Around 60% of respondents had negative views (12% mostly negative, 46% entirely negative). Ten percent were neutral about the proposal and 10% didn't have a view.

Figure 16: Q38. Which of the following best describes your view on the ANPR cameras proposed for the James Street filter in east Oxford? (All responding n=2,012)



Individuals were significantly more likely to have positive views than businesses and other organisations (23% individuals, 8% organisations), whereas they had significantly more negative views than individuals (88% individuals, 57% organisations), as shown in the table below.

Table 36: Q38. Which of the following best describes your view on the ANPR cameras proposed for the James Street filter in east Oxford? (All responding n=).

Respondent type	Individuals (1941)	Businesses (59)
Entirely positive	12%	7%
Mostly positive	11%	2%
Neutral	10%	0%
Mostly negative	12%	17%
Entirely negative	45%	71%
Don't know	3%	2%
No view on this LTN area	7%	2%
NET: Positive	23%	8%
NET: Negative	57%	88%



James Street ANPR cameras by demographic

Results for the different demographics are summarised below.

Age

- Respondents aged 25-34 were most positive (29%), whereas respondents who preferred not to say what their age was were most negative (79%), as shown below.

	<25 (51)	25-34 (250)	35-44 (421)	45-54 (433)	55-64 (375)	65-74 (290)	75+ (164)	PNTS (71)
NET: Positive	25%	29%	25%	19%	19%	24%	21%	10%
NET: Negative	59%	51%	56%	63%	60%	53%	57%	79%

Gender

- All genders were more negative in their views than positive.
- Respondents who preferred not to say what their gender was (76%) were significantly more negative than both females (55%) and males (54%).

	Female (838)	Male (903)	Prefer not to say (215)
NET: Positive	22%	27%	10%
NET: Negative	55%	54%	76%

Ethnicity

- Respondents of Black (83%) and Asian (78%) ethnicities, closely followed by those who preferred not to say were most negative in their views about the ANPR cameras proposed for the James Street filter.

	Asian / Asian British (101)	Black / Black British (6)	Chinese (10)	Mixed / multiple (35)	White (1410)	PNTS (375)
NET: Positive	13%	0%	30%	23%	27%	10%
NET: Negative	78%	83%	70%	54%	51%	75%

Day-to-day activities

- Respondents whose day-to-day activities were limited either a little or a lot were significantly more likely to be negative in their views than those whose activities weren't limited (76%, 66% compared with 51% respectively).

	Day to day activities limited a lot (113)	Day to day activities limited a little (209)	Day to day activities not limited (1436)
NET: Positive	14%	19%	26%
NET: Negative	76%	66%	51%



Blue badge holders

- Blue badge holders were significantly more negative (67%) than non-blue badge holders (57%) in their views on the ANPR cameras proposed for the James Street filter.

	Blue Badge holder (69)	Non-Blue Badge holder (1880)
NET: Positive	19%	23%
NET: Negative	67%	57%

Carers

- Carers were significantly more negative (73%) than non-carers (53%) in their views on the ANPR cameras proposed for the James Street filter.

	Carer (252)	Non-carer (1584)
NET: Positive	12%	26%
NET: Negative	73%	53%

Location

- Respondents living within the St. Clement's LTN area were most positive in their views (34%), however views were more negative than positive for residents living in all areas.
- Respondents living elsewhere in east Oxford were significantly more negative than the locations within the LTN area (67% compared with Divinity Road: 42%, St. Mary's: 50%, and St. Clement's: 40%).

	Divinity Road LTN area (299)	St. Mary's LTN area (155)	St. Clement's LTN area (419)	Elsewhere in east Oxford (592)
NET: Positive	24%	28%	34%	19%
NET: Negative	42%	50%	40%	67%

Further comments

- Many respondents expressed either general disagreement for the plan (29%), another 12% did not believe the plan will work / or felt that fines won't deter bad drivers.
- Over one in ten responses indicated general support for the scheme (12%).

Table 37: Q39. Please provide comments to support your view on the proposal to install ANPR cameras in James Street below: (All responding n=1,171)

	No. Responses	% Responses
Disagree with proposal(s) / can't see the benefits / remove them	337	29%
Support / agree with / can see the benefits	144	12%

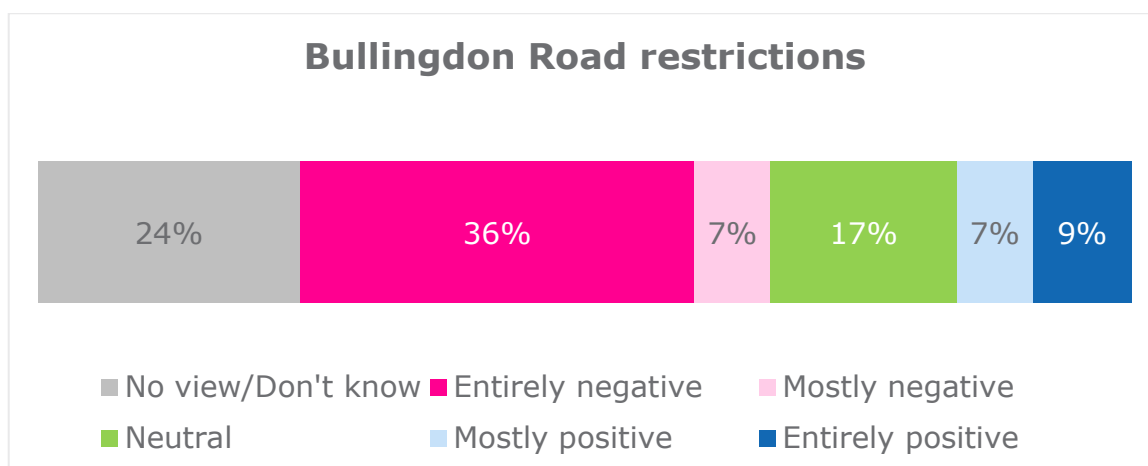


	No. Responses	% Responses
Doesn't believe the plan will work / fines won't deter bad drivers	136	12%
Concerned that it will be ignored / abused / vandalised	103	9%
Just a money spinner / negative view of extra income for the council	103	9%
Plan will displace traffic and pollution to surrounding areas	100	9%
Better for emergency services	83	7%
Concerned over extra costs involved	69	6%
Traffic should be allowed to flow freely	63	5%
More information needed about exemptions	52	4%
Infringement on rights / liberties / freedom of movement	49	4%
Concerns over how it will be enforced	48	4%
Exemptions needed e.g., taxis, deliveries etc.	48	4%
Disagree with extra surveillance	44	4%
Concerns about safety for everyone (cyclists / pedestrians / drivers)	37	3%
Plan will / has increased pollution / worsen air quality	37	3%
Concerned people will get caught out if they don't know the area	29	2%
Other methods of preventing traffic flow are more suitable e.g., bollards	29	2%
Will help enforce the rules	22	2%
Will be harder to abuse / vandalise	19	2%
Will enable residents to have full access the area	16	1%
Cars are sometimes a necessary and essential part of everyday life	12	1%
Concerned about increase in dangerous driving e.g., speeding	11	1%
Concerned residents will be fined for using their road / accessing their properties	11	1%
More general information required	10	1%
Public transport needs general improvement	9	1%
A one-way system needs to be implemented	6	1%
Will encourage more car use / cars on the road	5	<1%
Safer to walk/cycle	5	<1%
Other	19	2%
Don't know	20	2%
Not answered	251	21%

Bullington Road restrictions

Sixteen percent of respondents had positive views on the proposal to relocate the restrictions on Bullington Road in east Oxford (9% entirely positive, 7% mostly positive). Forty three percent of respondents had negative views (7% mostly negative, 36% entirely negative). 17% percent were neutral about the proposal and 24% didn't have a view.

Figure 17: Q40. Which of the following best describes your view on the proposal to move the restrictions on Bullington Road in east Oxford? (All responding n=1,993)



Individuals were significantly more likely to have positive views than businesses and other organisations (17% individuals, 3% organisations), whereas they had significantly more negative views than individuals (42% individuals, 78% organisations), as shown in the table below.

Table 38: Q40. Which of the following best describes your view on the proposal to move the restrictions on Bullington Road in east Oxford? (All responding n=).

Respondent type	Individuals (1923)	Businesses (59)
Entirely positive	9%	3%
Mostly positive	7%	0%
Neutral	18%	3%
Mostly negative	6%	15%
Entirely negative	36%	63%
Don't know	6%	3%
No view on this LTN area	17%	12%
NET: Positive	17%	3%
NET: Negative	42%	78%



Bullingdon Road restrictions by demographic

Results for the different demographics are summarised below.

Age

- Respondents aged 25-34 were most positive (21%), whereas respondents who preferred not to say what their age was were most negative (64%), as shown below.

	<25 (51)	25-34 (245)	35-44 (418)	45-54 (429)	55-64 (376)	65-74 (285)	75+ (164)	PNTS (72)
NET: Positive	12%	21%	18%	14%	14%	18%	13%	6%
NET: Negative	51%	37%	41%	45%	48%	36%	45%	64%

Gender

- Respondents who preferred not to say what their gender was (61%) were significantly more negative than both females (40%) and males (40%).

	Female (826)	Male (895)	Prefer not to say (218)
NET: Positive	16%	19%	7%
NET: Negative	40%	40%	61%

Ethnicity

- Respondents of Asian / Asian British (77%) and Black / Black British (75%) ethnicities were most negative in their views about moving the restrictions on Bullingdon Road.

	Asian / Asian British (100)	Black / Black British (4)	Chinese (10)	Mixed / multiple (35)	White (1395)	PNTS (374)
NET: Positive	8%	0%	20%	9%	19%	9%
NET: Negative	77%	75%	50%	46%	35%	62%

Day-to-day activities

- Respondents whose day-to-day activities were limited either a little or a lot were significantly more likely to be negative in their views than those whose activities weren't limited (70%, 50% compared with 36% respectively).

	Day to day activities limited a lot (113)	Day to day activities limited a little (207)	Day to day activities not limited (1423)
NET: Positive	11%	14%	18%
NET: Negative	70%	50%	36%



Blue badge holders

- Blue badge holders were significantly more negative (62%) than non-blue badge holders (42%) in their views about moving the restrictions on Bullingdon Road.

	Blue Badge holder (68)	Non-Blue Badge holder (1860)
NET: Positive	18%	16%
NET: Negative	62%	42%

Carers

- Carers were significantly more negative (64%) than non-carers (37%) in their views about moving the restrictions on Bullingdon Road.

	Carer (250)	Non-carer (1569)
NET: Positive	10%	18%
NET: Negative	64%	37%

Location

- Respondents living within the St. Clement's LTN area were most positive in their views (22%), however views were more negative than positive for residents living in all areas.
- Respondents living elsewhere in east Oxford were significantly more negative than the locations within the LTN area (53% compared with Divinity Road: 24%, St. Mary's: 37%, and St. Clement's: 29%).

	Divinity Road LTN area (299)	St. Mary's LTN area (150)	St. Clement's LTN area (419)	Elsewhere in east Oxford (586)
NET: Positive	15%	18%	22%	14%
NET: Negative	24%	37%	29%	53%

Further comments

- Respondents provided general disagreement (15%) for the moving of the restrictions on Bullingdon Road; more wide-ranging comments were provided, but by fewer respondents for each.

Table 39: Q41. Please provide comments to support your view on the proposal to move the restrictions on Bullingdon Road below: (All responding n=798).

	No. Responses	% Responses
Disagree with proposal(s) / remove them	122	15%
This is unnecessary / waste of time, money, and resources	73	9%
Does not think it will work / unrealistic	64	8%
Plan will / has increased traffic and congestion	52	7%
Have to drive further / detours / more difficult	47	6%

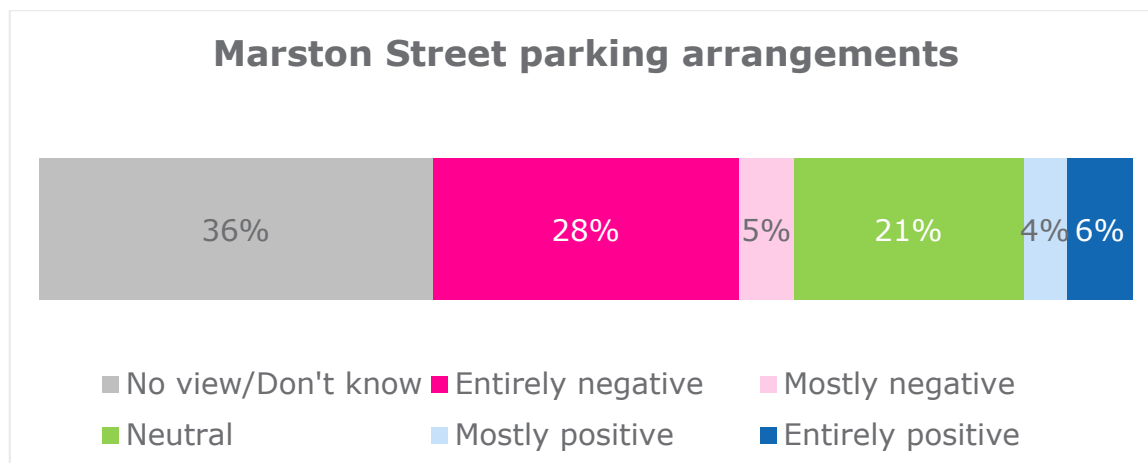


	No. Responses	% Responses
Plan will displace traffic and pollution to surrounding areas	46	6%
Plan will / has increased pollution / worsen air quality	41	5%
Infringement on rights / liberties / freedom of movement	39	5%
Just a money spinner / negative view of extra income for the council	39	5%
Support ANPR	35	4%
Support / agree with / can see the benefits	34	4%
Concerns for local businesses / economy	32	4%
Need for information / don't understand the aim or what you are trying to achieve	30	4%
Traffic should be allowed to flow freely	27	3%
Negative opinion of ANPR / object to them	26	3%
Exemptions needed e.g., emergency services, taxis, residents etc.	25	3%
Plan has / will disrupt residents daily life / cause residents stress	25	3%
don't live there or use the area often	24	3%
Concerns about safety for everyone (cyclists / pedestrians / drivers)	18	2%
Concerned that it will be ignored / abused / vandalised	17	2%
Will be divisive to communities / only benefits a few	16	2%
Concerned over extra costs involved	15	2%
Concerns over how it will be enforced	15	2%
Cars are sometimes a necessary and essential part of everyday life	15	2%
Disagree with exemptions/too many exemptions will undermine the scheme	15	2%
Public transport needs general improvement	13	2%
Concerns about lack of access / disruptions for emergency services	11	1%
Plan has / will reduce the number of cars / traffic on the roads	11	1%
Disagree with extra surveillance	10	1%
A one-way system needs to be implemented	9	1%
Plan will result / has already resulted in parking difficulties	9	1%
Safer / more pleasant for cyclists and pedestrians	9	1%
Will help enforce the rules	8	1%
Improve infrastructure (inc. for pedestrians and cyclists)	7	1%
More information needed about residents passes / exemptions	6	1%
Reducing the amount of cars on the road is a good idea	6	1%
Leave the bollards where they are	5	1%
Other	35	4%
Not answered	134	17%

Marston Street parking arrangements

Only 10% of respondents had positive views on the proposed change to the parking arrangements on Marston Street in east Oxford (6% entirely positive, 4% mostly positive). Thirty three percent of respondents had negative views (5% mostly negative, 28% entirely negative). Twenty one percent were neutral about the proposal and 36% didn't have a view.

Figure 18: Q42. Which of the following best describes your view on changing the parking arrangements on Marston Street in east Oxford? (All responding n=1,989)



Individuals were significantly more likely to have positive views than businesses and other organisations (11% individuals, 0% organisations), whereas they had significantly more negative views than individuals (32% individuals, 67% organisations), as shown in the table below.

Table 40: Q42. Which of the following best describes your view on changing the parking arrangements on Marston Street in east Oxford? (All responding n=)

Respondent type	Individuals (1921)	Businesses (58)
Entirely positive	7%	0%
Mostly positive	4%	0%
Neutral	21%	9%
Mostly negative	5%	9%
Entirely negative	28%	59%
Don't know	10%	3%
No view on this LTN area	26%	21%
NET: Positive	11%	0%
NET: Negative	32%	67%



Marston Street parking arrangements by demographic

Results for the different demographics are summarised below.

Age

- Respondents aged 25-34 were most positive (15%), whereas respondents who preferred not to say what their age was were most negative (46%).

	<25 (51)	25-34 (246)	35-44 (421)	45-54 (426)	55-64 (375)	65-74 (281)	75+ (163)	PNTS (70)
NET: Positive	12%	15%	10%	8%	10%	10%	7%	3%
NET: Negative	31%	30%	34%	36%	39%	23%	33%	46%

Gender

- Respondents who preferred not to say what their gender was (53%) were significantly more negative than both females (29%) and males (31%).

	Female (828)	Male (895)	Prefer not to say (213)
NET: Positive	10%	12%	5%
NET: Negative	29%	31%	53%

Ethnicity

- Respondents of Black (80%) ethnicities were most negative in their views about changing the parking arrangements on Marston Street.

	Asian / Asian British (100)	Black / Black British (5)	Chinese (10)	Mixed / multiple (33)	White (1392)	PNTS (374)
NET: Positive	5%	0%	20%	0%	12%	5%
NET: Negative	67%	80%	50%	36%	26%	48%

Day-to-day activities

- Respondents whose day-to-day activities were limited either a little or a lot were significantly more likely to be negative in their views than those whose activities weren't limited (59%, 38% compared with 27% respectively).

	Day to day activities limited a lot (111)	Day to day activities limited a little (210)	Day to day activities not limited (1414)
NET: Positive	5%	7%	12%
NET: Negative	59%	38%	27%



Blue badge holders

- Positive views were similar for both blue badge holders (9%) and non-blue badge holders (10%), albeit relatively low.
- However, blue badge holders were significantly more negative (47%) than non-blue badge holders (32%) about changing the parking arrangements on Marston Street.

	Blue Badge holder (68)	Non-Blue Badge holder (1856)
NET: Positive	9%	10%
NET: Negative	47%	32%

Carers

- Carers were significantly more negative (48%) than non-carers (28%) in their views about changing the parking arrangements on Marston Street.

	Carer (252)	Non-carer (1559)
NET: Positive	6%	11%
NET: Negative	48%	28%

Location

- Respondents living elsewhere in east Oxford were significantly more negative than those living within the LTN area (53%), and St. Mary's LTN residents (30%) were significantly more negative compared with Divinity Road (11%) and St. Clement's (20%).

	Divinity Road LTN area (297)	St. Mary's LTN area (151)	St. Clement's LTN area (412)	Elsewhere in east Oxford (586)
NET: Positive	11%	13%	12%	9%
NET: Negative	11%	30%	20%	42%

Further comments

- Respondents provided general disagreement (34%) to the proposed change to parking in Marston Street, but generally fewer respondents commented than for the other proposals.

Table 41: Q43. Please provide comments to support your view on the proposed change to parking in Marston Street below: (All responding n=587)

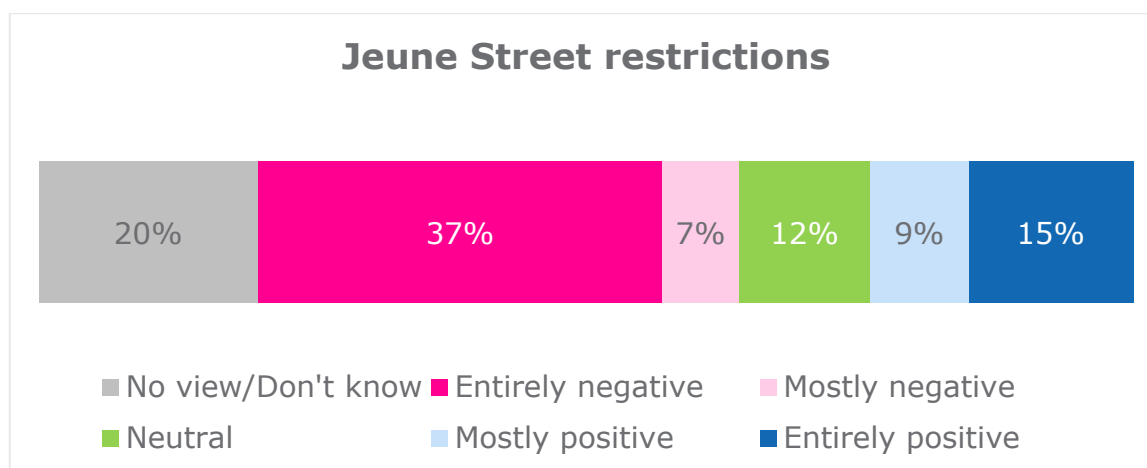
	No. Responses	% Responses
Disagree with proposal(s) / can't see the benefits / remove them	197	34%
This is unnecessary / waste of time, money, and resources	78	13%
Support / agree with / can see the benefits	67	11%
Plan will result / has already resulted in parking difficulties	55	9%

	No. Responses	% Responses
Plan will / has increased traffic and congestion	53	9%
Will / has already resulted in increased journey times and costs	38	6%
Concerns for local businesses / economy	32	5%
Plan will / has increased pollution / worsen air quality	32	5%
Plan will displace traffic and pollution to surrounding areas	28	5%
Other	16	3%
Not answered	157	27%

Jeune Street restrictions

Twenty five percent of respondents had positive views on the proposal to place a traffic restriction (bollards and / or planters) at the St. Clement's Street end of Jeune Street in east Oxford and make Jeune Street two-way south of the restriction (15% entirely positive, 9% mostly positive). Over 40% of respondents had negative views (7% mostly negative, 37% entirely negative). Twelve percent were neutral about the proposal and 20% didn't have a view.

Figure 19: Q44. Which of the following best describes your view on the proposal to place a traffic restriction (bollards and / or planters) at the St. Clement's Street end of Jeune Street in east Oxford, and make Jeune Street two-way south of the restriction? (All responding n=1,994)





Individuals were significantly more likely to have positive views than businesses and other organisations (24% individuals, 3% organisations), whereas they had significantly more negative views than individuals (43% individuals, 80% organisations), as shown in the table below.

Table 42: Q44. Which of the following best describes your view on the proposal to place a traffic restriction (bollards and / or planters) at the St. Clement's Street end of Jeune Street in east Oxford, and make Jeune Street two-way south of the restriction? (All responding n=)

Respondent type	Individuals (1925)	Businesses (59)
Entirely positive	15%	2%
Mostly positive	9%	2%
Neutral	12%	5%
Mostly negative	7%	10%
Entirely negative	36%	69%
Don't know	6%	3%
No view on this LTN area	14%	8%
NET: Positive	24%	3%
NET: Negative	43%	80%

Jeune Street restrictions by demographic

Results for the different demographics are summarised below.

Age

- Respondents aged 25-34 were most positive (21%), whereas respondents who preferred not to say what their age was were most negative (64%), as shown below.

	<25 (50)	25-34 (244)	35-44 (422)	45-54 (425)	55-64 (382)	65-74 (284)	75+ (163)	PNTS (70)
NET: Positive	34%	30%	26%	22%	22%	27%	13%	3%
NET: Negative	40%	41%	42%	45%	49%	36%	52%	70%

Gender

- Respondents who preferred not to say what their gender was (67%) were significantly more negative than both females (42%) and males (39%).

	Female (831)	Male (896)	Prefer not to say (215)
NET: Positive	21%	30%	9%
NET: Negative	42%	39%	67%



Ethnicity

- Of all the ethnicities identified, white respondents were most positive about the Jeune Street proposal (28%), closely followed by Mixed / multiple (26%), however negative comments outweighed positive ones for all groups.
- Respondents of Black and Asian ethnicities, closely followed by those who preferred not to say were most negative in their views about moving the restrictions on Bullington Road (100% and 78% respectively).

	Asian / Asian British (101)	Black / Black British (5)	Chinese (10)	Mixed / multiple (35)	White (1395)	PNTS (375)
NET: Positive	12%	0%	20%	26%	28%	14%
NET: Negative	76%	100%	70%	43%	35%	66%

Day-to-day activities

- Respondents whose day-to-day activities were limited either a little or a lot were significantly more likely to be negative in their views than those whose activities weren't limited (72%, 54% compared with 36% respectively).

	Day to day activities limited a lot (109)	Day to day activities limited a little (209)	Day to day activities not limited (1423)
NET: Positive	9%	18%	29%
NET: Negative	72%	54%	36%

Blue badge holders

- Blue badge holders were significantly more negative (67%) than non-blue badge holders (43%) in their views about the Jeune Street restrictions.

	Blue Badge holder (67)	Non-Blue Badge holder (1865)
NET: Positive	13%	25%
NET: Negative	67%	43%

Carers

- Carers were significantly more negative (60%) than non-carers (38%) in their views about the Jeune Street restrictions.

	Carer (250)	Non-carer (1570)
NET: Positive	15%	27%
NET: Negative	60%	38%



Location

- Respondents living within the LTN areas were more positive than those living elsewhere in east Oxford in their views, and this is one of the few proposals where positive views outweigh negative ones for Divinity Road LTN area residents (33% positive compared with 15% negative) and St. Clement's area residents (29% compared with 25%).
- Respondents living elsewhere in east Oxford were significantly more negative than the locations within the LTN area (57% compared with Divinity Road 15%, St. Mary's 45%, and St. Clement's 25%).

	Divinity Road LTN area (294)	St. Mary's LTN area (153)	St. Clement's LTN area (414)	Elsewhere in east Oxford (592)
NET: Positive	33%	37%	29%	18%
NET: Negative	15%	45%	25%	57%

Further comments

- Respondents provided general disagreement (19%) for the proposals to place a traffic restriction (bollards and / or planters) at the St. Clement's Street end of Jeune Street in east Oxford and make Jeune Street two-way south of the restriction; with a slightly lower proportion seeing the benefits of the proposal / supporting it (15%).

Table 43: Q45. Please provide comments to support your view on the proposals to place a traffic restriction (bollards and / or planters) at the St. Clement's Street end of Jeune Street in east Oxford, and make Jeune Street two-way south of the restriction below: (All responding n=867)

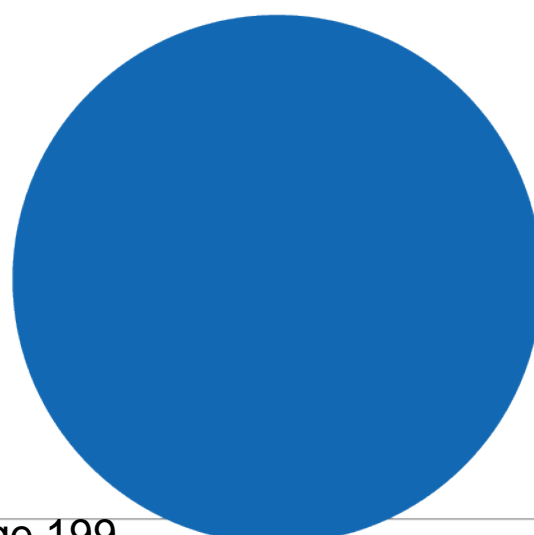
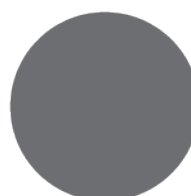
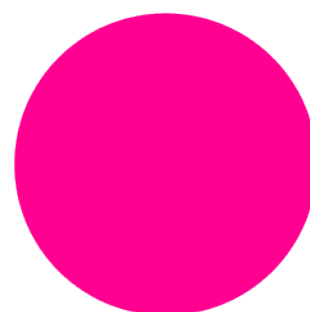
	No. Responses	% Responses
Disagree with proposal(s) / can't see the benefits / remove them	166	19%
Support/agree with / can see the benefits	127	15%
Plan will / has increased traffic and congestion	94	11%
Plan will displace traffic and pollution to surrounding areas	78	9%
Does not think it will work/unrealistic	77	9%
Disagree with restrictions on residents - will cause them stress / issues	69	8%
This is unnecessary / waste of time, money, and resources	68	8%
Plan will / has increased pollution / worsen air quality	63	7%
This filter will help solve the problem of drivers turning right onto St. Clement's Street	40	5%
Concerns about safety for everyone (cyclists / pedestrians / drivers)	38	4%
Will / has already resulted in increased journey times and costs	38	4%
Concerns for local businesses / economy	30	3%
Just a money spinner / negative view of extra income for council	26	3%
Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)	20	2%



	No. Responses	% Responses
This will ease the flow of traffic	20	2%
A one-way system needs to be implemented	19	2%
Concerns for elderly / (hidden)disabled / young children / those with illnesses	15	2%
Disagree with extra surveillance	13	1%
Cars are sometimes a necessary / essential part of everyday life	11	1%
Concerned over extra costs involved	10	1%
Concerns about lack of access / disruptions for emergency services	9	1%
Public transport needs general improvement	9	1%
Safer to walk / cycle	9	1%
Concern over vandalised bollards/damage increasing	5	1%
Other	44	5%
Not answered	112	13%



Views on ANPR cameras





The proposal to replace some physical closures with automatic number plate recognition (ANPR) cameras generated comments from all areas, whether they were proposed there or not. Here we detail some comments (both for and against) from respondents in different areas:

Some respondents would prefer to see ANPR cameras in place over bollards/planters as they feel that these are less intrusive and less prone to vandalism. However, there were also suggestions from some that having some kind of physical barrier in place would be more likely to result in effective enforcement. Some suggested there could be the potential benefit of emergency service vehicles being able to quickly drive through if ANPR cameras were used over barriers, but others advised that having cameras could put pedestrians and cyclists at risk if motorists were to ignore the cameras.

"I am mindful that the ANPR proposal results from ongoing engagement with the emergency services. This matters significantly, especially if people in the LTN area need an ambulance or a fire service vehicle. However, the most impatient drivers, and especially those willing to vandalise LTN bollards will also simply drive through the ANPR and ignore any fines. This will make the area less safe for families, pedestrians, and cyclists."

(Proposal for Divinity Road, Individual, elsewhere in east Oxford)

"If the healthcare professionals are entitled to drive through ANPR cameras, this is positive."

(Proposal for Divinity Road, Individual, elsewhere in east Oxford)

"If our trade is not permitted to be allowed through the ANPR camera along Magdalen Road, then our views are negative, and we DO NOT support these proposals. We will only support these proposals if we are granted access through this road when the camera is installed."

(Proposal for Magdalen Road, On behalf of an interest group)

"Why ANPR Cameras? What not an alternative of raising / lowering bollards at different times of the day? Emergency services could use installed remotes to lower the bollards when needed."

(Proposal for James Street, Business, St. Mary's LTN area)

"ANPR is a gross invasion of privacy, a profligate waste of money and are just another attempt to introduce LTNs which are neither helpful nor desired. We need routes opened up to allow traffic to flow freely and unimpeded by planters, ANPR or bollards."

(Proposal for James Street, Individual, not living in Oxford)



"No ANPR it does not work!!! It is not then sufficiently safe for cyclists. Keep as permanent filters please!!!"

(Proposal for Bullingdon Road, Individual, St. Clement's LTN area)

"Stops people from almost being hit by traffic as the right turn onto St. Clements or ANPR to catch offenders."

(Proposal for Bullingdon Road, Individual, Divinity Road LTN area)

"Better than a bollard. Not as good as a road that can be used for through traffic. If you have to have ANPR, let's allow vans used for business to go through - not make life difficult for the working people of Oxford."

(Proposal for Bullingdon Road, Business, Divinity Road LTN area)

"The bollard works great at blocking all traffic, the only use for an ANPR camera would be to stop mopeds."

(Proposal for Marston Street, Individual, Divinity Road LTN area)

"This is an appalling waste of taxpayers' money. LTNs benefit only a few people living on one street to the detriment of everyone else living and working in the city. Installing ANPR cameras is Orwellian. I have zero faith that the responses to this survey will be listened to, and this will be pushed through, like the last time. Even if public opinion is so set against their implementation."

(Proposal for Jeune Street, Individual, elsewhere in east Oxford)

"You have to use ANPR cause the bollard and planter vandalism is rampant."

(Proposal for Jeune Street, Individual, not living in Oxford)

"ANPR or Bollard I couldn't care less it is the LTN as a whole I have issue with. If residents that live within the ring road could have free 24hr access (even access most of the time with 'rush hour' restrictions would help) through all the LTN's then I would be all for it as it would be stopping the 'rat running' of commuters from further afield and force those people to use arterial routes without victimising local residents. You already have most of our details for CPZ parking permits across the city so it would not be difficult to implement a 'ticket / pass' ANPR system to allow unrestricted access to those of us that live within the ring road or for delivery companies to register with to be given access. Heck even charge an annual fee for the permit if you must like with the CPZ parking permits! at least then that didn't want to pay don't have to and can use the other routes."

(Proposal for Jeune Street, Individual, elsewhere in Oxford)

Verbatims

This section highlights some of the key themes from the consultation with example verbatims.

Concerns

Plan will increase traffic / congestion.

"The East Oxford LTNs have clearly displaced a lot of traffic to Morrell Avenue and (therefore) St. Clements, leading to severe congestion at 'popular' travel times. Pollution from standing traffic must be increased during these times, buses and taxis are held-up, and drivers are generally frustrated, particularly at the junction of Morrell Avenue and St. Clements, where the 'box junction' rules for passage of traffic is seldom observed, if ever."

Will result in increased journey times and costs.

"The increase in traffic along Iffley Rd and St Clements had led to an unacceptable increase in journey times for school buses using that route. My daughter was rarely late for school before the introduction of the LTNs but was frequently late afterwards. As a direct consequence [REDACTED] and we have had to find alternative ways of getting her to school.

Time spent travelling is taking away from personal life / working hours

"I spend on average 2 hours a day in traffic. Before the LTNs I would be 30 minutes a day. How can this be good for the environment and the economy. Those 2 hours a day is 2 hours unpaid for me, so I now only work a 6 hour day and lose 2 hours work which is substantial in a cost of living crisis."

"Placing any restrictions of motorists is causing more delays, pollution for people to go about daily life. People need to work, and this is costing money for businesses."

The traffic / pollution has / will move to other areas of the city.

"The LTNs increase the journey time for everyone that drives through the area. I also suffer from asthma and can feel that the air quality decreased massively from all the pollution caused by standstill traffic. I also always notice emergency vehicles getting stuck in traffic due to the LTNs. I haven't ever spoke to anyone that had a positive view on the LTNs."

Concerns over lack of access to essential locations (e.g., hospital, work, shopping, schools etc.)

"Getting to essential services (hospital, rubbish dump), the train station, hardware shops etc now requires much longer journeys hence adding significantly to pollution and traffic. Emergency services and delivery services have been significantly delayed. I have always cycled and walked where possible and the LTNs have not



increased this. in fact I would say that the cycling environment in particular has degraded - the side streets were safe and quiet before the LTNs but now the main routes (Cowley, Iffley roads and The Plain) have become more crowded, polluted, and unpleasant to cycle on."

Concerns for elderly / (hidden) disabled / young children / those with illnesses.

"I don't go anywhere on the other side of an LTN, the pavements need repair, blocked by wheelie bins; it's unsafe to use my wheelchair in the road. Since LTN, no tradesmen, plumbers, electricians or visitors, and carers are late by hours. No drop curbs to cross the road, wheelie bins block paths and entire footpaths assigned to parked vehicles. Only one way out is 45 mins to get that first mile away from home, unless you go out of town to countryside 10.00 to 14.00 and drive back in home after 4 that seems ok, but it's a very restricted existence."

"I struggle with walking long distances and feel that I am being forced to walk further than I can by the LTNs. I also have difficulty standing so waiting longer for a taxi is problematic and very anxiety provoking for me. If anything, I have used more taxis and driven further as I feel more anxious about the travel time."

"I have been stuck in traffic for 45 minutes on journeys that previously took 5-10 minutes. I have a life threatening disease, and this is uncomfortable and anxiety provoking, especially as I need to get to medical appointments on time."

"Since the introduction of LTNs it is extremely difficult as a disabled person to access this area of Oxford for work, to see friends and to go to the cinema etc. As all the side streets are now inaccessible from Cowley Road and no additional blue badge parking spaces have been added to Cowley Road, I have to drive further to find a space to park and often the distances I then need to walk make Cowley Road inaccessible to me. The policy of introducing LTNs has made absolutely no additional / compensatory provision for blue badge holders. The situation, which was already extremely poor, is now much worse. The enormous increase in congestion and traffic in the area because of the LTNs adds to the situation exponentially."

Disagree with restrictions on residents / will cause stress / problems for residents.

"Traffic used to last a couple of hours peak time prior to the introduction of LTNs, now it's up to 19:00-20:00hrs, how is this cutting down on pollution? I feel like a prisoner in my own home and can't open windows."

"It has made my car journey much longer now so cost me more in fuel, my time, and more pollution due to how long I'm sat in long ques for my journey. I absolutely hate it as it's causing me stress and anxiety. I can't use taxis either as they cost too much now as they are having to use longer route and stuck in traffic so taxi costs are ridiculous."

Dangerous cyclists / scooters / dangerous for cyclists

"As there is less traffic, cycles and scooters ride very fast on Southfield and Divinity Roads and this is dangerous."



"Have witnessed millions of near misses created by cyclist, scooters, and electric bikes because there is TOO much bike, scooter and electric bikes all jammed on certain roads. It was SO much safer without LTNS Also there is much more pollution on the roads now roads are blocked with traffic."

Concerns about lack of access / disruptions for emergency services.

"The horror that is St Clement's traffic jams increasing pollution and delaying emergency services as well as increasing my journey times. It's not just the neighbourhood but the city this impacts."

This will split up communities

"Dividing communities, driving traffic on to few main roads, unfair on local residents."

"My neighbourhood has been split in two - in fact the council garage I rent is now on the other side of an LTN despite being 1 min walk away - to use the garage for storage I now have to drive either out to the ring road and back into town or into the Plain roundabout and back out again."



Positives

Safer / easier for cyclists / pedestrians.

"Walking has become much more pleasant as there is so much less traffic."

"The road is much more pleasant to cycle and walk along, I have noticed only a slight increase in traffic on the main roads and most of that is, in my opinion, a throwback from Covid restrictions and now the Botley road closure."

Plan has / will decrease pollution / make the air cleaner.

"Safer to use road and pavement, less air pollution, less noise pollution, friendlier neighbourhood - I would consider moving if the LTNs are unsuccessful as I feel I can no longer go back to Divinity Road being used as a cut-through by so many commuters. It would be unbearable and decrease my life significantly."

Will / has reduced the amount of cars / traffic on the roads / quieter.

"Has made neighbourhood safer, quieter and generally much more amicable."

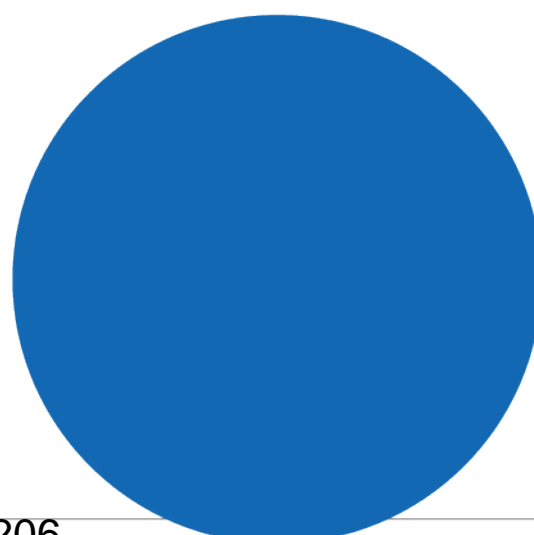
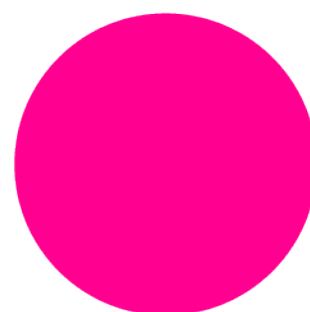
"It is safer to walk and cycle, quieter and cleaner now cars do not rat run through St. Mary's. changes wonderful!"

They have improved our community spirit / no more angry drivers.

"The LTNs have transformed the area into a safer and more community oriented area. They make the streets safer and cleaner and as a commuter who does drive out of Oxford on the Iffley Road I feel that they have made the traffic on that road better rather than the worse conditions some predicted."



Email and letter responses





In addition to the feedback received from questionnaire returns, 139 emails and letters were received with comments about the proposals. 103 were from individuals and 36 from stakeholders. These responses were not included in the questionnaire survey analysis as the feedback they contained was more general overviews on the plans or supplementary feedback to completed survey responses.

The emails have been grouped by Oxfordshire County Council as supporting, opposing or being neutral about the proposed schemes. We have summarised each group in turn below.

Neutral

There were 73 email responses falling into the “neutral” category, the majority being from members of the public (53), three were from businesses or organisations, six were from councillors and three were from interest groups. The content of these were mainly requests for a paper / email survey, issues with the survey itself, and general comments about the LTNs that are in place, e.g., missing, or vandalised bollards, locked / unlocked locations, which are not included here.

“I see that there is a plan to replace the Bollard in Divinity Road with an Automatic Number Plate Recognition Camera. Will this camera be used only to allow emergency services to travel through this area, or will the residents of the Divinity Road Area also be allowed to travel through this area?” (Member of public)



Support

There were 21 emails fitting the “support” category, mainly from members of the public (19), one from a councillor and one from an interest group. Some of these emails were also reporting damage to current fixtures and are not included here:

“I support all the work you have been doing around LTNs and was heartened to see the new research showing that it reduces driving - but I understand this will only happen if the bollards actually stay in place.” (Member of public)

Oppose

There were 25 emails falling into the “oppose” category. Sixteen were from members of the public and six were from businesses; other categories were councillors (two) and one school.

Two of the businesses and the school sent lengthier submissions in the form of letters attached to emails. We have summarised these below.

Other comments included:

“I have done many a survey on the LTN’s and consider it a waste of time to do more. It appears from other consultations you do not listen to the majority and go ahead whatever. It is obvious that people do not want / like what you are doing, hence the vandalism which is meaning you are wasting so much money trying to sort. Making everyone go round the ring road is causing more pollution as it is a constant queue and if you bring in the crazy bus gate scheme it will not cope. Oxford businesses are suffering but you don’t seem to care. To get to the hospitals is hopeless and only going to get worse. I could go on and on, but not worth it as I know you do not listen. Basically you are driving everyone away, I live in Abingdon and dread the traffic in peak times on the A34 and southern bypass.” (Member of public)

“I wish to travel between CPZ CT and CPZ CS. This could be a very long way when the Bartholomew Road BUS-GATE is operating 24/7. Could we please be allowed through the bus-gate out of hours, I had it in mind that from 6.30pm to 8am (the times when the parking restrictions on CPZs are relaxed). You are cramping the social lives of elderly and disabled local people by adding a mile or two to local journeys by car in the evening. Could Blue Badge drivers go through the bus-gate again to save extra miles and extra pollution. Note that the AA used to recommend Bartholomew Road as the natural route from Littlemore to Blackbird Leys.” (Member of public)



Support / oppose part of the scheme

There were 19 responses supporting or opposing one part of the scheme. Mainly support for the LTNS, and opposition to ANPR cameras or taxis being allowed access or not.

"Firstly, as the LTN consultation comes to an end, may I thank you for your vision and initiative in developing the traffic management and calming schemes across East Oxford and Cowley. These are sorely needed to reduce motor traffic and improve air quality in residential areas, and to support environmental targets. I'm concerned however about how the proposals for replacing bollards with ANPR gates have been introduced, and their potential to undermine the very basis of a Low Traffic Neighbourhood." (Member of public)

"I remain worried about the taxi exemption for the Cowley area LTNs, so equally for my local Divinity Road LTN." (Member of public)

Specific stakeholder responses

Transport

Stagecoach and Go Ahead/Oxford Bus Company

The organisations' letter evidenced longer journey times and reduced passenger numbers due to the LTNs. Overall support was voiced for the principle behind the LTN strategy, but they don't feel that it's achieving its goal. Alternative proposals from them included more bus lanes, and parking and / or loading restrictions.

C.O.L.T.A

C.O.L.T.A expressed its desire for the Hackney Carriage trade to be given access through roads marked for the ANPR cameras on the three roads in the east Oxford area.

Education

Magdalen College School

The school's letter said that the schemes currently in place were causing disruption to bus travel and resulting in significantly longer journeys. This was causing problems with their partnership work within the community as long journeys meant that pupils didn't get back in time for the end of the school day. They also affected physical activity because the LTNs prevented timely travel to sporting facilities on the outskirts of the city. Safety of cycling had been impacted in a negative way due to increased traffic numbers. Also, staff had seen commuting time increase, with little or no better alternative to driving being evident.

Oxford Brookes University

The University's response supported the strategies and policies to help improve the environment around Oxford. However, they raised concerns about slower bus journeys and increased traffic congestion since the LTNs were introduced, which seemed to be resulting in the city being a less desirable place for people to visit, live and work (including current and prospective university employees deciding not to work there). Increased traffic had made it dangerous for more sustainable forms of transport (e.g., cyclists, e-



scooters, walkers). Alternatives to the physical LTNs were supporting the recommendations of the emergency services for ANPR technology.

Emergency services

Thames Valley Police

The response detailed that east Oxford's low traffic neighbourhoods had placed considerable burden on the force, including from criminal activity, assaults, and protests, along with general complaints from members of the public to their contact centre.

They would like to see ANPR camera technology deployed at all locations rather than physical restrictions to allow them to uninterrupted response to call outs.

Oxfordshire Fire & Rescue Service

OFRS provided a general comment continuing to support the use of ANPR cameras to allow the negotiation of LTN sites.

South Central Ambulance Service (SCAS)

SCAS said they were happy to support the project, given the potential health and wellbeing benefits. They valued ongoing engagement and regular meetings with Oxfordshire County Council and relevant councillors. They also went on to show support for the introduction of ANPR cameras as it allows unobstructed movements around Oxford city, whilst still supporting the concept of LTNs.

Business

Midcounties Co-operative

Again, the letter supports the proposed traffic filters, but the organisation voiced concern that they need to be balanced with the impact on shopping behaviours and people's livelihoods. They go on to say the filters implemented have had a measurable negative impact on sales and profitability because of significant traffic congestion negatively affecting local businesses.

Interest Groups

Change.org

There are over 500 supporters of a petition on Change.org – "Do not dismantle our LTNs!" calling on Oxfordshire County Council and Cabinet Member for Highway Management Andrew Gant to:

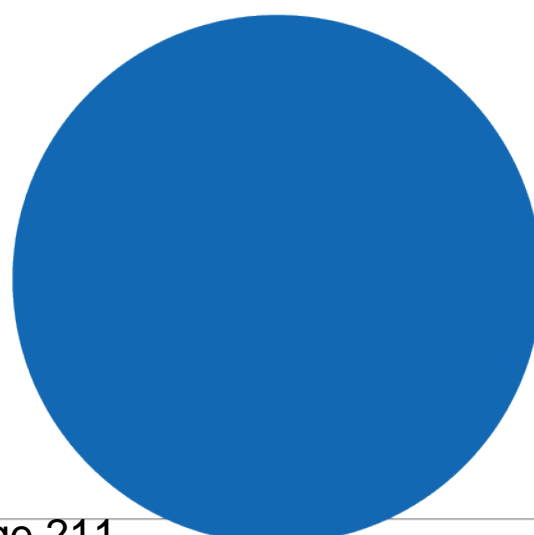
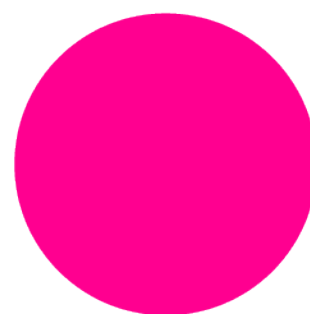
- leave the timber bollards in place to protect all age groups (including children) who cycle, scoot, use mobility scooters and walk through our neighbourhoods.
- reject any proposal to open up the LTNs to further motor vehicles, such as taxis.

They don't think there is a reason to compromise. They believe that the LTNs are working fine and will work even better once the city-wide bus gates are introduced.

They believe that ANPR barriers will not feel as safe as a physical barrier.



Appendix A:





Survey for the six week traffic regulation order consultation on the east Oxford low traffic neighbourhoods – June 2023

Introduction

We are asking for people's views on proposed changes to the east Oxford low traffic neighbourhoods (LTNs), and for feedback on the impact of the scheme since new bollards were introduced in March 2023.

This survey is open from **12 noon on Monday 5 June to 5pm on Thursday 20 July 2023** and only needs to be completed once. We encourage you to read the supporting information before having your say.

To view or download the supporting documents and complete this survey online visit: letstalk.oxfordshire.gov.uk/east-oxford-ltns-2023 You can also request paper copies of any documents using the contact details below.

Once you have completed this survey, you can return it to us by dropping the survey off at Oxfordshire County Library (in the Westgate) and Cowley Library, or posting it for free (as no stamp is needed) by writing this address as **one line** in the middle of an envelope:

Freepost OXFORDSHIRE COUNTY COUNCIL

Please also write '**East Oxford LTNs six week consultation**' on the top left corner of the envelope, so we can easily identify what is inside.

All responses must be received by **5pm on Thursday 20 July 2023** when the consultation closes.

Alternative formats:

We know that some people cannot, or find it difficult to, take part in online consultations or need things in a different format such as large print, Easy Read, audio, braille or a different language, to have their say.

If you, or anyone you know needs an alternative format of this survey or consultation document, paper copies of the consultation document or help with sharing their thoughts, please email eastoxfordltn@oxfordshire.gov.uk or call Oxfordshire County Council's customer services team on 0345 310 1111 who will find the right person to get back to you.

Part 1 – What capacity are you responding in?

In the first part of this survey, we would like to find out a bit more about you and what has motivated you to respond today.

Q1. Please select one of the following that best describes the capacity you are completing the survey in:

(choose any one option) (required)

- | | |
|--|--------------------------|
| As an individual | <input type="checkbox"/> |
| As a business, faith organisation,
charity/organisation or education
establishment | <input type="checkbox"/> |
| As part of an interest group, campaign
group or campaign organisation | <input type="checkbox"/> |
| As a parish, town, district or County
councillor | <input type="checkbox"/> |

Other, please provide further details:

Q2. If you are responding as an individual, do you live in any of the following?

If you are unsure if you live in an east Oxford LTN area, please check first by referring to the maps provided.

(Tick one box only) (required)

- | | |
|------------------------|--------------------------|
| Divinity Road LTN area | <input type="checkbox"/> |
| St Mary's LTN area | <input type="checkbox"/> |
| St Clement's LTN area | <input type="checkbox"/> |

Elsewhere in East Oxford ☐

No ☐

Q3. Please enter the road only where you currently live:

Q4. If you are responding as a representative of a business, group, education establishment or organisation, please provide further details:

Please provide your name and the name of the establishment:

Q5. Is your business, faith organisation, charity/organisation or education establishment in any of the following?

If you are unsure if your organisation is based in an east Oxford LTN area, please check first by referring to the maps provided.

(choose any one option) (required)

Divinity Road LTN area ☐

St Mary's LTN area ☐

St Clement's LTN area ☐

Elsewhere in East Oxford ☐

No ☐

Q6. Please enter the road only where the business, faith organisation, charity/organisation or education establishment you are responding on behalf is based

Q7. If you are responding as a councillor, please give your name and the parish or town/ward or division you represent below:

Your name:

Area you represent:

Part 2 – Tell us about your travel habits

The second section of the survey asks two questions about your travel habits within any of the experimental east Oxford LTN areas in a personal or professional capacity (ie. relating to your job, business, school, group, organisation etc.).

Q8. We would like to know if the experimental trial LTNs have led to a change in your travel habits. Please take a moment to fill out the following table. This question applies to any journeys you make that go through or within the LTN areas, in a personal or professional capacity.

(required)

Select the most applicable option in each row.

Increased frequency	Decreased frequency	Stayed the same	Do not use this method of travel
---------------------	---------------------	-----------------	----------------------------------

Car (as driver)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Car (as passenger)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Van	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mini-bus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cycling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taxi (including as driver)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motorbike or moped	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mobility scooter/wheelchair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E-scooter or push scooter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q9. Please add any additional comments about your travel habits during the LTNs trial.

Part 3 – Your views on the experimental east Oxford LTN areas

In part three of the survey, we would like to hear your views on the three experimental east Oxford LTN areas now that the wooden bollards have been installed. These bollards were installed in March 2023. You will also have the

opportunity to provide feedback on one or all of the 14 individual traffic filters within the three east Oxford LTN areas.

Q10. Which of the following best describes your views on the Divinity Road LTN area, in east Oxford?

Please look at the plans of filter locations before answering this question.

	Entirely positive	Mostly positive	Neutral	Mostly negative	Entirely negative	Don't know	No view on this LTN area
Divinity Road	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q11. Please provide comments to support your view on the Divinity Road area LTN below:

Q12. Which of the following best describes your views on the St Clement's LTN area in east Oxford?

Please look at the plans of filter locations before answering this question.

	Entirely positive	Mostly positive	Neutral	Mostly negative	Entirely negative	Don't know	No view on this LTN area
St Clement's	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q13. Please provide comments to support your view on the St Clement's area LTN below:

Q14. Which of the following best describes your views on the St Mary's LTN area in east Oxford?

Please look at the plans of filter locations before answering this question.

	Entirely positive	Mostly positive	Neutral	Mostly negative	Entirely negative	Don't know	No view on this LTN area
St Mary's	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q15. Please provide comments to support your view on the St Mary's area LTN below:

Q16. Do you want to comment on any of the 14 individual traffic filters within the three east Oxford LTN areas?

You will see a full list of the filters in each area on the following pages and you have the option to comment on one or all of those filters. You will then have the option to do the same for another LTN area until you have provided all of your comments. You do not have to provide comments on all filters.

(choose any one option)

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

Q17- Do you have any comments to make about the Divinity Road LTN area?

(choose any one option)

Yes ☐

No ☐

Answer this question only if you have chosen Yes for Do you have any comments to make about the Divinity Road LTN area?

Q18. If you have a comment about the DR1 Divinity Road filter, please use the box below. (Leave blank if you have no comment to make.)

Answer this question only if you have chosen Yes for Do you have any comments to make about the Divinity Road LTN area?

Q19. If you have a comment about the DR2 Southfield Road filter, please use the box below. (Leave blank if you have no comment to make.)

Q20. Do you have any comments to make about the St Clement's LTN area?

(choose any one option)

Yes ☐

No ☐

Answer this question only if you have chosen Yes for Do you have any comments to make about the St Clement's LTN area?

Q21. If you have a comment about the SC1 Rectory Road (contraflow, cycle way and two-way section) filter, please use the box below. (Leave blank if you have no comment to make.)

Answer this question only if you have chosen Yes for Do you have any comments to make about the St Clement's LTN area?

Q22. If you have a comment about the SC2 Princes Road filter, please use the box below. (Leave blank if you have no comment to make.)

Q23. Do you have any comments to make the St Mary's LTN area?

(choose any one option)

Yes ☐

No ☐

Answer this question only if you have chosen Yes for Do you have any comments to make about the St Mary's LTN area?

Q24. If you have a comment about the SM1 Circus Road filter, please use the box below. (Leave blank if you have no comment to make.)

Answer this question only if you have chosen Yes for Do you have any comments to make about the St Mary's LTN area?

Q25. If you have a comment about the SM2 Temple Street filter, please use the box below. (Leave blank if you have no comment to make.)

Answer this question only if you have chosen Yes for Do you have any comments to make about the St Mary's LTN area?

Q26. If you have a comment about the SM3 Stockmore Street filter, please use the box below. (Leave blank if you have no comment to make.)

Answer this question only if you have chosen Yes for Do you have any comments to make about the St Mary's LTN area?

Q27. If you have a comment about the SM4 Marston Street filter, please use the box below. (Leave blank if you have no comment to make.)

Answer this question only if you have chosen Yes for Do you have any comments to make about the St Mary's LTN area?

Q28. If you have a comment about the SM5 James Street filter, please use the box below. (Leave blank if you have no comment to make.)

Answer this question only if you have chosen Yes for Do you have any comments to make about the St Mary's LTN area?

Q29. If you have a comment about the SM6 Bullingdon Road filter, please use the box below. (Leave blank if you have no comment to make.)

Answer this question only if you have chosen Yes for Do you have any comments to make about the St Mary's LTN area?

Q30. If you have a comment about the SM7 Leopold Street filter, please use the box below. (Leave blank if you have no comment to make.)

Answer this question only if you have chosen Yes for Do you have any comments to make about the St Mary's LTN area?

Q31. If you have a comment about the SM8 Magdalen Road (two way) filter, please use the box below. (Leave blank if you have no comment to make.)

Answer this question only if you have chosen Yes for Do you have any comments to make about the St Mary's LTN area?

Q32. If you have a comment about the SM9 Barnet Street and SM10 Howard Street (contraflow, cycle way and two-way section) filter, please use the box below. (Leave blank if you have no comment to make.)

Part 4 – Your views on the proposed changes to the experimental east Oxford LTN areas

In part four of the survey, we would like to hear your views on the following proposed changes to the three experimental east Oxford LTN areas.

Location		Proposed change
Divinity Road LTN area	Divinity Road	Bollard removed and replaced with an ANPR camera to enforce the restriction.

St Clement's LTN area	Jeune Street	New traffic restriction proposed. Introduction of bollards and/or planters at the junction with St Clement's Street. Jeune Street to be made two-way south of the restriction.
St Mary's LTN area	James Street	Bollard removed and replaced with an ANPR camera to enforce the restriction.
	Marston Street	Relocation of the residential parking bay located to the south of the business entrance to outside number 47 Marston Street.
	Bullington Road	Move existing restriction along Bullington Road to the southwest, to a point east of the junction with Hurst Street.
	Magdalen Road	Bollard removed and replaced with an ANPR camera to enforce the restriction.

These changes would only go ahead if the decision were made to make the LTNs permanent.

Q33. Which of the following best describes your view on the ANPR cameras proposed for the Divinity Road filter in east Oxford?

Please look at the plan before answering this question.

	Entirely positive	Mostly positive	Neutral	Mostly negative	Entirely negative	Don't know	No view on this proposal
Divinity Road ANPR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q34. Please provide comments to support your view on the proposal to install ANPR cameras at Divinity Road below:

Q35. Which of the following best describes your view on the ANPR cameras proposed for the Magdalen Road filter in east Oxford?

Please look at the plan before answering this question.

	Entirely positive	Mostly positive	Neutral	Mostly negative	Entirely negative	Don't know	No view on this proposal
Magdalen Road ANPR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q36. Please provide comments to support your view on the proposal to install ANPR cameras in Magdalen Road below:

Q37. Which of the following best describes your view on the ANPR cameras proposed for the James Street filter in east Oxford?

Please look at the plans before answering this question.

	Entirely positive	Mostly positive	Neutral	Mostly negative	Entirely negative	Don't know	No view on this proposal
James Street ANPR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q38. Please provide comments to support your view on the proposal to install ANPR cameras in James Street below:

Q39. Which of the following best describes your view on the proposal to move the restrictions on Bullingdon Road in east Oxford?

Please look at the plans before answering this question.

	Entirely positive	Mostly positive	Neutral	Mostly negative	Entirely negative	Don't know	No view on this proposal
Bullingdon Road restrictions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q40. Please provide comments to support your view on the proposal to move the restrictions on Bullingdon Road below:

Q41. Which of the following best describes your view on changing the parking arrangements on Marston Street in east Oxford?

Please look at the plans before answering this question.

	Entirely positive	Mostly positive	Neutral	Mostly negative	Entirely negative	Don't know	No view on this proposal
Marston Street parking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q42. Please provide comments to support your view on the proposed change to parking in Marston Street below:

Q43. Which of the following best describes your view on the proposal to place a traffic restriction (bollards and/or planters) at the St Clement's end of Jeune Street in east Oxford, and make Jeune Street two way south of the restriction?

Please look at the plans before answering this question.

	Entirely positive	Mostly positive	Neutral	Mostly negative	Entirely negative	Don't know	No view on this proposal
Jeune Street restriction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q44. Please provide comments to support your view on the proposals to place a traffic restriction (bollards and/or planters) at the St Clement's end of Jeune Street in east Oxford, and make Jeune Street two way south of the restriction below:

Thank you for your feedback on the east Oxford LTNs we would now like to ask some questions about you

Q45 How did you find out about this consultation? (Choose all that apply)

- ☐ Facebook
- ☐ Twitter
- ☐ Instagram
- ☐ LinkedIn
- ☐ NextDoor
- ☐ Letter
- ☐ Oxfordshire.gov.uk website
- ☐ Email from Oxfordshire County Council
- ☐ Local news item (newspaper, online, radio, tv)
- ☐ Radio advert
- ☐ Oxfordshire County Councillor District Councillor
- ☐ Parish or town councillor
- ☐ Local community news item
- ☐ Poster / information in local library
- ☐ Local community group / organisation
- ☐ Friend / relative
- ☐ Other (please specify)

Part 4 – About You

We would like to know more about you so that we can understand more about our customers and residents, as it helps us to know if we are hearing the views of a wide range of people and communities.

If you do not wish to provide any of this information, please select prefer not to say.

All information given is anonymous and is governed by the General Data Protection Regulations 2018 which you can read by going to this website:

<https://www.gov.uk/government/publications/guide-to-the-general-data-protection-regulation>

Q46 What is your postcode?

If you are responding as a resident please provide the first four or five digits of your postcode (but not the letters at the end). e.g. OX1 1 or OX14 5.

Q47 What is your postcode?

If you are responding as a representative of a business or other organisation, please provide the first four or five digits of your premises' postcode (but not the letters at the end). e.g. OX1 1 or OX14 5.

Q48 What is your age? (Choose one option)

- ☐ Under 16
- ☐ 16 - 24
- ☐ 25 - 34
- ☐ 35 - 44
- ☐ 45 - 54
- ☐ 55 - 64
- ☐ 65 – 74
- ☐ 75 - 84
- ☐ 85 or over
- ☐ Prefer not to say

Q49 What is your sex? (Choose one option)

- ☐ Female
- ☐ Male
- ☐ Prefer not to say
- ☐ I use another term (please state here)

Q50 What is your ethnic group or background? (Choose one option)

- ☐ Asian or Asian British (Indian, Pakistani, Bangladeshi or any other Asian background)
- ☐ Black or Black British (Caribbean, African, or any other Black background)
- ☐ Chinese
- ☐ Mixed or multiple ethnic groups (White and Black Caribbean, White and Black African, White and Asian, and any other mixed background)
- ☐ White (British, Irish, or any other white background)
- ☐ Prefer not to say
- ☐ Other ethnic group or background (please specify)

Q51 What is your current religion, if any? (Choose one option)

- ☐ Buddhist
- ☐ Christian (including Church of England, Catholic, Protestant and all other Christian denominations)
- ☐ Hindu
- ☐ Jewish

- ☐ Muslim
- ☐ Sikh
- ☐ No religion
- ☐ Prefer not to say
- ☐ Any other religion (please state below)

Q52 Are your day-to-day activities limited because of a long-term illness, health problem or disability which has lasted, or is expected to last, at least 12 months? (Choose one option)

- ☐ Yes - limited a lot
- ☐ Yes – limited a little
- ☐ No
- ☐ Prefer not to say

Q53 Are you a blue badge holder?

- Yes
- No

Q54 Are you a carer? (Choose one option)

A carer is anyone who cares, unpaid, for a friend or family member who, due to illness, disability, a mental health problem or an addiction, cannot cope without their support. Both children and adults can be carers

- ☐ Yes
- ☐ No
- ☐ Prefer not to say

Data protection and privacy

Under the Data Protection Act 2018, we (Oxfordshire County Council) have a legal duty to protect any personal information we collect from you. Oxfordshire County Council is committed to open government and this may include quoting extracts from your consultation response in our report.

We will not however, disclose the names of people who have responded unless they have provided consent. For this purpose, we ask that you are careful not to disclose personal information in your comments – for example the names of service users or children. If you do not want all or part of your response to be made public, or shared with councillors, please state below which parts you wish us to keep confidential.

View Oxfordshire County Council's privacy notice online at
www.oxfordshire.gov.uk/privacy-notice

Q55 Please use this space to tell us if there is any specific part of your response you wish to keep confidential:

Stay in touch

We invite you to sign up to get regular email updates on news, events, and developments from across the county.

Any contact details you provide will be separated from the feedback you have shared in this survey.

Q56 Would you like to sign up?

(Choose one option)

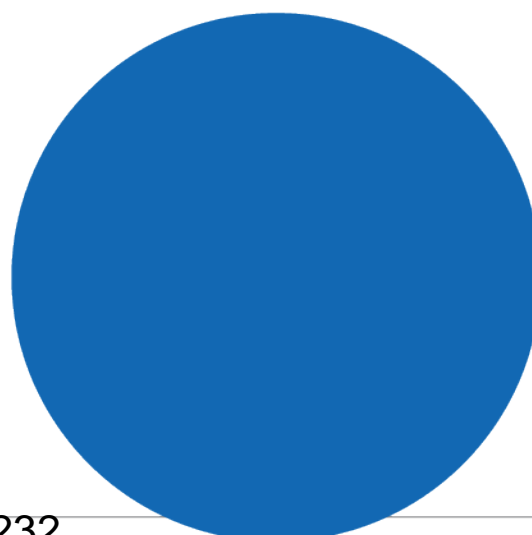
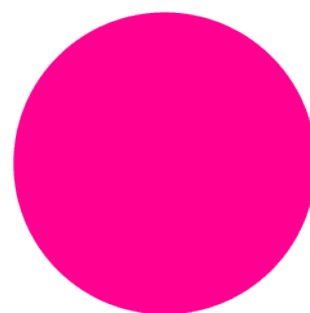
- ☐ Yes, I'd like to receive updates about activities on Let's Talk Oxfordshire.
- ☐ Yes, I'd like to sign-up to get regular updates on the county's news, events, and developments from the council.
- ☐ I would only like to be kept informed about this consultation
- ☐ No

Q57. Please provide your email address below, so we can contact you and send a link to our sign-up page where you can tailor which communications you receive:

Thank you for taking the time to answer these questions.



Appendix B:





Summary of proposals broken by responding type

Group responding	Individual (n=1970)		Business, faith, charity, or education organisation (n=61)		Interest group, campaign group or organisation (n=5)		Parish, town, district or County councillor (n=7)	
	Net: Negative	Net: Positive	Net: Negative	Net: Positive	Net: Negative	Net: Positive	Net: Negative	Net: Positive
Divinity Road ANPR cameras	60%	26%	84%	10%	100%	0%	29%	43%
Magdalen Road ANPR cameras	59%	24%	88%	9%	100%	0%	29%	43%
Jeune Street restrictions	43%	24%	80%	3%	25%	50%	17%	67%
James Street ANPR cameras	57%	23%	88%	8%	100%	0%	29%	43%
Bullington Road restrictions	42%	17%	78%	3%	20%	20%	17%	0%
Marston Street parking arrangements	32%	11%	67%	0%	20%	20%	0%	0%



For more information

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Active Travel Tranche 2: East Oxford LTNs Monitoring and Evaluation Full Report, October 2023

DOCUMENT HISTORY

Revisions – Amendments

Version and date	Changes
Version 1 17/08/2023	First draft for comment
Version 2 05/09/2023	Second draft with comments
Version 3 11/09/2023	Third draft incorporating comments and updates
Version 4 12/9/2023	Fourth draft for external review
Version 5 27/09/2023	Fifth draft incorporating external review and updates
Version 6 03/10/2023	Final version

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Milestone
Oxford City Council
South Central Ambulance Service (SCAS)

Reviewed by

School of the Built Environment, Oxford Brookes University

Executive Summary

1. This report provides an evaluation of the effects of the east Oxford low traffic neighbourhoods (LTNs) since their implementation on 20 May 2022. It supports the cabinet decision on whether to make the Traffic Regulation Order (TRO) permanent.
2. The following aspects are presented in this report:
 - Sensor-derived traffic volume changes by mode (car, pedestrian, cycle, LGV, HGV & motorcycle) for both within LTNs and along the boundary roads immediately surrounding them, using data from:
 - VivaCity sensors.
 - Automatic traffic count (ATC) surveys.
 - CCTV surveys.
 - Telraam sensors.
 - Automatic cycle counters (ACC).
 - Journey time analysis for the boundary roads and key feeder roads for vehicular traffic, including specific analysis for bus runtimes.
 - Air quality analysis from Oxford City Council in terms of Nitrogen Dioxide (NO₂) both within the LTNs and on the boundary roads, including roads bordering the Cowley LTNs, to consider whether the east Oxford LTNs have had any influence on air quality on roads immediately surrounding the Cowley LTNs, given their proximity.
 - The impact on emergency services response times, based on South Central Ambulance Services (SCAS) modelled data using Optima Predict.
 - Safety data, based on collision statistics within and surrounding the LTN areas.

In-LTN Area

3. The report indicates that overall, vehicle traffic levels within the LTNs have decreased significantly, in line with the objective of the scheme. A notable exception within the LTNs is Jeune Street¹, a one-way road with no traffic filter, which has seen sizable percentage increases in vehicular traffic.
4. Cycling has seen mixed changes. Movements across St Mary's LTN between Iffley and Cowley Roads experienced large percentage increases, particularly on Magdalen Road. Movements through St Mary's LTN in- or out-bound from The Plain have decreased, suggesting that cyclists are not using the LTNs as a route to and from the city.
5. Pedestrian movement within the LTNs is also a mixed picture, with some streets showing decreases and others increases. The locations seeing increases are near potential trip attractors, which could be an explanation for this variation.

¹ Jeune Street has a no right turn restriction in place, precluding right turn onto St Clement's Street from this road. Anecdotally, neither this restriction nor the one-way restriction is being adhered to.

6. In general, the impact has not been consistent across all modes of transport, with some roads measured seeing greater increases or reductions respectively than others for each mode of transport.
7. In addition, motorcycle traffic has also generally increased within LTN roads. Since motorcycles are not physically precluded entry at LTN filter locations they can circumvent the restrictions.

Boundary Roads

8. In terms of the impact on the boundary roads immediately surrounding the LTNs, the picture is mixed. Some areas have experienced higher traffic levels post-implementation compared to immediately pre-implementation, whilst other areas have seen reductions in traffic. Overall, when volumes are aggregated across all sites measured, there is a small increase in traffic levels on the boundary roads (1.7% direct difference, moderated to 8.7% impact estimate when factoring for wider transport trends). Annual average daily traffic (AADT) in Oxford in 2023 is still some 16% below 2019 levels overall (see Annex L), but overall traffic levels across the city are quite similar between 2022 and 2023. This suggests some level of stabilisation of wider vehicular travel patterns to a lower traffic level in Oxford post COVID-19. Traffic levels in 2021 were still notably lower than they were in 2022 and 2023 however, indicating that an increase between 2021 and 2022/2023 is partially caused by an overall increase in traffic levels within the city. This supports the need for an impact estimate calculation to indicate the impact of the LTNs on traffic levels, rather than relying on the direct difference when 2021 levels are used within the baseline.
9. Morrell Avenue has seen a modest increase in traffic, whilst along the Cowley and Iffley Roads the impact on traffic volumes has been different at either end of each road. In both instances, prior to the introduction of the LTNs (during the period between November 2021 and May 2022) the sensors further away from the city centre recorded significantly higher traffic volumes than those closer to the city. After the introduction of the LTNs on 20 May 2022 the gap in volume has closed (completely in the case of Cowley Road and significantly for Iffley Road), due to large increases in traffic near The Plain roundabout, and sizeable decreases in traffic at locations further from the city centre. A possible explanation may be that people are re-routing and/or choosing alternative transport to gain access to the city from the direction of the ring-road. Once a driver reaches the areas covered by the sensors though (bounded by LTNs on both sides for Cowley Road, and on one side for Iffley Road), they have little alternative than to drive straight down the road. As a result, what would have been dispersed previously is all contained to the radial routes. The in-LTN analysis supports this theory, since the largest increase in volume is on the Cowley Road at The Plain. Previously, Divinity Road experienced high volumes of through-traffic between the Cowley Road and Warneford Lane roundabout.
10. Unlike the other key boundary roads on the approach to The Plain roundabout, at St Clement's Street where proxy data was available for in-bound traffic, the number of cars reduced. However, journey time analysis and bus 'runtime'

analysis indicated that the most significant delays experienced amongst any location in the vicinity are along this stretch of road, concentrated in the PM-peak (when many people leave work) and afternoon-peak (when many schools have pick-up) periods. Initially this seems counter-intuitive, but when considered in the context of The Plain roundabout, with its relatively low capacity but with huge amounts of activity (including large numbers of cyclists and pedestrians) and the increased volumes entering the roundabout from Cowley and Iffley roads, the likelihood is that the delays are being caused by difficulty entering the roundabout from St Clement's Street (i.e. there are insufficient gaps in traffic to enable vehicles to enter). The journey time and bus runtime delays are significantly greater in the in-bound direction. Whilst aggregated journey time reliability, in terms of the journey time delay compared to free-flowing traffic, decreased (worsened) by 71% towards The Plain, aggregated out-bound journey times experienced a small, 10%, improvement in reliability overall, measured by Planning Time Index². However, St Clement's Street and some other locations still experience additional delays in journey times in the out-bound direction in some instances.

11. Where journey times have improved, it tends to be in locations away from The Plain, and in the mid-section of the route. Of all boundary roads, Iffley Road seems to have experienced the most journey time improvements along the section between Donnington Bridge Road and Church Cowley Road. However, in the in-bound direction, when journey times are aggregated along this road, there is still an overall delay, which is particularly marked in the AM-peak period, applying both to vehicular journey times and bus runtimes.
12. Bus runtimes tend to follow the same pattern as overall journey times, but with some differences. For example, in the out-bound direction, several stops along the Cowley Road, in the section between Howard Street and Between Towns Road, experience significant delays in the Afternoon-peak period not mirrored in the *Journey times (driving)* analysis. Otherwise, the pattern is very similar, with greatest bus runtime delays in the in-bound direction along St Clement's Street.
13. Generally, there has been a reduction in walking along boundary roads, with only one location (Iffley Road, near Donnington Bridge Road) experiencing increases after moderation to adjust for increasing walking at control sites. However, there is a generally positive picture with respect to cycling, with all boundary roads showing increases in uptake, in some cases significant percentage increases. Morrell Avenue shows the largest percentage (51% difference, moderated to 49% impact when increases in cycling at control sites are factored in) increase in cycling levels of the boundary roads.

² Planning Time index (PTI), which is typically used as a measure of reliability, represents the extra delay time that should be added to average travel time. PTI is the ratio of the 95th percentile to the free-flow travel time and shows the total time which is needed for on-time arrival in 95 percent of all trips.

Air Quality

14. The air quality analysis generally matches the traffic evaluation, with variable levels of improvement in air quality within the east Oxford LTNs alongside an increase in pollutant levels along the boundary roads immediately surrounding them. Only one location, on St Clement's Street, at The Plain roundabout, has exceeded the legal limit, having exceeded this limit in 2019, in excess of those readings for 2022. A further two locations in the immediate vicinity of the LTNs are at or above the local target for Nitrogen Dioxide (NO₂) levels: St Clement's Street near the junction with Alma Lane, and Hollow Way Road. All locations showed lower NO₂ levels in 2022 than in 2019, where data was available for comparison.

Emergency Services

15. The effect of the east Oxford LTN traffic restrictions on emergency services has been considered using response time delay modelling (simulation) from South Central Ambulance Service (SCAS), using their Optima Predict platform. This platform provides a simulation of impacts, not actual delays, and models response time delays from the east Oxford LTNs traffic restrictions compared to a baseline without them. The initial modelling assumed ambulances would re-route to avoid all east Oxford and Cowley LTN closure points. Subsequent modelling was undertaken to assess the mitigatory impact of replacing bollards in six locations within the two LTN areas with automatic numberplate recognition cameras (ANPR). Delay times were modelled against different response categories (categorised by level of urgency).
16. Initial modelling (without ANPR) indicated delays of 45 seconds within the east Oxford LTN area for the most urgent category 1 (life threatening) calls; this was mitigated down to a 7 second delay for this area and category when ANPR was introduced in the model. At the Oxfordshire-wide level, a 4 second delay without ANPR becomes a 1 second delay with ANPR in category 1. This simulated 1 second delay could be mitigated by the ambulance service providing one additional dual crew ambulance hour per day, at an annual cost of £40,000, based on modelling this controlled scenario and conditions. Hypothetical modelling was also undertaken to assess the impact of congestion on the response times, as the model does not otherwise account for any additional general traffic delays. When the surrounding roads had speeds reduced to 70% of historic speeds (based on data from 2019), the delay came back to a 5 second delay for category 1 across the Oxfordshire area. In reality, the journey times and speed impacts vary considerably depending on routes and times of day, with some locations and times experiencing improvements, so this 5 second delay is unlikely to be the reality of the situation.

Road Safety

17. Road safety analysis has been undertaken to assess changes in collision statistics. This shows little change between the baseline period and post-implementation. However, due to the low numbers of incidents, safety analysis is usually taken over a five-year period, to avoid skewing of the evaluation. For example, over five years there may be one fatal incident; should this fatal collision happen to fall in the single 'after' year but there be no further collisions beyond the first year of implementation, it would skew the results of the analysis compared to the five-year baseline averaging a single fatal collision over five years down to being 0.2 collisions per year. This analysis is therefore not statistically significant and only indicative.

Overall Findings

18. Overall, looking at the most significant findings, the effects of the east Oxford LTNs are mixed. There are some positive impacts such as reduced car use within the LTNs and on some sections of the boundary roads, with associated air quality improvements within the LTNs, plus increased cycling on the boundary routes. When aggregating the data between the boundary roads and LTNs, where data sources are compatible, there is a clear overall increase in cycling of over 20% and an overall reduction in car movements of more than 10%. However, there are also negative impacts such as bus journey time delays. Evaluation suggests that the negative results seem to stem from the funnelling of traffic along the Iffley and Cowley Roads and onto The Plain roundabout. This, in turn, puts additional pressure on The Plain, historically a congested area, which acts as a bottleneck adding to congestion on the approaches, particularly on St Clement's Street. Air pollution levels at The Plain are also worsened accordingly, in an area already problematic for air quality. As a result of the increased congestion, journey times increase in the direction towards the city centre (by up to 290%), reducing reliability and creating delays for bus services. However, analysis of March 2023 data shows an improving trend in bus runtimes on routes leading into St Clement's Street towards The Plain.

Conclusions

19. Should the LTNs remain in place to maintain the beneficial outcomes, the recommendation from this report would be that the challenges also outlined require mitigation. Over time, modal shift away from widespread, default reliance on motor vehicles, potentially through the implementation of the trial traffic filters scheme and other strategic plans such as extension of the Zero Emissions Zone (ZEZ) and introduction of a workplace parking levy, may lead to wider improvements. However, a short-term and joined-up solution should be investigated to mitigate the impact on bus services using St Clement's Street in particular. An acceleration of proposals already in place to tackle bus journey time delays in the area through the Bus Services Improvement Partnership (BSIP), could go some way towards achieving this mitigation, building on works already implemented in London Place and St Clement's Street. It should be noted that the bus journey time data analysis periods pre-date these works (the installation of an in-bound bus lane on Headington Hill, London Place and St

Clement's Street), and further monitoring should be undertaken to assess their efficacy in improving runtimes for buses. In addition, the use of ANPR for traffic restriction enforcement in place of hard closures at three locations in the east Oxford LTNs and three additional locations in the Cowley LTNs serves to mitigate the emergency service delays to a large degree and would therefore be recommended. This could also be beneficial for other groups of road users such as taxis. However, this does not overcome the key problem identified above in relation to The Plain roundabout: to address which ideally requires the volume of traffic entering The Plain to be reduced.

20. Additionally, further behavioural research should be undertaken to understand the reasons for the variation of active travel increase between different locations. The connection with trip attractors might indicate that further measures may be needed to achieve the policy objectives. Further research would also be beneficial looking into other impacts of the LTNs, including a fuller review of health and safety impacts once sufficient time has elapsed to allow these elements to be evaluated, plus consideration of wider social impacts.
21. In summary, against the three key objectives of LTNs: to reduce traffic in the LTNs, increase uptake of active travel and improve air quality in the area, evidence collected suggests that the east Oxford LTNs have:
 - Reduced car use within the LTNs themselves and facilitated an overall reduction in car traffic in the area of over 10% (based on aggregating data across compatible sensor types), but with the negative effect of increasing traffic in some locations elsewhere.
 - Increased uptake of cycling outside the LTN areas and across the LTN areas (e.g. between Iffley and Cowley Roads) but not through them (in the direction to or from The Plain roundabout), with an overall cycling increase of over 20% (based on aggregating data across compatible sensors); walking indicates little to no change overall.
 - Improved air quality within LTN streets, but with the negative effect of worsening air quality in the surrounding locations (although improved air quality from 2019 data).

List of Contents

Executive Summary	2
In-LTN Area	2
Boundary Roads	3
Air Quality	5
Emergency Services	5
Road Safety	6
Overall Findings	6
Conclusions	6
List of Contents	8
Table of Figures	11
Introduction	13
Background	15
Benchmarking	15
Local Information	17
Traffic Volume Analysis	24
Methodology	24
Average Traffic Counts	24
Simple Difference	24
Impact Estimate	25
Analysis	26
Granularity	29
Confounding Factors	30
Boundary Roads	32
Sensor Locations	32
Pedestrians	33
Cycles	35
Cars	37
Motorbikes	41
LGVs	43
HGVs	43
In-LTN Roads	44
Sensor Locations	44
Pedestrians	45
Cycles	46
Cars	48
Motorbikes	51

LGVs	52
HGVs	54
Traffic Volume Analysis Summary	55
Active Travel impact on Health	57
Journey times (driving)	59
Analysis approach	59
Towards The Plain.....	60
Journey time analysis.....	60
Reliability using Planning Time Index scores	62
Away from The Plain.....	65
Journey time analysis.....	65
Reliability using Planning Time Index scores	68
Journey Time full road overview	70
Bus Journey Time and Reliability	72
Analysis approach	72
Change in stop-to-stop runtime metric	73
Towards The Plain.....	74
Away from The Plain.....	77
Bus times full road overview	79
Emergency Services Response Times.....	83
Methodology	83
Results of the simulation including ANPR locations.....	85
Air Quality.....	89
Air Quality Sampling	89
Air Quality Analysis.....	89
Road Safety	96
Analysis	96
Conclusions.....	103
Annex A.....	105
East Oxford LTN area Public Health data report	105
Annex B.....	120
Calculations Used for Statistical Analysis	120
Difference.....	120
Difference in Difference (DiD)	120
Annex C	121
Map of all sensor locations	121
Types of traffic sensors used	122

VivaCity object identification sensors	122
Temporary Automatic Traffic Counters (ATCs)	123
Closed Circuit TV (CCTV)	124
Automatic Cycle Counter (ACC).....	124
Telraam counter	125
Annex D	126
Boundary roads - detailed analysis.....	126
Annex E.....	128
In-LTN survey dates	128
In-LTN - detailed analysis	129
Annex F.....	132
Other roads analysis.....	132
Annex G	133
Quickway cycle scheme details.....	133
Annex H	136
Summary of east Oxford LTN bollard outages.....	136
Comparison of bollard outages with count data	137
Annex I.....	140
Journey time analysis tables (% difference in duration).....	140
Journey time analysis tables (percentage difference in speed)	141
Reliability: Planning Time Index (PTI).....	143
Annex J	147
Bus analysis: change in stop-to-stop runtime	147
Annex K.....	151
Road Safety - control comparison.....	151
Annex L	152
Background traffic volumes in Oxford	152
References.....	155

Table of Figures

Figure 1 - Timeline of key events related to LTN interventions.	18
Figure 2 - Timeline of key data gathering undertaken for the analyses.	19
Figure 3 - Map depicting areas of commercial activity and educational institutions in and around east Oxford LTNs	20
Figure 4 - Map depicting areas of deprivation in and around east Oxford LTNs. The 2019 English indices of deprivation rank each of England's 32,844 Lower-layer Super Output Areas (LSOA) by deprivation with the overall deprivation the Index of Multiple Deprivation (IMD). This map is coloured by which quintile (20% band) each area falls into with 1 being the most deprived 20% and 5 the least deprived 20% nationally.	21
Figure 5 - Location of boundary road sensors and filters in east Oxford LTNs.....	32
Figure 6 - Cycling flows over time along boundary roads including Quickways completion times (weekly aggregated counts)	36
Figure 7 - Car traffic post LTN-implementation at Cowley Road north	40
Figure 8 - Car traffic post LTN-implementation at Iffley Road north	40
Figure 9 - Location of In-LTN sensors and filters in east Oxford LTNs.....	44
Figure 10 - Overview of car volume changes across east Oxford LTN from all available data sources.....	56
Figure 11 - Overview of cycle volume changes across east Oxford LTN from all available data sources.....	56
Figure 12 - Percentage difference in Journey time by time of day for each boundary road segment - towards 'The Plain roundabout' direction	61
Figure 13 - Percentage difference in Journey time by time of day for each boundary road segment – away from 'The Plain roundabout' direction.....	67
Figure 14 - Percentage difference in stop-to-stop runtime: In-bound and multiplier roads (east to west).....	74
Figure 15 - Percentage difference in stop-to-stop runtime: Out-bound and multiplier roads (west to east).....	77
Figure 16 - Geographical areas of analysis used in second SCAS simulation model. Top left to bottom right: Oxfordshire, Oxford, Cowley LTNs, east Oxford LTNs	85
Figure 17 - Road speed scaling on roads surrounding the LTNs	87
Figure 18 - Location of air quality diffusion tube sensors used in the analysis.....	90
Figure 19 - Air quality comparison (NO ₂ , ug/m ³) - between years 2019 and 2022..	94
Figure 20 - Location of all incidents by severity pre- and post- LTN implementation	97
Figure 21 - Location of Pedestrian incidents by severity pre- and post- LTN implementation.....	98
Figure 22 - Location of Cycle incidents by severity pre- and post- LTN implementation	99
Figure 23 - Location of Motor Vehicle (MV) incidents by severity pre- and post- LTN implementation	100
Figure 24 - Map of all traffic sensor locations used in report analysis	121
Figure 25 - Vivacity camera installed on lamp post	122
Figure 26 - An ATC installation	123
Figure 27 - An ACC installation	124
Figure 28 - A Telraam counter	125
Figure 29 - Location of other roads used in the analysis	132
Figure 30 - Location of Quickways – shown in orange	133
Figure 31 – Quickway, Iffley Road, showing orcas and wands	134
Figure 32 - Quickway, Iffley Road, showing cycle path junction details.....	134

Figure 33 - Quickway, Marston Road, showing orcas and wands	135
Figure 34 - Quickway, Warneford Lane, showing orcas and wands.....	135
Figure 35 – Timeline of VivaCity car counts on Leopold Street (west) and bollard outage on Leopold Street	137
Figure 36 - Timeline of VivaCity car counts on Divinity Road (north) and bollard outage on Divinity Road	138
Figure 37 - Timeline of VivaCity car counts on Cowley Road (north) and bollard outage on James Street	138
Figure 38 - Timeline of VivaCity car counts on Cowley Road (east) and bollard outage on Magdalen Road	139
Figure 39 - Comparison of control area versus east Oxford LTN: as a percentage of 2017-2019 average annual total.....	151
Figure 40 - Location of count sensors used in analysis of overall trends in Oxford city traffic	153
Figure 41 - Annual average daily Traffic (AADT) in Oxford	154

Introduction

22. To provide assurance, capture learnings and guide future decision making, Oxfordshire County Council set out an extensive evaluation framework of active travel interventions. This work was led by the Innovation Hub's (iHUB) Future of Mobility and Placemaking team, and was conducted in collaboration with leading universities, businesses, Oxford City Council and other county council teams. It has been reviewed by Oxford Brookes University, School of the Built Environment.
23. This evaluation framework was originally established for the Department for Transport (DfT) -funded Tranche 2 Emergency Active Travel Fund intervention. Due to the period during which the interventions took place, and the COVID-19 pandemic and cost of living crisis affecting the periods of interest, there are significant variations and complications in the data analysis, however. This report uses the metrics suggested in the original submission, along with ones raised in interactions with local stakeholders to address these challenges. One metric which was originally planned was a survey to assess changing perceptions about the LTNs over time. Unfortunately, it was not possible to undertake this dedicated user perception survey due to overlapping timeline requirements with the Experimental Traffic Regulations Order (ETRO) survey. A full analysis of the ETRO survey and subsequent TRO survey associated with this scheme have been undertaken separately and are appended to the cabinet report. These reports should be read in conjunction with this evaluation report, for a fuller picture of scheme implications and effects.
24. The methodology for east Oxford low traffic neighbourhoods (LTNs) was written up and published on Oxfordshire County Council's website³, to provide transparency to the public on the way in which their evaluation would be undertaken. This methodology has been adapted, by removing Triple Difference (DiDiD)⁴ in this final report, following advice received from academic and industry peer review, in order to simplify the evaluation approach and provide greater consistency across the analyses. Journey time analysis has been undertaken using a different dataset (Google API) from that referred to in the methodology (INRIX) to capture a greater and more representative proportion of vehicles within the dataset. Since publishing the methodology, a new data source (CitySwift) also became available for bus journey times, which has been applied in this report instead of the original source (Bus Open Data Service, BODS). Additional metrics have also been included in this report, which were not defined in the methodology statement.
25. The report covers a number of areas to assess a range of effects from the east Oxford LTNs, covering those both internal and external to the LTNs. An initial 'snapshot' evaluation of the east Oxford LTNs was undertaken and published in

³ [East Oxford low traffic neighbourhoods – air quality, traffic sensors and data analysis | Oxfordshire County Council](#)

⁴ DiDiD as used previously in the snapshot report, compares control and intervention sites to look at the difference in the differences between the immediate pre-intervention period and post-intervention period, as well as comparing the pre- and post- traffic volume data for both control and intervention sites against 2019 baseline volumes.

June 2023⁵. This report builds on the analysis and commentary undertaken in the snapshot, both in terms of encompassing additional data and granularity of analysis within the topics covered, and in providing additional metrics. During analysis for this report, some errors in data processing were identified in the Snapshot report relating to counts on Divinity Road, Morrell Avenue and Iffley Road north. These have all been corrected in this full report and where significant, flagged with footnotes.

26. It is worth noting that the period covered for this evaluation, which is approximately a year post implementation (due to time limitations associated with ETROs), is not sufficient to measure some of the aspects which may be impacted by the scheme. Notably this includes the influences on public health and on safety. Both are touched on in this report to provide some indicative information on the likely effects, but to fully understand how the LTNs have affected health and road safety, a minimum of a three- to five- year post implementation evaluation timeline would be necessary. Equally, behaviour change can take some time to take effect especially when habitual behaviours have been formed over many years.
27. The following sections outline background information, each analysis topic in turn, and conclusions.

⁵ [Active Travel Tranche 2: East Oxford LTN Evaluation Snapshot Report](#)

Background

Benchmarking

28. Low Traffic Neighbourhoods (LTNs) have been implemented in the UK since 2018 but have been in existence for decades under other names. They aim to reduce traffic, increase uptake of active travel modes and improve air quality in residential areas. The evidence on the success or failure of LTNs is mixed, both in terms of outcomes and in the way the evidence has been gathered, analysed and reported.
29. Some studies have shown that LTNs can be effective in reducing traffic. For example, a 2023 study by Thomas and Aldredⁱ found that LTNs in London reduced motor traffic levels by an average of 32.7% within their boundaries. Another study, by the Centre for Londonⁱⁱ, found that cycling increased by 31-172% and car traffic decreased by 22-76% in 10 LTNs in London. LTNs can also improve air quality. A study by King's College Londonⁱⁱⁱ found that LTNs in London led to a reduction in nitrogen dioxide (NO₂) levels of up to 10%. LTNs can make residential areas more attractive and safer for walking and cycling. A study by the University of Westminster^{iv} found that LTNs in London led to an increase in the number of people walking and cycling in the areas affected.
30. Whilst LTNs have been shown to have some successes in terms of meeting their objectives within the LTN areas themselves, some studies however have found that LTNs can lead to increased traffic on surrounding roads. For example, a 2022 study by The Times^v found that traffic increased by up to 35% on some boundary roads in LTNs in London, though the degree of traffic increase varies significantly between areas depending on the context, so direct comparisons can't be made between disparate areas with different characteristics. In the evaluation undertaken for the Cowley LTNs in Oxford^{vi}, the overall traffic increase on the boundary roads was only 2.3% after COVID-19 adjustment and seemed to be decreasing over time. In addition, another study, by the RAC^{vii}, found that crime rates increased in some areas after LTNs were introduced, though a study into Waltham Forest LTNs^{viii} showed a 10% decrease in total street crime following LTN introduction. LTNs have also proved to be a divisive topic, and whilst there are strong supporters of them, they also have a strong contingent of detractors. For example, a survey by the Local Government Association^{ix} found that 40% of residents in areas with LTNs were opposed to them. A YouGov poll^x in November 2022 found that 29% of people in Oxford were opposed compared to 56% in support.
31. When looking at the results of studies in a bit more detail, there are also significant variations between areas in the level of success and/or failure of the different schemes. This suggests that local factors and the implementation approach itself are of high importance in determining whether or not a given scheme is on balance positive or negative and to what degree. Table 1 below indicates this variation in the results.

Table 1 - Changes in traffic and cycling within LTNs

City	LTNs Implemented	Reduction in Traffic	Increase in Cycling	Period
London	100+	-32.7%	31-172%	2018 - 2023
Paris ^{xi}	50	-15%	20%	2020 - 2023
New York City ^{xii}	20	-10%	15%	2020 - 2023
San Francisco ^{xiii}	10	-20%	30%	2020 - 2023
Amsterdam ^{xiv}	100	-40%	50%	2020 - 2023
Copenhagen ^{xv}	50	-50%	75%	2020 - 2023
Oslo ^{xvi}	20	-60%	80%	2020 - 2023

32. As noted above, one of the reasons for the variation in results is likely due to the different ways in which LTNs are implemented. Some cities have implemented LTNs more comprehensively than others, with more physical barriers and traffic calming measures. Arguably, these cities are more likely to see larger reductions in traffic. Another reason for the variation in results is likely due to the different characteristics of the cities themselves. For example, cities have varying levels of traffic to start with, some cities have better public transportation systems than others or better infrastructure for active modes of travel, and social norms also vary between locations meaning what is more acceptable in one location may be less so in another. The very layout of the city itself may also impact on the effectiveness and level of impact, depending on how easy or difficult it is for vehicles to re-route around an LTN area, for example. These factors can also influence the effectiveness of LTNs.
33. Another aspect to consider is that variable results are also at least partially down to the differences in how the data has been collected and analysed, and some of the studies undertaken are considerably more robust in nature than others. The majority of studies undertaken have simply looked at straight change between pre- and post-implementation. This does not account for changes caused by underlying trends and wider disruption such as the pandemic and cost of living crisis. To address this challenge though, some studies have considered control sites. A variety of analytical techniques have then been applied to understand the impact of the LTNs, depending on data availability (e.g., ongoing or short, defined periods) and type (e.g., traffic volume or questionnaire etc). The implementation and baseline periods covered by the studies also varies. Some studies only looked at the short-term impact of LTNs, while others looked at the long-term impact. It is important to consider the length of the implementation and baseline periods when interpreting the results of the studies, as results usually change over time.
34. Overall, therefore, the results of LTNs implemented and evaluated around the world vary. There is generally an indication that traffic reduces within the LTN area and that cycling increases. At the same time, however, there is sufficient evidence that some locations have also experienced negative impacts such as displaced traffic. Further study is needed to be able to better compare the results

between locations and understand in more detail the different factors contributing to the level and kind of result.

Local Information

35. To help understand some of the wider likely impacts of the east Oxford LTNs, a range of geographic and economic background information has been reviewed. This covers mapping of key land-based information, as depicted in figure 3 below, such as retail and commercial locations, coloured in orange/salmon pink, and places of education. Areas of deprivation are also shown in figure 4 below, and the LTN areas are shown to encompass a range of deprivation levels, but neither of the extremes. In addition, two timelines are provided for context, the first of which (figure 1) shows key events in the lead up to and following implementation of the east Oxford LTNs. The second (figure 2) shows the baseline and post implementation data gathering undertaken for the analyses.

Figure 1 - Timeline of key events related to LTN interventions.

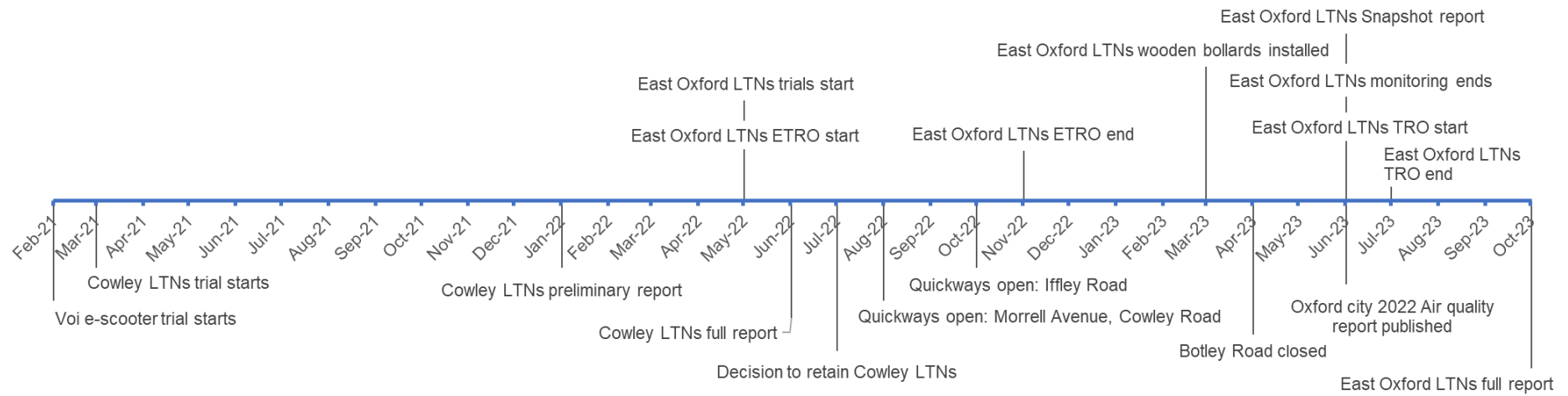
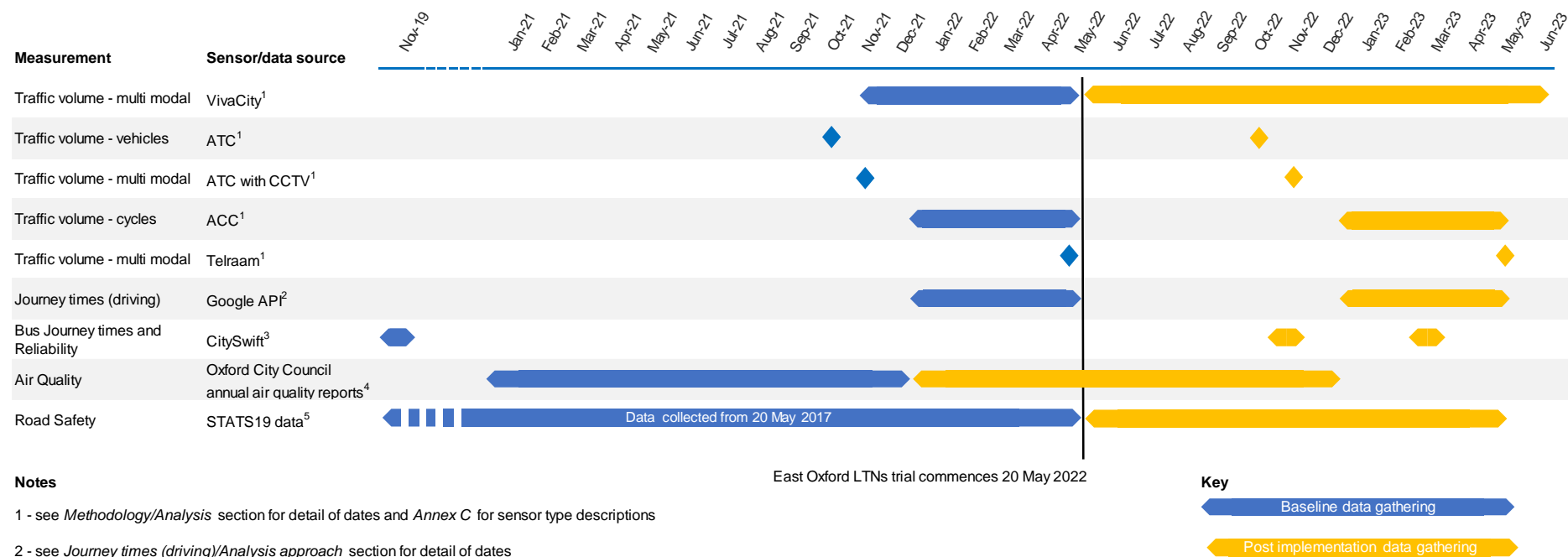


Figure 2 - Timeline of key data gathering undertaken for the analyses.



Notes

- 1 - see *Methodology/Analysis* section for detail of dates and *Annex C* for sensor type descriptions
- 2 - see *Journey times (driving)/Analysis approach* section for detail of dates
- 3 - see *Bus Journey Time and Reliability/Analysis approach* section for detail of dates
- 4 - see *Air Quality/Analysis* section for detail of dates
- 5 - see *Road Safety/Analysis* section for detail of dates

36. The intervention itself was funded through the Department for Transport's Active Travel Tranche 2 programme. It encompassed the installation of bollards (traffic filters) in key locations which preclude the LTNs from being used to drive between one radial route and the next. Alongside the LTNs, Quickways have also been installed along the boundary roads, which provide improved cycling infrastructure, through the same tranche of funding.

Figure 3 - Map depicting areas of commercial activity and educational institutions in and around east Oxford LTNs

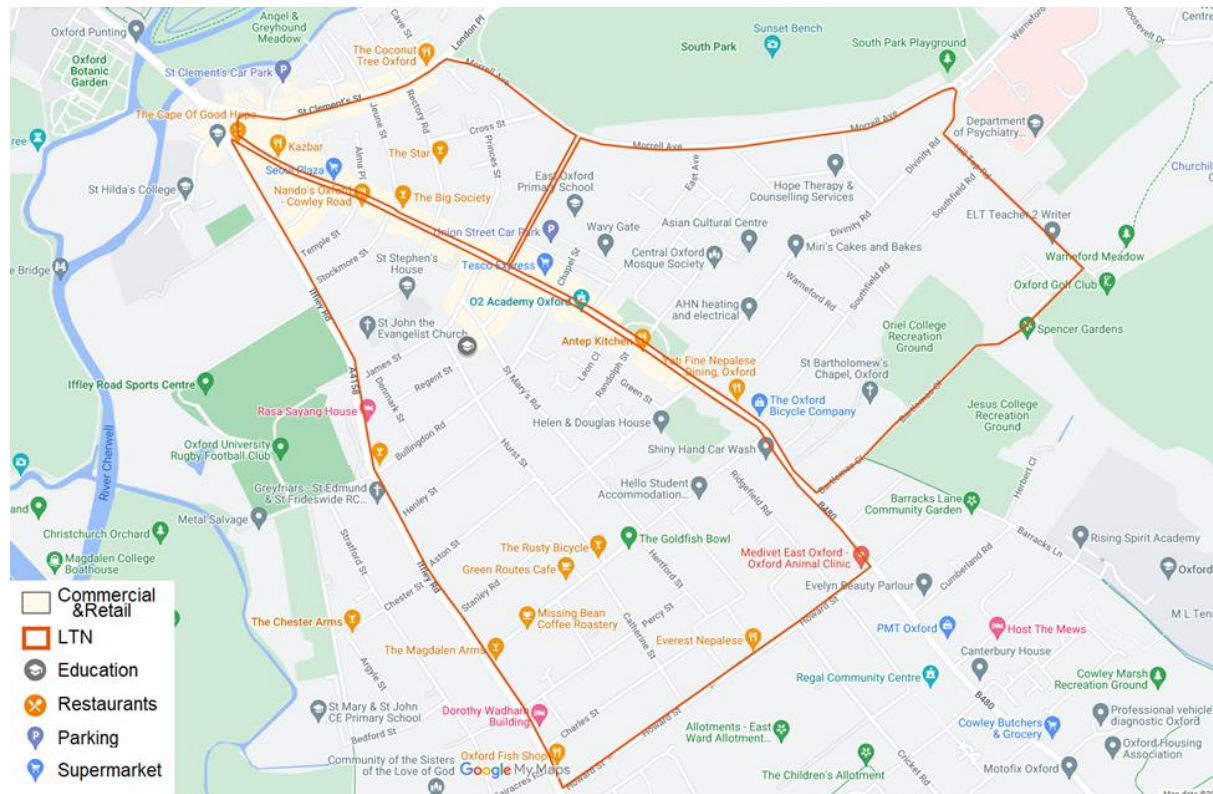
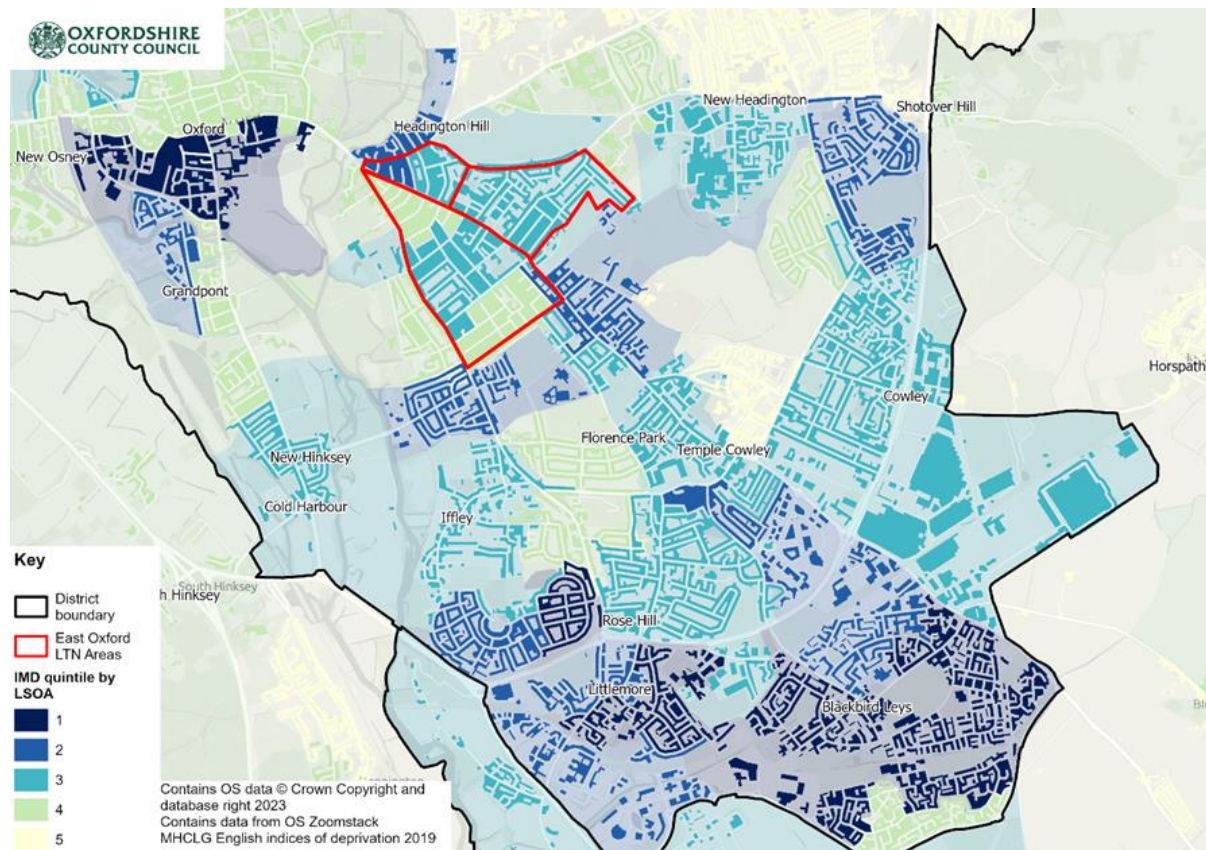


Figure 4 - Map depicting areas of deprivation in and around east Oxford LTNs. The 2019 English indices of deprivation rank each of England's 32,844 Lower-layer Super Output Areas (LSOA) by deprivation with the overall deprivation the Index of Multiple Deprivation (IMD). This map is coloured by which quintile (20% band) each area falls into with 1 being the most deprived 20% and 5 the least deprived 20% nationally⁶.



37. In addition, information on the population of the area has been gathered to assess demographic makeup and health. Whilst it is not possible, as noted previously, to fully understand the impacts of the LTNs on health, an understanding of the local population can provide some insight into the likely implications of the changes for this population. Census data from 2021 was reviewed, alongside public health, hospital and life expectancy data from the Office for Health Improvement and Disparities and benefit claimant data from Department of Work and Pensions. More information can be found in Annex A - *East Oxford LTN area – Public Health data*.

38. The review of population data for the east Oxford LTN area^{xvii} shows:

- The area has c.12,000 residents living in c.4,300 households (March 2021).
- Compared with Oxford city, the area has double the proportion of residents aged 20-24 years. There are lower than average numbers aged 0-19 years and aged >45 years.
- Residents were more likely than Oxford city to be from a White ethnic background.

⁶ <https://insight.oxfordshire.gov.uk/cms/deprivation-dashboard>

- Households were significantly more likely to be private rented accommodation (52% compared with 32% for Oxford) and to have four or more people living in the household.
- Residents were more likely to have higher level qualifications (degree and above) and were more likely to be in professional occupations than the Oxford average. The proportion in elementary occupations⁷ was also slightly higher than the Oxford average.
- Households in the area had lower car ownership levels than the average for Oxford and those in employment were more likely to work mainly from home. (Note that the Census 2021 survey was carried out in March 2021 when lockdown restrictions were in place). Comparing 2011 and 2021 Census findings for the east Central Oxford MSOA shows the proportion of households with at least one car declined slightly in the area, while in Oxford the percentage of households with car(s) increased slightly.
- Residents had a higher level of active travel use, either walking or cycling, when commuting to work than the Oxford average (by 7%) and a much lower level of driving to work (14% versus 23%).
- Residents of the area were more likely than average to be in very good health and to be “not disabled”. This comparison is likely to be affected by the younger age profile of the local population.
- Rates of older people in poverty were above average, but all other categories of low income or claiming health-related benefits were below Oxford’s average.

39. The review of Health data for the east Oxford LTN area^{xviii} shows:

- Life expectancy data for 2016-20 for the area shows males in the area with a significantly lower life expectancy than the average for England (76.3 compared with 79.5 years). Life expectancy for females was better than average for England (85.5 compared with 83.2 years).
- Hospital admissions for alcohol attributable conditions for the area were significantly worse than the England average.
- Deaths from respiratory disease and hospital admissions for Chronic Obstructive Pulmonary Disease (COPD) were both similar to the national and Oxford average.
- Deaths from stroke, coronary heart disease and circulatory disease were all higher than the England average.
- Over a third of children in year 6 (aged 10-11 years) living in the area were measured as overweight/obese, which is slightly more than the Oxford average though below the England average.⁸

⁷ Elementary occupations consist largely of simple and routine tasks which mainly require the use of hand-held tools and often some physical effort. Most occupations in this major group require skills at the first ISCO skill level (a primary education which generally begins at the age of 5, 6 or 7 and lasts about 5 years)

⁸ Further information can be found at: <https://insight.oxfordshire.gov.uk/cms/joint-strategic-needs-assessment>

40. The following analyses refer back to relevant aspects within this local information, which is intended to provide some context around how the impacts may interact with and/or be influenced by pre-existing conditions in the area.

Traffic Volume Analysis

Methodology

41. A number of different data gathering approaches and metrics have been used to calculate the effects of the east Oxford LTN traffic filters on traffic volumes across different modes of transport. The methodology for the different approaches to traffic volume analysis are set out in the following sections, covering the approaches and the statistical analyses applied. For more information on the statistical approaches, see Annex B. For more information on the data gathering approaches, see Annex C.

Average Traffic Counts

42. The average daily count is calculated differently for different methods of data gathering. This is dependent on whether the method provides short-term data with an equivalent baseline period (e.g., November 2021 baseline compared to November 2022 post intervention), or longer-term data with a baseline period which is not equivalent to the intervention period (e.g., 20 November 2021 to 19 May 2022 baseline compared to 20 May 2022 to 19 June 2023 intervention).
43. For the short-term data, the effects of seasonality on the data are minimised by the before and after periods being at similar dates pre- and post- intervention. However, there is likely significant variation by day of the week, for example with commercial vehicles, commuting, and the school run, which with small samples, may skew an overall mean. To reduce the potential distortion caused by full weeks not being evenly covered, a day-of-week daily average approach is taken in these short-term data instances. First, the mean daily count by each individual day of the week is calculated. Then, the mean of the already averaged seven days is calculated to determine the overall daily average.
44. For the longer-term data collection, the median is used instead of the mean, as the mean is more sensitive to outliers. The median represents the middle value (daily count) of the distribution, making it well suited to minimising the effects of outliers/anomalies in the data (skewed to extreme value counts). For instance, outliers could be created in the data where there were factors other than the LTN filters affecting daily traffic volume, such as: roadworks, local and national events, as well as unforeseen power outages on street architecture on which sensors are located.
45. In both instances, the average value is used to compare the baseline (pre-intervention) period against the post-intervention data, to assess the changes between periods.

Simple Difference

46. Using the calculated average for the data collected, the first metric of 'difference' is a simplified output to understand the effects of LTN filters on traffic volumes by

comparing average daily counts by transport mode before and after the LTN filters were installed.

47. This method provides a simplified difference in traffic volume between two time periods but does not account for the wider trends in traffic volume across Oxford, for example wider changes due to the impact of the cost-of-living crisis, or changes in working arrangements and travel patterns post COVID-19, or seasonal effects such as festive periods. A difference-in-differences (DiD) statistical technique was adopted to derive an impact estimate metric, to distinguish the impact on traffic volume attributed to the LTN filters from what is happening more generally across Oxford, where data was available and suitable (see Annex B).

Impact Estimate

48. The impact estimate metric uses a DiD statistical technique to estimate the causal effect of the LTN filters by comparing changes in outcomes between the intervention and affected areas against a control area before and after the east Oxford LTNs were implemented. The change in outcomes between the location associated with the east Oxford LTNs and a set of equivalent control roads were then compared. The key idea behind DiD is to compare the difference in outcomes between the LTN area and the control before and after the LTN implementation, over time. This approach helps account for general trends that might affect traffic flows, such as those noted above.
49. When interpreting the results of the impact estimate, it is also important to consider some of the assumptions and limitations inherent in the DiD statistical technique:
- There is an assumption that where there are external forces affecting traffic flows (such as cost of fuel, change in daily work patterns that affect flows following COVID-19, weather, holidays etc.), these forces affect both the in-LTN area/boundary roads and the control area/control boundary roads equally.
 - The LTN traffic filters are the only area-specific aspect that changed over time in LTN area/boundary roads and there is not anything else influencing the outcome variable (daily average traffic volume) that did not similarly impact the control areas.
 - The LTN area/boundary roads and the control area/control boundary roads are similar except for the LTN filters.
50. In consideration of the above assumptions and limitations of the DiD, the method was refined where possible to mitigate the potential skewing effects on the results. Regarding selection bias, the roads chosen for control purposes were constrained by sensor availability and data completeness over time. However, the roads that were selected (see map in Annex C) were chosen based on the following criteria:
- Data availability.
 - Comparability in terms of flow context (e.g., similar levels of traffic and road classification type).

- Reasonable distance from the LTNs (i.e., minimising the likely impact of the intervention on the control sites).
- Choice of locations within Oxford city to minimise differences in overall patterns of travel due to aspects such as the seasonal large student population and tourist movements.
- Avoidance of known long-term disruption on the control route during the periods of interest (e.g., major roadworks or road closures).

Analysis

51. The analysis that was applied to each sensor used to gather data for the LTNs traffic volume evaluation is outlined below. Annex C provides more detailed descriptions of each type of sensor used.
52. The data collected for the volume analysis of boundary roads undertaken in this report are from permanent VivaCity Sensors. The data for these sensors compares the before period of 20 Nov 2021 – 19 May 2022, to the after period of 20 May 2022 – 19 June 2023. Ideally, the pre- and post- intervention periods would match dates to avoid seasonal differences between the baseline and interventions period, but data was not available in all locations during the corresponding time period. Controls were available for this sensor type, and as such both difference and impact estimate metrics could be calculated, where volumes were sufficiently high (lower volumes may show skewed values when calculating an impact estimate and the metric has therefore been omitted in these instances). Given sufficient data, the metrics have been applied across all major modes of transport, covering pedestrian, cycling, car, motorcycle, light goods vehicle (LGV) and heavy goods vehicle (HGV). Where an impact estimate has been applied, seasonal differences between pre- and post- intervention period should largely be negated, since controls are likely to experience similar effects. The effect of seasonality will be apparent in the difference metric, however.
53. VivaCity sensors were chosen for their ability to capture data across multiple modes of transport, including active travel modes which other sensor types often cannot capture. Oxfordshire County Council has a network of 103 VivaCity sensors across the county, with a large proportion in Oxford, some though not all of which have been in place capturing data since 2019⁹. This provides valuable baseline and pre-COVID-19 data, as well as control site data for comparison. Other permanent sensors are unable to capture all modes of transport of interest within this evaluation. It is worth noting, however, that VivaCity sensors can only capture data under sufficient lighting conditions. As they are mounted on streetlights, they can capture data during night-time periods, but it may be less comprehensive, particularly in less well-lit locations.
54. Whilst coverage of the major roads surrounding the LTNs were well monitored by the VivaCity sensors, there were not sufficient numbers in place within the LTNs to provide a comprehensive picture of the effects, owing to constraints such as

⁹ Notable locations used in this evaluation without (usable) 2019 baseline data include Morrell Avenue, Cowley Road north, Divinity Road and St Clement's Street

suitable street architecture necessary to facilitate and power the VivaCity sensors. To overcome this coverage issue, additional data sources were also used to gather data inside the LTNs.

55. ATC surveys were conducted twice consecutively, one year apart (October 2021 and October 2022). The locations were identified as those likely to provide a clear demonstration of the vehicular traffic impact within the LTNs. This included roads which may be impacted by the placement of the restrictions, as well as roads where LTN restrictions had been applied. The specific timing and duration of these surveys can be seen in Annex E.
56. In addition, there were two sites with corresponding control locations (Annex E) surveyed independently, which alongside ATC surveys, included CCTV pedestrian and cycle counts. The surveys in these locations were carried out as per the specific timings shown in Annex E, also twice consecutively, one year apart (November 2021 and November 2022).
57. All periods for both ATC and ATC plus CCTV surveys covered at least a full continuous week, although the exact days monitored were inconsistent, with setup and removal on different days of the week and issues with the ATC sensors, including obstruction and damage. As such, the day of the week mean was applied to these datasets.
58. As well as the VivaCity data, ATC and ATC plus CCTV surveys which were undertaken and results reported in the June snapshot evaluation report¹⁰ data has been gathered and reviewed from two additional datasets, previously not reported. The first of these is a permanent Automatic Cycle Counter (ACC), which has been in place on Magdalen Road on the Cowley Road side of the junction with St Mary's Road since 12/08/2021. ACCs are designed to count only cycles crossing loops cut into the carriageway; however, they do pick up some other vehicle movements, and may not count all cycles made from carbon fibre or aluminium. In this particular location, the loop is cut across the whole of Magdalen Road, but only across the sides of the road on St Mary's Road. As there was no suitable control for this ACC location, to account for seasonal variation and other factors, the period from 01/01/2022 to 19/05/2022 has been set as the baseline and compared to 01/01/2023 to 19/05/2023. However, it must be acknowledged that there will be limitations of using this data in isolation given other influencing factors. As for the VivaCity analysis, median values are used to avoid outliers exerting significant influence on the averages.
59. The second additional dataset is from a Telraam sensor, which has been located on Hurst Street since 06/05/2022. Telraam sensors are mounted in the 1st floor window of a building and are available to citizens and businesses alike to purchase and install, with data collected being openly available on the internet. Data has been fully reviewed from this sensor and an assessment of another Telraam sensor co-located with a VivaCity sensor undertaken to validate the sensor type's accuracy. Whilst citizens have installed Telraam sensors in several relevant locations for the east Oxford LTNs, only the Hurst Street location was in

¹⁰ [Active Travel Tranche 2: East Oxford LTN Evaluation Snapshot Report](#)

place prior to the installation of the LTNs. It is therefore the only such device in the area capable of providing any before and after measurement of the impact of the LTNs on the area.

60. Due to the timeline for the installation of the Telraam device on Hurst Street and the lack of a suitable control site, the analysis is being undertaken using the same methodology as used for the ATC survey analysis. The period of 06/05/22 to 19/05/22 is compared to 06/05/23 to 19/05/23, using day of the week mean to account for the different spread of days over the two periods. It is worth noting that Telraam devices do not have night vision functionality and so can only count when there is sufficient external lighting and therefore are only likely to be counting during daylight hours, particularly in more residential areas with lower lighting levels, not 24-hour periods.
61. It is worth noting that without the availability and use of historic data from pre-COVID-19 and/or the use of control sites, the simple difference between the counts over the two years derived from Telraam, ATC, CCTV and ACC datasets cannot be attributed to the LTNs alone. Traffic patterns were still in flux in 2021/2022, following the pandemic, when surveys and count periods were undertaken. Additionally, as shown in Annex L, overall traffic levels in Oxford were lower in 2021 than in 2022. The cost-of-living crisis will also have influenced travel choices during the interim period. In all cases therefore, a simple before and after comparison can only be indicative to a greater or lesser degree depending on the comparison being made in each case.
62. The analysis of volume data is presented in the following sections, split into '*Boundary Roads*' and '*In-LTN Roads*' for pedestrians, cyclists, cars, Light Goods Vehicles (LGVs), Heavy Goods Vehicles (HGVs) and motorbikes. For each mode, the average daily counts are reported per location for the pre- and post-intervention periods (labelled as 'before' and 'after'). The percentage difference between the pre- and post- intervention counts is also given (labelled as 'difference') together with the impact estimate where this has been possible to calculate. Where available, 2019 average data is also provided for reference; this is calculated as the median, as it is only available for the longer-term datasets. Additionally, where sufficient data is available, the percentage difference is shown for modal traffic during weekdays and weekend days only.
63. For ease of reading, data has been colour-coded within the summary tables provided in the analysis sections of this report. The key for this is included below in Table 2.

Table 2 - key for percentages

Decrease					%	Increase				
> -100	-100 to -76	-75 to -51	-50 to -26	-25 to -10	-9 to +9	10 to 25	26 to 50	51 to 75	76 to 100	> 100

64. Some additional car volumes on roads elsewhere in Oxford have also been analysed to understand the patterns of traffic flow dispersal around the city and

to test particular theories put forward in this evaluation. The data for these additional roads is included in Annex F.

Granularity

65. To assess whether there are any differences in the changes by modal volumes depending on time of day, further analysis has also been undertaken to split out the data into time periods, where hourly data is available within a given dataset, and direction of travel. Direction of travel is covered for all locations but is of greater import for the boundary road data, where volumes are higher and peak flows can vary by direction quite significantly affecting times when congestion is caused. The time periods considered cover:
- AM-peak: 7am to 9am
 - Day: 9am to 3pm
 - PM-peak: 3pm to 7pm.
66. For this more granular analysis, the use of control sites is not suitable, as the amounts of data involved become smaller and differences between control sites and intervention areas become magnified at this level of granularity, meaning their use could skew the results. For example, peak periods are likely to differ slightly across disparate locations, depending on key trip attractors and distances from them.
67. As outlined previously (see paragraph 48 above), the use of control data allowed the impact estimate to be applied to datasets with different periods covered by baseline and post-intervention timelines, adjusting for differences between the time periods. Since impact estimates cannot therefore be applied in the granular time-period analysis, it has been necessary to undertake it on different periods than were used for the aggregated datasets of this kind – namely the VivaCity sensor data. Data has therefore been taken from 1 January 2022 to 19 May 2022 for the baseline period and compared to data from 1 January 2023 to 19 May 2023 for the post-intervention period for the VivaCity data both in-LTN and for boundary roads.
68. Due to the difference in periods analysed for the VivaCity data and the fact that not all time periods are covered (i.e., the granular data excludes the time period from 7pm to 7am), the granular total counts do not add up to the totals provided in the aggregated data. It has also only been possible to provide the granular analysis for modes of transport which experienced sufficient movement volumes; other modes/locations with lower counts have been excluded from the granular analysis. Some data was also not available hourly, and so it has not been possible to apply the granular analysis in these instances. In particular, three VivaCity count lines were required to have their data re-cast, due to their host sensor being misaligned, and the data available subsequently did not go down to the hourly level.
69. Points of interest from the granular analysis are noted within the commentaries on the relevant aggregated data analysis. The focus is on locations and modes of transport which show larger, more significant differences, since even when

only applying this analysis to modes with higher volumes, some time periods and directions of travel have very small numbers. Where only small absolute numbers of movements occurred, a small change such as from 1 to 2, creates a misleadingly large percentage change (100% increase). The full granular data summary is provided in Annex D and Annex E.

Confounding Factors

70. In analysing the impact of the LTNs, it is worth noting a few confounding factors which will affect the data gathered. These include:

- Significant levels of vandalism and subsequent non-compliance with LTN restrictions, particularly in the period when plastic bollards were in place, up until wooden bollards being installed week commencing 13 March 2023, causing areas which should be closed to through-traffic to be treated by some motor vehicles as effectively 'open' for some periods of time. Whilst levels of vandalism have dropped since new bollards have been installed, isolated acts of vandalism and theft are still occurring. There is also reportedly increased non-compliance with other traffic orders which pre-dated the LTNs, such as one-way streets and banned turns.
- The Quickways (see Annex G) cycling routes were implemented during the evaluation period, meaning that roadworks and/or changes in infrastructure not directly related to the LTN occurred at the same time as the LTNs. Both roadworks and changes in the infrastructure available at any one time are likely to have had an impact on route choice as well as modal uptake along these routes.
- The lack of availability of a full year of representative baseline data prior to the implementation of the LTNs owing to instability of travel patterns after COVID-19.
- The closure of the Botley Road to vehicular traffic from 11 April 2023 will have influenced travel patterns in Oxford post this period, and some datasets include analysis covering this period.

71. Some additional, more specific, confounding factors have also been raised in the relevant sections of the report below.

72. The periods of vandalism or damage causing bollard outages has been compiled and can be found in Annex H and summarised in table 3 below.

Table 3 - Sum of bollard outage days by road

Street Name	Total approximate number of outage days per site
Divinity Road	79
Bullingdon Road	71
Leopold Street	69
Essex Street	56
Marston Street	52
Howard Street	44
Rectory Road	44
Princes Street	39
Magdalen Road	38
Southfield Road	38
Barnet Street	28
James Street	18
Temple Street	14
Stockmore Street	5

73. The data on outage periods has been compared against car trends along relevant boundary roads during these periods to assess whether they have had a significant impact on volumes of vehicles. Where ongoing data is available, the impact does not seem to be significant in overall traffic volume terms, though there is some evidence to suggest that where outages were highest on Divinity Road, traffic levels may have been more significantly influenced by permeability than the boundary routes. It has also been compared against the data collection periods for the short-term sources, to identify where an outage may have influenced the results of these datasets. Whilst there are some dates which coincide, in no cases was a bollard out on the same street as where short-term data was being collected. Where bollard outages coincided with data collection periods, this has been noted in the text discussing the results. The results of these comparisons are included in the relevant section of this report and in Annex H.
74. As a key intervention which went in place during the evaluation period, the timelines for installation of Quickways has also been reviewed to assess whether changes in travel patterns can be correlated with the timelines involved on the routes affected. There is some evidence to suggest (see *Boundary Roads - Cycles* section) that Quickways have had an influence on cycling levels separate from the LTNs. The timelines and locations where Quickways have been installed are included in Annex G.
75. This evaluation uses techniques which are outlined in the methodology above and detailed further in Annex B with the aim of accounting for the instability in patterns of travel and the closure of the Botley Road where possible. Where this has not been possible, this has been caveated in the relevant section of the report.

Boundary Roads

Sensor Locations

76. The sensors, located on the boundary roads can be seen on figure 5 below and are listed below:

- OX38 Iffley Road north
- OX20 Iffley Road east
- OX39 Cowley Road north
- OX44 Cowley Road east¹¹
- OX4 Morrell Avenue
- OX4 London Place.¹²

Figure 5 - Location of boundary road sensors and filters in east Oxford LTNs



77. Control road sensors, used to calculate the impact estimate and adjusted impact estimate for boundary roads can be seen in Annex C and are listed below:

- OX11 Bayswater Road east
- OX15 Headley Way south

¹¹ The data for this location was re-cast due to a sensor misalignment for part of the analysis period, meaning that it needed to be re-calibrated and run again. Data for this location and the two in-LTN locations were affected by this. Granular, hourly data, is not available for these sites, due to data processing restrictions.

¹² The London Place sensor has been used to create a proxy for St Clement's Street – see paragraph 78 for further explanation.

- OX31 Marston Ferry Road.
- OX49 Woodstock Road north.¹³

78. It has not been possible to use data from the sensor in St Clement's Street as part of the boundary road analysis due to consistency issues following the incorrect relocation of the sensor as part of roadworks during the monitoring period. As this is a significant location to assess the effects of the interventions on boundary roads, data from a traffic turning survey, performed on 4 May 2023 has been used to calculate the average weekday turning counts from London Place and Morrell Avenue into St Clement's Street and so to estimate traffic through St Clement's area. Due to the availability of data at the London Place sensor, this calculation can only be made for the in-bound direction (that is, towards The Plain roundabout), as shown on figure 5. The turning counts survey shows that the average daily turning counts from London Place to St. Clement's Street is 90% and from Morrell Avenue to St Clement's Street, 78%. This approximation works reasonably well for cars; there was a +/- 10% difference between the estimated and recorded counts for those times the St Clement's Street sensor was properly installed and reading correctly. However, this is not the case for other modes. This may be because these counts are much lower and taking average turning counts for a single day does not give good estimate of average turning counts. Therefore, only results for cars are reported.

Pedestrians

Table 4 - Pedestrian VivaCity analysis for boundary roads, In and Out direction, Weekday and Weekend

Road	Pedestrian, In + Out						
	Weekday + Weekend					Weekday	Weekend
	2019	before	after	diff.	impact ¹⁴	diff.	diff.
Iffley Road north	1,689	2,588	2,570	-0.7%	-14.6%	-3.4%	+3.9%
Iffley Road east	424	477	567	+18.9%	+5.0%	+16.9%	+30.2%
Cowley Road north	4,589	5,999	5,699	-5.0%	-18.9%	-5.4%	-4.7%
Cowley Road east	*	6,606	6,490	-1.8%	-15.6%	-2.0%	+1.4%
Morrell Avenue	**	1,098	1,216	+10.7%	-3.7%	+1.8%	0.0%
Total		16,768	16,542	-1.3%	-15.2%		

Table 5 - Pedestrian VivaCity analysis for boundary roads, In direction, Weekday and Weekend

Road	Pedestrian, In						
	Weekday + Weekend					Weekday	Weekend
	2019	before	after	diff.	impact	diff.	diff.
Iffley Road north	1,007	1,405	1,444	+2.8%	-6.3%	+1.7%	+5.4%
Iffley Road east	310	366	450	+23.0%	+13.9%	+21.0%	+26.5%
Cowley Road north	2,434	3,149	2,958	-6.1%	-15.1%	-6.8%	-6.5%
Cowley Road east	*	2,859	2,952	+3.3%	-15.9%	+1.1%	+10.1%
Morrell Avenue	**	515	592	+15.0%	-4.0%	+8.5%	-0.5%

¹³ Note that control roads were altered following the publication of the east Oxford LTNs evaluation methodology, due to a data outage on Banbury Road, making the site unsuitable for inclusion.

¹⁴ See explanation of 'impact' in *Methodology – Impact Estimate* and see Annex B for further detail

Table 6 - Pedestrian VivaCity analysis for boundary roads, Out direction, Weekday and Weekend

Road	Pedestrian, Out						
	Weekday + Weekend					Weekday	Weekend
	2019	before	after	diff.	impact	diff.	diff.
Iffley Road north	665	1,189	1,128	-5.1%	-24.2%	-8.1%	+2.6%
Iffley Road east	90	95	110	+15.8%	-2.6%	+9.2%	+42.2%
Cowley Road north	2,132	2,810	2,742	-2.4%	-21.4%	-3.7%	-1.7%
Cowley Road east	*	3,666	3,534	-3.6%	-13.0%	-4.9%	-5.2%
Morrell Avenue	**	574	597	+4.0%	-5.0%	-3.8%	-4.2%

*The sensor was upgraded during the intervention period and data is not comparable for 2019

**Data is not available for this location in 2019

79. Looking at the pedestrian counts in-bound and out-bound and weekday and weekends (table 4), they show a decrease in number after implementation along Iffley Road north¹⁵, Iffley Road east and Cowley Road east (-0.7%, -5.0%, -1.8%). When compared to the control roads (where pedestrians increased on average), this decrease is more pronounced as shown by the impacts (-14.6%, -18.9%, -15.6% respectively). Iffley Road east and Morrell Avenue both show an increase in pedestrian flows (+18.9%, +10.7%¹⁶) although this is reduced when looking at the impact (+5.0%, -3.7%). Overall, pedestrian movements have fallen slightly across the boundary roads (-1.3%) and more significantly when considering comparison to controls (-15.2% impact).

80. Footfall is consistently either more positively or less negatively affected at weekends than during the weekdays, with Iffley Road east showing a marked percentage increase in pedestrian use at weekends (+30.2% at weekends compared to +16.9% for weekdays). The increased weekend levels may be due to locations near allotments and other green space, likely to be more visited during leisure times. Where data is available, pedestrian counts are significantly higher, both before and after implementation, than they were in 2019. It is worth noting that Voi e-scooters were made available in Oxford city from 18/02/2021, which may have impacted on pedestrian levels as the scheme has grown significantly over the 2022-2023 period post-implementation (142% year on year gain compared to the previous 2021-2022 period). Data from users identifying modal shift suggest that around 30% of e-scooter users would have walked their journey in the absence of an e-scooter.

81. When considering directional movements in towards The Plain roundabout and city versus out-bound from these locations (tables 5 and 6), there are significant differences in flows for some locations. Whilst Morrell Avenue is fairly consistent in both directions, Iffley Road in particular shows much greater flows of pedestrian movements in-bound than out-bound. Cowley Road has a more mixed picture, with the northern (near The Plain) location showing slightly lower

¹⁵ Note that the pedestrian counts on Iffley Road north before and after intervention, are greater in this report than in the Snapshot report due to a data processing error which has been rectified in this report.

¹⁶ Note that the increase in Morrell Avenue pedestrian counts is less pronounced than it was in the snapshot report due to a data processing error which has been rectified in this report.

flows out-bound than in-bound, but the reverse being true of the Cowley Road east sensor location. The patterns of in- and out-bound counts are consistent across time-periods, suggesting that it is not the LTNs which are affecting the difference between flows towards or away from the city, but something longer-standing which influences choice of route. It may be (partly) to do with the sensitivity of the sensors under different lighting levels and the timings of travel during daylight hours and in darkness when sensitivity of the sensors is lower.

Cycles

Table 7 - Cycle VivaCity analysis for boundary roads, In + Out, Weekday + Weekend

Road	Cycle, In + Out						
	Weekday + Weekend					Weekday	Weekend
	2019	before	after	diff.	impact	diff.	diff.
Iffley Road north	2,452	2,684	2,806	+4.5%	+2.8%	+8.4%	+13.7%
Iffley Road east	660	690	795	+15.2%	+13.4%	+23.5%	+16.3%
Cowley Road north	2,622	2,110	2,850	+35.1%	+33.3%	+34.9%	+34.5%
Cowley Road east	*	2,349	2,952	+25.7%	+23.9%	+25.1%	+35.9%
Morrell Avenue	**	644	970	+50.6%	+48.8%	+40.6%	+36.8%
Total		8,477	10,373	+22.4%	+20.6%		

Table 8 - Cycle VivaCity analysis for boundary roads, In, Weekday + Weekend

Road	Cycle, In						
	Weekday + Weekend					Weekday	Weekend
	2019	before	after	diff.	impact	diff.	diff.
Iffley Road north	1,385	1,355	1,383	+2.1%	+2.0%	+8.2%	+7.4%
Iffley Road east	470	481	537	+11.6%	+11.5%	+16.1%	+21.1%
Cowley Road north	1,155	939	1,072	+14.2%	+14.1%	+16.2%	+20.1%
Cowley Road east	*	1,189	1,482	+24.6%	+22.6%	+25.6%	+44.2%
Morrell Avenue	**	347	527	+51.9%	+49.7%	+45.5%	+29.6%

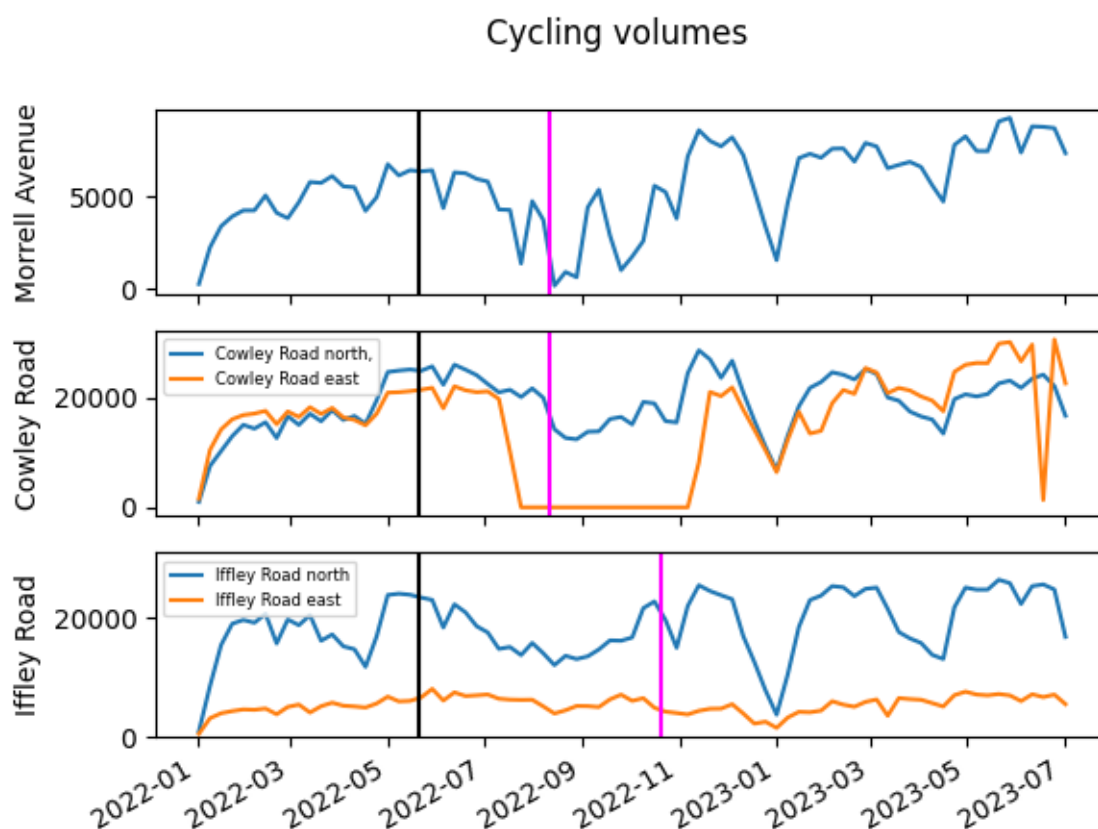
Table 9 - Cycle VivaCity analysis for boundary roads, Out, Weekday + Weekend

Road	Cycle, Out						
	Weekday + Weekend					Weekday	Weekend
	2019	before	after	diff.	impact	diff.	diff.
Iffley Road north	1,073	1,305	1,431	+9.7%	+7.6%	+12.2%	+17.4%
Iffley Road east	169	206	257	+24.8%	+22.7%	+28.0%	+15.9%
Cowley Road north	1,377	1,212	1,770	+46.0%	+44.0%	+40.1%	+40.5%
Cowley Road east	*	1,145	1,439	+25.7%	+25.5%	+27.5%	+32.6%
Morrell Avenue	**	298	451	+51.3%	+51.5%	+33.6%	+46.4%

82. Cyclist counts have consistently increased across all boundary roads with similar changes in flows and impact percentages, meaning it is likely that the effect of the LTNs and other local changes are driving the increase rather than changes in travel patterns more generally. Looking at table 7, the highest percentage increases are found on Morrell Avenue (+50.6% difference, +48.8% impact), Cowley Road north (+35.1% difference, +33.3% impact) and Cowley Road east (+25.7% difference, +23.9% impact). A local factor that could have contributed to

this increase in cycling is the opening of the Quickways on Warneford Lane/Morrell Avenue, Cowley Road (both on 11/08/2022) and Iffley Road (on 20/10/2022). The difference in impact between these roads could be attributed to the type of provision – more segregation is afforded on Warneford Lane so offers more protection to cyclists. See Annex G for photographs of infrastructure provision outlining these differences. Figure 6 below shows an increase in cycling after the completion of the Quickways, taking into account usual seasonal trends, particularly on Morrell Avenue. It may also be that cycling is becoming a more attractive option as cyclists can filter through traffic (see also *Journey times (driving)* analysis). Overall, across the boundary roads there has been a 22.4% increase in flows, tempered slightly to an impact of 20.6% when taking increases in cycling at control sites into account. Also, cycling counts are up after LTN implementation compared to 2019, where data is available.

Figure 6 - Cycling flows over time along boundary roads including Quickways completion times (weekly aggregated counts)



The LTN implementation date is marked in black and Quickways completion date is marked in pink.

83. Unlike for pedestrians, there is a more mixed picture for the differences between weekdays and weekends for cyclists (table 7), with some locations showing higher increases in cycling in the week and others during the weekend. This is likely due to the patterns of routes used for travel to work versus those used for leisure travel. It should also be noted that delivery cycles will be recognised by the VivaCity cameras and it is not possible to distinguish the proportion of the cycles which are for personal trips versus those being used for delivery purposes.

84. When in-bound are separated from out-bound cycle counts (tables 8 and 9), as for pedestrians, there are more in-bound than out-bound cyclists on the Iffley Road at both sensor locations. The difference is greater at the eastern location (further out). The Cowley Road again, is a more mixed picture, with the more central location showing higher out-bound counts than in-bound, whilst the more peripheral sensor shows little difference between in- and out-bound flow. There could be a whole range of factors driving this behaviour and without residential or user surveys it would be difficult to say, with any certainty, why this is happening. However, this could indicate that cyclists able to use alternative routes for their journeys may favour the Iffley Road for trips into the city and shift to using the Cowley Road, or other routes such as St Clement's or off-road routes, for those out-bound single or linked trips away from the city. Alternatively, it may be (partly) due to the timing of journeys during lighter/darker times, when sensors are more/less sensitive to picking up movements.
85. Morrell Avenue sees a greater overall number of cyclists in the in-bound direction than out-bound, perhaps due to the steep incline along this route, which is down-hill in the in-bound direction. However, it has seen a slightly higher increase in counts for the out- than in-bound direction. As for pedestrians, the patterns of varying in- and out- bound counts existed prior to the LTNs. Therefore, it is not only the LTNs which are affecting the difference between flows towards or away from the city, but something longer standing which influences choice of route or timing of journeys. Since, however, the increases are generally higher in the out-bound direction across all locations, this does indicate a recent disparate influence on flows.
86. Looking at the more detailed, granular analysis of the data (see Annex D and explanation of the approach taken in the section on *Granularity*), Cowley Road north experiences the greatest level of change (+35%) in the PM-peak period, in the out-bound direction, whilst other periods remain relatively consistent with pre-implementation levels. Iffley Road north also shows the greatest change in the PM-peak in the out-bound direction (+23%), but also experiences reasonable increases in the opposite direction in the AM-peak and 'day' period between peaks (+16% AM-peak; +12% day).

Cars

Table 10 - Car VivaCity analysis for boundary roads, In + Out, Weekday + Weekend

Road	Car, In + Out						
	Weekday + Weekend					Weekday	Weekend
	2019	before	after	diff.	impact	diff.	diff.
Iffley Road north	8,818	7,764	9,835	+26.7%	+33.6%	+27.1%	+24.8%
Iffley Road east	15,750	16,016	13,377	-16.5%	-9.6%	-15.6%	-15.2%
Cowley Road north	5,787	5,361	8,411	+56.9%	+63.8%	+57.5%	+51.7%
Cowley Road east	12,648	10,561	8,548	-19.1%	-12.1%	-20.7%	-11.8%
Morrell Avenue	**	3,148	3,425	+8.8%	+15.7%	+7.0%	+12.1%
Total		42,850	43,596	+1.7%	+8.7%		

Table 11 - Car VivaCity analysis for boundary roads, In, Weekday + Weekend

Road	Car, In						
	Weekday + Weekend					Weekday	Weekend
	2019	before	after	diff.	impact	diff.	diff.
Iffley Road north	4,610	3,980	4,981	+25.2%	+33.9%	+26.0%	+24.2%
Iffley Road east	7,832	8,052	6,971	-13.4%	-4.7%	-12.9%	-10.8%
Cowley Road north	2,996	2,721	4,089	+50.3%	+59.0%	+52.9%	+50.8%
Cowley Road east	6,436	5,346	4,351	-18.6%	-13.8%	-19.8%	-13.2%
Morrell Avenue	**	1,449	1,653	+14.1%	+18.8%	+12.7%	+19.2%
St Clement's proxy	**	6,230	5,216	-16.3%	-11.5%	-16.8%	***

Table 12 - Car VivaCity analysis for boundary roads, Out, Weekday + Weekend

Road	Car, Out						
	Weekday + Weekend					Weekday	Weekend
	2019	before	after	diff.	impact	diff.	diff.
Iffley Road north	4,171	3,790	4,834	+27.5%	+32.3%	+30.1%	+25.2%
Iffley Road east	7,374	7,882	6,387	-19.0%	-15.3%	-20.6%	-19.6%
Cowley Road north	2,769	2,655	4,308	+62.3%	+67.0%	+62.0%	+53.4%
Cowley Road east	6,211	5,188	4,170	-19.6%	-10.9%	-21.7%	-10.5%
Morrell Avenue	**	1,688	1,791	+6.1%	+14.8%	+3.7%	+6.2%

87. From table 10 there has been a significant increase in car traffic flows on Iffley Road north and Cowley Road north, closer to city centre (+26.7% and +56.9%), which is similarly reflected in the impact (+33.6%, +63.8%). Away from the city centre, there has been a (less pronounced) decrease in flows along Iffley Road east and Cowley Road east (-16.5% and -19.1%), moderated in the impact figures (-9.6%, -12.1%). Morrell Avenue shows a small increase in flows and impact (+8.8%, +15.7%). The lack of option to use Divinity Road will likely have affected use of Morrell Avenue for those based in the vicinity travelling by car. In total, car journeys along boundary roads have increased by 1.7% in volume, with an 8.7% impact when taking control site decreases into account. Overall, except for Morrell Avenue, weekend flows are slightly less pronounced than weekdays.

88. Interestingly, there is a distinct difference in pre-existing (prior to the implementation of the east Oxford LTNs) volumes on Iffley Road and Cowley Road between the more central and peripheral locations, respectively – lower volumes near the city centre and higher at the outer sensors. These same sets of sensors also generally see an increase in traffic post LTN implementation where the volume was lower, and a decrease in traffic where the volume was higher. The analysis of in-LTN car movements (see following section) indicates that prior to LTNs going in place, a large proportion of traffic would have diverted off these two roads between the sensor locations; now that movements are constrained, it is no longer possible to divert and so a flattening (consistent level of traffic) of the overall car volume along each road can be seen. Analysis of the movements on Divinity Road shows an average reduction of around 6,000 daily car movements (see table 25 in the *in-LTN Roads* analysis section), which previously would have used this as a through-route.

89. The reduction in traffic at the outer sensors could point to people re-routing and/or choosing alternative transport to gain access to the city. Given the consistently higher levels of cycling along all boundary roads, there is some evidence supporting a degree of modal shift, though without full coverage of all potential routes it is not possible to say definitively that this is due to modal shift. However, once a driver reaches the inner sensor locations, they have little alternative than to continue on that road, so what would have been dispersed previously is all contained to the radial routes. The reduction in volume between Iffley Road east and Iffley Road north can be explained by some diversion along Donnington Bridge Road, whereas Cowley Road has no side road options to divert along.
90. To assess the degree to which re-routing versus modal shift or avoiding travelling may be occurring, a number of additional sensor locations were considered to determine whether car volumes might have gone up in other areas of the network in response. The locations and results are included in Annex F. Locations considered are not fully comprehensive and are based on possible re-routing options amongst locations where sensors were in place and collecting comprehensive data. Interestingly, of all the locations considered, the Banbury Road sensor (in Summertown, north Oxford) is the only one with increases in volumes of car movement post LTN implementation, with an overall 15.2% increase. This indicates that the reductions in flow identified are only being partially displaced within the city, but this does not exclude the possibility of increased use of routes not assessed, including the ring road. The reductions at The Plain sensor – which is on the Magdalen Bridge side of the roundabout – indicates slightly reduced numbers accessing the city centre from the eastern side of the city, which supports the picture of some car journeys from further out either re-routing or switching modes.
91. The volume over time has also been assessed and compared against bollard outages (periods during which a bollard has been removed - see Annex H). There is no obvious correlation between when bollards have not been in place and changes in traffic volume along the boundary roads, indicating that the majority of drivers are following the traffic restrictions of the LTNs even when bollards are not in place. Trends over time do suggest that in the locations which have experienced increases in car traffic volume, this is reducing slightly over time as the LTNs bed in. This is more apparent on the Cowley Road approaching The Plain roundabout (see figure 7 below), where the trend line is down by 12.5% over the period 20 May 2022 to 18 June 2023. Iffley Road north (see figure 8) shows a more flat, though very slightly declining trajectory overall (down 1.9% over the same period), but there is an increase post-January 2023, with particularly high figures in May 2023, so further data would be needed to assess the trend on this road more thoroughly.

Figure 7 - Car traffic post LTN-implementation at Cowley Road north

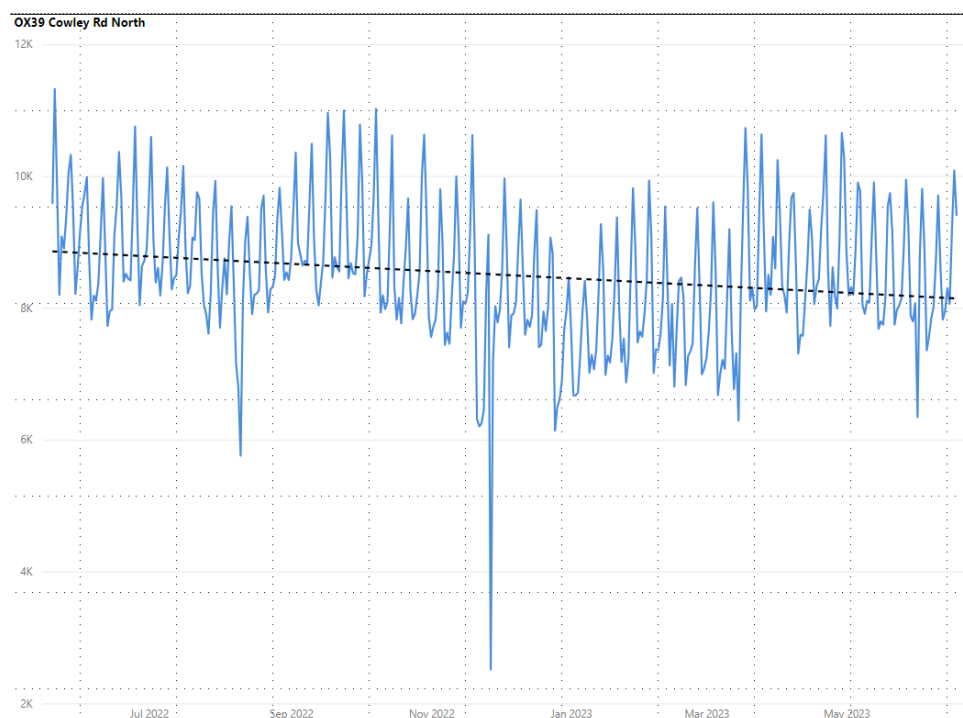
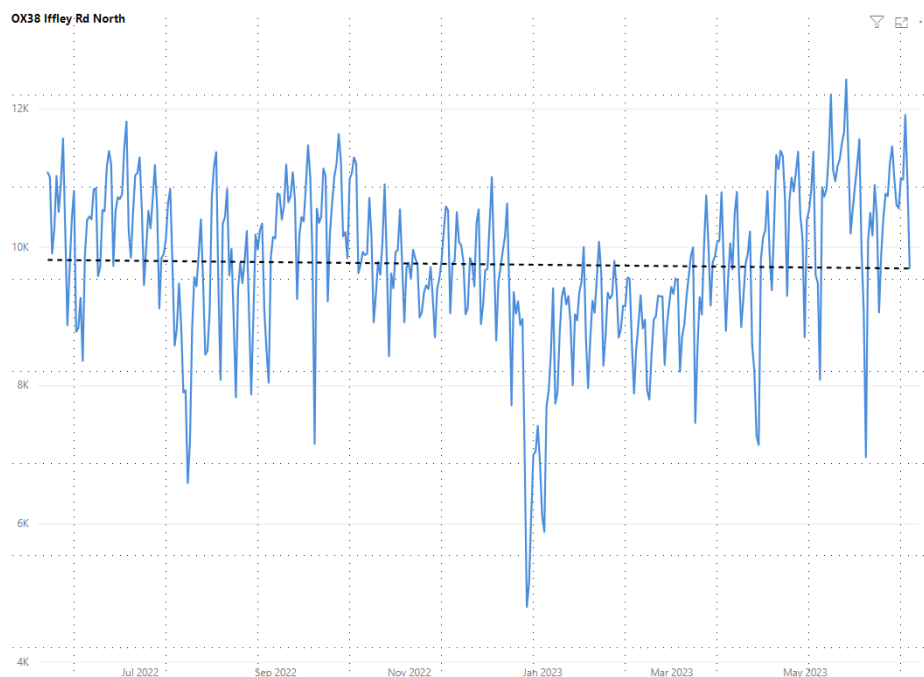


Figure 8 - Car traffic post LTN-implementation at Iffley Road north



92. When considering in-bound versus out-bound counts for cars (tables 11 and 12), there are smaller proportional differences than were apparent for cyclists and pedestrians. However, there is a greater volume of traffic using the Iffley Road at both sensor location in the in-bound than the out-bound direction. The same is true for the Cowley Road east (peripheral) location, but the opposite is true for the Cowley Road north (more central) location.

93. For in-bound counts, proxy data for St Clement's Street (described in paragraph 78), shows volume has decreased between the pre- and post- implementation period (-16.3% difference and -11.5% impact). This decrease on St Clement's Street is different from the respective increases seen along both Iffley and Cowley Road segments approaching The Plain roundabout. It may be that some drivers heading to the northern side of the city are diverting across the city using the Marston Ferry Road/The Slade/Hollow Way or ring road, rather than driving through the city centre to avoid journey time delays being experienced on St Clement's Street (refer to *Journey Time* analysis, paragraph 148). The increase in traffic levels on the Banbury Road noted above in paragraph 90 supports this theory. It is worth noting that since the data for St Clement's Street is based on proxy data, it is less accurate than direct sensor data with a higher error margin. As described in paragraph 78, comparison suggested the data was within +/-10% of direct sensor data which was available. There are also fewer car movements on the Marston Road post-implementation, particularly in the in-bound direction, supporting the reduction in the proxy St Clement's Street data and indicating that drivers from the Marston area are re-routing via Banbury Road to access the city centre area or Headley Way/The Slade/Hollow Way if heading to the south of the city. Slightly smaller volumes of car traffic on the Headington Road also supports the same picture (see Annex F).
94. Review of the more granular data (see Annex D) identified that the changes are generally fairly consistent across daily time periods, with perhaps a slightly greater change in the AM-peak for most locations than for other times of day. St Clement's Street, however, indicated that the reduction in traffic volume is most significant in the PM-peak, when it reduced by 33% in volume. Again, though, caution should be taken when interpreting the St Clement's Street results.

Motorbikes

Table 13 - Motorbike VivaCity analysis for boundary roads, In + Out, Weekday + Weekend

Road	Motorbike, In + Out						
	Weekday + Weekend					Weekday	Weekend
	2019	before	after	diff.	impact	diff.	diff.
Iffley Road north	142	278	277	-0.4%	+9.4%	+1.0%	-6.0%
Iffley Road east	248	455	462	+1.5%	+11.4%	+0.4%	+8.0%
Cowley Road north	256	438	502	+14.6%	+24.5%	+12.3%	+20.4%
Cowley Road east	238	576	671	+16.5%	+26.2%	+13.9%	+25.7%
Morrell Avenue	**	182	203	+11.5%	+21.3%	+13.8%	+30.9%
Total		1,929	2,115	+9.6%	+19.4%		

Table 14 - Motorbike VivaCity analysis for boundary roads, In, Weekday + Weekend

Road	Motorbike, In						
	Weekday + Weekend					Weekday	Weekend
	2019	before	after	diff.	impact	diff.	diff.
Iffley Road north	79	110	134	+21.8%	+26.8%	+21.7%	+14.3%
Iffley Road east	149	265	279	+5.3%	+10.2%	+4.7%	+8.3%
Cowley Road north	115	266	282	+6.0%	+11.2%	+6.6%	+12.7%
Cowley Road east	79	311	365	+17.4%	+30.0%	+15.1%	+25.4%
Morrell Avenue	**	87	92	+5.7%	+19.0%	+3.0%	+11.9%

Table 15 - Motorbike VivaCity analysis for boundary roads, Out, Weekday + Weekend

Road	Motorbike, Out						
	Weekday + Weekend					Weekday	Weekend
	2019	before	after	diff.	impact	diff.	diff.
Iffley Road north	64	160	140	-12.5%	+0.4%	-12.1%	-10.1%
Iffley Road east	91	189	181	-4.2%	+8.4%	-7.1%	+4.1%
Cowley Road north	136	167	214	+28.1%	+40.8%	+24.6%	+30.2%
Cowley Road east	157	269	307	+14.1%	+19.1%	+11.2%	+24.0%
Morrell Avenue	**	90	111	+23.3%	+28.3%	+19.6%	+35.6%

95. Table 13 shows there has been an increase in the volumes and impact in the number of motorbikes, particularly on Cowley Road north (+14.6%, +24.5%) and east (+16.5%, +26.2%) and a substantial increase across all roads compared to 2019. It is likely that these increases reflect the growth of takeaway food deliveries by motorbike, motor scooter or moped, which would explain why Cowley Road with its many restaurants and takeaways sees the greater increase, compared to Iffley Road. There is also approximately a doubling in the difference counts at the weekend, except on Iffley Road north, where the weekend volume change is negative. Morrell Avenue has also experienced a significant increase (+23.3% difference and +28.3% impact). The reason for this may be the removal of parking along this route making it a more attractive option for motorcyclists, particularly as bus movements would be more predictable without their need to wait for oncoming traffic to pass.

96. When in-bound versus out-bound motorcycle counts are considered, similar to cycles, there are differences for some sensor locations but not others. There are more in-bound than out-bound motorcyclists on the Iffley Road at the eastern location (further out), but not a significant difference at the northern sensor point. The Cowley Road has higher in-bound counts at both sensor locations, unlike other modes of transport. It is worth noting that the overall number of motorcycles is lower than other modes of transport analysed in this way, so smaller changes seem more significant.

LGVs

Table 16 - LGV VivaCity analysis for boundary roads, In + Out, Weekday + Weekend

Road	LGV, In + Out						
	Weekday + Weekend					Weekday	Weekend
	2019	before	after	diff.	impact	diff.	diff.
Iffley Road north	1,154	1,077	1,359	+26.2%	+26.1%	+31.6%	+35.4%
Iffley Road east	1,829	1,762	1,540	-12.6%	-12.7%	-11.0%	-5.2%
Cowley Road north	717	730	1,121	+53.6%	+54.0%	+54.2%	+49.3%
Cowley Road east	1,314	1,014	774	-23.7%	-24.0%	-10.2%	-1.3%
Morrell Avenue	**	347	424	+22.2%	+77.0%	+24.9%	+21.7%
Total		4,930	5,218	+5.8%	+5.7%		

97. LGV counts are broadly consistent with cars, showing the same overall trends, apart from a significantly greater increase in impact (+77%) than was seen for cars (+15.7%) on Morrell Avenue. Overall numbers are, however, relatively low at this sensor site for LGVs in comparison to other boundary roads, so relatively small changes show greater percentage increases.

HGVs

Table 17 - HGV VivaCity analysis for boundary roads, In + Out, Weekday + Weekend

Road	HGV, In + Out						
	Weekday + Weekend					Weekday	Weekend
	2019	before	after	diff.	impact	diff.	diff.
Iffley Road north	47	35	35	0.0%	+8.3%	0.0%	-12.5%
Iffley Road east	70	46	53	+15.2%	+24.4%	+11.3%	+11.3%
Cowley Road north	46	55	40	-27.3%	-18.3%	-23.3%	-23.3%
Cowley Road east	46	45	43	-4.4%	+5.6%	+2.1%	+2.1%
Morrell Avenue	**	11	10	-9.1%	-8.4%	-14.3%	-33.3%
Total		192	181	-5.7%	3.3%		

98. The count numbers for HGVs are too low for firm conclusions to be drawn. However, it is interesting to note that in all locations, the counts are lower post-LTN implementation than in 2019.

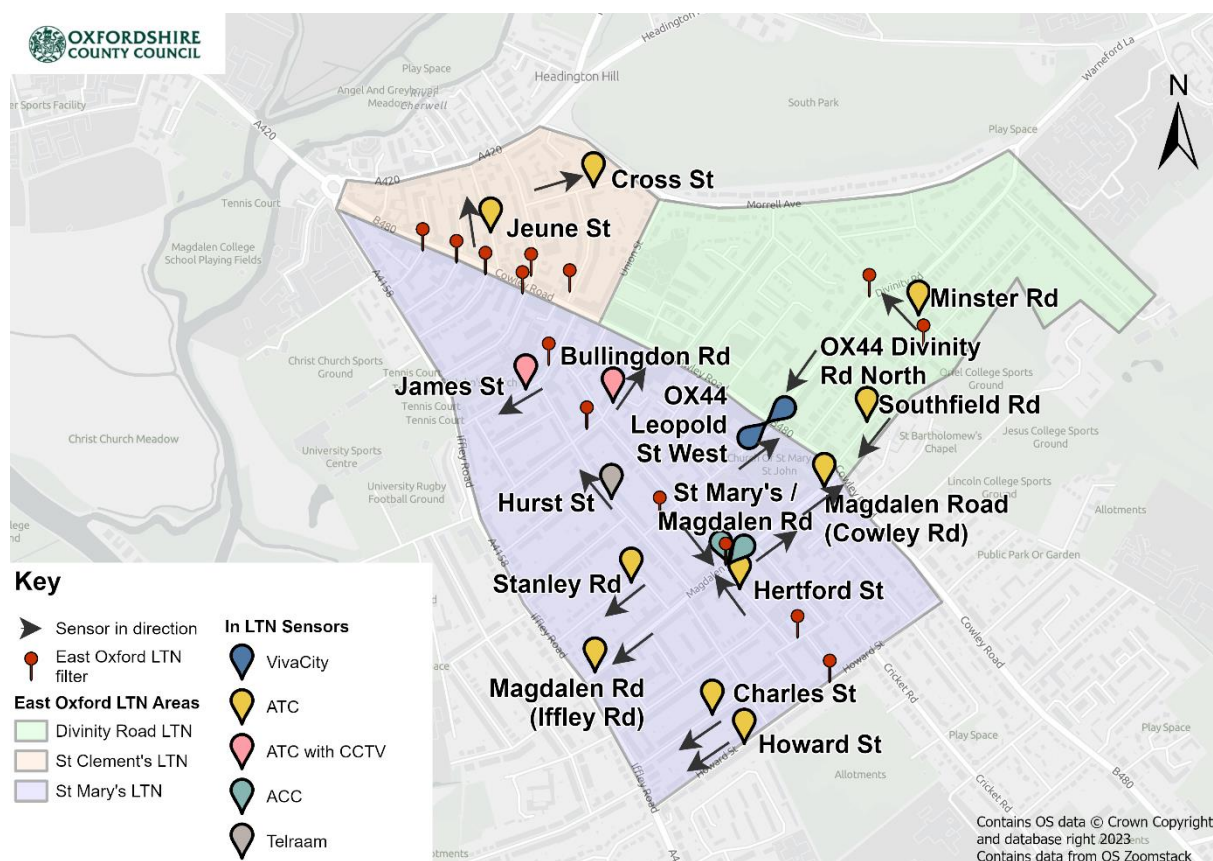
In-LTN Roads

Sensor Locations

99. Only two VivaCity sensor count lines were available to monitor the In-LTN area. They can be seen in figure 9 and are listed below:

- OX44 Leopold Street west
- OX44 Divinity Road north

Figure 9 - Location of In-LTN sensors and filters in east Oxford LTNs



100. Control road VivaCity sensors for the In-LTN area can be seen in Annex C and have the following locations:

- OX27 Minns Business Park
- OX13 B4494 south¹⁷

101. Only two VivaCity count lines were available to monitor traffic modes in the In-LTN areas. Previously, as outlined in the published Methodology statement noted in the *Introduction*, Divinity Road was made up of 3 separate count lines, covering pavements and roadway separately, but, for simplicity, these were combined to a single count line (covering exactly the same area). For Divinity Road north, data from 2019 was not available, as the count line was not set up

¹⁷ Two locations (Ashurst Way and Moreton Road) required to be similarly excluded because of data issues.

until after this period. For Leopold Street west the sensor was upgraded in February 2023. Data was re-calibrated to allow comparison across the baseline and intervention period but was not applied to 2019 data. Whilst larger-vehicle volumes are relatively similar between versions of the sensor, the version 2 sensors are much more sensitive to other modes such as bicycles and walkers. Comparisons therefore can only be made back to 2019 for cars, LGVs and HGVs in this location. As two locations are not sufficient to understand traffic flow patterns within the LTN area, ATC data was also analysed, using sensors located as shown on figure 9.

Pedestrians

Table 18 - Pedestrians VivaCity analysis for in-LTN roads, In + Out, Weekday + Weekend

Road	Pedestrian, In + Out, Weekday + Weekend				
	2019	before	after	diff.	impact
Divinity Road north	**	3,847	3,667	-4.7%	-6.8%
Leopold Street west	1,196	1,409	1,479	+5.0%	+2.9%
Total		5,256	5,146	-2.1%	-2.1%

** Data not available/not comparable at this location for 2019. See paragraph 101

102. Table 18 indicates minor changes in pedestrian counts, the greater being a fall in flows and impact on Divinity Road north¹⁸ (-4.7%, -6.8%). As noted in the previous section (*Boundary Road/Pedestrians*), use of e-scooters could be impacting on these reduced pedestrian figures to some degree, given growth of the scheme during the evaluation period.

Table 19 - Pedestrians ATC with CCTV analysis for in-LTN roads, In + Out, Weekday/Weekend comparison

Road	Pedestrian, In + Out				
	Weekday + Weekend				Weekday
	before	after	diff.	impact	diff.
James Steet	745	686	-8%	-3%	-5%
Bullington Road	1,038	1,706	+64%	+70%	+66%
Total	1,783	2,392	+34%	+39%	

103. The daily average pedestrian count varied between the two locations of James Street and Bullington Road. James Street experienced a decrease in flows of 8% (Table 19) and a smaller negative impact estimate of -3% (Table 19) when comparing to the control areas (which had a 5% decrease in flows). Conversely, Bullington Road saw a large increase of 64% and an impact estimate of 70% increase in pedestrians (Table 19). These roads run parallel to each other with several joining roads: the James Street camera is closer to the Iffley Road side and the Bullington Road camera to the Cowley Road side.

¹⁸ Note that the pedestrian counts before and after intervention are greater in this report than in the Snapshot report due to a data processing error which has been rectified in this report.

104. When looking at the more granular detail of the data (see Annex E), the main reduction in pedestrian movements on James Street was during the weekend, with a larger reduction in flows in the direction towards the Iffley Road (defined as in-bound to the city), which showed a 28% reduction in flows. Bullingdon Road, by contrast, shows increases across all times of day, with the most significant increase in pedestrian counts occurring in the weekday PM-peak towards Iffley Road of 78% (defined as out-bound from the city) and 74% in the opposite direction.

Table 20 - Pedestrians Telraam analysis for in-LTN roads, In + Out, Weekday/Weekend comparison

Road	Pedestrian, In + Out			
	Weekday + Weekend			Weekday
	before	after	diff.	diff.
Hurst Street	380	440	+16%	+12%

105. Pedestrian use of Hurst Street has increased in by 16%, with more of the increase occurring during weekends than weekdays, as weekdays alone saw a smaller increase of 12%. When considering all data-sources and looking at the variations in levels of pedestrian use within the LTNs, with some locations increasing and others decreasing, the pattern of change may be reflective of desire lines. The likelihood is that pedestrians will tend to walk to where there are amenities, rather than into predominantly residential streets with fewer commercial destinations. Hurst Street, for example, provides a link to several shops and eateries on Magdalen Road (see *Background* section, figure 3 map of the area indicating areas of commercial interest). The Bullingdon Road, which saw significant pedestrian increases in the ATC + CCTV data, provides convenient access from the St Mary's LTN area and the general direction of the Iffley Road, to the largest local supermarket on Cowley Road, as well as the O2 Academy (see figure 3). Both locations monitored showing increases, therefore, may fall on specific walking desire lines to access these amenities. Conversely, James Street, which saw decreases in footfall, has few local amenities on the Iffley Road side, where the counter was situated. Divinity Road and Leopold Street both saw only slight changes in footfall. Neither provide an obvious route to local amenities, but there are potential destinations which can be reached via both routes. However, more comprehensive data for all locations within the LTNs would be required to confirm this theory.

Cycles

Table 21 - Cycle VivaCity analysis for in-LTN roads, In + Out, Weekday + Weekend

Road	Cycle, In + Out, Weekday + Weekend				
	2019	before	after	diff.	impact
Divinity Road north	**	781	974	+24.7%	-3.1%
Leopold Street west	128	220	204	-7.3%	-35.2%
Total		1,001	1,178	+17.7%	-10.2%

** Data not available/not comparable at this location for 2019. See paragraph 101

106. There have been mixed impacts on cycling levels – an increase of 24.7% in flows on Divinity Road north¹⁹ and a decrease of 7.3% on Leopold Street west. However, when compared with control roads, Divinity Road north has a small decrease in impact, but there is a substantial decrease in impact on Leopold Street. Overall, there is an increase in volume of 17.7% between the two sites, but when control sites are factored in, there is a 10.2% reduction in impact.

Table 22 - Cycle ATC with CCTV analysis for in-LTN roads, In + Out, Weekday + Weekend

Road	Cycle, In + Out				
	Weekday + Weekend				Weekday
	before	after	diff.	impact	diff.
James Street	316	341	+8%	+10%	+9%
Bullington Road	384	523	+36%	+39%	+35%
Total	701	864	+23%	+26%	

107. The daily average cycle volumes increased for both James Street and Bullington Road, but as with pedestrians there was a larger increase on Bullington Road. As seen in Table 22, there was a 36% increase in flows compared to an 8% increase on James Street. The impact estimate also shows a similar finding to the difference metric; an impact estimate of 39% increase on Bullington Road compared to a 10% increase on James Street.

108. More granular analysis of the ATC + CCTV cycling data (see Annex E) identifies that the increases on James Street are experienced during weekdays, with the weekend seeing a reduction in flows of 29% towards Iffley Road and 5% towards Cowley Road. The largest % change increases in flows are during the weekday AM-peak in this location. Overall numbers of cyclists are small and small changes in absolute numbers can result in significant percentage changes. Drawing definitive conclusions for this location is therefore not possible based on the numbers in the analysis.

Table 23 - Cycle ACC analysis for in-LTN roads, In + Out, Weekday + Weekend

Road	Cycle, In + Out			
	Weekday + Weekend			Weekday
	before	after	diff.	diff.
Magdalen Road	321	548	+71%	+66%
St Mary's Road	74	62	-16%	-17%
Total	272	367	+34.9%	

109. The ACC data, similar to the VivaCity in-LTN data, shows a mixed impact on cycling levels, with Magdalen Road seeing a significant increase in flows of 71%,

¹⁹ Note that the cycle counts before and after intervention are greater in this report than in the Snapshot report due to a data processing error which has been rectified in this report.

whilst St Mary's Road has a decrease in flows of 16%. The decrease on St Mary's Road (which forms part of one of two obvious cycling routes in- or out-bound of the city centre away from main roads – the other option being Hurst Street (see paragraph 111 below)) is suggestive that cyclists are not using the LTNs as a route to avoid traffic on the boundary roads, since the overall cycling levels have consistently increased along Iffley and Cowley Roads. When considering the higher figures on the Magdalen Road, it is worth noting that there is an electric bicycle shop located on the road, from which, prospective buyers can take bikes for test rides, potentially affecting the counts along this route.

110. When considering the direction of travel (see Annex E), prior to the LTNs, most of the cycle movement was from Iffley Road towards Cowley Road (c.80% of cycle movements were in this direction). Following LTN implementation, the volumes in each direction have equalised to a degree (around 57% of counts are in the Iffley to Cowley Road direction), with the Iffley to Cowley Road direction increasing by 26%, whilst flows in the opposite direction have gone up by 270%. This could be connected with the change of status from Magdalen Road having previously been a one-way route; whilst cyclists were not required to use the route only in one direction, users may have been more inclined to follow the same direction as the vehicular traffic. Whilst the entrance to Magdalen Road from Cowley Road noted “no through route to Iffley Road *except cycles*”, the side roads previously had one-way arrows opposite them, which did not note that cycles were excluded from the one-way system, so many cyclists may have believed they were required to follow the same direction as the vehicular traffic.

Table 24 - Cycle Telraam analysis for in-LTN roads, In + Out, Weekday/Weekend comparison

Road	Two-wheeler, In + Out			
	Weekday + Weekend			Weekday
	before	after	diff.	diff.
Hurst St	784	719	-8%	-8%

111. ‘Two-wheeler’ (cycles and motorbikes, see Annex C for a description of Telraam sensors) use of Hurst Street has decreased in flow by 8%, evenly between weekdays and weekends. Whilst this data includes both motorcycles and bicycles and it is therefore not possible to draw firm conclusions on cyclist movements, the reduction at this location is in line with the reductions also seen on St Mary's Road, supporting the assertion above that cyclists are not generally choosing the LTNs as a route to and from the direction of the city centre.

Cars

Table 25 - Car VivaCity analysis for in-LTN roads, In + Out, Weekday + Weekend

Road	Car, In + Out, Weekday + Weekend				
	2019	before	after	diff.	impact
Divinity Road north	**	7,336	1,147	-84.4%	-86.5%
Leopold Street west	1,593	1,289	923	-28.4%	-30.5%
Total		8,625	2,070	-76.0%	-78.1%

112. Overall, there are significant decreases in car volume (-75%, -78.1%), encompassing Divinity Road north²⁰ (-84.4%, -86.5%) and Leopold Street west (-28.4%, -30%). The reduction on Divinity Road north is to be expected as there is a traffic filter near the count sensor. The lesser reduction for Leopold Street west may be explained by the presence of a filter on this road some distance away; Leopold Street has always been more of an access into the area whereas Divinity Road was always more of a through route. Divinity Road was previously a major route between east Oxford and Headington, including for access to the hospitals and Oxford Brookes University main campus. Car traffic on Leopold Street reduced by more than 40% since 2019, having already reduced by about 20% between 2019 and 2021/2022.

113. It is worth noting that Divinity Road is the location with the most days of bollard outages of all LTN locations, and yet still has very high car movement reductions. The data does, however, show a marked and sharp decrease in car movements on Divinity Road post wooden bollard installation on 13/03/2023, having previously been showing an upwards trend in usage to that point (see Annex H). There is therefore reasonable evidence that bollard outages have increased traffic along Divinity Road.

Table 26 - Car ATC analysis for in-LTN roads, In + Out, Weekday/ Weekend comparison

Road	Car, In + Out			
	Weekday + Weekend			Weekday
	before	after	diff.	diff.
Jeune Street	341	493	+44%	+46%
Cross Street	1,887	750	-60%	-59%
Minster Road	174	174	0%	-4%
Southfield Road	1,505	267	-82%	-83%
Stanley Road	240	214	-11%	-13%
Magdalen Road (Iffley Road)	2,063	487	-76%	-77%
Magdalen Road (Cowley Road)	2,326	1,106	-52%	-54%
Hertford Street	370	229	-38%	-40%
Charles Street	619	506	-18%	-25%
Howard Street	2,189	344	-84%	-85%
Average	1,171	457	-61%	-62%
Total	12,885	5,025	-61%	

114. The daily average car count saw a general decrease across most ATCs with a total average decrease in volumes of 61%. The five ATCs recording the highest car flows in 2021, both ends of Magdalen Road, Howard Street, Cross Street, and Southfield Road, all saw significant decreases in volumes of at least 50%. The ATCs with lower before counts mostly experienced smaller decreases in

²⁰ Note that the car counts before and after intervention are greater in this report than in the Snapshot report due to a data processing error which has been rectified in this report.

flows, although Minster Road saw no change, having previously already experienced very low traffic volumes, and Jeune Street had an increase in volume of 44%.

115. Jeune Street is one-way from Cowley Road to St Clement's Street and this road does not currently include a traffic filter. An additional proposed filter at this location to address the increased traffic on this route was consulted on in June, and a decision on its implementation will be made in October 2023 if the LTNs are made permanent at this point. There have also been reports, anecdotally, that traffic has been using this route in the wrong direction, which the ATC will not have recorded – as such, the real (bi-directional) increase may be higher than that recorded here. When looking at the more granular detail within the data (see tables in Annex E), the greatest increase on Jeune Street was during the weekday AM-peak period, where the increase in volume was 80%. Weekday PM-peak also experienced a 63% increase in volume.
116. Prior to the LTNs being installed, Magdalen Road was one-way between the Iffley Road and the junction with Ridgefield Road, with just the small section between Ridgefield Road and Cowley Road being two-way. Following LTN installation, the segments on either side of filter are now both two-way to facilitate access and egress. Counts for the baseline period were therefore in one direction only, whilst implementation period counts were for both directions.
117. More granular analysis of the directions of flow show that, whilst most locations experienced a decrease in overall car volumes, in many locations there is a small increase of volume in one direction, which is counterbalanced by a greater decrease in the opposite direction. This is particularly true for Charles Street, Hertford Street and the Cowley Road side of Magdalen Road. Each of these locations show increased volumes in the direction towards the LTNs (classed as out-bound from the city), which is counterbalanced by greater reductions away from the LTNs (in-bound to the city). There is generally not a clear pattern of when the greatest changes are across the roads, with some seeing more significant changes during the AM-peak and others during the PM-peak. Others still experienced very consistent changes across all times of day, such as Southfield Road, which had reductions in volumes of between 77% and 90% in both directions across all times periods.
118. None of the bollards located on the roads included in the ATC surveys were out at the time of the 2022 survey. However, there were some locations missing during the period of surveying, which may have skewed some of the results. For example, Bullingdon Road bollard was missing during part of the survey period. This may have affected the traffic flows elsewhere in the St Mary's LTN area accordingly.

Table 27 – Car/LGV ATC with CCTV analysis for in-LTN roads, In + Out, Weekday/ Weekend comparison

Road	Car/LGV, In + Out				
	Weekday + Weekend				Weekday
	before	after	diff.	impact	diff.

James Street	1,519	343	-77%	-67%	-78%
Bullington Road	648	401	-38%	-27%	-42%
Total	2,167	744	-66%	-55%	

119. The decrease in cars and LGVs followed a similar overall trend to the data recorded at the 10 ATCs. Across both James Street and Bullington Road (as seen in table 27) there was an average decrease in difference of 66%, as well as an impact estimate decrease of 55% when compared to the control area locations (which experienced a smaller decrease of 11% as seen in table 27). However, when looking at the roads individually, there was a significantly higher impact estimate decrease on James Street (-67%) when compared to the 27% decrease on Bullington Road (as seen in table 27).

120. In reviewing the more detailed breakdown (see Annex E), for both James Street and Bullington Road, the counts for the 'in' direction, which denotes the direction towards the radial (boundary) routes and away from the LTN area, are generally negligible, with 13 being the highest count in this direction for a given time period across both roads. On James Street this is a generally sizable reduction, whilst on Bullington Road it is small absolute increases but because numbers are low, the percentage changes are very large. In the 'out' direction away from the city and into the LTNs, Bullington Road has experienced a rough halving of vehicle numbers across most time periods, whilst James Street has seen much greater decreases in difference of 81 to 85%.

121. Neither of the bollards on the relevant streets were missing during the data collection for the ATC element of the ATC plus CCTV survey. However, the Howard Street bollard was not in place during the survey period, so this may have affected movements during the period of the survey.

Table 28 - Car Telraam analysis for in-LTN roads, In + Out, Weekday/ Weekend comparison

Road	Car, In + Out			
	Weekday + Weekend			Weekday
	before	after	diff.	diff.
Hurst Street	493	270	-45%	-45%

122. In line with other in-LTN locations, car usage has dropped significantly, with an even 45% reduction in difference across weekdays and weekends on Hurst Street. There is little variation in the pattern of the change by time of day or week.

123. Only the Marston Street bollard was out during the period of analysis for Hurst Street. This location is unlikely to have affected flows on Hurst Street, as the two are not connected, but may have caused some small changes in vehicle flows in the period of analysis.

Motorbikes

Table 29 - Motorbike VivaCity analysis for in-LTN roads, In + Out, Weekday + Weekend

Road	Motorbike, In + Out, Weekday + Weekend				
	2019	before	after	diff.	impact
Divinity Road north	**	200	192	-4.0%	-24.7%
Leopold Street west	27	37	35	-5.4%	-26.3%
Total		237	227	-4.2%	-25.1%

124. Motorbike counts have decreased very slightly, but the change is not statistically significant. The impact is more pronounced when compared to the set of control roads, however, as motorcycle use has generally increased. This slight reduction for the two count locations is unexpected. However, the ATC counts show increases where data is available (see table 30).

Table 30 - Motorbike ATC analysis for in-LTN roads, In + Out, Weekday/Weekend comparison

Road	Motorcycle, In + Out			
	Weekday + Weekend			Weekday
	before	after	diff.	diff.
Jeune Street	48	63	+32%	+31%
Cross Street	63	89	+42%	+56%
Minster Road	13	16	+24%	+25%
Southfield Road	89	136	+54%	+57%
Stanley Road	10	13	+32%	+25%
Magdalen Road (Iffley Road)	*	*	*	*
Magdalen Road (Cowley Road)	279	351	+26%	+28%
Hertford Street	*	*	*	*
Charles Street	21	30	+42%	+31%
Howard Street	*	*	*	*
Average	75	100	+34%	+36%
Total	596	798	+34%	

*Some motorcycle counts excluded with one of the surveys showing strong anomalous counts in these locations

125. The daily average motorcycle counts generally showed an increase in volumes between 24% and 54% across all locations, and an average increase of 34%. The traffic restrictions do not physically prevent motorcyclists travelling through. Therefore, it is likely that the combination of the reduced levels of car traffic within the LTNs, alongside the general increases in traffic on the boundary roads nearing The Plain on Cowley and Iffley Roads would make these routes more attractive to motorcyclists. Whilst it is worth noting that increases in delivery of food by motorcycle post COVID-19 have increased, this is unlikely to account for the changes between 2021 and 2022, since the majority of increase in delivery services occurred prior to 2022. Some sources suggest that the market share of delivery services actually decreased in 2022 compared to 2021, as consumers favoured click and collect options to save on delivery costs^{xix}.

LGVs

Table 31 - LGV VivaCity analysis for in-LTN roads, In + Out, Weekday + Weekend

Road	LGV, In + Out, Weekday + Weekend				
	2019	before	after	diff.	impact
Divinity Road north	**	550	110	-80.0%	-77.9%
Leopold Street west	151	101	80	-20.8%	-18.3%
Total		651	190	-70.8%	-68.8%

Table 32 - LGV ATC analysis for in-LTN roads, In + Out, Weekday/Weekend comparison

Road	LGV, In + Out			
	Weekday + Weekend			Weekday
	before	after	diff.	diff.
Jeune Street	25	90	+265%	+256%
Cross Street	223	55	-75%	-75%
Minster Road	32	34	+7%	-1%
Southfield Road	95	44	-53%	-51%
Stanley Road	41	33	-19%	-23%
Magdalen Road (Iffley Road)	311	199	-36%	-39%
Magdalen Road (Cowley Road)	427	75	-83%	-83%
Hertford Street	34	33	-3%	0%
Charles Street	72	78	+8%	-2%
Howard Street	205	20	-90%	-92%
Average	146	66	-55%	-56%
Total	1,611	727	-55%	

126. LGVs follow a similar trend to cars, with an overall decrease in volumes of 55%. The five ATCs recording highest flows in 2021 saw significant decreases of between 36% to 90%. Jeune Street saw a large increase of 265% from being the ATC site with the lowest flows to the second highest. The other four ATC sites measured small decreases in volume of between 8% to 19%.

Table 33 - LGV and HGV (heavy vehicles) Telraam analysis for in-LTN roads, In + Out, Weekday/Weekend comparison

Road	Heavy vehicles, In + Out			
	Weekday + Weekend			Weekday
	before	after	diff.	diff.
Hurst St	95	76	-20%	-25%

127. Heavy vehicle movements, which cover both LGV and HGV types within this dataset (table 33), have also reduced on Hurst Street, with a reduction in volume of 20%. The reduction over weekdays is slightly greater than during the weekend, showing a 25% volume decrease.

HGVs

Table 34 - HGV VivaCity analysis for in-LTN roads, In + Out, Weekday + Weekend

Road	HGV, In + Out, Weekday + Weekend			
	2019	before	after	diff.
Divinity Road north	**	4	4	0.0%
Leopold Street west	3	2	2	0.0%
Total		6	6	0.0%

128. The count numbers for HGVs have not changed between baseline and implementation periods in the locations monitored by VivaCity sensors but are too low to be statistically significant and for conclusions to be drawn.

Table 35 - HGV ATC analysis for in-LTN roads, In + Out, Weekday/Weekend comparison

Road	HGV, In + Out				
	Weekday + Weekend			Weekday	
	before	after	diff.	diff.	
Jeune Street	6	14	+139%	+184%	
Cross Street	44	15	-66%	-68%	
Minster Road	8	11	+29%	+34%	
Southfield Road	32	22	-32%	-33%	
Stanley Road	7	8	+19%	+14%	
Magdalen Road (Iffley Road)	61	50	-18%	-17%	
Magdalen Road (Cowley Road)	120	48	-60%	-64%	
Hertford Street	7	12	+87%	+75%	
Charles Street	15	18	+24%	+15%	
Howard Street	56	37	-35%	-45%	
Average	36	23	-34%	-37%	
Total	391	258	-34%		

129. HGV flows followed similar trends to car and LGV flows, with some exceptions (table 35). The five ATCs with highest 2021 counts saw significant decreases of between 18% to 66% in volume, whilst the findings also showed an average overall decrease of 34% in volume. The other five ATCs all saw increases in HGV volumes from 19% to the highest of 139% on Jeune Street, although the volume of HGVs is much lower than other vehicles, so small absolute changes show high percentage changes.

Table 36 - HGV ATC with CCTV analysis for in-LTN roads, In + Out, Weekday/Weekend comparison

Road	HGV, In + Out				
	Weekday + Weekend				Weekday
	before	after	diff.	impact	diff.
James Street	139	54	-61%	-37%	-62%
Bullington Road	99	45	-55%	-31%	-54%
Total	237	99	-58%	-34%	

130. HGVs also followed a decreasing trend, although reductions were more similar than for cars and LGVs across the two roads. James Street and Bullingdon Road HGV flows decreased by 61% and 55% respectively, with impact estimates of -37% and -31% when taking into account the control decrease of 24%.

Traffic Volume Analysis Summary

131. Whilst it is not possible to aggregate the results from all the different data sources together into a single metric to look at overall increases or decreases, it is possible to combine the data from compatible sensors. As such, to provide a high-level indication of the overall changes across both boundary roads and in-LTN, the VivaCity data for the three major modes of transport covered above: car, cycle and pedestrian, are aggregated together (see table 37).

Table 37- Summary of VivaCity counts, boundary roads and in-LTN by mode of transport

Mode	All roads, In + Out, Weekday + Weekend		
	before	after	diff.
Pedestrian	22,024	21,688	-1.5%
Cycle	9,478	11,551	+21.9%
Car*	51,475	45,666	-11.3%

**Note that proxy data for St. Clement's Street is not included within this summary*

132. It should be stressed that this metric is only an indication, as not all locations are covered. As outlined above, some of the more significant changes for some modes of transport were experienced in locations with non-compatible data sources, such as Bullingdon Road and Magdalen Road, and there are of course also locations where no data is available. The overall changes are therefore likely to be different from those outlined above. However, it can provide an indication of the likely overall impact, which is generally positive. Cycling has seen an overall increase of 21.9% across the VivaCity sensor locations, whilst car use has decreased by 11.3%. Overall pedestrian change is the only small negative, with a slight decrease of 1.5%, though given the locations which experienced more significant increases in pedestrian movements are not included here, the likelihood is that overall change is more towards 0%.

133. The overall figures outlined in table 37 suggest that there is a moderate level of vehicular traffic evaporation; noting that the locations not covered within this summary table include several within the LTNs which have generally experienced decreases in traffic levels, the evaporation may be more significant in reality. Without a network-wide evaluation, however, it is not possible to assess to what degree it is caused by the combination of modal shift, re-routing or total avoidance of travel.

134. Figure 10 provides an overview of the car changes across the boundary roads and in-LTN area for all data sources covered in the previous sections. And figure 11 provides an overview of the cycle changes across the boundary roads and in-LTN area for all data sources covered in the previous sections.

Figure 10 - Overview of car volume changes across east Oxford LTN from all available data sources

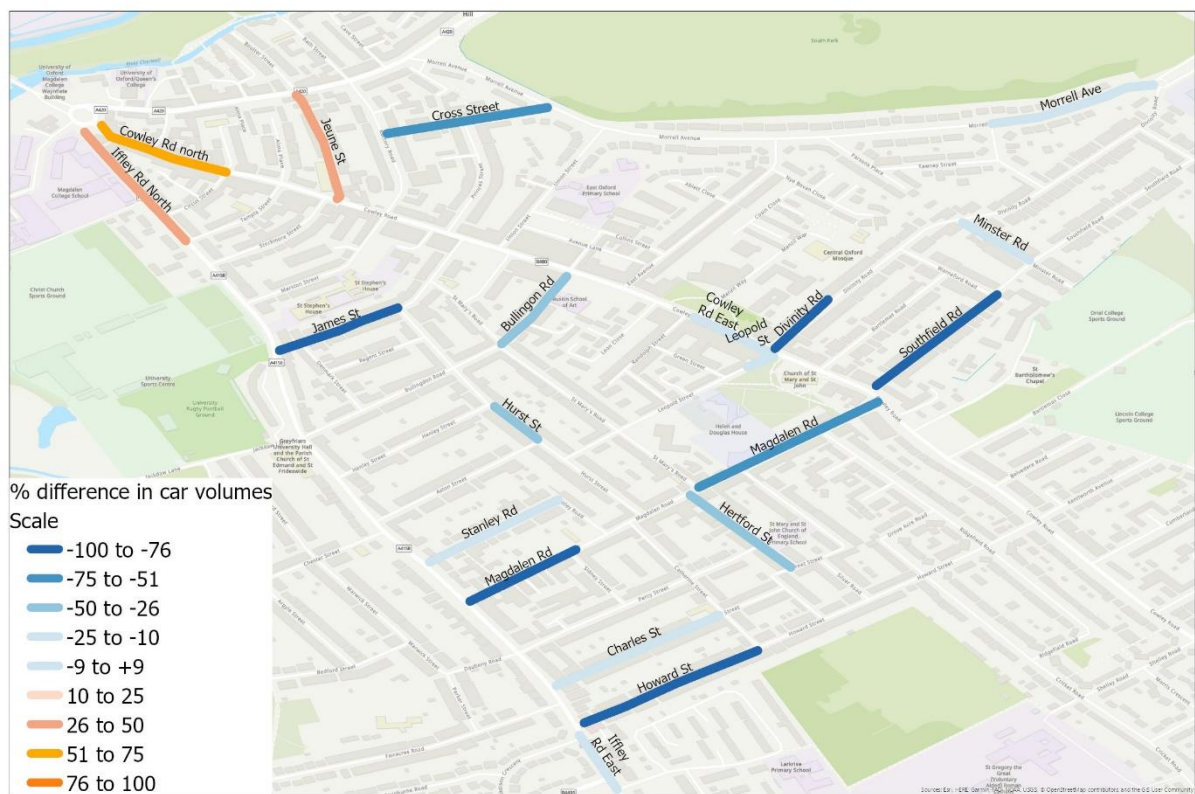
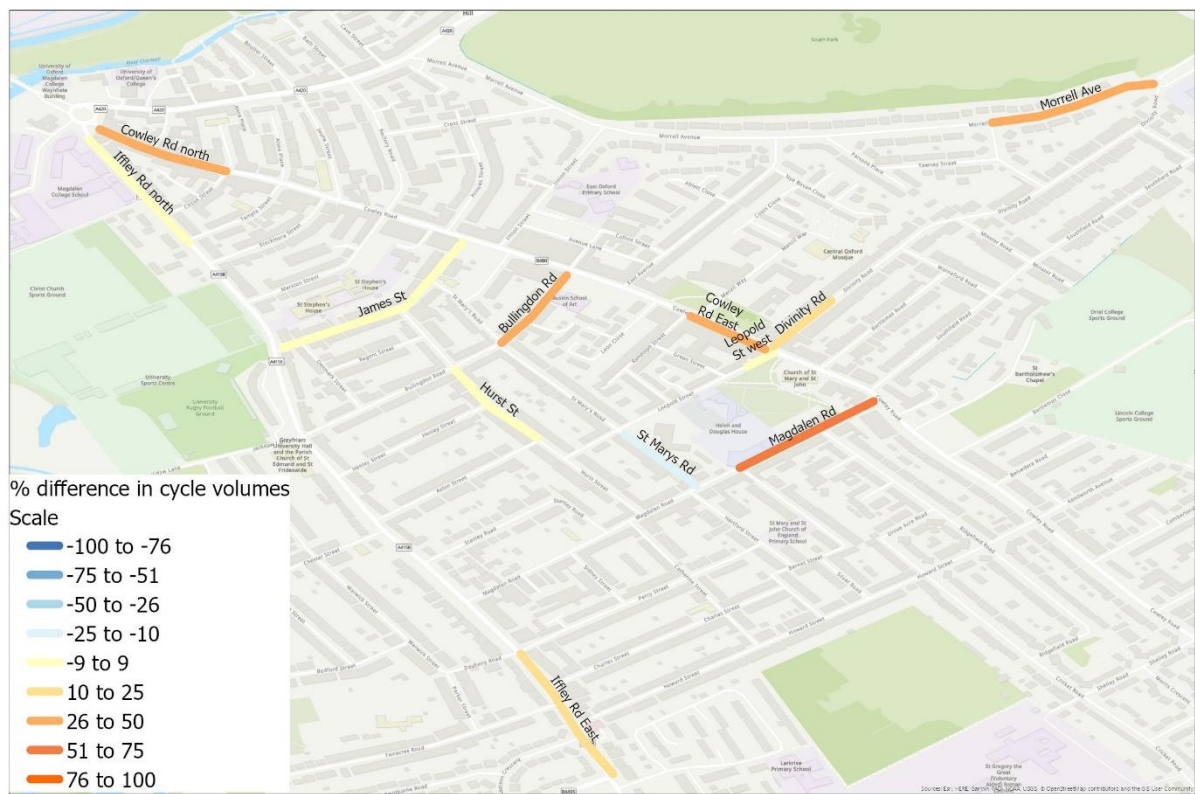


Figure 11 - Overview of cycle volume changes across east Oxford LTN from all available data sources



Active Travel impact on Health

135. Whilst it has not been possible to measure changes in health outcomes from the LTNs due to the timeline involved in this evaluation, since a minimum of three years would be needed to make any meaningful analysis of health outcomes and a ten-year timeline would really be needed for greater confidence in any outcomes at a population level, it is widely accepted that active travel is positive for health, both physical and mental. As such, health agencies generally recommend 30 minutes or more of moderate-intensity physical activity on most days of the week for good health^{xx}. These recommendations correspond to weekly energy expenditures of about 750 kcal, over basal (maintenance) levels, and are associated with around 30% reductions in mortality from any cause, cardiovascular disease and type 2 diabetes^{xxi}.
136. Active travel has also been shown to have beneficial outcomes for different age groups. As was noted in the *Local Information* section of this report, paragraph 39, childhood obesity levels in the intervention area are relatively high. Regular active travel can help to lower children's BMI. A study tracked over 8,000 school children for several years and found that those who switched to walking and cycling to school between the ages of 7 and 14 had healthier body weights ([BMI](#)) than those who continued to travel by car^{xxii}. At the other end of the age spectrum, being physically active in old age is associated with numerous positive health outcomes, such as lower incidence of cognitive impairment, depression, dementia, coronary heart disease, some types of cancers, diabetes, stroke and hypertension^{xxiii}. As noted previously, cycling levels have increased generally in the area, indicating that other populations are impacted by the various changes associated with active travel.
137. Schemes which support increased uptake of active travel can therefore be beneficial to longer term health outcomes. When considering the results of the LTNs in terms of impact on active travel, there is a mixed picture. Whilst there are increases in cycling along boundary roads, within the LTNs some areas have experienced increases and others decreases. Overall, however, the changes in cycling have been positive, with around a 20% increase (based on aggregating data across compatible sensors). Whilst the LTNs do seem to have effected change, due to other interventions (e.g., Quickways) implemented in the area at the same time, it is difficult to say which intervention is responsible for the positive increases in cycling, and to what degree.
138. For pedestrians, the picture is less positive. Whilst some locations have seen increases – notably Bullingdon Road – some have experience little or no change and others have seen slight reductions in footfall. There are some possible indications that where there are potential trip attractors nearby, footfall has gone up within the LTNs and in some boundary road locations, but it is not clear cut. In total though, when aggregating the data across compatible sensors, pedestrian use has experienced little to no change. It is worth noting that walking has increased at control sites both for the boundary roads and in-LTN locations, indicating that comparatively pedestrian uptake has likely fallen slightly.

139. Overall, therefore, it is reasonable to conclude that there should be some positive impacts on health from the changes in active travel brought about by the LTNs, but the extent is likely to be only moderate based on the evidence available.
140. The above does not, however, take into account the fact that behaviour change can take a significant amount of time to occur. There is some indication of the increases in cycling continuing over time – the uptake in cycling is consistently higher in percentage difference in the evaluation undertaken for the boundary roads in this report than it was in the previous snapshot evaluation, which took a shorter period post-intervention than the current analysis. However, this should be taken in the context of the additional data falling after the Botley Road closure, which will have also impacted on choice of transport. As such, the impact estimate should be used in this context (bringing in comparison with control sites), which indicates that further increases in cycling have been achieved in some, but not all, locations measured.
141. Changes in travel behaviour, whilst supported by improvements to infrastructure, have a greater impact at points of change within a person's life – for example, a change in job, home, education, caring, or period of major transport disruption^{xxiv}. The LTNs accompanied by the Quickways can be argued to fulfil the disruption element for some types of journey and the improved infrastructure, thus providing the ingredients required to support modal shift. However, studies suggest that a more comprehensive approach to behavioural change is needed – to achieve modal shift to active travel, interventions are needed at multiple levels: society, city, neighbourhood and individual.^{xxv} As wider interventions are put in place across these different levels, they should interact together to enable greater uptake of active travel schemes; as such, and as the population experiences further life changes over time, further increases may be seen over time.

Journey times (driving)

Analysis approach

142. Evaluation of journey times was undertaken for selected boundary road segments in east Oxford between 01 January 2022 to 19 May 2022 (baseline pre-LTN) and 01 January 2023 to 19 May 2023 (post-LTN intervention period). St Clement's Street and Morrell Avenue had shorter periods for comparison owing to data availability of earliest google API query: 20 April 2022 to 19 May 2022 (baseline pre-LTN) and 20 April 2023 to 19 May 2023 (post-LTN intervention period). Please note that during this time – from 11 April 2023 – the Botley Road was closed to traffic (related to the redevelopment of Oxford railway station and replacement of the rail bridge over the Botley Road). The following weekday daily time-periods were used to query Google Maps API to estimate the duration for each road segment in both directions:
- AM-peak (7:45am)
 - Afternoon-peak (3pm)
 - PM-peak (4:45pm)
 - Evening off-peak (7:45pm).
143. Difference is shown as a percentage based on the comparative evaluation periods as stated. Where speed is referenced, this is an indicative metric based on the median journey time and distance of the road segment and should not be used as an indication of speeding.
144. Control sites were not included in the evaluation as an increase/decrease in journey times in one location would not be expected to be comparable with journey times at another location. This is because of the complexity of factors (some examples below) that influence journey times which are relative to each road and their influence is variable depending on time of day as well as direction:
- The east side of the city is a major area of employment compared to the west side of the city – including three major NHS hospital sites plus additional private and smaller sites, Oxford Brookes University main campus, Oxford Business Park (south), Unipart, and the BMW Mini Plant.
 - Other attractors such as school sites with different drop-off and pick-up times.
 - The node of The Plain roundabout has a significant impact, as it acts as a bottleneck between west and east sides of the city.
 - Areas with greater/lesser numbers and types of amenities causing greater or lesser need to travel.
 - Differences in the provision of public transport, both in terms of frequencies of services and routes covered.
145. The lack of control data influenced the time periods used for pre- and post-implementation periods, choosing equivalent periods to minimise background variation caused by seasonality and data from after the beginning of 2022 to minimise influence from the aftermath of the COVID-19 pandemic. However, it is not possible to assign all changes in journey times to the implementation of the

LTNs – other changes (both local and global) between the baseline and intervention periods will also have impacted on the journey times.

146. To estimate duration, Google Maps combines its database of historical traffic patterns for roads over time with live traffic conditions, using machine learning to then generate predictions of journey times based on both sets of data. The data outputs from the Google API can be seen in the following maps with a full breakdown of all the selected roads in Annex I.

Towards The Plain

Journey time analysis

147. Table 38 below is to be used to interpret the map outputs for the boundary roads segments in the direction towards The Plain roundabout (as seen in figure 12). The multiplier roads (direction east to west) are also included to understand the estimated cumulative impact of both Cowley and east Oxford LTNs.

Table 38 - Road segments used in journey time analysis

map_id	Boundary road segments (towards The Plain)	
EO.1r	St Clement's Str	Top of Morrell Av to The Plain Roundabout
EO.2r	Morrell Av	Roundabout Warneford L up to St Clement's Str
4	Cowley Rd	Magdalen Rd to The Plain
6	Cowley/Oxford Rd	Hollow Way to Magdalen Rd
8	Garsington Rd (B480)	Eastern Bypass to Hollow Way
12	Iffley Rd	Donnington Bridge Rd to The Plain
14	Iffley/Henley Av	Church Cowley Rd to Donnington Bridge Rd
16	Henley Av/Rose Hill/Oxford Rd	Eastern Bypass to Church Cowley Rd
Multiplier roads (east to west)		
18	Between Towns Rd	Cowley Rd to Iffley Rd
20	Hollow Way	Horspath Driftway to Cowley Rd
22	Donnington Bridge Rd	Iffley Rd to Abingdon Rd

Figure 12 - Percentage difference in Journey time by time of day for each boundary road segment - towards 'The Plain roundabout' direction



148. The percentage difference in journey time across all peak times, as shown in Figure 12 for in-bound roads (towards The Plain roundabout), was significantly higher in St Clement's Street compared to the other road segments. The Afternoon-peak shows an increase of 290% (an additional 3 mins 29 secs to the pre-LTN journey time of 1 min 12 secs) and PM-peak an increase of 242% (an

additional 5 mins 34 secs to the pre LTN journey time of 2 min 18 secs). This was also reflected in a reduction in median journey speed from 12mph to 6mph at AM-peak, 12mph to 3mph at Afternoon-peak, and 6mph to 2mph at PM-peak.

149. In terms of other boundary road segments with significant increases, Iffley Road – Donnington Bridge Road to The Plain – with a 61% increase at AM-peak (an additional 2 mins 33 secs to the pre-LTN journey time of 4 min 12 secs), and Cowley Road (B480) – Magdalen Road to The Plain – with a 63% increase at PM-peak (an additional 2 mins 39 secs to the pre-LTN journey time of 4 min 11 secs). Conversely, there were moderate percentage decreases in IffleyRoad/Henley Avenue – Church Cowley Road to Donnington Bridge Road – at AM-peak (-26%, a decrease of 41 secs from the pre-LTN journey time of 2 min 36 secs), and at PM-peak (-17%, a decrease of 22 secs to the pre-LTN journey time of 2 min 13 secs). This is in line with the findings of reduced traffic volumes along this stretch of road, as outlined in the *Boundary Road/Cars* analysis section.

150. On the multiplier roads (from east to west direction), there were slight increases at AM-peak and Afternoon-peak across all multiplier road segments. The highest % increase was seen at Hollow Way – Horspath Driftway to Cowley Road – of 62% at PM-peak (an additional 2 mins 50 secs to the pre-LTN journey time of 4 min 34 secs). This was also reflected in a decrease in median journey speed from 11mph to 7mph at PM-peak.

Reliability using Planning Time Index scores

151. Planning Time index (PTI), which is typically used as a measure of reliability, represents the extra delay time that should be added to average travel time. PTI is the ratio of the 95th percentile to the free-flow travel time and shows the total time which is needed for on-time arrival in 95% of all trips. A PTI value of 2.0 for a given period suggests that travellers should spend twice as much time traveling as the free-flow travel time to reach their destination on-time 95% of the time. In this evaluation PTI was applied to the journey time data at both pre- and post-intervention evaluation periods, in order to provide a baseline indication of reliability before the LTNs were implemented. The free flow time used in the PTI calculation was the median evening journey time.

Table 39 - Planning Time Index (PTI) with reliability ranges and colour key for pre-PTI and post-PTI table values

Unreliable		>1.7
Moderately unreliable		1.31 to 1.7
Reliable		1.0 to 1.3

Table 40 - Planning Time Index for Journey time by time of day and for each boundary road segment – towards 'The Plain roundabout' direction.

Boundary road segments (towards 'The Plain roundabout')		AM-peak		
Road	Road segment direction	Pre PTI	Post PTI	PTI Diff
St Clements Str	The top of Morrell Av to The Plain roundabout	2.46	3.97	+61.3%
Morrell Av	Roundabout on Warneford L up to St Clements Str	1.32	1.64	+24.5%
Cowley Rd	Magdalen Rd to The Plain	1.73	2.32	+34.1%
Cowley/Oxford Rd	Hollow Way to Magdalen Rd	1.98	2.10	+5.8%
Garsington Rd (B480)	Eastern Bypass to Hollow Way	3.91	3.69	-5.7%
Iffley Rd	Donnington Bridge Rd to The Plain	3.28	4.26	+30.1%
Iffley/Henley Av	Church Cowley Road to Donnington Bridge Rd	4.57	1.82	-60.3%
Henley Av/Rose Hill/Oxford Rd	Eastern Bypass to Church Cowley Rd	2.00	2.74	+37.2%

Boundary road segments (towards 'The Plain roundabout')		Afternoon-peak		
Road	Road segment direction	Pre PTI	Post PTI	PTI Diff
St Clements Str	The top of Morrell Av to The Plain roundabout	1.57	5.29	+236.3%
Morrell Av	Roundabout on Warneford L up to St Clements Str	1.15	1.44	24.3%
Cowley Rd	Magdalen Rd to The Plain	1.39	2.97	+113.7%
Cowley/Oxford Rd	Hollow Way to Magdalen Rd	1.56	1.44	-7.5%
Garsington Rd (B480)	Eastern Bypass to Hollow Way	1.58	1.73	+10.1%
Iffley Rd	Donnington Bridge Road to The Plain	1.36	1.53	+13.0%
Iffley/Henley Av	Church Cowley Road to Donnington Bridge Rd	1.84	1.51	-18.0%
Henley Av/Rose Hill/Oxford Rd	Eastern Bypass to Church Cowley Rd	1.72	3.37	+96.5%

Boundary road segments (towards 'The Plain roundabout')		PM-peak		
Road	Road segment direction	Pre PTI	Post PTI	PTI Diff
St Clements Str	The top of Morrell Av to The Plain roundabout	5.03	8.25	+64.0%
Morrell Av	Roundabout on Warneford L up to St Clements Str	1.50	3.71	+147.7%
Cowley Rd	Magdalen Rd to The Plain	1.71	3.60	+110.6%
Cowley/Oxford Rd	Hollow Way to Magdalen Rd	1.58	1.55	-2.3%
Garsington Rd (B480)	Eastern Bypass to Hollow Way	2.15	3.48	+61.8%
Iffley Rd	Donnington Bridge Road to The Plain	1.73	1.62	-6.1%
Iffley/Henley Av	Church Cowley Road to Donnington Bridge Rd	2.30	1.64	-28.7%
Henley Av/Rose Hill/Oxford Rd	Eastern Bypass to Church Cowley Rd	2.37	2.99	+26.2%

152. As seen in the tables above, when comparing the PTI scores pre- and post- for the boundary road segments, in direct contrast with the out-bound roads, there was an overall 71% decline in reliability across all times of day. The most significant AM-peak decline in reliability was seen in St Clement's Street – from the top of Morrell Avenue to The Plain roundabout - up to 3.97 times the evening off-peak journey time from 2.46. However, in terms of pre- and post- LTN reliability range, St Clement's Street's PTI remained unchanged within the 'unreliable' range (>1.7). The 'unreliable' range does, however, encompass all

PTI values over 1.7, and therefore a wide range of reliability scores, whilst other ranges are smaller and discrete. For Afternoon-peak, St Clement's Street, Cowley Road from Magdalen Road to The Plain and Eastern Bypass to Hollow Way, saw a decline from pre-LTN reliability, 'moderately unreliable' to 'unreliable'. The most significant increase in difference was seen in St Clement's Street (1.57 to 5.29) followed by Cowley Road (B480) - from Magdalen Road to The Plain (1.39 to 2.97).

153. Henley Avenue/Rose Hill/Oxford Road - Eastern Bypass to Church Cowley Road – also saw a significant increase in its PTI score (1.72 to 3.37), however, the pre-LTN reliability range was unchanged from its previous range of 'unreliable'. For PM-peak, despite an increase in the PTI scores for St Clement's Street, Cowley and Garsington Road, the pre-LTN reliability range was unchanged for those road segments from its previous range of 'unreliable'. The most significant change in reliability was seen in Morrell Avenue (roundabout on Warneford Lane up to St Clement's Street), where the PTI reliability range declined from 'moderately unreliable' to 'unreliable' (1.5 to 3.71).

154. In terms of road segments that showed an improvement in reliability, Iffley/Henley Avenue – Church Cowley Road to Donnington Bridge Road – showed a positive change across all time periods, in line with the reduced vehicle movements along this segment. The highest difference in PTI was seen at AM-peak (4.57 to 1.82), whereas the Afternoon-peak saw an improved change in PTI reliability range; from 'unreliable' to 'moderately unreliable' (1.84 to 1.51).

Table 41 - Planning Time Index for Journey time by time of day and for each multiplier boundary road segment – direction (east to west)

Boundary Road Segments (east to west)		AM-peak		
Road	Road Segment direction	Pre PTI	Post PTI	PTI Diff
Between Towns Rd	Cowley Rd to Iffley Rd	1.91	3.26	+70.5%
Hollow Way	Horspath Driftway to Cowley Rd	3.11	3.26	+4.7%
Donnington Bridge Rd	Iffley Rd to Abingdon Rd	2.05	2.80	+36.3%

Boundary Road Segments (east to west)		Afternoon-peak		
Road	Road Segment direction	Pre PTI	Post PTI	PTI Diff
Between Towns Rd	Cowley Rd to Iffley Rd	1.57	1.85	+18.1%
Hollow Way	Horspath Driftway to Cowley Rd	2.05	2.53	+23.5%
Donnington Bridge Rd	Iffley Rd to Abingdon Rd	1.55	1.36	-12.1%

Boundary Road Segments (east to west)		PM-peak		
Road	Road Segment direction	Pre PTI	Post PTI	PTI Diff
Between Towns Rd	Cowley Rd to Iffley Rd	2.57	3.42	+33.3%
Hollow Way	Horspath Driftway to Cowley Rd	3.65	4.26	+16.7%
Donnington Bridge Rd	Iffley Rd to Abingdon Rd	4.95	4.33	-12.4%

155. On the multiplier roads (running from east to west direction), apart from Between Towns Road – Cowley Road to Iffley Road – which saw a decline in reliability range (1.57 to 1.85), most roads were unchanged in terms of the pre-LTN PTI reliability range. The largest negative difference in PTI score was seen in Between Towns Road – Cowley Road to Iffley Road – (1.91 to 3.26) at AM-peak. There were also small improvements seen in Donnington Bridge Road - Iffley Road to Abingdon Road – at both Afternoon-peak (1.55 to 1.36) and PM-peak (4.95 to 4.33).
156. From the *Journey time analysis*, road segments with highest increase in journey time were located closest to and towards The Plain roundabout. The increases in journey times approaching The Plain on the Cowley and Iffley Roads may be expected, given the previously reported increased traffic volumes along these segments of road. However, the proxy data for St Clement's Street indicated a reduced in-bound volume at this location, which initially seems counter-intuitive, since this is the location experiencing the most significant journey time delays. Note that the effect of higher traffic volumes on Cowley and Iffley Roads has the impact of affecting the flows of traffic around The Plain roundabout. One aspect of note is that the turn from Cowley Road into Iffley Road is banned, and drivers must drive all the way around the roundabout to access Iffley Road from Cowley Road. Users travelling down Iffley Road wishing to access Cowley Road must also now use The Plain, since it is no longer possible to drive between Cowley and Iffley Roads using the 'ladder' roads. As such, road users exiting from St Clement's Street must give way to all other traffic from other arms of the roundabout, meaning few gaps to exit from St Clement's Street.
157. *

Away from The Plain

Journey time analysis

158. Table 42 below is to be used to interpret the map outputs for the boundary roads segments in the direction away from The Plain roundabout (as seen in figure 13). To understand the estimated cumulative impact of both Cowley and east Oxford LTNs, three multiplier roads (direction west to east) were also included:

Table 42 - Road segments used in journey time analysis

Map id	Boundary road segments (away from The Plain)	
EO.1	St Clement's Str	The Plain roundabout to the top of Morrell Av
EO.2	Morrell Av	St Clements Str, down to Warneford L. roundabout
3	Cowley Rd	The Plain to Magdalen Rd
5	Cowley/Oxford Rd	Magdalen Rd to Hollow Way
7	Garsington Rd (B480)	Hollow Way to Eastern Bypass
11	Iffley Rd	The Plain to Donnington Bridge Rd
13	Iffley/Henley Av	Donnington Bridge Rd to Church Cowley Rd
15	Henley Av/Rose Hill/Oxford Rd	Church Cowley Rd to Eastern Bypass
Multiplier roads (west to east)		
17	Between Towns Road	Iffley Rd to Cowley Rd
19	Hollow Way	Cowley Rd to Horspath Driftway
21	Donnington Bridge Rd	Abingdon Rd to Iffley Rd

These additional multiplier roads are included in the evaluation to help understand the combined and cumulative impact of the Cowley and east Oxford LTNs, as well as provide insight into some of the major feeder roads to the east Oxford LTN boundary roads.

Figure 13 - Percentage difference in Journey time by time of day for each boundary road segment – away from 'The Plain roundabout' direction



159. As seen in figure 13, overall, for the out-bound boundary road segments (away from The Plain roundabout), there was no significant difference in journey time. St Clement's Street had the highest median percentage increase of 34% (an additional 26 secs to the pre LTN journey time of 1 min 15 secs), which was in the Afternoon-peak period. This was also reflected in a reduction in median

journey speed from 13mph to 9mph. Conversely, Morrell Avenue – from St Clement's Street towards the roundabout at Warneford Lane – showed a consistent small percentage decrease in journey times across all selected times of day, with AM-peak (-12%) and PM-peak (-10%) displaying the highest decreases. The road segment with the highest percentage decrease was Iffley Road – from The Plain to Donnington Bridge Road – with an 18% decrease (52 secs quicker than the pre-LTN journey time of 4 mins and 44 secs) at PM-peak. The median journey speed was also found to increase at this time from 11mph to 14mph. This may be due to the freeing up of capacity further along the Iffley Road, between Donnington Bridge Road and Between Towns Road, as indicated by the reduction in traffic volumes covered previously.

160. In terms of multiplier roads (from west to east direction), there was a slight percentage increase with a minimum of 8% to a maximum of 19% across both Between Towns Road and Hollow Way across all times of day. The highest increase was seen in Hollow Way Road – from Cowley Road to Horspath Driftway – with a 19% increase in journey time at AM-peak (an additional 43 secs to the pre-LTN journey time of 3min 45sec), and a reduction in median speed from 13mph to 11mph. Donnington Bridge Road – Abingdon Road to Iffley Road – experienced the only decrease in journey time, with a 22% decrease (45 secs quicker than the pre-LTN journey time of 3 mins 27 secs) and an increase in median journey speed from 13mph to 16mph at AM-peak.

Reliability using Planning Time Index scores

Table 43 - Planning Time Index for journey time by time of day and for each boundary road segment – away from 'The Plain roundabout' direction.

Boundary road segments (away from 'The Plain roundabout')		AM-peak		
Road	Road segment/ direction	Pre PTI	Post PTI	PTI Diff
St Clements Str	The Plain roundabout to the top of Morrell Av	1.50	1.68	+12.4%
Morrell Av	St Clements Str, down to Warneford L. roundabout	1.24	1.16	-6.4%
Cowley Rd	The Plain to Magdalen Rd	1.11	1.10	-0.6%
Cowley/Oxford Rd	Magdalen Rd to Hollow Way	2.87	3.05	+6.3%
Garsington Rd (B480)	Hollow Way to Eastern Bypass	1.36	1.29	-5.4%
Iffley Rd	The Plain to Donnington Bridge Rd	3.63	1.77	-51.3%
Iffley/Henley Av	Donnington Bridge Rd to Church Cowley Rd	1.52	1.34	-11.8%
Henley Av/Rose Hill/Oxford Rd	Church Cowley Rd to Eastern Bypass	2.01	1.49	-25.6%

Boundary road segments (away from 'The Plain roundabout')		Afternoon-peak		
Road	Road segment direction	Pre PTI	Post PTI	PTI Diff
St Clements Str	The Plain roundabout to the top of Morrell Av	1.42	1.91	+34.8%
Morrell Av	St Clements Str, down to Warneford L. roundabout	1.16	1.15	-0.4%
Cowley Rd	The Plain to Magdalen Rd	1.35	1.54	+14.2%
Cowley/Oxford Rd	Magdalen Rd to Hollow Way	2.83	3.59	+27.1%
Garsington Rd (B480)	Hollow Way to Eastern Bypass	1.29	1.20	-6.8%
Iffley Rd	The Plain to Donnington Bridge Rd	1.65	1.32	-20.3%
Iffley/Henley Av	Donnington Bridge Rd to Church Cowley Rd	1.50	1.37	-9.0%

Henley Av/Rose Hill/Oxford Rd	Church Cowley Rd to Eastern Bypass	1.86	1.29	-30.8%
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Boundary road segments (away from 'The Plain roundabout')		PM-peak		
Road	Road segment direction	Pre PTI	Post PTI	PTI Diff
St Clements Str	The Plain roundabout to the top of Morrell Av	1.72	1.95	+13.5%
Morrell Av	St Clements Str, down to Warneford L. roundabout	1.23	1.22	-0.9%
Cowley Rd	The Plain to Magdalen Rd	1.61	1.56	-3.4%
Cowley/Oxford Rd	Magdalen Rd to Hollow Way	3.07	2.60	-15.2%
Garsington Rd (B480)	Hollow Way to Eastern Bypass	1.63	2.85	+75.1%
Iffley Rd	The Plain to Donnington Bridge Rd	5.35	1.75	-67.2%
Iffley/Henley Av	Donnington Bridge Rd to Church Cowley Rd	2.48	1.78	-28.1%
Henley Av/Rose Hill/Oxford Rd	Church Cowley Rd to Eastern Bypass	3.13	1.44	-54.0%

161. As seen in the tables above, when comparing the PTI scores, pre- and post-LTN implementation for the out-bound Boundary Road Segments (away from The Plain roundabout), there was an overall 10% improvement across all times of day. The most significant AM-peak improvements were seen on Iffley Road – The Plain to Donnington Bridge Road – from 3.63 down to 1.77 times the Evening off-peak journey time. At Afternoon-peak, the most significant improvement was seen in Henley Avenue/ Rose Hill/Oxford Rd - Church Cowley Road to Eastern Bypass, where the PTI moved into the 'reliable' range of 1 to 1.3 (1.29). For PM-peak, there were improvements across all sections of Iffley Road/Henley Avenue. Whilst the highest improvement was seen at The Plain to Donnington Bridge Road segment (5.3 to 1.75).

162. In terms of road segments, with a decline in reliability, St Clement's Street – The Plain roundabout to the top of Morrell Avenue – showed a negative change across all time periods. However, apart from the Afternoon-peak PTI (1.42 to 1.91), all other time periods had the same reliability range (moderately unreliable, 1.31 to 1.7; unreliable, > 1.7) after the east Oxford LTNs were implemented.

Table 44 - Planning Time Index for journey time by time of day and for each multiplier boundary road segment – direction (west to east)

Boundary Road Segments (west to east)		AM-peak		
Road	Road Segment direction	Pre PTI	Post PTI	PTI Diff
Between Towns Rd	Iffley Rd to Cowley Rd	2.00	1.89	-5.4%
Hollow Way	Cowley Rd to Horspath Driftway	2.09	2.26	+8.1%
Donnington Bridge Rd	Abingdon Rd to Iffley Rd	4.75	1.54	-67.5%

Boundary road segments (west to east)		Afternoon-peak		
Road	Road segment direction	Pre PTI	Post PTI	PTI Diff
Between Towns Road	Iffley Rd to Cowley Rd	1.88	2.07	+10.2%
Hollow Way	Cowley Rd to Horspath Driftway	1.52	1.49	-2.0%
Donnington Bridge Rd	Abingdon Rd to Iffley Rd	1.57	1.26	-19.5%

Boundary road segments (west to east)		PM-peak		
Road	Road segment direction	Pre PTI	Post PTI	PTI Diff
Between Towns Road	Iffley Rd to Cowley Rd	1.87	1.88	+0.6%
Hollow Way	Cowley Rd to Horspath Driftway	1.54	1.49	-3.0%
Donnington Bridge Rd	Abingdon Rd to Iffley Rd	2.30	1.50	-34.7%

163. On the multiplier roads (running from a west to east direction), the Donnington Bridge Road - Abingdon Road to Iffley Road – showed the most consistent improvement across all times of day. Whilst the AM-period had the highest percentage difference (-67%), the Afternoon-peak PTI moved into the reliable range (from 1.57 to 1.26). There was a slight decrease in PTI score in Hollow Way Road, but this had no impact on the reliability range prior to the implementation of the east Oxford LTNs.

Journey Time full road overview

Table 45 - Difference in journey time (secs) for road segments and along entire in-bound road length

Boundary roads/ segments (towards 'The Plain roundabout')	Weekday difference in duration +/- secs			
Road segment/Road name	AM-peak	Afternoon-peak	PM-peak	Evening
From Morrell Avenue to The Plain roundabout	+83	+209	+334	+18
St Clements Str total	+83	+209	+334	+18
From roundabout Warneford Lane up to St Clements St	-4	+1	+59	-9
Morrell Av total	-4	+1	+59	-9
Magdalen Rd. to The Plain	+54	+73	+159	+15
Hollow Way to Magdalen Rd	+25	+13	+19	+15
Eastern Bypass to Hollow Way	+5	+2	+49	+1
Cowley to Garsington Rd (B480) total	+83	+88	+226	+31
Donnington Bridge Rd to The Plain	+153	+23	+2	+11
Church Cowley Rd to Donnington Bridge Rd	-41	-4	-22	+8
Eastern Bypass to Church Cowley Rd	+36	+46	+27	+5
Iffley to Oxford Rd total	+148	+65	+7	+24

164. As seen in the table above, when considering the total road length in the direction towards The Plain, St Clement's Street and Cowley Road experienced the highest increase in journey times. In St Clement's Street, the highest increases were seen at Afternoon-peak and PM-peak; a median average of an additional 3min 29secs added to the pre-LTN journey time of 1min 12secs at Afternoon-peak, and a median average of an additional 5min 34secs added to

pre-LTN journey time of 2min 17 secs at PM-peak. Increases were also found along Cowley Road at PM-peak and Iffley Road at AM-peak.

165. The difference in impact at different times of day between routes is likely to be affected by patterns of use of other roads. For instance, The Plain has limited capacity, and any concentrated movements at this time are likely to affect delays both around The Plain and its feeder roads. Concentrated movements in this context could be attributed to large numbers of staff and students accessing universities and schools. This could partially explain AM-peak delays on Iffley Road which is particularly concentrated at this time of day. However, as the pick-up times are more dispersed (staggered due to after school/university activities etc), the impact at PM-peak is likely to be less of a contributory factor.

Bus Journey Time and Reliability

Analysis approach

166. Evaluation of the impact on bus times was undertaken for selected boundary road segments in east Oxford between 01 November 2019 to 30 November 2019 (baseline pre-LTN) and 01 November 2022 to 30 November 2022 (post-LTN intervention period). 2019 was chosen as the baseline year, owing to the impact of COVID-19 on comparable transport usage. According to DFT^{xxvi}, motor vehicle usage from May 2022 to September 2023 had returned to 2019 (pre-COVID levels), although as noted in Annex L, traffic in Oxford is still lower in 2023 than it was in 2019. Bus patronage levels also increased, but at the last reported publishing period (August 2023) were still lower than pre-COVID baseline period (74% August 2023). However, a continual increase in bus patronage over the LTN evaluation period will affect bus service frequencies; for example, impacting on journey times since more buses, whilst contributing to reduced car movements, can cause an increase in general traffic and congestion levels in some contexts. In addition, there were fewer buses per hour running along the routes of interest in 2022 than there were in 2019, this ensures that any journey time increases are not being caused by increased bus frequencies causing congestion. The St Clement's Street route is used by multiple bus services and is therefore more sensitive to changes in frequency and patronage affecting traffic delays. This may be attributed to more passengers getting on and off buses along St Clement's Street – as there was not a bus lane in this location during the period of this analysis, this can also lead to traffic delays for all vehicle types. It is also worth noting that a bus lane has been implemented in the in-bound direction in this location post the data analysis period of this report. The effects of this new bus lane have not been considered as part of this evaluation.
167. November was chosen as the period for analysis as it provides a likely 'worst case scenario' for the bus journey times. November is a time of year when vehicular travel is generally high in Oxford, as students are in residence and poorer weather discourages active travel. The analysis is focused on weekdays and was taken for the following daily time-periods in both directions: AM-peak (7am to 9am), Afternoon-peak (3pm to 3:30pm), PM-peak (4pm to 7pm); Evening off-peak (7pm to 11:59pm).
168. The data source used in the analysis was taken from CitySwift's runtime analysis dashboard for the Oxford SmartZone²¹ area, a product designed in collaboration with Oxfordshire County Council, Stagecoach Oxfordshire and the Oxford Bus Company.
169. As with the previous *Journey times (driving)* analysis, controls sites were not used as part of this evaluation, for the reasons previously discussed. In addition, numerous changes have occurred since 2019 that have added to the complexity of being able to untangle and make robust comparisons using controls. For example, service route and frequency changes following the pandemic. It should

²¹ The Smartzone area covers all the Oxford Bus Company, Stagecoach, Thames Travel or Arriva bus routes operating in and around Oxford City, a map is available [here](#).

be noted that due to the changes between 2019 and 2022, it is not possible to assign all bus journey time and reliability changes outlined in the analyses below to the introduction of the LTNs. Several services included within the datasets ran from one side of the city to the other prior to COVID-19. During the pandemic, most cross-city services were stopped and half the route re-numbered starting from the City Centre. One such example is the 4A service, which used to run from the west side of the city via the Botley Road, through the city and along St Clement's Street out to Wood Farm via Morrell Avenue. This service became the 15 from the city centre to Wood Farm when the route was split. It remains split in 2022, which may affect journey times between the two periods covered. The use of runtime as the metric is defined as the average time it takes to move from one stop to the next but excludes dwell time.

Change in stop-to-stop runtime metric

170. The main metric used in this evaluation to analyse bus times was taken from the CitySwift's dashboard – 'Change in Stop-to-Stop Runtime', which shows the averaged change in runtime recorded since the previous stop (departure to arrival) and the percentage change in average stop-to-stop runtimes across two periods (baseline and post-LTN implementation). The stop-to-stop runtime calculation includes all the services that visit each stop-pair, and accounts for the increase/decrease of services across two periods along a particular corridor/road. A full break-down of all stop pairs by road can be seen in Annex J.
171. Stops which did not have times in both comparative time-periods were not included in the analysis. The results of the analysis are shown as a percentage difference in time taken between stops pairs and in both directions from the following roads shown in table 46:

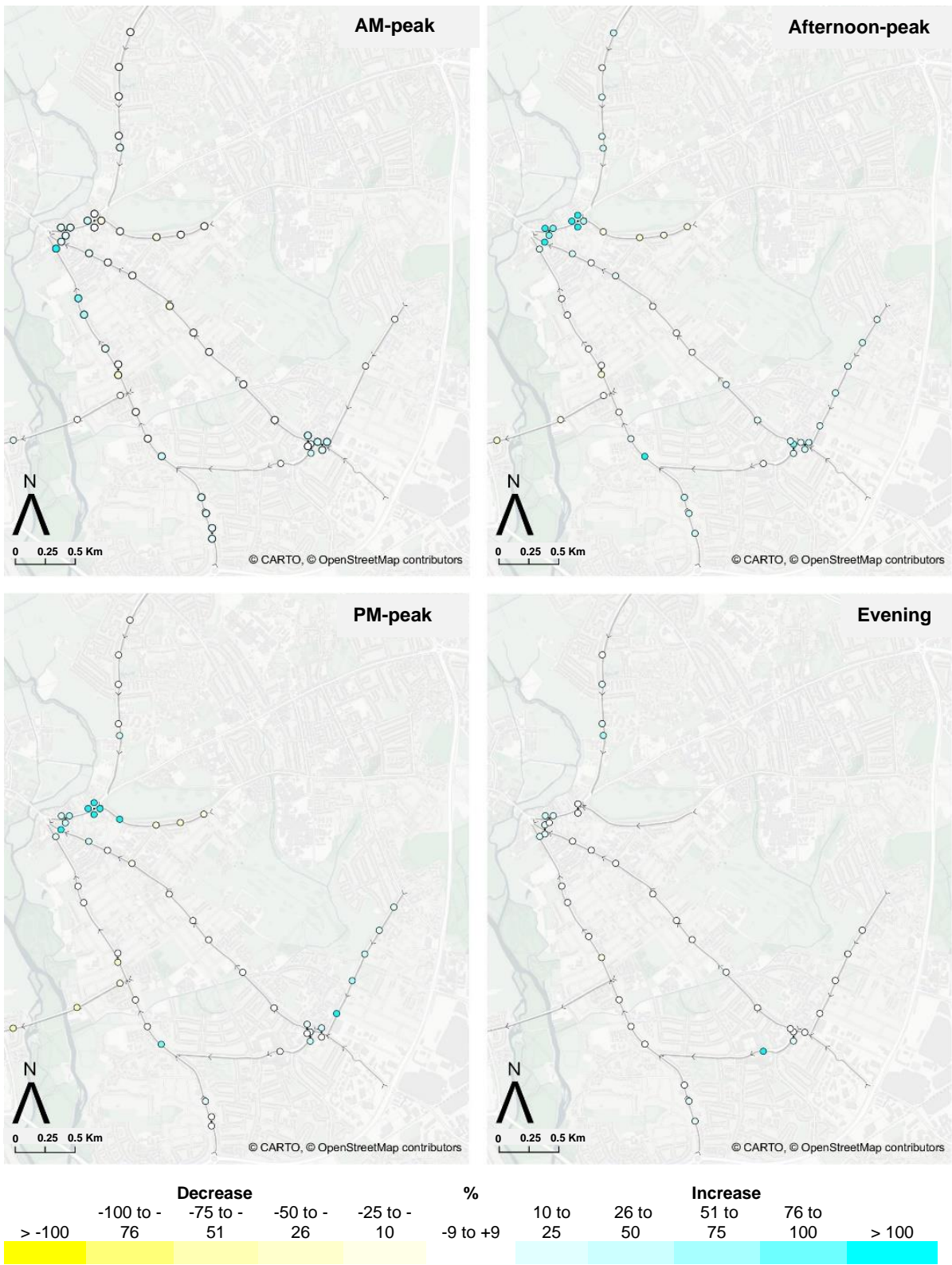
Table 46 - Road segments used in bus time analysis

Boundary roads	Multiplier roads
Cowley Rd: Cowley/Oxford/ Garsington Rd (B480)	Between Towns Rd
Iffley Rd: Iffley/Henley Avenue/Rose Hill/Oxford Rd	Donnington Bridge Rd
Marston Rd	Hollow Way
Morrell Avenue	
St Clements Str	

172. Where there are multiple previous stops going to the same stop, this is indicated on the following runtime maps as clusters around a point, as well as reflected in the breakdown tables in Annex J.

Towards The Plain

Figure 14 - Percentage difference in stop-to-stop runtime: In-bound and multiplier roads (east to west)



173. Overall, as seen in figure 14 (and in Annex J), for the stops in an inward direction towards The Plain, on roads closest to The Plain roundabout and

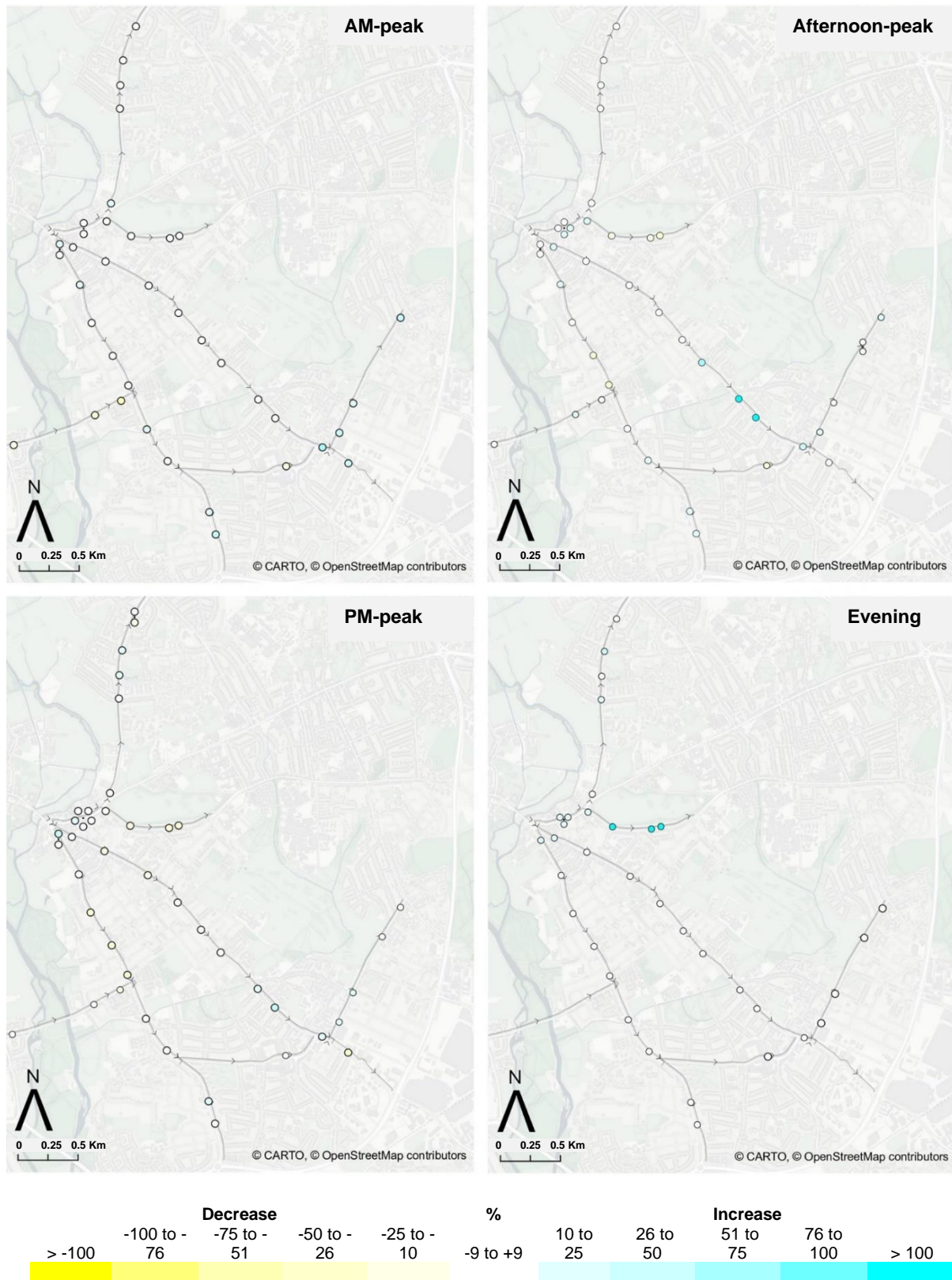
towards the ring road (e.g., close to Hollow Way/Between Towns Road) experienced the highest increases in runtime difference. Stops nearest to The Plain roundabout experienced the highest of these percentage increases; The Plain stop on Cowley Road (previous stop Stockmore Street) increased by 167% (an additional average 1min 19secs compared to 48secs in 2019) at Afternoon-peak, and 146% (an additional average of 1min 23 secs compared to 57secs in 2019) at PM-peak. The Plain stop on Iffley Road (Previous stop James Street) had an increase of 149% (an additional average of 2mins 33secs compared to 1min 43secs in 2019) at AM-peak. The difference in speed also aligned with these findings, as average speeds of 10mph in 2019 for the stops mentioned, dropped to an average of 4mph for the post-LTN period.

174. The road with the highest percentage increases as well as high levels of percentage increases across all stops at both Afternoon-peak and PM-peak times was St Clement's Street. The runtime data showed Glebe Street stop to have percentage increases between 61% and 258% during Afternoon-peak and PM-peak times respectively. The highest percentage increase in runtime was at PM-peak, with a 258% increase in duration from the previous stop of Brookes University Stop. This meant an average additional 7mins 9secs compared to 2mins 45secs in 2019. This finding also aligned with the change in speed which showed an average decrease from 13mph in 2019 to 4mph in 2022.
175. The data showed small to moderate decreases in the middle sections of Cowley Road and Iffley Road stops (-2% to -33%) during peak times, as well as decreases on Morrell Avenue stops, with an average 20% decrease at Afternoon-peak across all stops. Improvements in runtime along Morrell Avenue may be partly due to the removal of parking spaces along its length. The on-street parking previously required buses to wait for oncoming traffic to pass before they could pull out, creating delays to journeys at busier times.
176. On multiplier roads (from east to west direction), overall moderate to large percentage increases in runtimes were seen across all stops on Between Towns Road, (an average min of 19% to max 72% increase was seen across all time periods), and across all stops on Hollow Way Road, mainly at Afternoon-peak and PM-peak (an average min of 21% to max 67% increase). The highest off-peak time individual stop increase was seen on Templars Square (previous stop The Original Swan) in the evening, with a 201% average increase in runtime (an additional average of 1min 52secs to the 37secs runtime in 2019). In terms of peak times, Fernhill Road stop (previous stop Crescent Hall) on Hollow Way at PM-peak had the highest increase of 177% (an additional average of 2min 6secs to the 1min 11secs runtime in 2019). Whilst the average speed for Templars Square on Between Towns Road was shown to be similar to 2019 levels (12.9mph in 2019 and 13.5mph), findings for Fernhill Road stop on Hollow Way showed a significant reduction in average speed; 9.2mph down to 3.4 mph.
177. The main percentage decreases were seen on stops along Donnington Bridge Road at Afternoon-peak (an average -19% across all stops) and PM-peak (an average -42% across all stops). The highest individual stop percentage decreases were seen at PM-peak on the Donnington Bridge stop (-52%) and Weirs Lane stop (-55%). These decreases in runtime resulted in an average

reduction of 58secs from 1min 51secs in 2019 on Donnington Bridge stop, and an average reduction of 1min 47secs from 3min 17secs in 2019 on the Weirs Lane stop. At PM-peak, Donnington Bridge stop (10mph in 2019 up to 20mph) and Weirs Lane stop (9mph in 2019 up to 17mph) also experienced significant increases in average speed between their respective previous stops.

Away from The Plain

Figure 15 - Percentage difference in stop-to-stop runtime: Out-bound and multiplier roads (west to east)



178. As seen in figure 14 (and in Annex J), for the stops in an outward direction away from The Plain, the roads with the highest increase in runtime were Cowley

Road and Morrell Avenue. Cowley Road had 3 stops with an increase over 70%: Marsh Road, Clive Road and Shelley Road at Afternoon-peak. Marsh Road stop (previous stop Shelley Road) had the highest increase of 167%, with an average additional 2mins 12secs to the previous 1min 19sec average runtime in 2019. This was also reflected in the average speeds recorded (not including dwell time), which significantly reduced from 12mph in 2019 to 4mph.

179. In the evening, stops on Morrell Avenue also showed significant increases in runtime: East Avenue (previous stop Union Street) had the highest increase of 143% with an additional 1min 6 secs to the previous runtime of 46secs in 2019. The data also showed a reduction in speed from 18mph down to 7mph for the East Avenue stop and a similar finding for the Stone Street stop (15mph to 7mph).
180. There were also moderate to high increases on Iffley Road, with an increase of 27% at Rose Hill Parade stop (previous stop Westbury Crescent) at AM-peak, and a 32% increase at The Plain stop (previous stop St Cross road) at PM-peak.
181. When comparing runtime change for stops with the same previous stop – Queens Lane – located beyond The Plain roundabout on the High Street, all stops were found to have moderate increases in the evening: The Plain stop on Cowley Road (17%), The Plain stop on Iffley Road stop (17%) and St Clement's Street stop (22%). The impact is worse in the evening period.
182. In terms of other boundary roads with stops away from The Plain, on Morrell Avenue (apart from South Park stop, with a 9% increase) and in contrast with the Evening period described above, there were decreases of between 11% and 38% in runtimes across all other out-bound stops at Afternoon-peak and PM-peak, compared to 2019. For East Avenue stop this meant an average of 17 secs less in runtime at PM-peak from 56secs in 2019, and 11 secs less in runtime at PM-peak for Stone Street stop from 38secs in 2019. Stone Street stop (previous stop East Avenue) had the highest decrease of 38% in runtime at Afternoon-peak, resulting in an average reduction of 13secs from the 33secs runtime in 2019 and increase in average speed from 13mph to 20mph.
183. The largest percentage decreases in runtime were seen on Iffley Road: at Magdalen Road stop (-32% Afternoon-peak, -42% PM-peak), Howard Street (-31% Afternoon-peak, -38% PM-peak) and Henley Street stop (-4% Afternoon-peak, -33% PM-peak). The average decrease in runtime was between 26 and 42 secs. Smaller percentage decreases were also found on Cowley Road, on stops after The Plain stop down to Howard Street. Overall, the majority of stops that showed percentage decreases in runtime were in the middle of the boundary roads. However, the closer in proximity to The Plain as well as towards the ring road (e.g., near to Between Towns Road/Hollow Way Road), the opposite trend was found (percentage increase in runtime).
184. On multiplier roads (from west to east direction), overall, only Hollow Way showed small to moderate increases, with the highest increase found across all stops at AM-peak (10% to 33.37%). Fern Hill Road stop (previous stop The

Original Swan) showed consistent increases across all peak time periods, with AM-peak the highest: 33% increase in runtime change (an average additional 15 secs to the previous runtime of 46 secs in 2019). The data also showed a small reduction in average speed from 11mph down to 9mph. Delays on Hollow Way stops, and in particular Fern Hill Road stop, might be partly explained by the percentage increase in runtime shown at The Original Swan stop on Cowley/Garsington Road (B480) (60% AM-peak, 49% Afternoon-peak and 19% at PM-peak).

185. In terms of decreases, overall stops on both Between Towns Road and Donnington Bridge Road showed small to moderate decreases across all stops and across all times of day. The findings also showed higher levels of decreases across all stops on Donnington Bridge Road at AM-peak. Townsend Square stop showed the highest percentage decrease of 60% when compared to 2019: an average reduction of 55secs to the previous runtime of 1min 36secs in 2019. The data also showed a significant increase in average speed, from 8mph up to 18mph.

Bus times full road overview

186. The following tables show the cumulative percentage increase/decrease of stop-to-stop runtimes along an entire boundary road. Please note road length comparison of runtimes does not include dwell times, and therefore does not reflect the full journey time for buses along the route.

Table 47 - Cumulative impact of % +/- of runtimes along boundary roads in an in-bound direction

Boundary roads / segments (towards 'The Plain roundabout')	Weekday difference in duration +/- secs			
Road name	AM-peak	Afternoon-peak	PM-peak	Evening
Marston Rd Avg.	+8	+43	+13	+23
St Clements Str Avg.*	+1	+236	+396	+12
Cowley Rd Avg.* (Cowley/Oxford/ Garsington Rd (B480)	+12	+151	+84	-9
Iffley Rd Avg.* (Iffley/Henley Avenue/Rose Hill/Oxford Rd)	+246	+101	+51	+14
Morrell Ave Avg.	-13	-36	+80	

* Where roads have duplicate stops, a mean average has been applied to the runtime value

187. As seen in the table above, when considering the total road length in the direction towards The Plain roundabout, St Clement's Street and Iffley Road experienced the highest increases in runtimes. The journey times for St Clement's Street had the highest increases at Afternoon-peak and PM-peak: an average of an additional 3min 56secs added to the pre-LTN runtime of 3min 36secs at Afternoon-peak, and an average of an additional 6min 36secs added to the pre-LTN runtime of 5min 30secs at PM-peak. Iffley Road also experienced

an increased overall runtime at AM-peak; an average of an additional 4min 6secs to the pre-LTN runtime of 10min 40secs.

188. On St Clement's Street, Glebe Street stop has previous stops from three different roads: Headington Road, Marston Road and Morrell Avenue. The following table shows how difference in runtimes may vary based on these different routes into Glebe Street stop and cumulative runtimes on St Clement's Street.

Table 48 - Cumulative impact of % +/- of runtimes along boundary roads in an in-bound direction, examining three different road routes leading to St Clement's Street stop.

Boundary roads / segments (towards 'The Plain roundabout')		Weekday difference in duration +/- secs			
Previous road/stop	Destination road	AM-peak	Afternoon-peak	PM-peak	Evening
Headington Rd: Brookes University	St Clement's Str Avg.	-2	+242	+464	+9
Marston Road: Kings Mill Lane	St Clement's Str Avg.	-34	+184	+276	+17
Morrell Avenue: Union Street	St Clement's Str Avg.	42	+275	+380	

189. As seen in table 48, all three routes into St Clement's Street experienced large increases in runtimes at Afternoon-peak and PM-peak. The largest was from Headington Road direction with an average of an additional 7min 44secs to the pre-LTN runtime of 5min 27secs.

190. Tables 49 to 51 below show a comparison of runtimes by time of day looking at three data periods for the three routes (Headington Road, Marston Road and Morrell Avenue) into St Clement's Street: November 2019 (pre-LTN), November 2022 and more recently March 2023. Both latter data periods provide an insight at different post-implementation periods: around 6-months (November 2022) and 10-months (March 2023). The first table in each route pair shows the average weekday runtime in seconds by time of day. The second table examines the percentage difference when the March 2023 runtimes are compared firstly to the pre-LTN baseline of 2019, and then against the post-implementation period of November 2022 in order to see how the impact may have changed over the evaluation period. Please note while there may be some local seasonal variances in travel behaviours, based on the findings from the National Travel Survey^{xxvii} examining 'The average number of trips by month and main mode (trips per person per month)' for England, there are minimal differences between trip rates between March and November. However, findings should be interpreted as an indication only.

Table 49 - Comparison with March 2023 and the cumulative impact of runtimes along boundary roads in an in-bound direction: Headington Road (Brookes University stop) leading to St Clements Street stop.

Headington Rd: Brookes University (towards 'The Plain roundabout')		Weekday duration (secs)			
Data period	Destination Road	AM-peak	Afternoon-peak	PM-peak	Evening
November 2019	St Clement's Str Avg.	212	231	327	98
November 2022	St Clement's Str Avg.	210	473	791	110
March 2023	St Clement's Str Avg.	226	376	428	166

Headington Rd: Brookes University (towards 'The Plain roundabout')		Weekday % difference in duration March 2023			
Comparison data period	Destination Road	AM-peak	Afternoon-peak	PM-peak	Evening
November 2019	St Clement's Str Avg.	+6.6%	+62.77%	+30.89%	+69.42%
November 2022	St Clement's Str Avg.	+7.62%	-20.51%	-45.89%	+50.91%

191. As seen in table 49, whilst there were significant increases in runtimes – from Brookes University stop on Headington Road to St Clement's Street – between November 2019 and November 2022, the overall trend from November 2022 to March 2023 showed a significant improvement in runtimes, although still higher than in 2019. The largest increase in percentage difference between November 2019 and March 2023 was seen at Afternoon-peak (an average additional 2mins 25secs to the 3mins 51secs duration in 2019) and Evening time periods (an average additional 1mins 8secs to the 1mins 38secs duration in 2019). When compared to 2022, Evening runtimes were also found to be increasing over time, with an average 51% increase (an average additional 56secs in 2023 to the 1min 50secs duration in 2022). However, at Afternoon-peak and PM-peak time periods average 2023 runtimes showed significant decreases when compared to November 2022, the largest being a 46% decrease at PM-peak (an average reduction of 6mins 3secs from the 13mins 11secs duration in 2022). This may indicate that some people previously travelling by vehicle earlier in the day started to delay their journeys to avoid the peak traffic times, reducing the congestion and associated runtimes.

Table 50 - Comparison with March 2023 and the cumulative impact of runtimes along boundary roads in an in-bound direction: examining Marston Road (Kings Mill Lane stop) leading to St Clement's Street stop.

Marston Rd: Kings Mill L (towards 'The Plain roundabout')		Weekday duration (secs)			
Data period	Destination road	AM-peak	Afternoon-peak	PM-peak	Evening
November 2019	St Clement's Str Avg.	253	236	374	145
November 2022	St Clement's Str Avg.	219	420	650	163
March 2023	St Clement's Str Avg.	214	330	430	147

Marston Rd: Kings Mill L (towards 'The Plain roundabout')	Weekday % difference in duration March 2023
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Comparison data period	Destination road	AM-peak	Afternoon-peak	PM-peak	Evening
November 2019	St Clement's Str Avg.	-15.42%	+39.83%	+14.97%	+1.38%
November 2022	St Clement's Str Avg.	-2.28%	-21.43%	-33.85%	-9.82%

192. When comparing March 2023 runtimes from Kings Mill Lane stop on Marston Road to St Clement's Street with 2019 (as seen in table 50), the main increase was seen at Afternoon-peak (40%); an average additional 1mins 34secs to the 3mins 56secs duration in 2019). There was also a moderate reduction of 15% at AM-peak which meant an average reduction of 39secs from the 4mins 13secs duration in 2019. However, when comparing March 2023 with November 2022, there was consistent reduction in average runtimes across all times of day, with the highest decrease in difference of 34% at PM-peak; an average reduction of 3mins 40secs from the 10mins 50secs duration in 2022.

Table 51 - Comparison with March 2023 and the cumulative impact of runtimes along boundary roads in an in-bound direction: examining Morrell Avenue (Union Street stop) leading to St Clements Street stop.

Morrell Av: Union Str (towards 'The Plain roundabout')		Weekday duration (secs)			
Data period	Destination road	AM-peak	Afternoon-peak	PM-peak	Evening
November 2019	St Clement's Str Avg.	138	168	293	
November 2022	St Clement's Str Avg.	180	443	672	
March 2023	St Clement's Str Avg.	147	327	414	

Morrell Av: Union Str (towards 'The Plain roundabout')		Weekday % difference in duration March 2023			
Comparison data period	Destination road	AM-peak	Afternoon-peak	PM-peak	Evening
November 2019	St Clement's Str Avg.	+6.52%	+94.64%	+41.3%	
November 2022	St Clement's Str Avg.	-18.33%	-26.19%	-38.39%	

193. For Kings Union Street stop on Morrell Avenue to St Clement's, compared to 2019, runtimes in March 2023 showed small to large increases across all time periods. The largest increase in percentage difference was seen at Afternoon-peak: an average additional 2mins 39secs to the 2mins 48secs duration in 2019. As with the previous routes from Headington Road and Marston Road, when comparing March 2023 runtimes with November 2022, there was a consistent decrease in average runtimes across all times of day. The largest decrease was found at PM-peak: an average reduction of 4mins 18secs from the 11mins 12secs duration in 2022.

194. Overall, runtimes towards St Clement's Street from the 3 different routes toward The Plain roundabout have shown a decreasing trend. This was evident across all times of day between the 6-month post-implementation period and around the 10-month post-implementation period in March 2023.

Emergency Services Response Times

Methodology

195. To understand the impact of the east Oxford LTNs on the emergency services, South Central Ambulance Service (SCAS) included the east Oxford LTN traffic filters as road closures in the Optima Predict event simulation platform. Oxfordshire County Council are grateful for SCAS's collaboration in this report. The Optima Predict platform models the impact on response time of introducing LTN filters against a baseline of the prevailing response times for the period selected. Note this includes the Cowley LTNs as business as usual (BAU). **As a simulation, the model does not provide actual emergency response times.**
196. Two different over-arching scenarios were simulated to understand the impacts of the east Oxford LTNs. The first simulated the effects of the LTNs assuming full road closures at all locations with a bollard or planter in place. The second simulated the impact of replacing certain barriers with Automatic Number Plate Recognition (ANPR) cameras.
197. Both simulations assume that ambulances will route or divert against known factors, such as the road closures associated with the LTNs and calculate the additional journey time using average road speed data from 2019.
198. The simulation reports on the impact on NHS England ambulance response categories described in table 52 below.

Table 52 – NHS England emergency response categories

Category	Example injuries/illness	Response target
Category 1: Life-threatening	Cardiac arrest Severe allergic reaction	7 minutes on average, and 90% of calls in 15 minutes
Category 2: Emergency	Stroke Severe burns	18 minutes on average, and 90% of calls in 40 minutes
Category 3: Urgent	Late stages of labour Non-severe burns	90% of calls in 120 minutes

Source: NHS England, '[Ambulance response programme](#)'

Note - first responder time (e.g. paramedic on motorbike) is included in all categories.

199. The first of the simulation reports used historical incident and response data from 01 May 2022 to 13 November 2022 and was reported in the east Oxford LTN Snapshot report²².

²² [Active Travel Tranche 2: East Oxford LTN Evaluation Snapshot Report](#)

200. The second simulation undertaken used response data from 01 January 2023 to 30 June 2023. The simulation differs from the first by assuming that the physical barriers currently in place are replaced by ANPR cameras at the following locations:

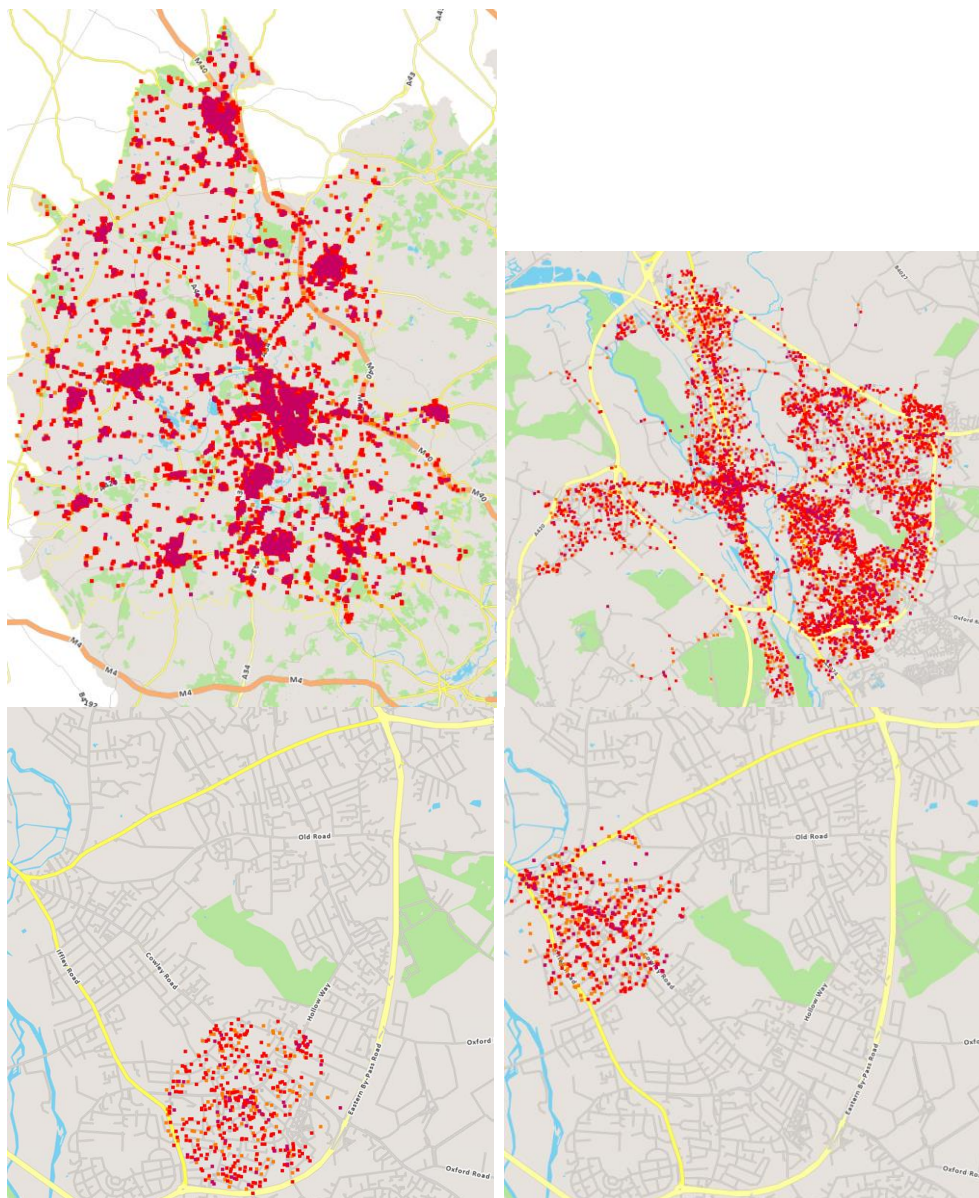
- Divinity Road (east Oxford, Divinity Road LTN)
- James Street (east Oxford, St Mary's LTN)
- Magdalen Road (east Oxford, St Mary's LTN)
- Crescent Road (Cowley, Temple Cowley LTN)
- Littlehay Road (Cowley, Florence Park LTN)
- Littlemore Road (Cowley, Church Cowley LTN)

201. The first three locations listed above have been consulted on, and the decision on their implementation will be decided as part of the decision on whether or not the east Oxford LTNs are made permanent. The latter three locations were consulted on and approved. Their implementation is scheduled to be undertaken during the first half of 2024. All other physical LTN barriers remain in the second simulation model.

202. To replicate the remaining physical barriers within the simulation, the road network was 'edited' in the simulation and corresponding sections removed. In the original modelling, road speeds were adjusted to simulate delays. The new methodology should be more accurate in simulating the filters. The methodology used for the more recent simulation also differs from that used in the first, using a customised version of the Optima SCAS model, incorporating just Oxfordshire operations, in order to speed up the model. This latter difference should have no effect on the accuracy.

203. A number of different geographical areas were considered separately within the simulation, as depicted in the following figure:

Figure 16 - Geographical areas of analysis used in second SCAS simulation model. Top left to bottom right: Oxfordshire, Oxford, Cowley LTNs, east Oxford LTNs



Results of the simulation including ANPR locations

204. The table below shows the simulated average response time difference between the baseline and scenario for the different geographical areas.

Table 53 - Results of simulation on impact of east Oxford LTNs including ANPR locations on response times by category and geography

Area	CAT1	CAT2	CAT3
NEOCW	+1 sec	+4 secs	+23 secs
Oxford	+1 sec	+7 secs	+23 secs
Cowley LTN	+7 secs	+6 secs	+32 secs
East Oxford LTN	+7 secs	+14 secs	+40 secs

205. The simulation incorporating the mitigation of ANPR at the six locations identified shows a significant lessening of impact compared to the original simulation previously reported on, particularly for the east Oxford LTNs area, where the simulated delay for CAT1 previously reported was 45 seconds. The impact at an Oxfordshire level is also greatly reduced: a simulated 4 second delay in CAT1 is now a 1 second delay (see Table 54).

Table 54 - Results of simulation on impact of east Oxford LTNs on local response times, by category, physical bollards in place at all sites (no ANPR)

Area	CAT1	CAT2	CAT2
NEOCW	+4 secs	+26 secs	+72 secs
Cowley LTN	+8 secs	+1 secs	+12 secs
East Oxford LTN	+45 secs	+45 secs	+35 secs

206. To understand what action would be needed to mitigate the delay times shown in this scenario, additional scenarios were subsequently run to assess the number of additional dual crew ambulance (DCA) hours needed to off-set the delays. The table below shows the simulated delays at the Oxfordshire-wide level between the baseline, LTNs scenario and potential mitigations for the area.

Table 55 - Results of simulations for Oxfordshire area with potential mitigation actions

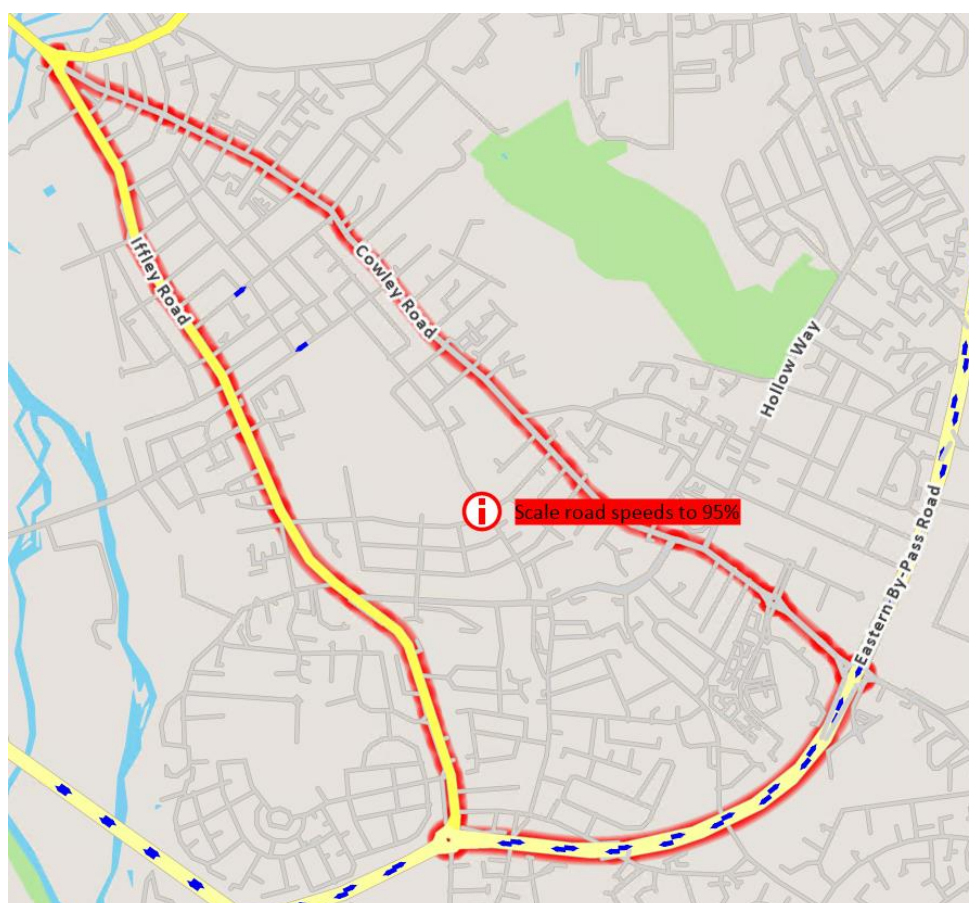
Scenario	CAT1	CAT2	CAT3
Baseline	-	-	-
LTNs	+1 sec	+4 secs	+23 secs
+1 Hour DCA	-1 sec	-8 secs	-29 secs
+2 Hours DCA	-2 secs	-20 secs	-1 min

207. Table 55 shows that just 1 additional DCA hour would be required to off-set the delays shown. The current number of unit hours in the area averages at 565,

meaning that less than 0.02% additional resource would be required, at an annual cost of £40,000. Given other variations in the way in which the ambulance service models and plans, this is not considered to be statistically significant and other factors will have a much more significant role in emergency response times.

208. One aspect which is not considered within the simulation however, is the potential for the LTNs to cause congestion on surrounding routes. The above simulations assume no change in prevailing traffic speeds between the baseline scenario and LTNs scenario. However, as outlined in the above *Journey times (driving)* analysis, there is evidence that journey times have increased and speeds reduced in some areas surrounding the LTNs, although there are also some areas which have seen improvements in journey times. Therefore, to assess the impact of increased congestion to ambulance response times, additional scenarios were modelled to assess the potential impact of reduced speeds along the roads immediately surrounding the east Oxford and Cowley LTNs. Figure 17 below shows the roads to which speed changes were applied in the further scenarios undertaken.

Figure 17 - Road speed scaling on roads surrounding the LTNs



209. Three further scenarios were run, scaling the speed to different levels on these roads to simulate congestion to a greater or lesser degree. The results of these

scenarios against response times for the Oxfordshire area are outlined in table 56 below.

Table 56 - Simulated average response time differences between baseline, LTNs scenario and sensitivity analysis for different road speeds

Scenario	CAT1	CAT2	CAT3
Baseline	-	-	-
LTNs	+1 sec	+4 secs	+23 secs
90% Scaled Road Speeds	+1 sec	+11 secs	+51 secs
80% Scaled Road Speeds	+3 secs	+25 secs	+1 min
70% Scaled Road Speeds	+5 secs	+37 secs	+2 mins

210. Road segments are affected by changes in speed due to increased congestion to different degrees, and some segments show generalised improvements. In addition, both direction and time of day significantly alter speed patterns. There are also road segments which are affected by speed changes which are not covered in the scenarios, notably St Clement's Street, which has experienced the most marked journey time impacts of all segments analysed in the journey time analysis. On the other hand, journey speeds along the routes with ANPR will likely be significantly faster than they were in 2019. As such, applying a scaling across the board will not give a reliable picture of the impact of the LTNs, but it does give an indication of the degree to which changes in speed will impact emergency response times.

211. Overall, the impact on emergency services response times can be seen to be significantly mitigated by the introduction of ANPR cameras in the six locations outlined and is minimal as long as congestion does not slow down surrounding main roads to a great degree. The impact is greater at the local level, however, and response times are likely to be slower in the LTN areas, with congestion caused on surrounding roads likely having a greater impact here than to overall Oxfordshire response times.

Air Quality

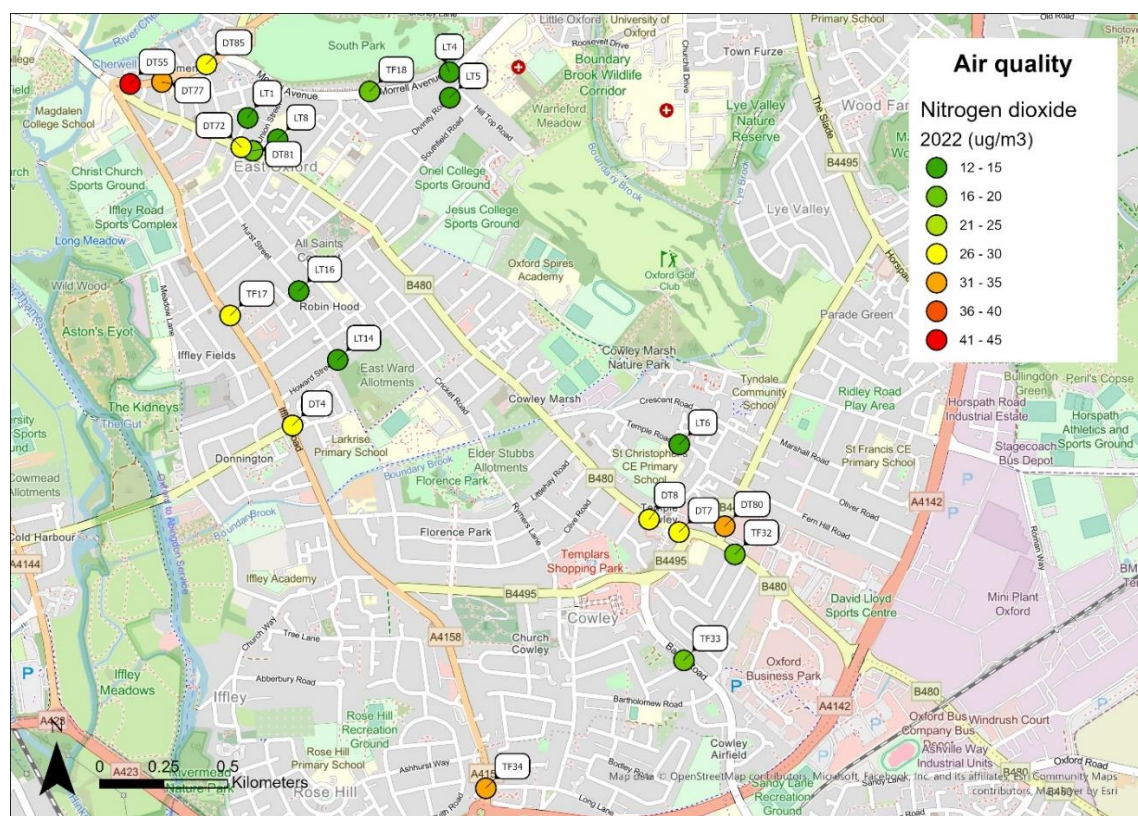
Air Quality Sampling

212. Evaluation of air quality (AQ) within the east Oxford LTNs was undertaken using the existing air quality monitoring network managed by Oxford City Council, the air quality authority for Oxford. This network was supplemented with 16 additional sensors in 2021 to provide greater coverage in the east Oxford and Cowley LTN areas. Oxfordshire County Council are grateful for the City Council's collaboration in this work.
213. Diffusive samplers, as described in the Department for Environment Food and Rural Affairs (DEFRA)'s [Technical Guidance LAQM.TG22](#) paragraphs 7.197 – 7.234, are widely used for indicative monitoring of ambient nitrogen dioxide (NO₂) in the context of regular review and assessment of local air quality levels by Local Authorities. This monitoring technique is particularly useful to give an indication of longer-term average NO₂ concentrations and for highlighting areas of high NO₂ (particularly when assessing NO₂ sources such as traffic emissions, which do not change much from day to day). Diffusion tubes take samples over approximately a one-month period, hence a monthly mean value of NO₂ can be derived.
214. The diffusion tubes used for the purpose of assessing the impacts of LTNs were supplied and analysed by accredited laboratories. In 2021 they were analysed by South Yorkshire Air Quality Samplers and in 2022 by SOCOTEC, both using the 50% TEA in Acetone method. All accredited laboratories processing diffusion tubes are subject to quality assurance testing as part of their accreditation. This involves an independent comparison to other laboratories, under the independent AIR-PT scheme. The [results of these inter-comparisons](#) are publicly available.
215. All the diffusion tube results that are used in this LTN analysis have been fully corrected and adjusted according to the specific Defra guidelines that local authorities are required to follow and which are available [here](#).

Air Quality Analysis

216. The location of the sampling tubes used in this analysis are shown in the map below.

Figure 18 - Location of air quality diffusion tube sensors used in the analysis



217. As outlined below, there are multiple factors which can influence NO₂ levels. To control for these factors, it is important to understand how air quality has changed more widely across the city. An assessment has therefore been conducted to analyse overall 2022 air quality levels across all the City of Oxford monitoring sites that would not show differences in air quality data that would be due to the introduction of the LTNs or ZEZ. The 2022 data has been compared to the 2021 data to identify what the wider changes in NO₂ levels have been in Oxford City. The results of this analysis indicate that overall, air quality levels have improved across the city by approximately 2 micrograms per cubic metre (2 ug/m³). This reduction is not considered to be statistically significant, as it's within the margin of error of the monitoring technique. It has therefore been decided not to include this correction as part of the analysis. The analysis is therefore based on a simple comparison between 2021 and 2022 data.

218. The following limitations to the air quality analysis should be noted:

- The data has been compared between the two full calendar years of 2021 and 2022, to allow for comparison of only fully ratified air quality datasets and so that exact LAQM procedures and DEFRA guidelines could be followed. However, the east Oxford LTNs have only been in place from May 2022 onwards.
- Fully ratified data for the automatic monitors that are used to calculate the bias adjustment factor that is used to correct the diffusion tube data is only available at the time of the analysis for up to December 2022. Unratified data cannot be used in comparison with ratified data, as ratification can change the figures significantly. It is particularly important to use the

ratified data in the instance of using two different laboratories to undertake the analyses, to ensure results are comparable.

- There were weeks where LTNs were not in full operation because of episodes of vandalism to bollards, as outlined previously in this evaluation
- Air quality measurements can also be heavily impacted by external factors such as the weather and short-term roadworks. Therefore, it is difficult to isolate the exact contribution of the LTNs to the air quality levels measured. This limitation needs to be acknowledged in this analysis.
- A local study conducted in 2020^{xxviii} identified that approximately 40% of Nitrogen Oxides (NOx)²³ in Oxford City are contributed by road transport, as such any changes in the measures provided by diffusion tubes may be caused by changes in other factors which generate NO₂, such as domestic combustion (e.g., wood-burners) and other forms of transport.

219. Table 57 below compares the annual mean NO₂ levels in ug/m³ for the sensor sites. A numerical difference is calculated between the data for 2022 and 2021 and between 2022 and 2019 in ug/m³ – the associated percentage change is also given.

- When 'NM' is shown instead of a reading, this means 'no measurements' were available because this tube was not in place during that period; a comparison cannot therefore be made with earlier years and the data available for only 2022 is included simply to supplement the analysis and greyed out accordingly in the table.
- Diffusion tubes prefixed 'LT' were installed in March 2021 and generated data for the 9 months April to December 2021. In line with technical guidance and validation from Defra, these 2021 data were used to generate the annual average 2021 figure. See paragraph 7.200 and 7.213 of the Defra [Technical Guidance LAQM.TG22](#).
- Diffusion tubes prefixed 'TF' were installed in May 2022 and generated data for the 8 months May to December 2022. In line with technical guidance and validation from Defra, these data were annualised to generate the 2022 figure. See paragraph 7.200 and 7.214 of the Defra [Technical Guidance LAQM.TG22](#).

²³ The term Nitrogen Oxides includes Nitrogen Dioxide, but also includes other compounds of Nitrogen and Oxygen

Table 57 - Air quality data (NO₂) from diffusion sampling tubes used in the analysis

Diffusion Tube ID	Site name	LTN name	Sensor Inside / Outside LTN	Fully Ratified Dataset				Difference (2021/2022)	% Difference (2021/2022)	Difference (2019/2022)	% Difference (2019/2022)
				2019 (ug/m3)	2020 (ug/m3)	2021 (ug/m3)	2022 (ug/m3)				
LT5	189 Divinity Road	East Oxford	Inside	NM	NM	18	12	-6	-33%		
LT8	East Oxford Primary School	East Oxford	Inside	NM	NM	15	13	-2	-13%		
LT1	26 Princes Street	East Oxford	Inside	NM	NM	17	13	-4	-24%		
LT14	94 Howard Street	East Oxford	Inside	NM	NM	16	13	-3	-19%		
LT16	103-139 Hurst Street	East Oxford	Inside	NM	NM	16	13	-3	-19%		
DT81	Cowley Rd/ Union Street	East Oxford	Inside	22	19	30	19	-11	-37%	-3	-14%
LT4	138-146 Morrell Avenue	East Oxford	Outside	NM	NM	16	13	-3	-19%		
TF18	143 Morrell Avenue	East Oxford	Outside	NM	NM	NM	16				
DT72	Cowley Rd./ James Street	East Oxford	Outside	31	22	20	27	7	35%	-4	-13%
DT55	St Clement's	East Oxford	Outside	53	36	39	43	4	10%	-10	-19%
DT77	St Clement's 2	East Oxford	Outside	42	28	30	35	5	17%	-7	-17%
DT85	St Clement's 3	East Oxford	Outside	36	26	29	30	1	3%	-6	-17%
DT4	Boundary Brook Road/ Iffley Road	East Oxford	Outside	28	23	26	27	1	4%	-1	-4%
TF17	23 Iffley Rd/St Stanley Road	East Oxford	Outside	NM	NM	NM	26				
LT6	St Christophers School	Cowley	Inside	NM	NM	13	12	-1	-8%		
DT80	Hollow way Road	Cowley	Outside	37	31	35	34	-1	-3%	-3	-8%
DT7	Oxford Road/ Between Towns Road	Cowley	Outside	32	27	30	30	0	0%	-2	-6%
DT8	Oxford Road(Cowley) LP13	Cowley	Outside	31	24	29	29	0	0%	-2	-6%
TF33	119 Barns Road	Cowley	Outside	NM	NM	NM	16				
TF34	Oxford Road/Newmans Road	Cowley	Outside	NM	NM	NM	35				
TF32	22 Garsington Road	Cowley	Outside	NM	NM	NM	20				

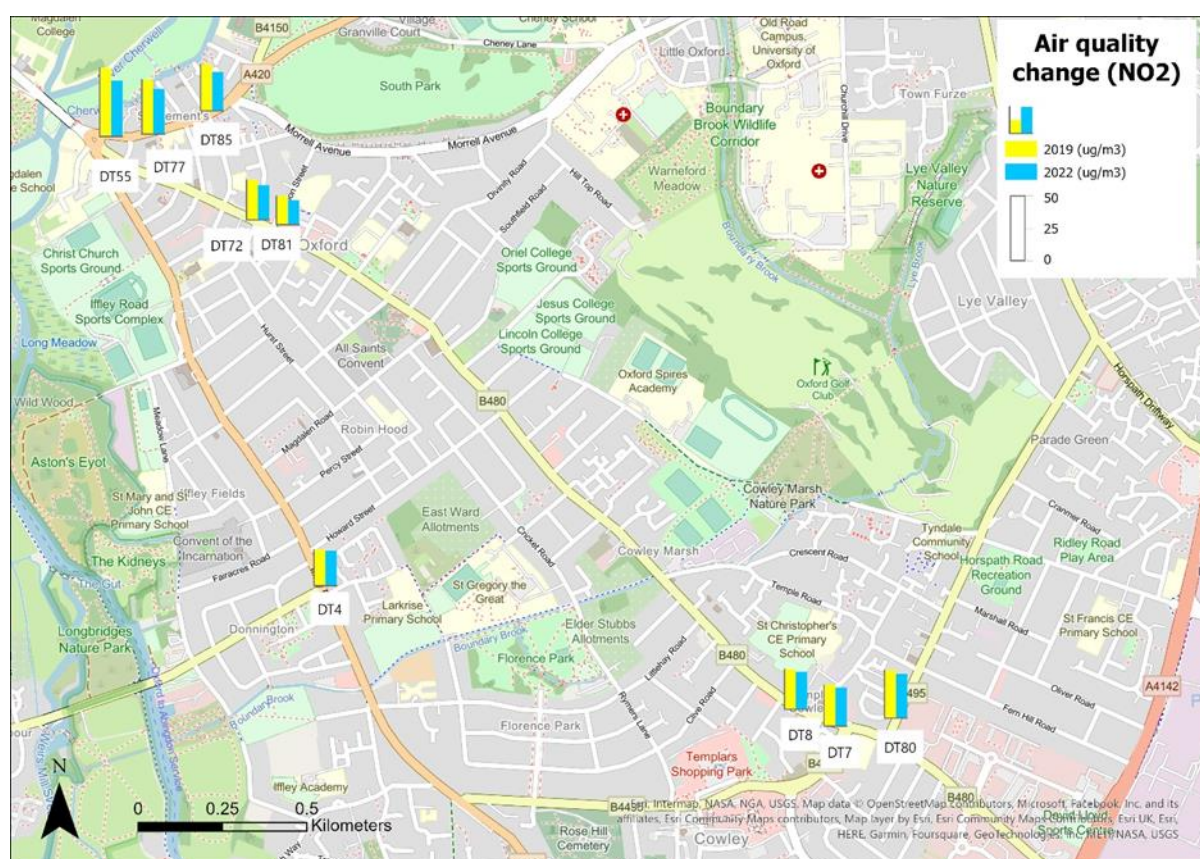
Note 1 - 'NM' means 'no measurements' were available because these diffusion tubes were not in place during the relevant time period.

Note 2 - Diffusion tubes prefixed 'LT' were installed in March 2021 and generated data for the 9 months April to December 2021. In line with technical guidance and validation from Defra, these 2021 data were used to generate the annual average 2021 figure. See paragraph 7.200 and 7.213 of the Defra [Technical Guidance LAQM.TG22](#).

Note 3 - Diffusion tubes prefixed 'TF' were installed in May 2022 and generated data for the 8 months May to December 2022. In line with technical guidance and validation from Defra, these data were annualised to generate the 2022 figure. See paragraph 7.200 and 7.214 of the Defra [Technical Guidance LAQM.TG22](#).

220. Of the 16 sensors with comparative 2021 to 2022 data there are 11 which show either no change, an insignificant or significant decrease in NO₂ levels and 5 which show an insignificant or significant increase in NO₂. The term 'significant' refers to changes of more than 2 ug/m³ of NO₂.
221. All sensors inside the LTNs show a decrease in NO₂ with the greatest effects seen on LT5 189 Divinity Road (-6 ug/m³ or -33%) and LT1 26 Princes Street (-4 ug/m³ or -24%). Note that DT81 Cowley Road/Union Street diffuser tube is 10m down Union Street away from Cowley Road; readings are the same in 2020 and 2022 at 19 ug/m³. The 2021 reading of 30 ug/m³ from this site cannot be used for comparison purposes with the 2022 result as the measurement has been extremely influenced by external factors for most of 2021: the emissions from the construction works above the Tesco Express near the middle of the Cowley Road used Union Street as the point of access for some plant. Construction spanned the period August 2020 to August 2022 with the first 18 months being the most intense.
222. On the boundary roads the picture is more mixed. LT4 138-146 Morrell Avenue has shown a reduction (-3 ug/m³ or -19%). But on St Clements there is a significant and consistent increase in NO₂ at two locations: DT77 St Clement's Street 2 (5 ug/m³ or 17%); DT55 St Clements (4 ug/m³ or 10%). Whilst at DT72 Cowley Road/James Street there is a significant increase in NO₂ levels (7 ug/m³ or 35%). The diffusion tube here is located directly on Cowley Road and has recorded the greatest percentage increase of all sensor locations but still below national and local limits and shows a reduction from the 2019 reading.
223. Of the NO₂ levels recorded in 2022, one site is above the national limit of 40 ug/m³: DT55 St Clement's Street increasing from 39 in 2021 to 43 in 2022. However, it is significantly down on the 2019 result of 53 ug/m³. In addition, there are a further three sites above the local target of 30 ug/m³: DT77 St Clement's Street 2 increasing from 30 ug/m³ in 2021 to 35 in 2022; DT80 Hollow Way Road decreasing from 35 ug/m³ in 2021 to 34 in 2022 and TF34 Oxford Road/Newman Road with a reading in 2022 of 35 ug/m³.
224. Overall, these AQ results mirror the findings of the vehicle counts analysis: there is an overall improvement in air quality inside the LTNs. On the boundary roads, Cowley Road and St Clement's Street see a marked deterioration of air quality as measured by levels of NO₂ between 2021 and 2022. It can also be seen from figure 19 below that where 2019 data is available, comparative data for 2022 shows an improvement in air quality.

Figure 19 - Air quality comparison (NO₂, ug/m³) - between years 2019 and 2022



225. In terms of the public health impact of these changes in air quality, there is strong evidence that a wide range of public health problems including respiratory and cardiovascular illnesses are impacted by air quality. There is also mixed evidence linking poor air quality with health impacts such as increased instance of pre-eclampsia in pregnant women, pre-term birth and low birth weight, as well as increased autism spectrum disorders, diabetes and reduced fertility^{xxix}.

226. Research by King's College London in 2019^{xxx} highlighted some of the impacts of air pollution in Oxford. Each year on average, higher air pollution days in Oxford are responsible for:

- 6 more cardiac arrests outside hospital
- 5 more admissions to hospital for cardiovascular disease
- 4 more admissions to hospital for stroke.

227. In addition, roadside air pollution in Oxford stunts lung growth in children by 14.1%. Cutting air pollution in Oxford by 20% would result, each year, in:

- 83 fewer cases of coronary heart disease
- 28 fewer cases of lung cancer
- 77 fewer children with low lung function
- 38 fewer asthmatic children with bronchitic symptoms
- 31 fewer instances of children being diagnosed with acute bronchitis
- 1 less baby born underweight (at term)
- an increase in children's lung capacity by around 2.8%.

228. As outlined in the *Background* section of this document, the population within the east Oxford LTN area shows a higher instance of cardiovascular and stroke deaths than the England average, and respiratory deaths and COPD hospital admissions similar to the national average, despite having a relatively young population according to health data. Improvements in air quality within the east Oxford LTNs may therefore serve to better the health outlook of this population, though this needs to be balanced against the increased pollution levels seen on the boundary roads, which will have a detrimental health impact.

229. It should be noted that the LTNs are part of wider strategy for Oxford to manage traffic. This includes the introduction of trial traffic filters, expected in 2024, which will introduce strategic traffic filters at six locations in Oxford. Two of the locations will be on St Clement's Street and Hollow Way with the intention of improving air quality, amongst other benefits, on these two roads. The traffic filters will be subject to separate evaluation to assess whether the projected benefits are realised.

Road Safety

Analysis

230. Using STATS19 data (Britain's official road accident statistics²⁴), a simple comparison has been made between incidents in the 5 years prior to LTN implementation (20 May 2017 to 19 May 2022), and the year after implementation (20 May 2022 to 19 May 2023). A simple control comparison has also been undertaken and is presented in Annex K. Overall there has not been significant change in incidents in the LTN area as compared to control.

231. Care should be taken in reading too much into this comparison between a five-year pre-LTN period and a single year post LTN period for a number of reasons:

- Subsequent years of data need to be collected before a direct comparison can be made and changes become statistically significant.
- Highway schemes normally need time to bed-in before true comparisons can be made. For example, spikes in accidents can occur immediately after alterations to the highway network but longer-term trends show a road safety benefit.
- It is noted that the five-year pre-LTN period includes years when COVID-19 had an impact on traffic volumes.
- In the post-LTN period it is noted that the bollards were not in place 100% of the time due to vandalism (see Annex H).

With these caveats, the maps below show that on the boundary roads, clusters of collisions are appearing in broadly similar locations. For example, pedestrian and cyclist incidents on Cowley Road near James Street and Bullingdon Road junctions (see figures 21 and 22). Applying the same caveats, inside the LTNs, the location of incidents shows little similarity pre- and post- implementation. Within the limits of the analysis and at this early stage, there appear to be no emerging trends or new concerns from a road safety point of view relating to the implementation of the LTNs.

232. Motor vehicle (MV) incidents post LTN implementation have taken place in two boundary road locations similar to the pre-implementation period, on Cowley Road near the junction with Bullingdon Road and with James Street (see figure 23). Inside the LTN there are two slight MV incidents, one at the Charles Street/Catherine Street junction where incidents had previously occurred and a new incident at the south-west end of Bullingdon Road.

²⁴ STATS19 is a code designating the protocol which outlines information to be collected whenever an injury crash is reported to the police. This code is also frequently used to refer to Britain's official Road Accident Statistics, which are derived from police STATS19 returns and compiled by the Department for Transport.

Figure 20 - Location of all incidents by severity pre- and post- LTN implementation

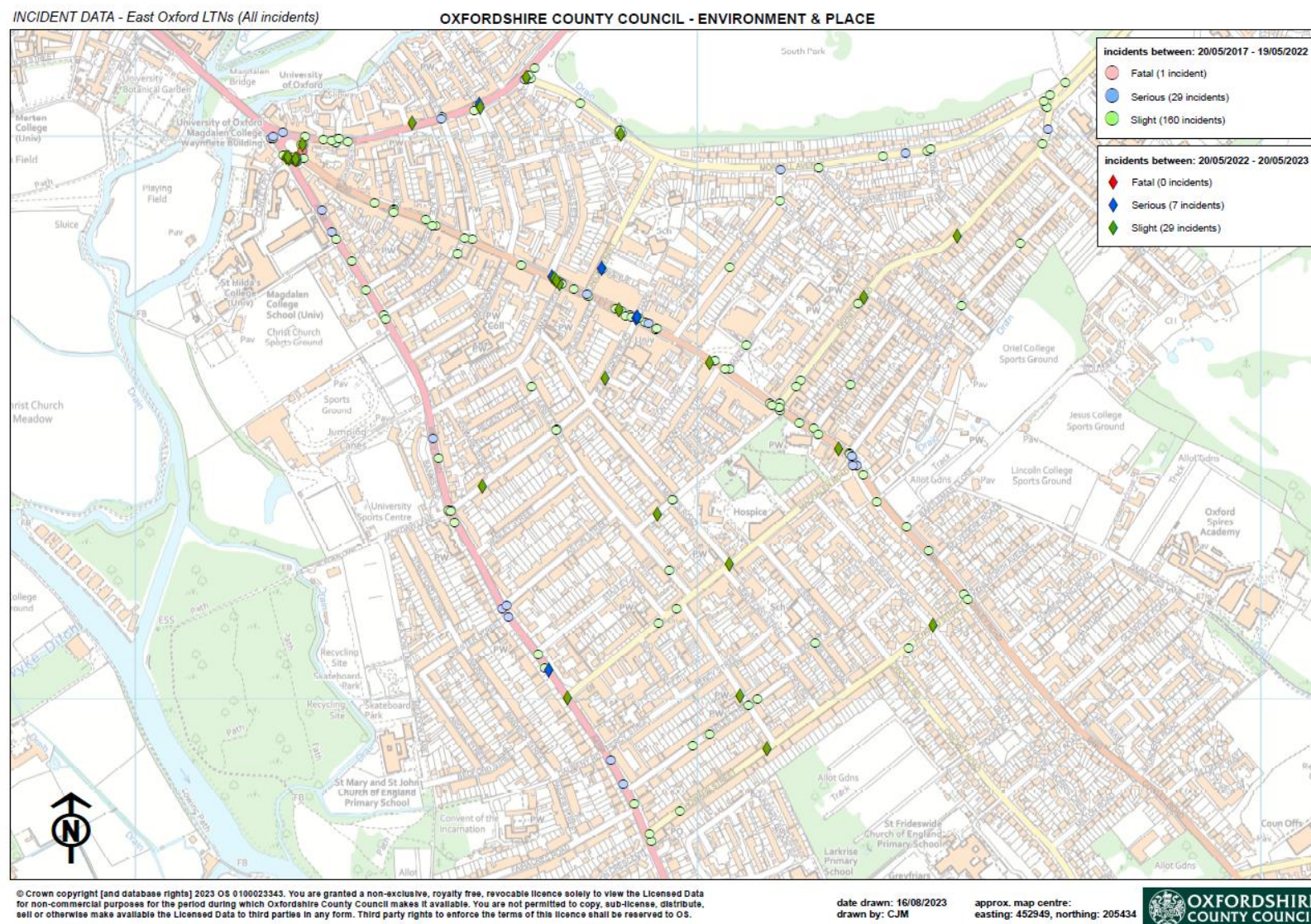


Figure 21 - Location of Pedestrian incidents by severity pre- and post- LTN implementation

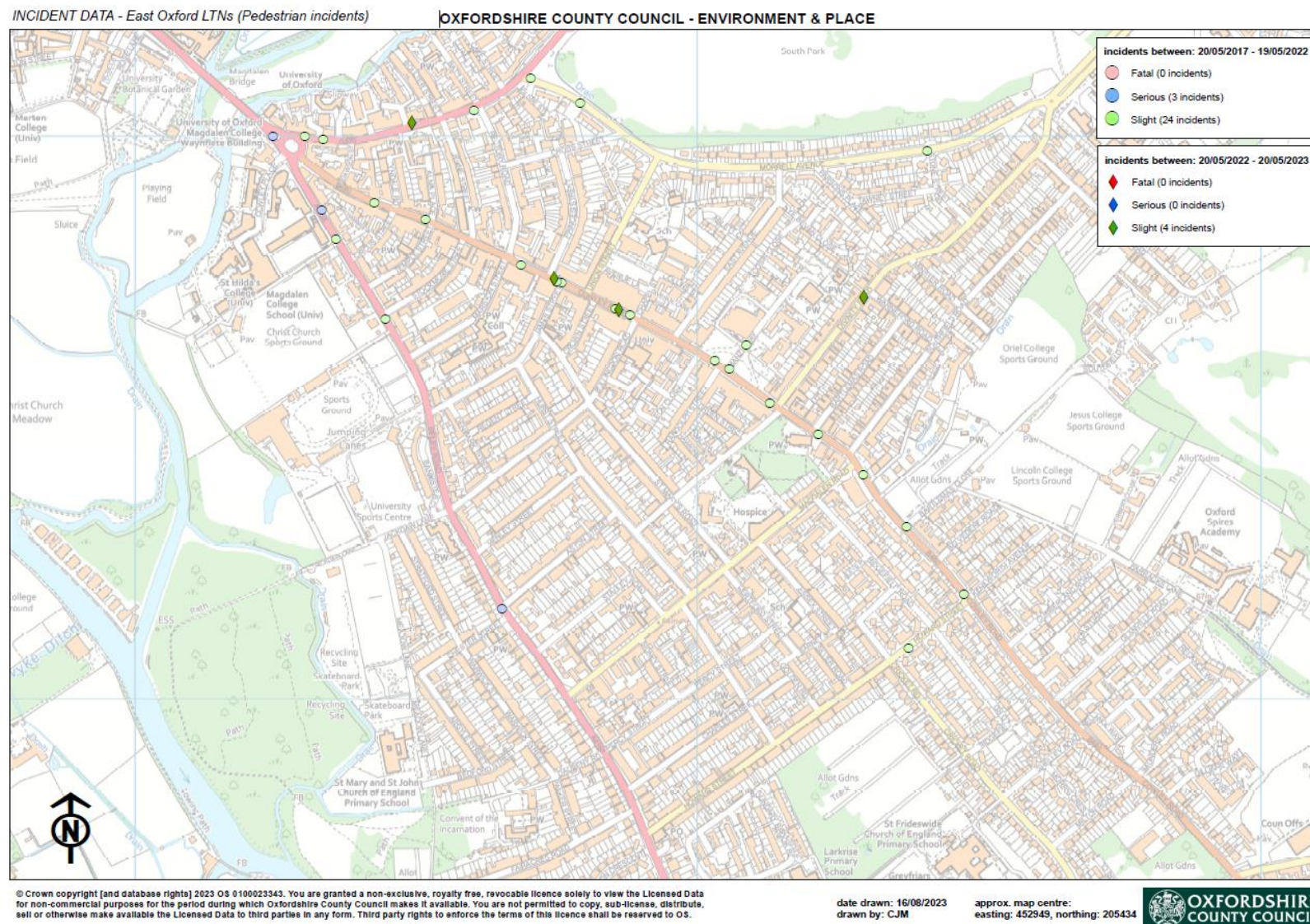


Figure 22 - Location of Cycle incidents by severity pre- and post- LTN implementation

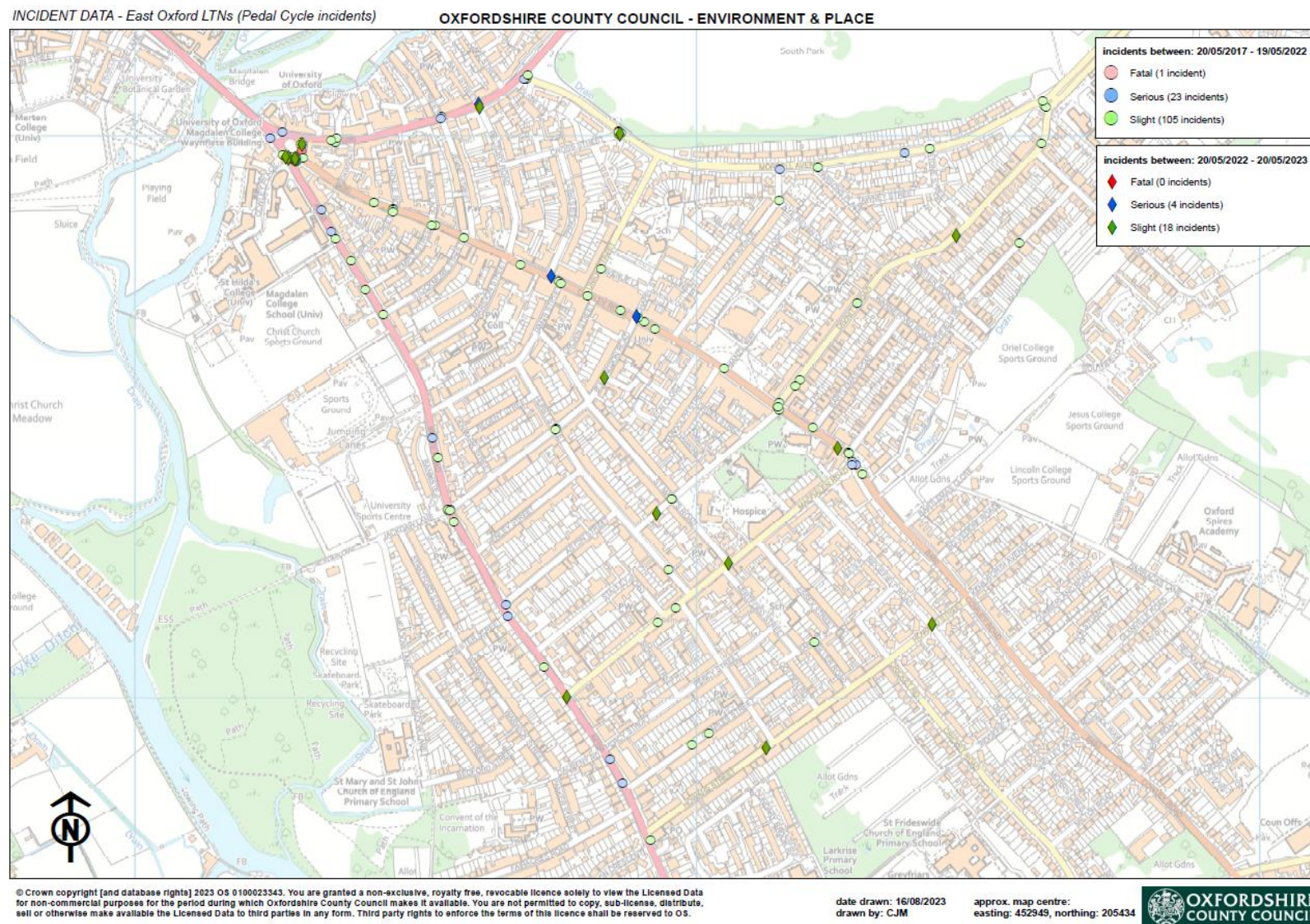
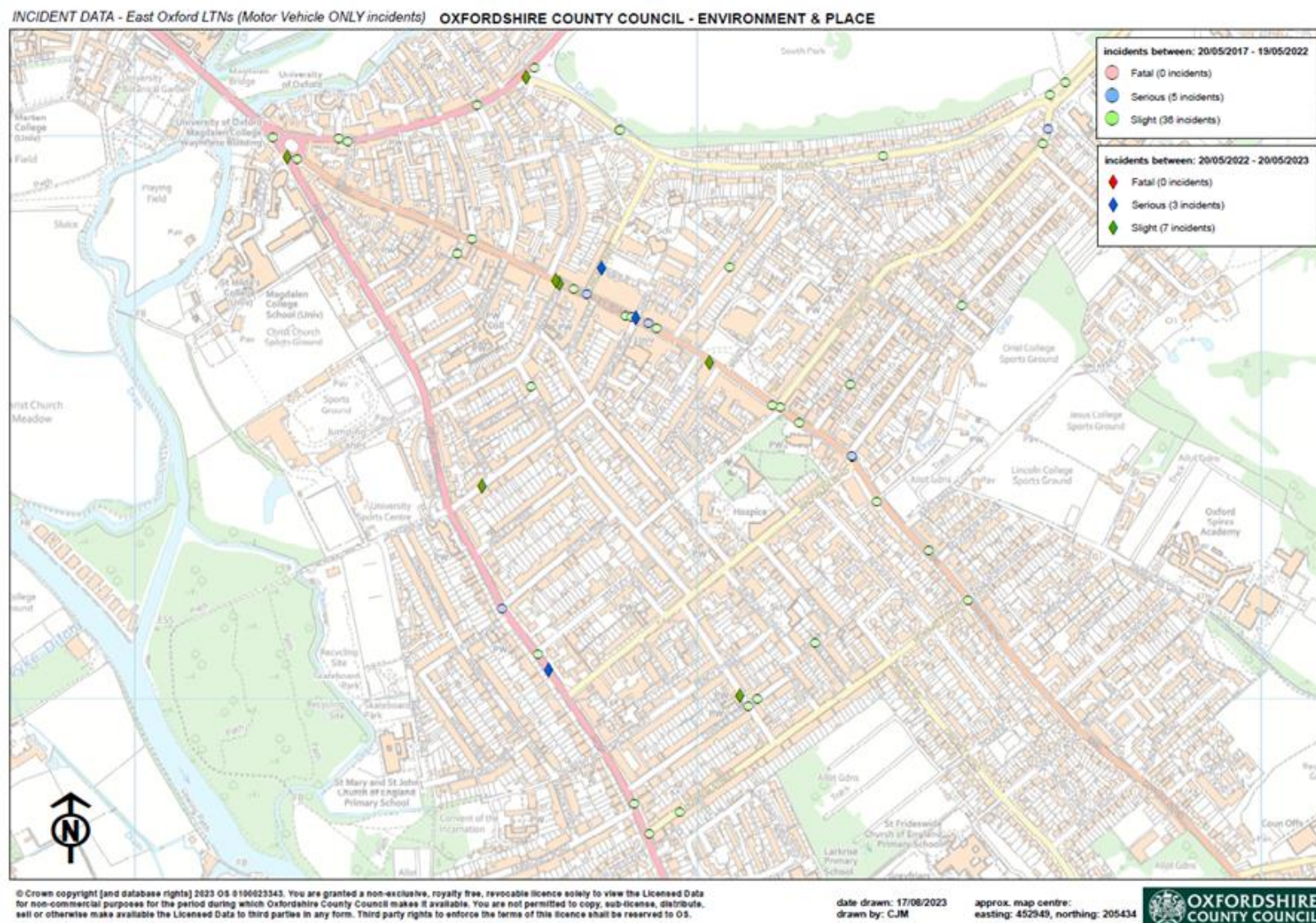


Figure 23 - Location of Motor Vehicle (MV) incidents by severity pre- and post- LTN implementation



233. The tables 58 to 60 below give some insight into the number of incidents pre- and post- implementation; the number of incidents in the five-year pre-implementation period has been averaged and are shown by severity and mode and compared with the post-implementation year for boundary roads, in-LTN area and The Plain. The Plain is singled out for the relatively higher number incidents that have occurred there. However, the same caveat applies of not reading too much into one year's data post-LTN implementation compared to the five years of pre-implementation data.

Table 58 - Road safety incidents by mode and severity - boundary roads

Incidents Boundary Rd	Pre LTN (5 year average)				Post LTN (1 year)			
	Ped	Cycle	MV	All	Ped	Cycle	MV	All
Fatal	0	0	0	0	0	0	0	0
Serious	0.4	2.8	0.2	3.4	0	3	2	5
Slight	4.2	10.8	4.6	19.6	3	4	4	11
Mode total	4.6	13.6	4.8	23.0	3	7.0	6.0	16

234. On the boundary roads there is a reduction in the number of incidents involving cyclists in the 'slight' category, down from an average 10.4 pre-LTN implementation to 4 post-LTN introduction. This might be explained by the introduction of Quickways. The impact of the Quickways will be subject to its own evaluation.

Table 59 - Road safety incidents by mode and severity - In-LTN

Incidents In-LTN	Pre LTN (5 year average)				Post LTN (1 year)			
	Ped	Cycle	MV	All	Ped	Cycle	MV	All
Fatal	0	0	0	0	0	0	0	0
Serious	0	0	0.2	0.2	0	0	1	1
Slight	0.4	3.4	1.4	5.2	1	6	2	9
Mode total	0.4	3.4	1.6	5.4	1	6	3	10

235. Inside the LTN area there is an increase in the number of incidents involving cyclists up from 3.6 to 6 in the 'slight' category, but these are small numbers.

Table 60 - Road safety incidents by mode and severity - The Plain

Incidents The Plain	Pre LTN (5 year average)				Post LTN (1 year)			
	Ped	Cycle	MV	All	Ped	Cycle	MV	All
Fatal	0	0.2	0	0.2	0	0	0	0
Serious	0.2	1.8	0	2	0	1	0	1
Slight	0.2	6.8	0.4	7.4	0	8	1	9
Mode total	0.4	8.8	0.4	9.6	0	9.0	1.0	10

236. On The Plain no significant change can be seen from the periods studied; a longer post-LTN implementation monitoring period is required. It should be noted that safety improvements were implemented at The Plain in November 2022 which included some amendments to road markings and traffic signs, installation of light cycle lane segregation, bollards and vegetation clearance.

Conclusions

237. In conclusion, there are both positive and negative outcomes associated with the LTNs. Positive results include consistent reductions in car use within the LTNs and indications of overall traffic evaporation from the area, with associated improvements in air quality within the east Oxford LTNs. It is worth noting that without a network-wide evaluation though, to what degree traffic evaporation is being caused by the combination of re-routing, modal shift or total avoidance of travel, cannot be fully ascertained. There are also comprehensive increases in cycle use along the boundary roads and on roads crossing between Iffley and Cowley Roads, indicating there may be some level of modal shift associated with the traffic evaporation. This trend continues to improve but should be subject to longer term monitoring. Pedestrian use, however, has generally not increased, except for Bullingdon Road – the only location to have seen a significant uplift, with some locations showing decreasing footfall both within and outside the LTNs; given increases in footfall at control sites, an increase might be anticipated based on background trends, which is not apparent in and around the east Oxford LTNs.
238. More significant negative impacts seem to be stemming from the increased congestion at The Plain. The knock-on impact of this is to create further delays along St Clement's Street, affecting buses and private vehicles alike, particularly during the Afternoon- and PM-peak hours and in the in-bound direction towards The Plain roundabout and the city centre. This, in turn, has increased air pollution levels on the boundary roads, particularly along St Clement's Street, where the legal limit has been exceeded at the location by The Plain roundabout. It is worth noting, however, that although air quality has worsened on the boundary roads in general, at all the locations air quality is still better than it was in 2019.
239. The emergency services simulated impact previously reported seems to be significantly mitigated by the introduction of ANPR at the six locations identified, three of which have already been approved in the Cowley LTNs area, and three of which have been consulted on within east Oxford LTNs. Should the LTNs be made permanent, it is strongly recommended that the ANPR changes should be approved in east Oxford to reduce the impact on emergency services. Continued congestion could, however, off-set this mitigation, as a change in average road speeds within the area increases the delays for emergency services.
240. Whilst wider traffic levels have not grown significantly since pre-implementation, the change in the pattern of traffic has resulted in worsening journey times and congestion at certain times of the day, since Oxford's road network is sensitive to change. Although journey times have improved during the period of evaluation of the trial, delay, particularly to buses is still an issue. Oxfordshire County Council has proposals to improve bus journey times across the city, but targeted improvements for buses in the east of the city have already been implemented as part the commitment through the Bus Service Improvement Partnership and the Bus Journey Time Reliability Fund, including implementation of additional bus lanes. It is worth noting that the data analysis undertaken in this report pre-dates the implementation of the in-bound bus lane on St Clement's Street,

London Place and Headington Hill, the results of which should be monitored to assess efficacy in mitigating bus journey time delays.

241. Oxfordshire County Council has policies in place to reduce volumes of traffic in Oxford, such as the trial traffic filters, workplace parking levy and expanded ZEZ. The trial traffic filters were expected to be in place but due to the Network Rail redevelopment of Oxford Station it has not been possible to implement the trial. In light of the delay to the trial traffic filters and the impact of Botley Road roadworks, further short-term measures are being considered in order to mitigate the delays being caused for bus runtimes, city-wide. It is recommended that any schemes being considered should be assessed in the context of the available data; given that the patterns of delays are markedly different on each route at different times of day, any mitigatory measures need to take this into account, as well as assessing efficacy of the bus lanes already implemented.
242. It should be noted that research has shown that modal shift is most effectively instigated through a package of measures and less so where infrastructural measures are not supported by wider behavioural change initiatives. As such, a wider package of behavioural change measures both providing a 'carrot' and a 'stick', as well as maximising intervention at times of life-change, are likely to prove more successful in reducing overall car use alongside the infrastructural elements such as the LTNs, Quickways and bus lanes. Oxfordshire County Council should consider this if the east Oxford LTNs are made permanent.
243. It is also worth noting that there are elements of the LTNs which have not been (fully) evaluated in this report. For example, health and safety implications have only been touched on, since longer-term observation is required to fully assess the effect on these aspects. In addition, impact on the use of space have not been analysed here. Studies to assess the effects on activities within the LTNs, such as levels of social interaction of different kinds and use of the space for play for example, investigating how these link to perceptions of the area would be beneficial, particularly if considering placemaking initiatives to complement the LTNs in the future. These studies could also consider the mental health implications of the changes, including the impact of active travel on mental health and any wider changes in use of the area, such as improved (or worsened) social cohesion.
244. In conclusion, there are some clear positive changes surrounding the east Oxford LTNs, such as the increased cycling levels and reduced overall car usage. However, measures should be investigated to ameliorate the journey time related disbenefits for buses and emergency vehicles and action should be taken to mitigate this negative effect of traffic-related congestion prior to wider policy aims being implemented. Whilst already an issue prior to the east Oxford LTNs being implemented, the congestion and associated journey times have worsened in the aftermath, making mitigatory measures of even greater importance than previously, should the east Oxford LTNs be made permanent.

Annex A

East Oxford LTN area Public Health data report

East Oxford LTN area – Public Health data

1st September 2023

Contents

1	Introduction	1
2	Key points from the data	2
3	Geographical area.....	3
4	Demographic profile – Census 2021	5
5	Housing – Census 2021	6
6	Household deprivation – Census 2021	6
7	Occupation and qualifications – Census 2021	8
8	Car ownership and travel to work – Census 2021	9
9	Health and caring – Census 2021	10
10	Low income and health-related benefit claimants	11
11	Life expectancy and hospital admissions.....	12
12	Healthy weight	14
	ANNEX 1: List of OA codes in the LTN and MSOA area	15

1 Introduction

This report provides demographic, Public Health and related data for the East Oxford Low Traffic Neighbourhood (LTN) area of Oxford City, including:

- Demographic, housing, health, economic and travel to work data from the ONS Census 2021 survey (March 2021);
- Public Health, hospital and life expectancy data provided by the Office for Health Improvement and Disparities via [fingertips](#);
- Benefit claimants data from the Department of Work and Pensions.

1st September 2023

Page 1

2 Key points from the data

Population and health data for the East Oxford LTN area shows that:

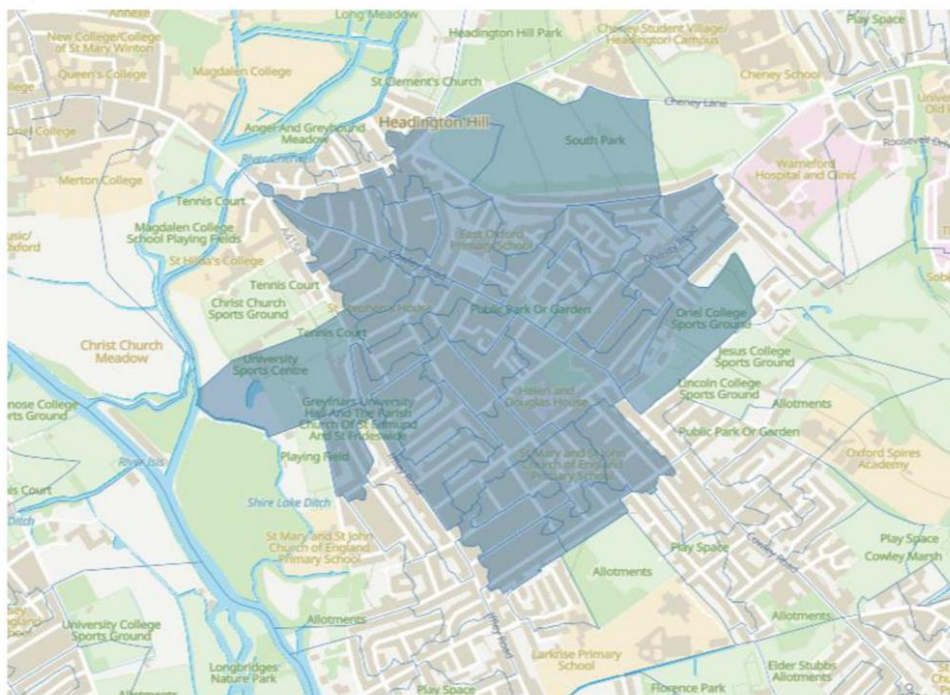
- As of March 2021, the area had 12,000 residents living in 4,300 households.
- Compared with Oxford city, the area had double the proportion of residents aged 20-24 years.
- Residents were more likely than Oxford city to be from a White ethnic background.
- Households were more likely to be private rented accommodation (52% compared with 32% for Oxford) and to have 4 or more people living in the household.
- The proportion of households in relative deprivation varies across the LTN area, which means that the area averages hide some wide differences.
- Residents were more likely to have higher level qualifications (degree and above) and were more likely to be in professional occupations. The proportion in elementary occupations was also slightly higher than the Oxford average.
- Households in the area were less likely to have a car than the average for Oxford and those in employment were more likely to work mainly from home. *(Note that the Census 2021 survey was carried out in March 2021 when lock down restrictions were in place).*
- The COVID-19 lockdown led to a major change in the proportion of people working from home. The proportion in the East Central Oxford area was above average in 2011 and in 2021.
- Residents of the area were more likely than average to be in very good health and to be "not disabled". The area had a lower proportion of people providing unpaid care. This comparison is likely to be affected by the younger age profile of the local population.
- Rates of older people in poverty were above average.
- Life expectancy data for 2016-20 for the area shows Males in the area with a significantly lower (worse than) life expectancy than the England average (76.3 compared with 79.5 years). Life expectancy for Females was better than the England average¹.
- Hospital admissions for alcohol attributable conditions for the area was significantly worse than the national average.
- The rate of emergency hospital admissions due to Chronic Obstructive Pulmonary Disease (COPD), a condition potentially affected by air quality, was similar to the Oxford and England averages.
- Over a third of children in year 6 (aged 10-11 years) living in the area were measured as overweight/obese.

¹ Data for Oxford for a comparable 5-years combined time period is not available
1st September 2023

3 Geographical area

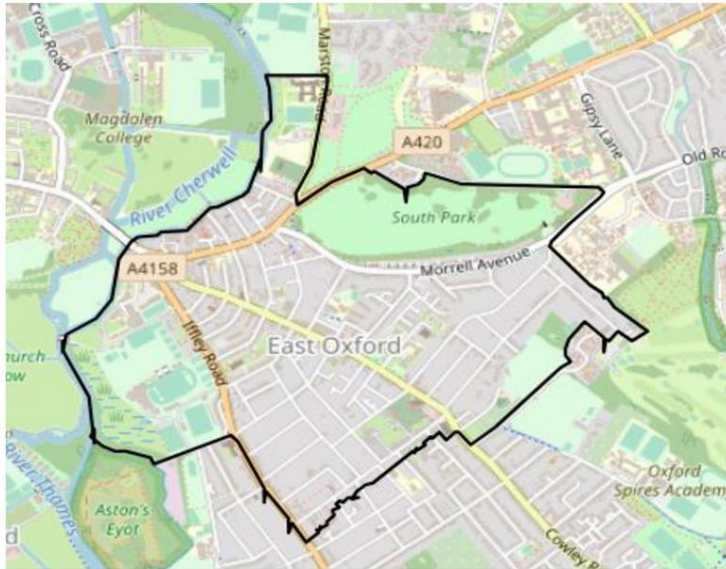
The Census 2021 profile for the East Oxford LTN area included in this chapter is based on a geographical area built from smaller “output areas” (see map below and annex 1 for the list of areas).

Map showing Output Areas selected for the East Oxford LTN



Small area Public Health, hospital admissions and life expectancy data however is not available at output area level. This type of data is published by Middle Layer Super Output (MSOA) area and the following map shows the extent of the MSOA covering the East Oxford LTN area.

Map showing boundary of Middle Layer Super Output Area Oxford 011, East Central Oxford



Map from www.nomisweb.co.uk

4 Demographic profile – Census 2021

According to the ONS Census survey of March 2021, the East Oxford Low Traffic Neighbourhood area included 12,000 residents living in 4,300 households.

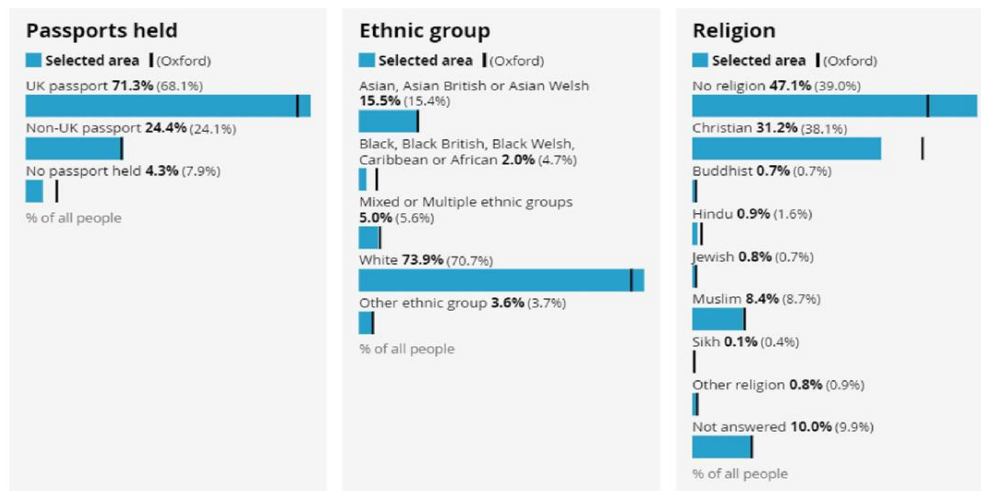
Compared with Oxford city, this area had double the proportion of residents aged 20-24 years.

- 3,300 residents in the East Oxford LTN area were aged 20-24 years, 28% of the total (14% in Oxford).



[Build a custom area profile - Census 2021, ONS](#)

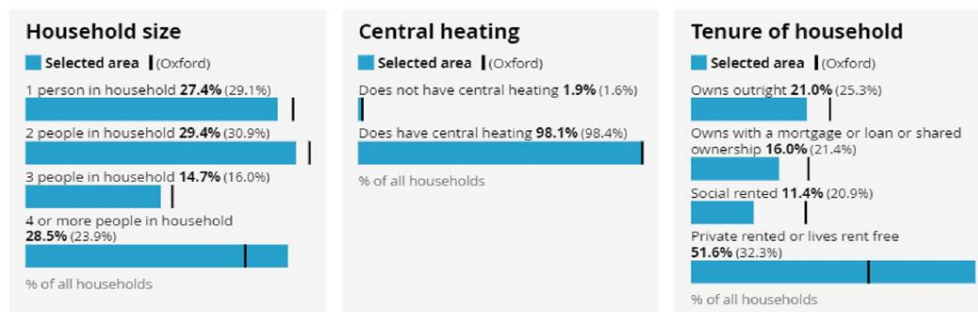
Residents of the East Oxford LTN area were more likely than Oxford city to have a UK passport, be from a White ethnic background and to have no stated religion.



[Build a custom area profile - Census 2021, ONS](#)

5 Housing – Census 2021

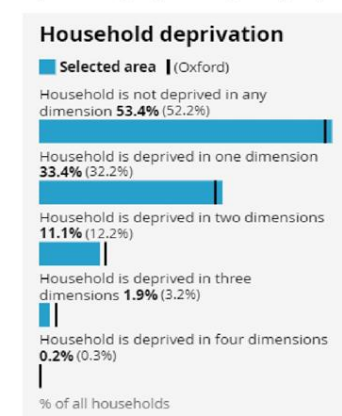
Households in the East Oxford LTN area were more likely to be living in private rented accommodation (52% compared with 32% for Oxford) and to have 4 or more people living in the household.



[Build a custom area profile - Census 2021, ONS](#)

6 Household deprivation – Census 2021

Overall, the East Oxford LTN area has a lower proportion of households classified as deprived on any dimension (using the Census 2021 data and definition²) than the Oxford City average (or a higher proportion classified as not deprived).



[Build a custom area profile - Census 2021, ONS](#)

² See [Household deprivation variable: Census 2021 - Office for National Statistics \(ons.gov.uk\)](#)

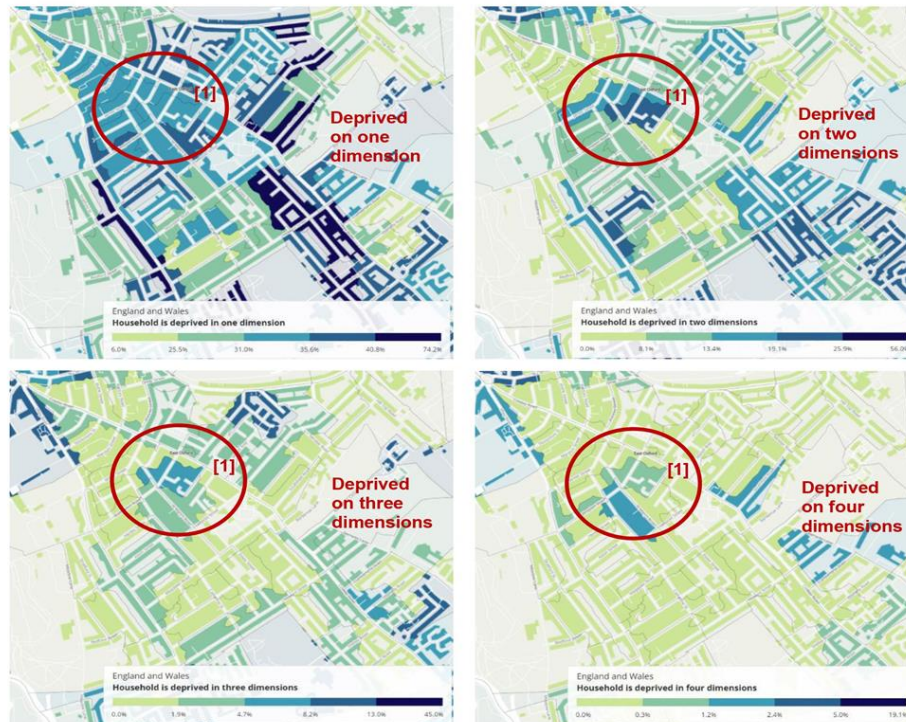
The dimensions of deprivation used to classify households are indicators based on four selected household characteristics:

- Education - A household is classified as deprived in the education dimension if no one has at least level 2 education and no one aged 16 to 18 years is a full-time student.
- Employment - A household is classified as deprived in the employment dimension if any member, not a full-time student, is either unemployed or economically inactive due to long-term sickness or disability.
- Health - A household is classified as deprived in the health dimension if any person in the household has general health that is bad or very bad or is identified as disabled.
- Housing - A household is classified as deprived in the housing dimension if the household's accommodation is either overcrowded, in a shared dwelling, or has no central heating.

Household deprivation varies across the LTN area however, which means that averages for the area hide some wide differences.

The area between Cowley Road, St Mary's Road and Leopold Street [1] is more likely to have households in relative deprivation.

Maps (by output area) for East Oxford LTN area showing % households deprived on one, two, three or four dimensions

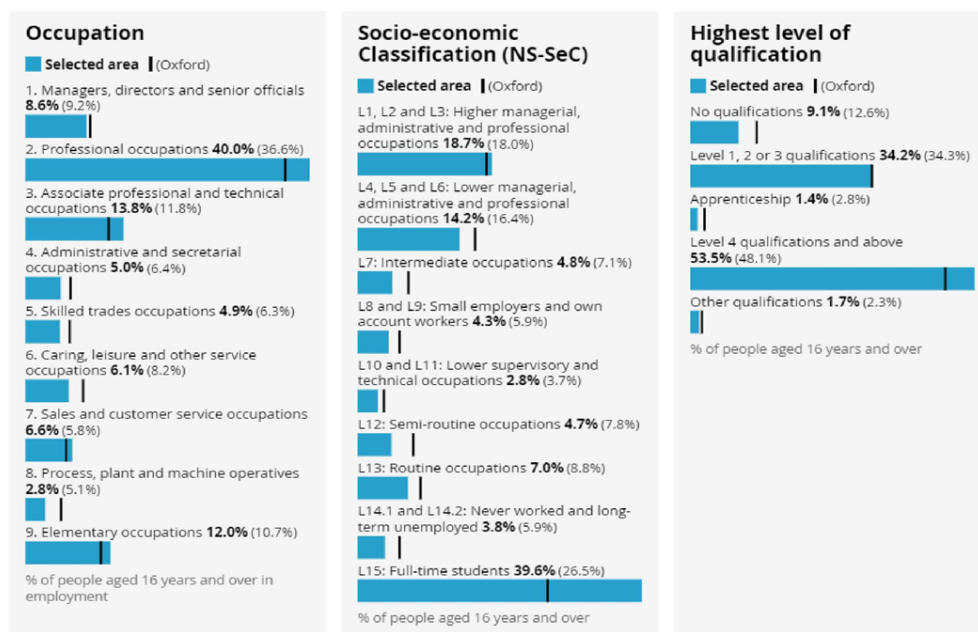


[Household deprivation - Census Maps, ONS](#)

7 Occupation and qualifications – Census 2021

Of people aged 16+ years, residents of the East Oxford LTN area were more likely to have higher level qualifications (degree and above) and to be in professional occupations.

The proportion in elementary occupations was also slightly higher than the Oxford average.

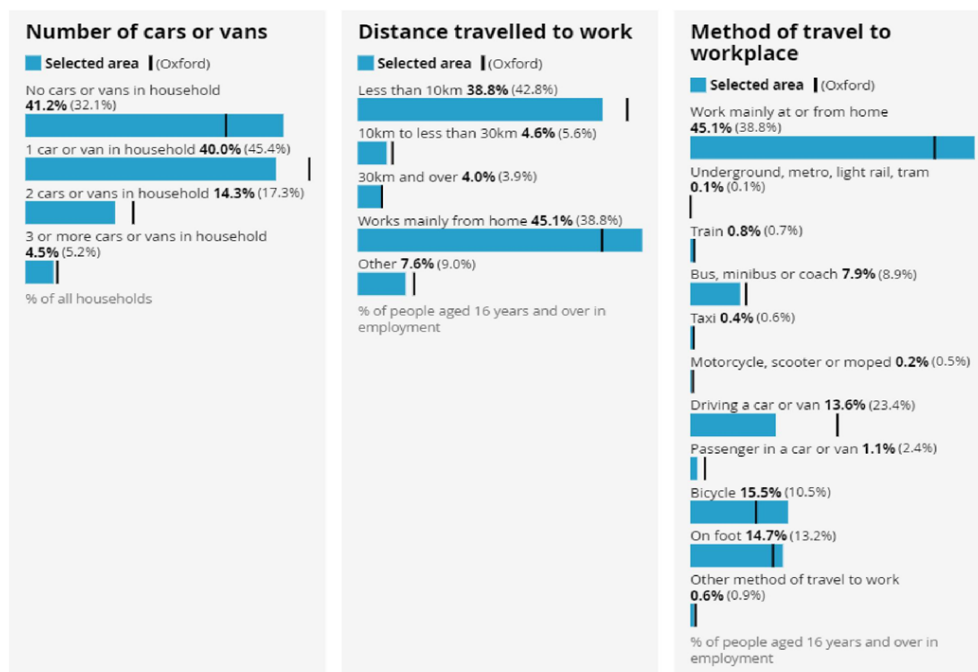


[Build a custom area profile - Census 2021, ONS](#)

8 Car ownership and travel to work – Census 2021

As of March 2021, households in the East Oxford LTN area were less likely to have a car than the average for Oxford and those in employment were more likely to work mainly from home.

Note that the Census 2021 survey was carried out in March 2021 when lock down restrictions were in place.



[Build a custom area profile - Census 2021, ONS](#)

Comparing 2011 and 2021 Census findings for the East Central Oxford MSOA shows the proportion of households with at least one car declined slightly in the area, while in Oxford the % of households with car(s) increased slightly. This may be linked to changes in household tenure and occupancy.

The COVID-19 lockdown led to a major change in the proportion of people working from home. The proportion in the East Central Oxford area was above average in 2011 and in 2021.

Households with at least 1 car	2011	2021	2011 to 2021
East Central Oxford MSOA	56%	55%	-1ppt
Oxford	67%	68%	+1ppt

Working from home as % of those in employment	2011	2021	2011 to 2021
East Central Oxford MSOA	8%	45%	+37ppt
Oxford	6%	39%	+33ppt

ONS Census 2011 and Census 2021 from www.nomisweb.co.uk; from Car ownership and Method of travel to work tables. Note slight differences to the above charts as this table is for the Middle Layer Super Output Area, see maps in [section 3](#)

9 Health and caring – Census 2021

Residents of the East Oxford LTN area were more likely than average to be in very good health and to be “not disabled”. The area had a lower proportion of people providing unpaid care. This comparison is likely to be affected by the younger age profile of the local population and the higher-than-average proportion of students.



[Build a custom area profile - Census 2021, ONS](#)

10 Low income and health-related benefit claimants

Within the East Oxford LTN (MSOA) area there were:

- 175 unemployment claimants
- 136 claimants of pension credit
- 156 children living in relative low income* households
- 93 residents claiming attendance allowance
- 280 claiming personal independence payments

The proportion per population of claimants were each below average for these measures with the exception of pension credit where the rate per population aged 65+ in East Oxford was above the Oxford average (14.4% vs 10.2%).

Claimants of income and health-related benefits for East Central Oxford MSOA

Benefit type		East Central Oxford MSOA		Oxford %	Denominator (Census 2021)
		Count	%		
Unemployment claimants	June23	175	1.8%	2.2%	aged 16-74
Pension credit	Nov22	136	14.4%	10.2%	aged 65+
Children in Low Income Households*	2021/22	156	9.4%	13.2%	aged 0-19
Attendance allowance	Nov22	93	9.9%	10.4%	aged 65+
Personal Independence Payments	Apr23	280	2.7%	3.4%	aged 16+

DWP from statXplore





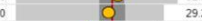







*Children in relative low income households. Relative low-income is defined as a family whose equivalised income is below 60 per cent of contemporary median income. Gross income measure is Before Housing Costs (BHC) and includes contributions from earnings, state support and pensions.

11 Life expectancy and hospital admissions

Life expectancy data (5 years combined for 2016-20) for the East Central Oxford MSOA area shows Males in the area had a significantly lower (worse than) life expectancy at 76.3 years than the England average (79.5 years).

For females, life expectancy was better than the England average (85.5 years vs 83.2 years).

Life Expectancy and mortality for East Central Oxford MSOA



















Indicator	Period	011 East Central Counties Oxford & UAs (2021/22-2022/23)				England		
		Count	Value	Value	Value	Worst	Range	Best
Life Expectancy								
Life expectancy at birth, (upper age band 90 and over) (Male)	2016 - 20	-	76.3	81.5	79.5	66.6		
Life expectancy at birth, (upper age band 90 and over) (Female)	2016 - 20	-	85.5	84.8	83.2	72.0		
Mortality								
Deaths from all causes, all ages, standardised mortality ratio	2016 - 20	221	96.8	87.1	100.0	251.0		36.0
Deaths from all causes, under 75 years, standardised mortality ratio	2016 - 20	91	97.0	78.5	100.0	309.2		26.1
Deaths from all cancer, all ages, standardised mortality ratio	2016 - 20	58	94.7	89.1	100.0	200.8		32.2
Deaths from all cancer, under 75 years, standardised mortality ratio (SMR)	2016 - 20	35	104.8	86.5	100.0	231.0		29.2
Deaths from circulatory disease, all ages, standardised mortality ratio	2016 - 20	67	127.3	81.3	100.0	244.7		32.1
Deaths from circulatory disease, under 75 years, standardised mortality ratio	2016 - 20	24	129.7	72.0	100.0	374.4		12.6
Deaths from coronary heart disease, all ages, standardised mortality ratio	2016 - 20	29	129.0	74.1	100.0	307.5		16.6
Deaths from stroke, all ages, standardised mortality ratio	2016 - 20	19	157.5	90.8	100.0	415.7		0.0
Deaths from respiratory diseases, all ages, standardised mortality ratio	2016 - 20	23	81.8	82.0	100.0	335.4		21.8
Deaths from causes considered preventable, under 75 years, standardised mortality ratio	2016 - 20	36	80.9	73.6	100.0	378.4		17.3

[Local Health - Small Area Public Health Data - Data - OHID \(phe.org.uk\)](#) (trend data currently not available). Comparable data for Oxford is not available.

Hospital admissions data shows East Central Oxford MSOA having rates of admissions similar to the England average, other than for hospital admissions for alcohol attributable conditions where the area was significant worse than average.

For Chronic Obstructive Pulmonary Disease (COPD), a condition potentially affected by air quality³, the rate of age standardised emergency hospital admissions (for the 5 year period combined 2016/17 to 2020/21) was 95.4. This was similar to the Oxford average (105.5) and similar to the England average (100).

Hospital admissions for residents of East Central Oxford MSOA

Indicator	Period	011 East Central Counties Oxford & UAs (2021/22-2022/23)				England		
		Count	Value	Value	Value	Worst	Range	Best
Emergency Hospital Admissions: Adults								
Emergency hospital admissions for all causes, all ages, standardised admission ratio 	2016/17 - 2021	-	91.4	93.1	100.0	215.6		31.5
Emergency hospital admissions for coronary heart disease, standardised admission ratio 	2016/17 - 2021	-	103.6	71.9	100.0	396.1		23.0
Emergency hospital admissions for stroke, standardised admission ratio 	2016/17 - 2021	-	78.4	80.3	100.0	260.9		28.4
Emergency hospital admissions for Myocardial Infarction (heart attack), standardised admission ratio 	2016/17 - 2021	-	110.8	81.0	100.0	318.7		21.4
Emergency hospital admissions for Chronic Obstructive Pulmonary Disease (COPD), standardised admission ratio 	2016/17 - 2021	-	95.4	63.5	100.0	554.5		9.3
Hospital admissions, harm and injury and Long Term Conditions								
Emergency hospital admissions for intentional self harm, standardised admission ratio 	2016/17 - 2021	-	88.3	98.9	100.0	541.4		10.2
Emergency hospital admissions for hip fracture in persons 65 years and over, standardised admission ratio 	2016/17 - 2021	-	108.4	96.4	100.0	527.4		29.3
Hospital admissions for alcohol attributable conditions, (Broad definition) 	2016/17 - 2021	595	109.9	77.1	100.0	391.1		35.9
Hospital admissions for alcohol attributable conditions, (Narrow definition) 	2016/17 - 2021	205	107.4	73.7	100.0	471.9		22.6

[Local Health - Small Area Public Health Data - Data - OHID \(phe.org.uk\)](#) (trend data currently not available)

Hospital data is flagged by NHS Digital as having a data quality issue affecting HES data for Nottingham University Hospitals Trust (NUH) in 2016/17. Over 30% of records from this trust did not have a valid geography of residence assigned.

Note that conditions such as asthma and diabetes is recorded by primary care and available for reporting at GP practice level, but statistics are not reported within geographical boundaries - either for the East Oxford LTN area or for the East Central Oxford MSOA.

³ [Chronic obstructive pulmonary disease \(COPD\) - Causes - NHS \(www.nhs.uk\)](#)
1st September 2023

12 Healthy weight

For children in reception year (aged 4-5 years) in the East Central Oxford MSOA, just above 1 in 6 (18%) were measured as overweight/obese. This was similar to⁴ the averages for Oxford and England.

In their final year of primary school aged 10-11 years, over a third (35%) of children were measured as overweight/obese in the East Central Oxford MSOA - also similar to the averages for Oxford and England.

Prevalence of children overweight (including obese) for East Central Oxford MSOA, 3-years data combined (2019/20 – 21/22)

	East Central Oxford MSOA	Oxford	England
Reception (aged 4-5 years)	17.9% (range 13.4% to 26.3%)	18.7%	22.6%
Year 6 (aged 10-11 years)	35.3% (range 24.9% to 44.7%)	33.7%	35.8%

[Local Health – Small Area Public Health Data, OHID](#) from NCMP

⁴ "Similar to average" means statistically similar - with overlapping confidence interval ranges
1st September 2023

ANNEX 1: List of OA codes in the LTN and MSOA area

OA codes in LTN area used in Census 2021 profile	OA codes in East Central Oxford MSOA Oxford 011
E00145425	E00145592
E00145427	E00145597
E00145428	E00145598
E00145430	E00145599
E00145431	E00145593
E00145432	E00145595
E00145433	E00145601
E00145592	E00145605
E00145593	E00145591
E00145594	E00145594
E00145595	E00145596
E00145596	E00145606
E00145597	E00145600
E00145598	E00145602
E00145599	E00145603
E00145601	E00145604
E00145605	E00145607
E00145606	E00145622
E00145607	E00145624
E00145621	E00145627
E00145622	E00145628
E00145623	E00145630
E00145624	E00145623
E00145625	E00145625
E00145626	E00145626
E00145627	E00145629
E00145628	E00145634
E00145629	E00145621
E00145630	E00145631
E00145632	E00145632
E00145633	E00145633
E00145634	

Annex B

Calculations Used for Statistical Analysis

Difference

245. To calculate the difference in counts the average daily traffic counts for the pre-implementation period was subtracted from the post-implementation period (dates for each period vary by data source). To derive the percentage difference, this difference was divided by the pre-implementation period average daily counts (in some instances the mean and in some instances the median, depending on the data source).

Difference in Difference (DiD)

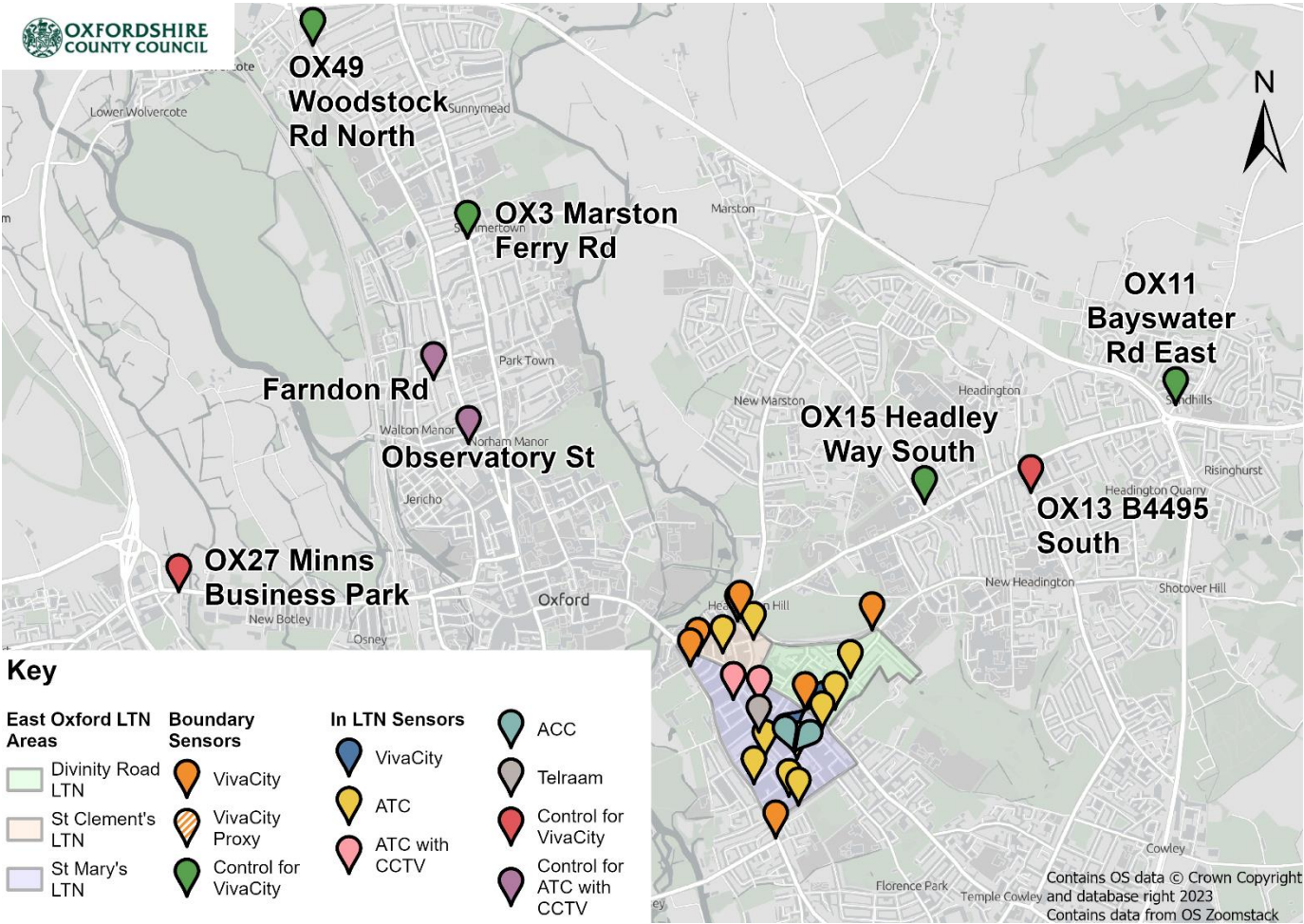
246. The calculation for DiD (impact estimate) takes the difference in the average daily traffic volumes (by mode) for the roads inside the east Oxford LTN before and after the implementation of the traffic filters, and then subtracts the difference in the average daily traffic volume (by mode) for the control area roads before and after the implementation of the traffic filters. The resulting difference is the estimated effect of the LTN on the traffic volumes by mode of transport. The same method was also applied to the boundary roads and their control roads. For the control roads, the aggregated daily average across all the roads from each individual road's daily median count was taken.

247. To account for the potential scaling effect on +/- difference calculations (owing to differences in traffic volume sizes between control and intervention area roads), firstly the DiD (impact estimate) as a percentage increase/decrease in average daily traffic volumes were calculated. This percentage was then applied to the pre-implementation traffic count to derive the estimated average daily count (by mode), which was the estimated effect attributed to the east Oxford LTN traffic filters.

Annex C

Map of all sensor locations

Figure 24 - Map of all traffic sensor locations used in report analysis



Types of traffic sensors used

VivaCity object identification sensors



Figure 25 - Vivacity camera installed on lamp post

248. These sensors count and classify a variety of road users including cars, pedestrians and cyclists, using cameras and machine vision. No personal data is collected, and the raw images from the camera are not used. In this evaluation VivaCity count lines²⁵ have been analysed from sensors on Cowley Road, Iffley Road and Morrell Avenue, at two locations on each of the former two roads and one location in the latter, and two are located inside the LTNs (one in St Mary's LTN and one in Divinity Road LTN).

249. Data is received as counts broken down by sensor and mode of transport down to 5-minute intervals for which the sensor has been live. These modes of transport are pedestrians, cycles, cars, motorbikes, Light Goods Vehicles (LGV), Other Goods Vehicles (OGV1, OGV2 and bus). OGV1 and OGV2 are grouped to HGVs and bus counts are not included in this analysis.

²⁵ Sensor 'count lines' are virtual lines across a road and used as part of the sensor analysis derived from each camera sensor. The modes such as pedestrians, cars, cyclists are then counted. Each sensor has at least one count line and some have multiple count lines.

Temporary Automatic Traffic Counters (ATCs)



Figure 26 - An ATC installation

250. These sensors are used to count vehicles inside the LTNs where there are limited VivaCity cameras available. ATCs use pneumatic tubing that is laid across a road to count air pulses from passing traffic. They can determine flow rate, mean speed, and type of vehicle. ATCs are unable to count pedestrians and cycle counts can only be used with caution.
251. Data was received from the ten sensor surveys as counts broken down by sensor, travel direction and mode of transport for each 15-minute interval during the survey period. These modes of transport are cycle, motorcycle, car, LGV, bus, and several categories of HGV.
252. It was decided to omit the cycle counts from the analysis as other studies indicated that cycles are not always picked up by the counters. This is due to the low speed and weight of bicycles. There is inconsistency in how many cycles are recorded, or not, from site to site, making any comparison unreliable.
253. This issue does also occur when surveying motorcycles. However, the problem is less of an issue due to the greater weight of the vehicles. Therefore, motorcycles have been included in the analysis, but three sensors which contained extreme outliers in either the before or during period have been removed from the dataset. All categories of HGV have been grouped together, including the occasional bus recorded, as there were no scheduled bus routes using these roads during the survey periods.
254. Days where only partial data was collected were omitted from the analysis. Roads affected by partial data include Hertford Street (in 2021) and Jeune Street (in 2022).
255. The second survey method used combined temporary ATC and CCTV data collection together. This method covered two additional in-LTN area ATCs and two control sites. It recorded vehicles differently from the ATCs undertaken without CCTV, with data hourly, no cycles or motorcycles monitored, and with cars and LGVs grouped together. When grouping vehicles together, this gives two vehicle categories of cars/LGVs and HGVs.

Closed Circuit TV (CCTV)

256. CCTV images are recorded for the duration of the survey and that CCTV footage is then manually analysed to count pedestrians and cycles. This method has been used to supplement the ATC count data to understand the impact on pedestrian and cycle counts (see paragraph 250 above).

257. Data is recorded in counts for every 15-minute interval from 7am to 7pm by direction and pedestrian or cycle during the survey period.

Automatic Cycle Counter (ACC)



Figure 27 - An ACC installation

258. These sensors use in-road inductive loops (metal detectors) that count cycles passing over them by direction and by hour of the day.

259. Data is received as hourly counts broken down by sensor for cycles.

Telraam counter



Figure 28 - A Telraam counter

260. A Telraam sensor is a small electronic device installed in a window overlooking a road. The sensor counts and classifies a variety of road users including cars, pedestrians and cyclists as well as car speed using artificial intelligence (AI) and a tracking algorithm. No personal data is collected, and the raw images from the camera are not saved or exported from the device. Data from these sensors is publicly available at the Telraam website²⁶.

261. Telraam sensors provide counts for multiple modes of transport, similar to VivaCity sensors, also using a camera and AI algorithm to classify and count road users. However, Telraam sensors have been designed for citizens to be able to monitor their local street by placement looking out from a first-floor window. The data collected by these devices is openly available on the internet in a [dashboard](#). Data is received as hourly counts broken down by sensor, direction of travel and mode of transport of pedestrian, two-wheeler, car or heavy. Two-wheeler includes both cycles and motorbikes with heavy including LGVs and HGVs.

²⁶ telraam.net

Annex D

Boundary roads - detailed analysis

262. Percentage difference is presented and coloured with the hourly count difference in brackets and the 'before' to 'after' below, following the methodology in *Traffic Volume Analysis/Methodology/Granularity*. Differences are calculated before rounding so may not exactly match the before and after counts.

Table 61 - Granular analysis of boundary roads

Mode	Road	Weekday						Weekend	
		AM-peak		Day		PM-peak		Day	
		In	Out	In	Out	In	Out	In	Out
Pedestrian	Iffley Road east	+9% (+3) 38 -> 41	-15% (-1) 5 -> 4	-8% (-2) 29 -> 26	-13% (-1) 5 -> 5	-5% (-2) 29 -> 28	-12% (-1) 9 -> 8	+10% (+3) 32 -> 36	+27% (+1) 5 -> 7
	Iffley Road north	+89% (+4) 5 -> 9	-50% (-1) 1 -> 1	+21% (+1) 4 -> 5	-14% (+0) 1 -> 1	-16% (-1) 4 -> 3	-36% (-1) 3 -> 2	+31% (+1) 5 -> 6	-52% (-1) 2 -> 1
	Cowley Road north	+0% (+0) 157 -> 157	-1% (-1) 47 -> 47	-12% (-26) 216 -> 191	-3% (-3) 124 -> 121	-15% (-32) 209 -> 177	-3% (-9) 253 -> 244	-7% (-19) 283 -> 264	-6% (-11) 171 -> 161
	Morrell Avenue	+40% (+1) 3 -> 4	-30% (-2) 5 -> 4	+17% (+0) 2 -> 2	-15% (-1) 3 -> 3	-15% (-1) 3 -> 3	-8% (+0) 3 -> 3	+38% (+1) 2 -> 2	-23% (-1) 2 -> 2
Cycle	Iffley Road east	+38% (+30) 81 -> 111	+38% (+4) 11 -> 15	+25% (+7) 28 -> 35	+4% (+0) 12 -> 12	+21% (+7) 31 -> 37	+19% (+4) 19 -> 22	+21% (+6) 28 -> 34	+25% (+4) 14 -> 18
	Iffley Road north	+16% (+29) 181 -> 209	+4% (+2) 41 -> 43	+12% (+14) 118 -> 132	+8% (+4) 55 -> 59	+3% (+2) 70 -> 72	+23% (+41) 174 -> 214	+16% (+15) 97 -> 112	+10% (+7) 68 -> 75
	Cowley Road north	+7% (+8) 112 -> 120	+8% (+4) 48 -> 51	-12% (-12) 95 -> 83	+5% (+3) 70 -> 74	-6% (-3) 57 -> 54	+35% (+55) 155 -> 210	-11% (-8) 76 -> 68	+9% (+6) 63 -> 69
	Morrell Avenue	+14% (+6) 42 -> 48	+28% (+16) 58 -> 74	+14% (+4) 28 -> 32	+33% (+9) 28 -> 37	+47% (+23) 50 -> 73	+52% (+12) 23 -> 35	+14% (+3) 18 -> 21	+31% (+4) 11 -> 15
Car	Iffley Road east	-25% (-162) 657 -> 495	-18% (-80) 456 -> 376	-12% (-55) 450 -> 395	-19% (-84) 440 -> 356	-7% (-41) 583 -> 542	-24% (-159) 668 -> 509	-12% (-61) 510 -> 450	-20% (-102) 503 -> 401

	Iffley Road north	+17% (+47) 282 -> 329	+44% (+76) 174 -> 250	+24% (+54) 225 -> 279	+30% (+66) 219 -> 284	+23% (+60) 259 -> 319	+28% (+85) 304 -> 388	+21% (+55) 262 -> 317	+31% (+71) 232 -> 303
	Cowley Road north	+63% (+77) 122 -> 199	+82% (+60) 74 -> 134	+61% (+79) 130 -> 208	+77% (+95) 124 -> 219	+40% (+66) 162 -> 228	+42% (+66) 160 -> 226	+46% (+73) 160 -> 233	+57% (+89) 155 -> 244
	Morrell Avenue	+30% (+24) 80 -> 103	+7% (+9) 133 -> 142	+24% (+20) 82 -> 102	+17% (+16) 91 -> 106	+10% (+12) 128 -> 140	+0% (+0) 125 -> 125	+22% (+17) 79 -> 96	+17% (+14) 81 -> 95
	St Clement's Proxy	-11% (-42) 395 -> 353		-1% (-2) 340 -> 338		-33% (-155) 475 -> 320		-5% (-19) 379 -> 360	
Motorcycle	Iffley Road east	+14% (+2) 15 -> 17	+20% (+1) 3 -> 3	-18% (-3) 16 -> 13	-15% (-1) 8 -> 7	-11% (-2) 18 -> 16	+12% (+1) 12 -> 13	-12% (-2) 14 -> 13	-1% (+0) 7 -> 7
	Iffley Road north	+9% (+1) 8 -> 9	+63% (+1) 2 -> 3	-6% (-1) 8 -> 8	-5% (-1) 9 -> 9	+16% (+1) 8 -> 9	-5% (-1) 13 -> 12	+4% (+0) 7 -> 7	-21% (-2) 10 -> 8
	Cowley Road north	-28% (-4) 13 -> 9	+0% (+0) 3 -> 3	-17% (-4) 22 -> 18	+5% (+1) 13 -> 13	-15% (-4) 25 -> 21	-2% (+0) 16 -> 16	-16% (-3) 20 -> 17	+8% (+1) 11 -> 12
	Morrell Avenue	-50% (-2) 4 -> 2	-33% (-1) 3 -> 2	-23% (-1) 6 -> 5	-13% (-1) 6 -> 6	-7% (-1) 10 -> 10	+8% (+1) 10 -> 10	-17% (-1) 5 -> 4	-6% (+0) 6 -> 5
LGV	Iffley Road east	-22% (-18) 84 -> 66	-7% (-3) 49 -> 46	-15% (-12) 80 -> 67	-14% (-13) 94 -> 80	-23% (-9) 39 -> 30	-19% (-15) 77 -> 62	-17% (-5) 28 -> 24	-5% (-2) 35 -> 33
	Iffley Road north	+9% (+4) 47 -> 51	+46% (+13) 28 -> 40	+22% (+11) 52 -> 63	+36% (+19) 52 -> 71	+20% (+5) 25 -> 30	+28% (+10) 35 -> 44	+19% (+3) 18 -> 22	+38% (+7) 18 -> 25
	Cowley Road north	+16% (+6) 38 -> 44	+68% (+12) 17 -> 29	+45% (+16) 36 -> 51	+74% (+24) 32 -> 55	+9% (+2) 22 -> 24	+49% (+8) 16 -> 24	+30% (+4) 14 -> 18	+98% (+10) 10 -> 20
	Morrell Avenue	+19% (+3) 13 -> 16	+52% (+6) 11 -> 16	+23% (+5) 19 -> 24	+37% (+6) 15 -> 21	+18% (+2) 11 -> 12	+25% (+2) 10 -> 12	+33% (+2) 6 -> 8	+36% (+2) 4 -> 6
HGV	Iffley Road east	+0% (+0) 19 -> 19	+0% (+0) 17 -> 17	+10% (+2) 21 -> 23	-6% (-1) 21 -> 20	+4% (+1) 14 -> 15	-14% (-2) 17 -> 14	-1% (+0) 13 -> 13	-20% (-2) 9 -> 7
	Iffley Road north	-6% (-1) 18 -> 17	-4% (-1) 13 -> 13	+1% (+0) 21 -> 21	+6% (+1) 15 -> 16	+5% (+1) 14 -> 14	-12% (-2) 13 -> 12	-1% (+0) 12 -> 12	-20% (-2) 8 -> 6
	Cowley Road north	-31% (-10) 31 -> 22	-23% (-6) 27 -> 21	-27% (-8) 31 -> 23	-7% (-2) 28 -> 26	-27% (-7) 27 -> 20	-15% (-3) 22 -> 19	-2% (+0) 19 -> 18	+8% (+1) 15 -> 16
	Morrell Avenue	-13% (-1) 8 -> 7	-8% (-1) 7 -> 6	-17% (-1) 8 -> 6	-23% (-2) 9 -> 7	-36% (-3) 7 -> 5	-37% (-3) 8 -> 5	-5% (+0) 3 -> 3	-13% (-1) 4 -> 3

Annex E

In-LTN survey dates

Table 62 - In-LTN survey dates

Type	Road	Survey	2021		2022	
			Start	Finish	Start	Finish
ATC	Minster Road	ATC	07/11/2021	23/11/2021	03/11/2022	21/11/2022
	Southfield Road	ATC	19/11/2021	30/11/2021	03/11/2022	21/11/2022
	Cross Street	ATC	07/11/2021	23/11/2021	03/11/2022	21/11/2022
	Jeune Street	ATC	07/11/2021	23/11/2021	03/11/2022	12/11/2022
	Stanley Road	ATC	07/11/2021	23/11/2021	03/11/2022	21/11/2022
	Magdalen Road (Iffley Road)	ATC	07/11/2021	23/11/2021	03/11/2022	21/11/2022
	Magdalen Road (Cowley Road)	ATC	07/11/2021	23/11/2021	03/11/2022	21/11/2022
	Hertford Street	ATC	12/11/2021	23/11/2021	03/11/2022	21/11/2022
	Charles Street	ATC	19/11/2021	30/11/2021	03/11/2022	21/11/2022
	Howard Street	ATC	07/11/2021	23/11/2021	03/11/2022	21/11/2022
ATC with CCTV	James Street	ATC	11/10/2021	24/10/2021	11/10/2022	24/10/2022
		CCTV	11/10/2021	24/10/2021	17/10/2022	30/10/2022
	Bullingdon Road	ATC	11/10/2021	24/10/2021	11/10/2022	24/10/2022
		CCTV	11/10/2021	24/10/2021	17/10/2022	30/10/2022
Control for ATC with CCTV	Farndon Road	ATC	11/10/2021	24/10/2021	11/11/2022	20/11/2022
		CCTV	11/10/2021	24/10/2021	17/10/2022	30/10/2022
	Observatory Street	ATC	11/10/2021	24/10/2021	11/10/2022	24/10/2022
		CCTV	11/10/2021	24/10/2021	17/10/2022	30/10/2022

In-LTN - detailed analysis

263. Percentage difference is presented and coloured with the hourly count difference in brackets and the 'before' to 'after' below, following the methodology in *Traffic Volume Analysis/Methodology/Granularity*. Differences are calculated before rounding so may not exactly match the before and after counts.

Table 63 – In-LTN ATC granularity

Mode	Road	Weekday						Weekend	
		AM-peak		Day		PM-peak		Day	
		In	Out	In	Out	In	Out	In	Out
Car	Jeune St	+80% (+25) 32 -> 57		+19% (+3) 16 -> 20		+63% (+13) 21 -> 34		+29% (+5) 17 -> 22	
	Cross St	-76% (-83) 109 -> 26	-70% (-31) 44 -> 13	-42% (-25) 61 -> 36	-63% (-26) 41 -> 15	-61% (-56) 91 -> 35	-53% (-33) 63 -> 29	-56% (-35) 62 -> 27	-63% (-25) 40 -> 15
	Minster Rd	-12% (-1) 6 -> 5	-34% (-1) 4 -> 2	+16% (+1) 6 -> 7	+4% (+0) 5 -> 6	-6% (+0) 8 -> 7	-14% (-1) 9 -> 8	+43% (+2) 5 -> 7	+17% (+1) 5 -> 5
	Southfield Rd	-85% (-33) 39 -> 6	-88% (-55) 63 -> 8	-83% (-37) 45 -> 7	-83% (-33) 40 -> 7	-90% (-89) 99 -> 10	-77% (-34) 44 -> 10	-84% (-38) 44 -> 7	-84% (-34) 40 -> 6
	Stanley Rd	-9% (-1) 6 -> 5	-20% (-1) 4 -> 3	+14% (+1) 8 -> 9	-28% (-2) 8 -> 5	-54% (-9) 17 -> 8	+39% (+3) 8 -> 12	+27% (+2) 7 -> 9	-17% (-1) 7 -> 6
	Magdalen Rd (Iffley Rd)		-88% (-156) 178 -> 22		-74% (-95) 129 -> 34		-82% (-125) 153 -> 28		-74% (-98) 131 -> 33
	Magdalen Road (Cowley Rd)	-71% (-108) 151 -> 44	+48% (+8) 17 -> 25	-71% (-82) 116 -> 34	+24% (+5) 20 -> 25	-67% (-96) 145 -> 48	+2% (+1) 32 -> 33	-73% (-89) 123 -> 34	+19% (+4) 23 -> 27
	Hertford St	-64% (-9) 14 -> 5	+32% (+2) 7 -> 9	-71% (-9) 13 -> 4	+27% (+3) 11 -> 13	-77% (-14) 18 -> 4	-25% (-4) 17 -> 13	-72% (-10) 14 -> 4	+34% (+3) 10 -> 13
	Charles St	-72% (-23) 31 -> 9	+26% (+3) 13 -> 16	-35% (-4) 12 -> 8	+20% (+3) 16 -> 20	-83% (-44) 53 -> 9	+34% (+7) 22 -> 30	-16% (-2) 11 -> 9	+18% (+4) 21 -> 25
	Howard St	-85% (-128) 151 -> 23		-84% (-109) 129 -> 20		-88% (-167) 191 -> 23		-83% (-114) 138 -> 24	

Table 64 – In-LTN additional ATC with CCTV granularity

Mode	Road	Weekday						Weekend	
		AM-peak		Day		PM-peak		Day	
		In	Out	In	Out	In	Out	In	Out
Pedestrian	James St	+9% (+2) 19 -> 21	+6% (+1) 18 -> 19	-13% (-4) 28 -> 24	-8% (-2) 29 -> 26	+1% (+0) 36 -> 36	-5% (-2) 45 -> 42	-28% (-9) 33 -> 24	-17% (-6) 33 -> 27
	Bullington Rd	+47% (+19) 40 -> 58	+28% (+5) 16 -> 21	+57% (+26) 45 -> 71	+69% (+23) 32 -> 55	+74% (+41) 56 -> 97	+78% (+48) 62 -> 110	+30% (+17) 57 -> 75	+55% (+21) 38 -> 59
Cycle	James St	+31% (+2) 6 -> 8	+14% (+3) 18 -> 21	-1% (+0) 9 -> 8	+4% (+1) 15 -> 16	+5% (+1) 19 -> 20	+19% (+3) 17 -> 20	-29% (-3) 10 -> 7	-5% (-1) 16 -> 15
	Bullington Rd	-12% (-4) 38 -> 34	+23% (+2) 8 -> 10	+41% (+6) 14 -> 20	+87% (+8) 9 -> 16	+35% (+6) 18 -> 25	+39% (+11) 27 -> 38	+11% (+2) 17 -> 19	+21% (+3) 13 -> 16
Car/LGV	James St	-89% (-41) 47 -> 5	-81% (-43) 53 -> 10	-69% (-20) 29 -> 9	-81% (-44) 54 -> 10	-70% (-29) 41 -> 13	-85% (-64) 76 -> 12	-74% (-24) 33 -> 8	-81% (-47) 58 -> 11
	Bullington Rd	+92% (+2) 2 -> 4	-57% (-15) 26 -> 11	+95% (+2) 2 -> 5	-52% (-18) 34 -> 16	+122% (+4) 3 -> 7	-52% (-23) 43 -> 21	+11% (+0) 3 -> 3	-39% (-13) 34 -> 20

Table 65 – In-LTN ACC granularity

Mode	Road	Weekday						Weekend	
		AM-peak		Day		PM-peak		Day	
		In	Out	In	Out	In	Out	In	Out
Cycle	Magdalen Rd	+20% (+8) 40 -> 48	+500% (+10) 2 -> 12	+19% (+3) 14 -> 17	+278% (+8) 3 -> 11	+9% (+1) 16 -> 17	+453% (+20) 5 -> 25	+27% (+4) 13 -> 17	+200% (+9) 4 -> 13
	St Mary's Rd	+0% (+0) 4 -> 4	-60% (-2) 3 -> 1	+7% (+0) 3 -> 3	-40% (-1) 2 -> 1	-12% (+0) 3 -> 3	-42% (-1) 3 -> 2	+7% (+0) 2 -> 3	-30% (-1) 2 -> 1

Table 66 - In-LTN Telraam granularity

Mode	Road	Weekday						Weekend	
		AM-peak		Day		PM-peak		Day	
		In	Out	In	Out	In	Out	In	Out
Pedestrian	Hurst St	+3% (+0) 15 -> 15	+24% (+2) 8 -> 10	-3% (+0) 12 -> 11	+29% (+3) 9 -> 11	+12% (+2) 18 -> 20	+15% (+3) 18 -> 20	+50% (+6) 13 -> 19	+78% (+7) 9 -> 16
Car	Hurst St	+10% (+1) 11 -> 12	-64% (-6) 10 -> 4	-47% (-10) 22 -> 12	-52% (-9) 18 -> 9	-50% (-11) 21 -> 11	-56% (-13) 23 -> 10	-26% (-4) 14 -> 11	-44% (-6) 13 -> 7
Two-wheeler	Hurst St	-4% (-1) 33 -> 32	-19% (-4) 23 -> 18	-11% (-3) 30 -> 26	+11% (+2) 21 -> 23	-10% (-3) 30 -> 27	-12% (-4) 37 -> 33	+6% (+2) 27 -> 29	+20% (+4) 18 -> 22
HGV	Hurst St	+34% (+1) 2 -> 2	-15% (+0) 1 -> 1	-39% (-2) 6 -> 4	-35% (-2) 5 -> 3	-49% (-4) 7 -> 4	+50% (+2) 4 -> 5	-32% (-1) 2 -> 1	-7% (+0) 1 -> 1

*Note, where there are minor differences in numbers, this is due to rounding errors

Table 67 Additional ATC with CCTV control data

Road	Pedestrian, In + Out				Cycle, In + Out			
	Weekday + Weekend			Weekday	Weekday + Weekend			Weekday
	before	after	diff.	diff.	before	after	diff.	diff.
Farndon Rd	216	196	-9%	-5%	80	69	-14%	-16%
Observatory St	952	910	-4%	-1%	230	234	2%	2%
Average	584	553	-5%	-2%	155	152	-2%	-3%

Road	Car/LGV, In + Out				HGV, In + Out			
	Weekday + Weekend			Weekday	Weekday + Weekend			Weekday
	before	after	diff.	diff.	before	after	diff.	diff.
Farndon Rd	456	322	-30%	-31%	75	53	-30%	-28%
Observatory St	929	917	-1%	2%	157	123	-21%	-18%
Average	693	619	-11%	-9%	116	88	-24%	-21%

Annex F

Other roads analysis

Figure 29 - Location of other roads used in the analysis

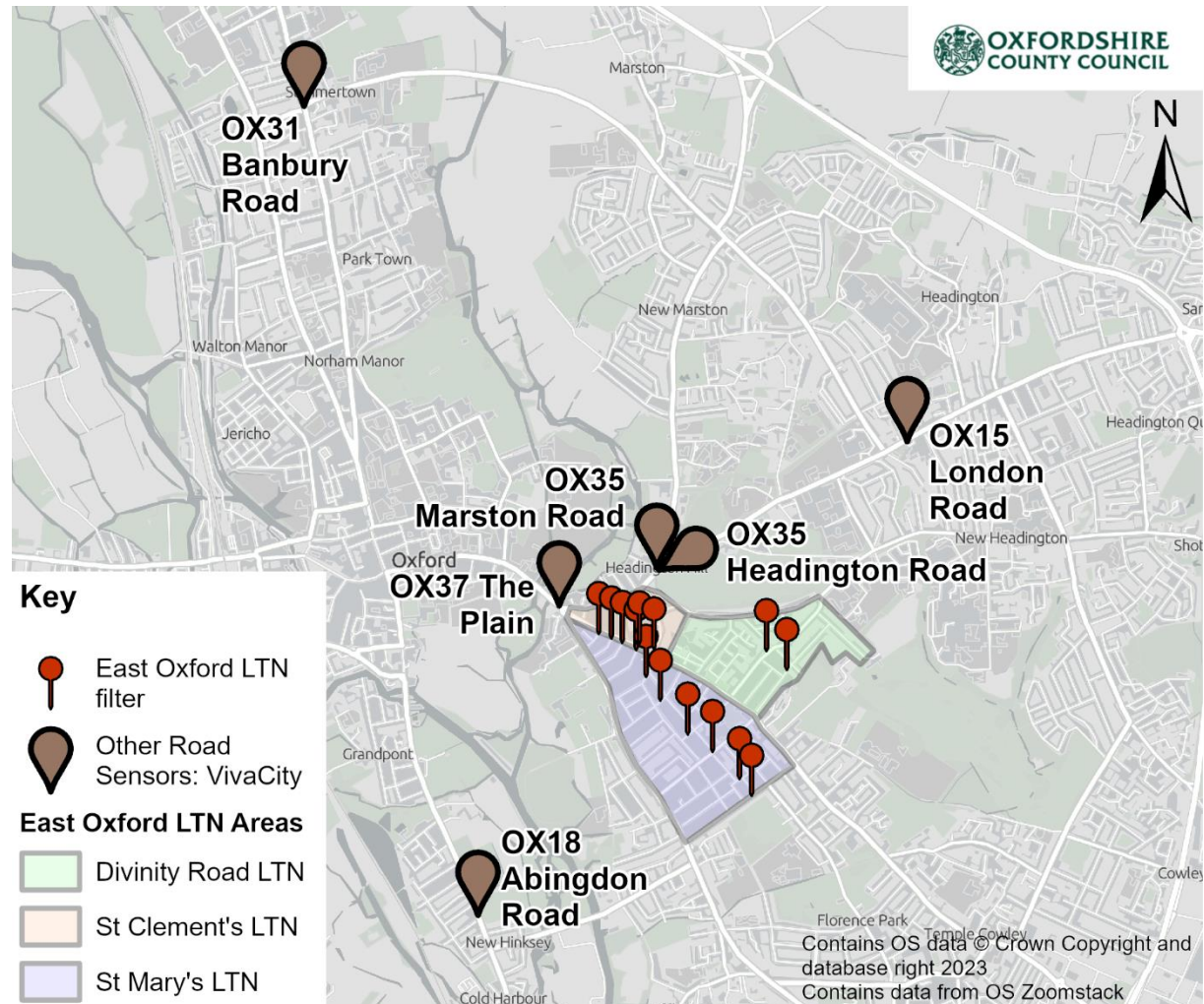


Table 68 - Other roads VivaCity car, In, Out, weekday + weekend

Road	Car, weekday + weekend								
	In + out			In			Out		
	before	after	diff.	before	after	diff.	before	after	diff.
OX37 The Plain	11,104	9,620	-13.4%	5,621	5,321	-5.3%	5,439	4,404	-19.0%
OX31 Banbury Road	11,305	13,019	15.2%	5,853	6,532	11.6%	5,431	6,435	18.5%
OX35 Marston Road	7,144	6,025	-15.7%	3,510	2,796	-20.3%	3,628	3,207	-11.6%
OX35 Headington Road	5,822	5,791	-0.5%	2,972	2,814	-5.3%	2,810	2,969	5.7%
OX18 Abingdon Road	13,283	13,085	-1.5%	6,405	6,257	-2.3%	6,811	6,810	0.0%
OX15 London Road	12,727	12,238	-3.8%	6,122	5,981	-2.3%	6,535	6,252	-4.3%

Annex G

Quickway cycle scheme details

Table 69 - Quickway opening dates

Road	From	To	Fully open date
Old Road/Morrell Ave/Warneford Lane (OXR12)	A420	Churchill Drive	11 August 2022
Cowley – Oxford Road (OXR14)	The Plain	Hollow Way	11 August 2022
Marston Road (OXR7)	Headington Road	Cherwell Drive	4 October 2022
Iffley Road/Rose Hill/Littlemore (OXR17)	The Plain	Eastern By-pass	20 October 2022

Note - for this exercise the completion of the installation of the wands/orcas (which was after the lining work) is used to denote when the schemes went live. However, with Cowley Road, as it didn't have any wands/orcas installed along it (due to available road width), the last night of lining work is used as the end date for this part of the project.

Figure 30 - Location of Quickways – shown in orange

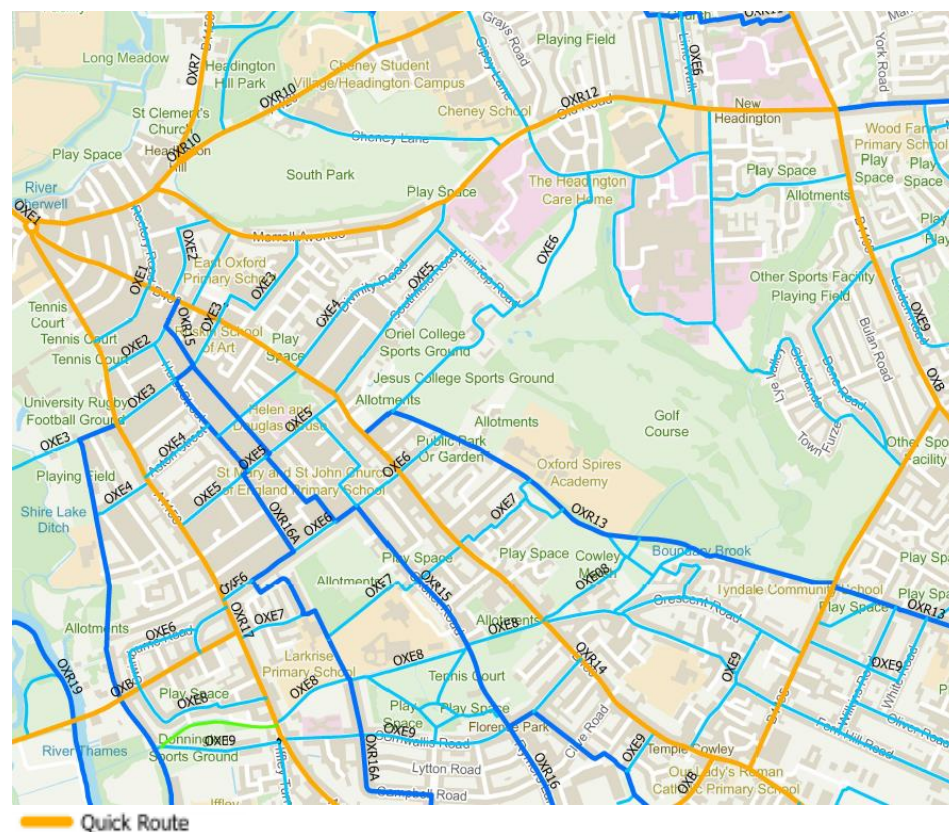


Figure 31 – Quickway, Iffley Road, showing orcas and wands



Figure 32 - Quickway, Iffley Road, showing cycle path junction details



Figure 33 - Quickway, Marston Road, showing orcas and wands



Figure 34 - Quickway, Warneford Lane, showing orcas and wands



Annex H

Summary of east Oxford LTN bollard outages

Table 70 - list of bollard outage periods by road

Area	Location	Date reported	Issue	Other notes	Date resolved	How long out in days?	Total days out, by road
East Oxford	Barnet street	24/06/2022	Fire damage	Done	08/07/2022	14	
East Oxford	Barnet Street	22/03/2023	Plastic bollard thrown in residential garden		05/04/2023	14	28
East Oxford	Bullingdon road	02/12/2022	bollard missing		06/12/2022	4	
East Oxford	Bullingdon road	15/11/2022	report of missing bollard		22/11/2022	7	
East Oxford	Bullingdon road	27/06/2022	Run over	Done	11/07/2022	14	
East Oxford	Bullingdon road	07/09/2022	Damaged bollard	Bollard Replaced	21/09/2022	14	
East Oxford	Bullingdon road	31/10/2022	missing	replaced - spent a while digging out sand which had been put into the base/	14/11/2022	14	
East Oxford	Bullingdon Road	01/09/2022	bollard socket damaged	Installed new bollard	19/09/2022	18	71
East Oxford	Circus street	22/11/2022	bollard missing on inspection		22/11/2022	0	0
East Oxford	Divinity road	04/08/2022	bollard socket damaged	installed temp bollard	06/08/2022	2	
East Oxford	Divinity Road	21/05/2022	Bollard removed (x1)	Bollard Replaced	26/05/2022	5	
East Oxford	Divinity Road	15/11/2022	report of missing bollard	socket damaged in one so not replaced	22/11/2022	7	
East Oxford	Divinity road	31/10/2022	missing	replaced	14/11/2022	14	
East Oxford	Divinity road	22/11/2022	bollard socket damaged		06/12/2022	14	
East Oxford	Divinity road	02/12/2022	bollard missing	one missing	16/12/2022	14	
East Oxford	Divinity Road	03/10/2022	Damaged bollard	2x bolalrds raplaced (were both missing)	26/10/2022	23	79
East Oxford	Essex Street	07/09/2022	Damaged bollard	Bollard Replaced	21/09/2022	14	
East Oxford	Essex street	31/10/2022	reported missing	waiting order	14/11/2022	14	
East Oxford	Essex street	02/12/2022	bollard missing		16/12/2022	14	
East Oxford	Essex street	06/12/2022	base damaged	plate in place	20/12/2022	14	56
East Oxford	Howard Street	21/05/2022	Bollard removed (x1)	Socket damaged as well as bollard removed	26/05/2022	5	
East Oxford	Howard Street	26/10/2022	base damage	bollard not locking	05/11/2022	10	
East Oxford	Howard street	24/06/2022	Fire damage	Done	08/07/2022	14	
East Oxford	Howard Street	11/10/2022	Missing	replaced	26/10/2022	15	44
East Oxford	James Street	01/09/2022	Bollard damaged	Installed new bollard	19/09/2022	18	18
	Leopold Street	13/07/2022	Bollard broken	inspection 2 persons visits due to H&S	15/07/2022	2	
East Oxford	Leopold Street	21/05/2022	Bollard removed (x1)	Bollard replace temporary / Socket damaged as well as bollard removed	26/05/2022	5	
East Oxford	leopold street	24/06/2022	Missing	Done	08/07/2022	14	
East Oxford	leopold street	27/06/2022	Run over	Done	11/07/2022	14	
East Oxford	Leopold Street	19/12/2022	bollard missing	being made safe/ Base damaged	02/01/2023	14	
East Oxford	Leopold Street	01/09/2022	bollard socket damaged	Installed new bollard	21/09/2022	20	69
East Oxford	Magdalen Road	13/07/2022	Bollard reported missing	inspection 2 persons visits due to H&S	15/07/2022	2	
East Oxford	Magdalen Road	04/08/2022	bollard socket damaged	installed temp bollard	06/08/2022	2	
East Oxford	Magdalen Road	18/07/2022	Damaged bollard		22/07/2022	4	
East Oxford	Magdalen Road	09/01/2023	bollard missing		23/01/2023	14	
East Oxford	Magdalen Road	10/10/2022	Missing	replaced	26/10/2022	16	36
East Oxford	Marston Street	04/08/2022	Bollard missing	replaced	04/08/2022	0	
East Oxford	Marston Street	03/05/2023	bollard missing	New Bollard fitted	17/05/2023	14	
East Oxford	Marston Street	07/10/2022	report bollard missing		14/11/2022	38	52
East Oxford	Princes Street	16/08/2022	bollard missing	OK still in place	17/08/2022	1	
East Oxford	Princes Street	07/10/2022	Damaged bollard		14/11/2022	38	39
East Oxford	rectory road	22/11/2022	bollard missing on inspection		22/11/2022	0	
East Oxford	Rectory Road	31/10/2022	missing	replaced	14/11/2022	14	
East Oxford	Rectory road	02/12/2022	bollard missing		16/12/2022	14	
East Oxford	Rectory Road	10/10/2022	Missing	replaced	26/10/2022	16	44
East Oxford	Southfield	02/12/2022	bollard missing		16/12/2022	14	
East Oxford	Southfield Road	04/08/2022	Bollard damaged	bollard damaged/ To replace	04/08/2022	0	
East Oxford	Southfield road	26/10/2022	base damage	bollard not locking	05/11/2022	10	
East Oxford	Southfield road	12/10/2022	missing	Bollard replaced	26/10/2022	14	38
East Oxford	Stockmore Street	22/11/2022	bollard missing on inspection		22/11/2022	0	
East Oxford	Stockmore Street	21/05/2022	Bollard removed (x2)	replaced 2 new bollards	26/05/2022	5	5
East Oxford	Temple Street	02/12/2022	bollard missing		16/12/2022	14	14

Comparison of bollard outages with count data

264. In the following timelines, the blue line shows count data on the road of interest, the red line the time that the named bollard was out.

Figure 35 – Timeline of VivaCity car counts on Leopold Street (west) and bollard outage on Leopold Street

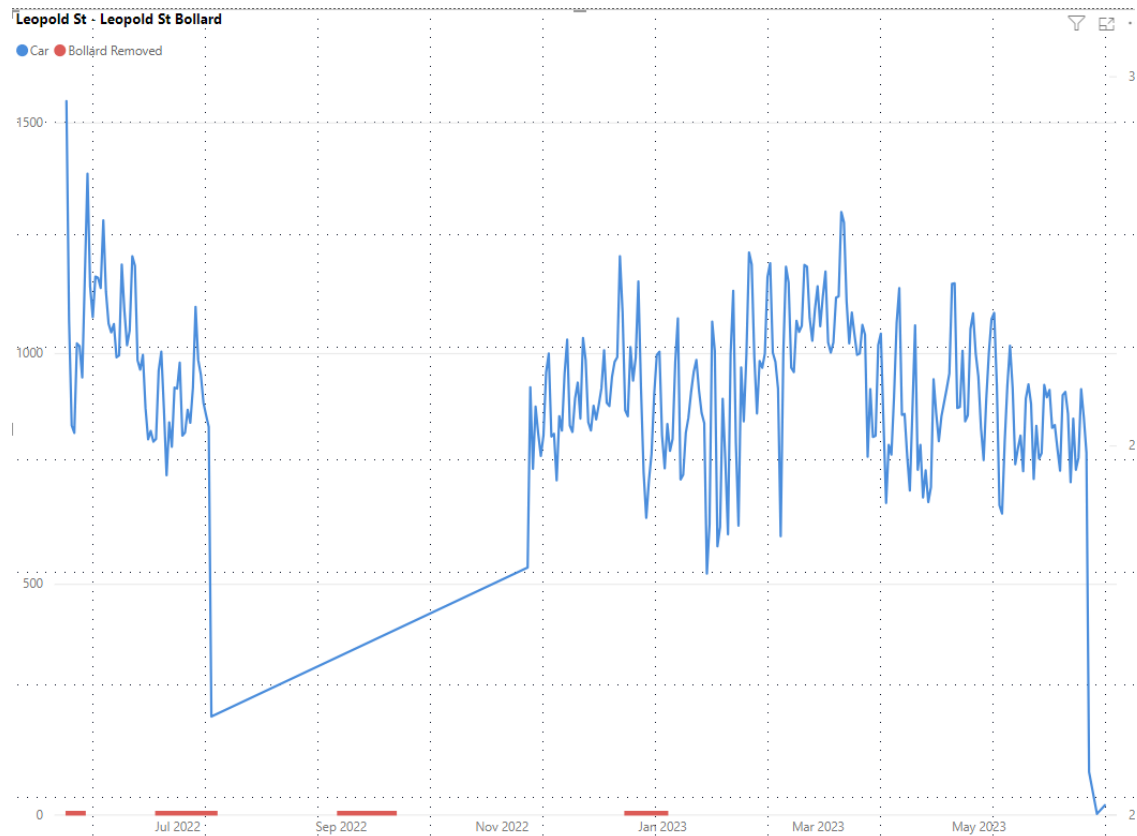


Figure 36 - Timeline of VivaCity car counts on Divinity Road (north) and bollard outage on Divinity Road

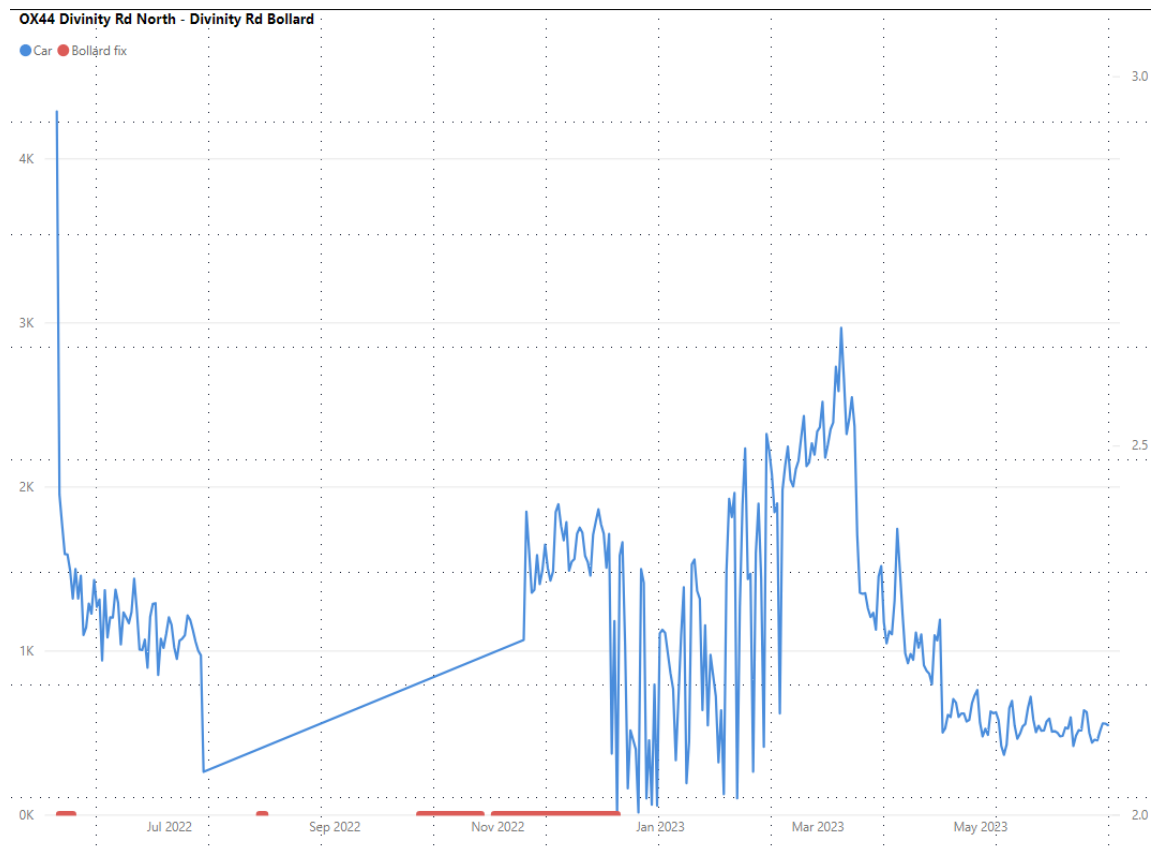


Figure 37 - Timeline of VivaCity car counts on Cowley Road (north) and bollard outage on James Street

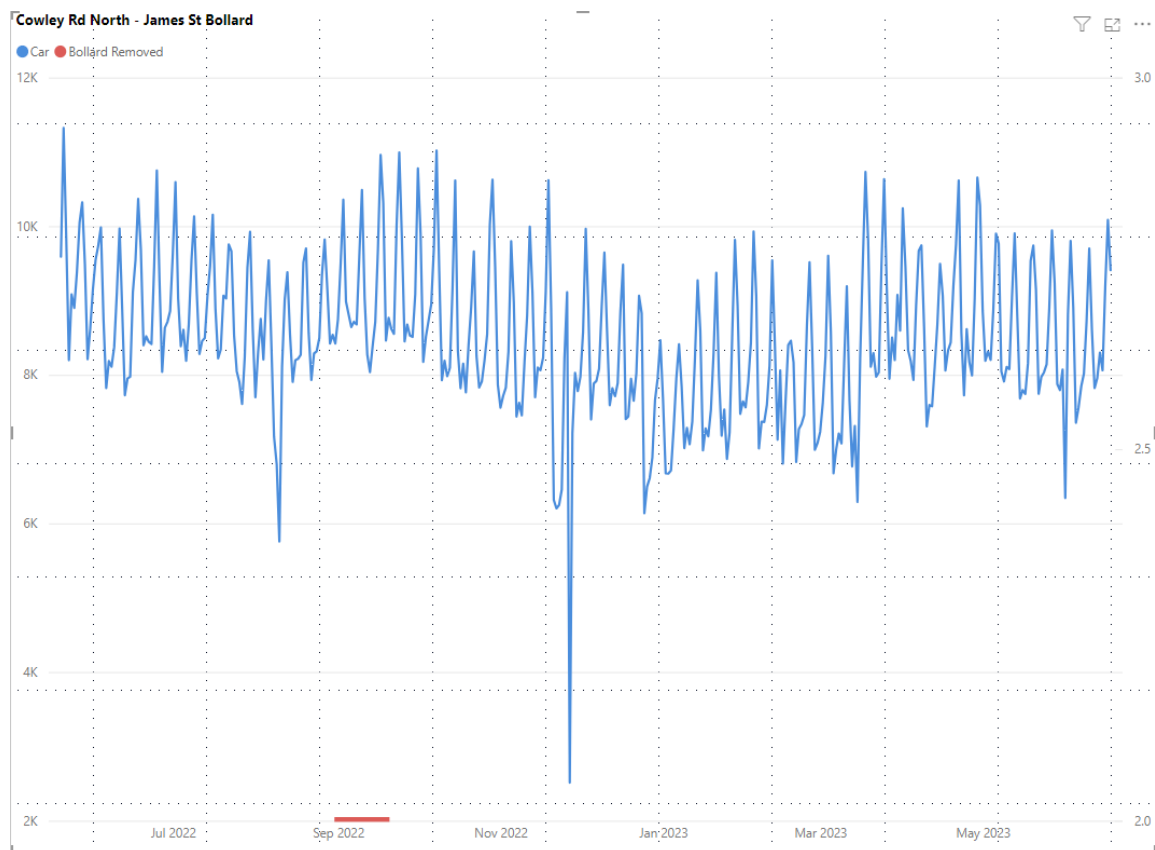
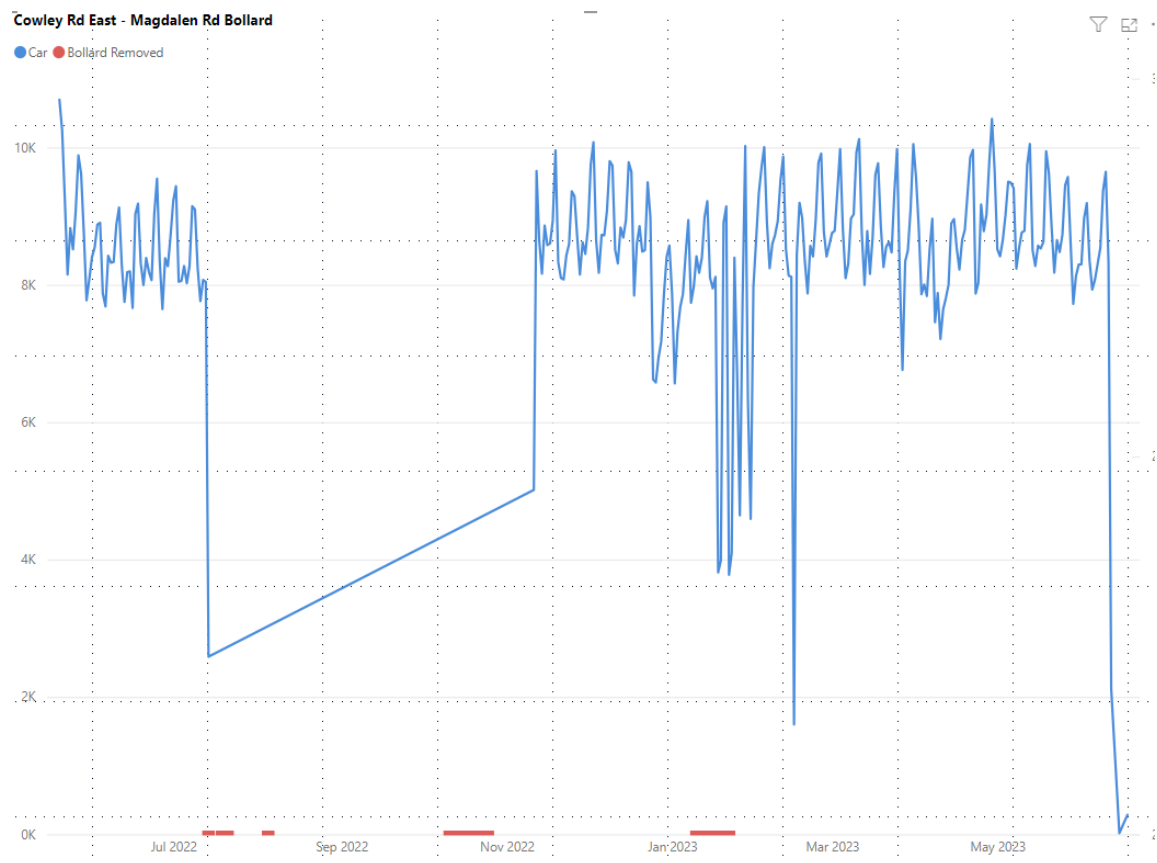


Figure 38 - Timeline of VivaCity car counts on Cowley Road (east) and bollard outage on Magdalen Road



Annex I

Journey time analysis tables (% difference in duration)

Table 71 - Boundary road segments towards and away from The Plain roundabout (percentage difference in duration)

Boundary road segments (towards 'The Plain roundabout')		Weekday '% Diff'			
Road	Road segment direction	AM-peak	Afternoon-peak	PM-peak	Evening
St Clement's Str	Top of Morrell Av to The Plain roundabout	+107.8%	+289.6%	+242.5%	+32.4%
Morrell Av	Roundabout Warneford L up to St Clements Str	-2.8%	+0.7%	+39.0%	-7.1%
Cowley Rd	Magdalen Rd to The Plain	+24.7%	+32.2%	+63.3%	+7.6%
Cowley/Oxford Rd	Hollow Way to Magdalen Rd	+8.4%	+4.8%	+6.5%	+7.0%
Garsington Rd (B480)	Eastern Bypass to Hollow Way	+4.5%	+2.0%	+45.8%	+1.3%
Iffley Rd	Donnington Bridge Rd to The Plain	+60.8%	+11.9%	+0.9%	+6.8%
Iffley/Henley Av	Church Cowley Rd to Donnington Bridge Rd	-26.0%	-3.7%	-16.5%	+10.4%
Henley Av/ Rose Hill/Oxford Rd	Eastern Bypass to Church Cowley Rd	+31.7%	+42.3%	+21.6%	+5.1%

Boundary road segments (away from 'The Plain roundabout')		Weekday '% Diff'			
Road	Road segment direction	AM-peak	Afternoon-peak	PM-peak	Evening
St Clement's Str	The Plain roundabout to the top of Morrell Av	+20.00%	+33.77%	+13.44%	+10.94%
Morrell Av	St Clements Str, down to Warneford L. roundabout	-11.94%	-9.02%	-10.15%	-6.90%
Cowley Rd	The Plain to Magdalen Rd	+4.20%	+8.58%	+5.13%	+6.63%
Cowley/Oxford Rd	Magdalen Rd to Hollow Way	+6.07%	+8.57%	-8.47%	+10.25%
Garsington Rd (B480)	Hollow Way to Eastern Bypass	+4.23%	+4.29%	+8.97%	+4.76%
Iffley Rd	The Plain to Donnington Bridge Rd	-7.17%	+1.00%	-18.49%	+4.59%
Iffley/Henley Av	Donnington Bridge Rd to Church Cowley Rd	+7.91%	+12.64%	+17.58%	+12.33%
Henley Av/ Rose Hill/Oxford Rd	Church Cowley Rd to Eastern Bypass	+1.43%	+4.55%	-3.51%	+5.81%

Table 72 Multiplier road segments towards and away from The Plain roundabout (percentage difference in duration)

Boundary road segments (east to west)		Weekday '% Diff'			
Road	Road segment direction	AM-peak	Afternoon-peak	PM-peak	Evening
Between Towns Rd	Cowley Rd to Iffley Rd	+15.9%	+12.7%	+28.5%	+8.3%
Hollow Way	Horspath Driftway to Cowley Rd	+15.8%	+15.8%	+61.9%	+10.2%
Donnington Bridge Rd	Iffley Rd to Abingdon Rd	0.0%	+2.8%	-19.5%	+11.8%

Boundary road segments (west to east)		Weekday '% Diff'			
Road	Road segment direction	AM-peak	Afternoon-peak	PM-peak	Evening
Between Towns Rd	Iffley Rd to Cowley Rd	+12.9%	+9.6%	+10.9%	+8.3%
Hollow Way	Cowley Rd to Horspath Driftway	+19.2%	+8.9%	+11.1%	+12.2%
Donnington Bridge Rd	Abingdon Rd to Iffley Rd	-21.7%	+1.4%	-9.0%	+10.4%

Journey time analysis tables (percentage difference in speed)

Table 73 - Boundary road segments towards and away from The Plain roundabout (percentage difference in speed)

Boundary road segments (towards 'The Plain roundabout')		Weekday 'Diff%'			
Road	Road segment direction	AM-peak	Afternoon-peak	PM-peak	Evening
St Clement's Str	Top of Morrell Av to The Plain roundabout	-51.9%	-74.3%	-70.8%	-24.5%
Morrell Av	Roundabout Warneford L up to St Clements Str	+2.8%	-0.7%	-28.1%	+7.7%
Cowley Rd	Magdalen Rd to The Plain	-19.8%	-24.4%	-38.8%	-7.1%
Cowley/Oxford Rd	Hollow Way to Magdalen Rd	-7.8%	-4.6%	-6.1%	-6.5%
Garsington Rd (B480)	Eastern Bypass to Hollow Way	-4.3%	-2.0%	-31.4%	-1.3%
Iffley Rd	Donnington Bridge Rd to The Plain	-37.8%	-10.6%	-0.9%	-6.4%
Iffley/Henley Av	Church Cowley Rd to Donnington Bridge Rd	+35.2%	+3.8%	+19.8%	-9.4%
Henley Av/ Rose Hill/Oxford Rd	Eastern Bypass to Church Cowley Rd	-24.1%	-29.7%	-17.8%	-4.8%

Boundary road segments (away from 'The Plain roundabout')		Weekday '% Diff'			
Road	Road segment direction	AM-peak	Afternoon-peak	PM-peak	Evening
St Clement's Str	The Plain roundabout to the top of Morrell Av	-16.7%	-25.2%	-11.8%	-9.9%
Morrell Av	St Clements Str, down to Warneford L. roundabout	+13.6%	+9.9%	+11.3%	+7.4%
Cowley Rd	The Plain to Magdalen Rd	-4.0%	-7.9%	-4.9%	-6.2%
Cowley/Oxford Rd	Magdalen Rd to Hollow Way	-5.7%	-7.9%	+9.3%	-9.3%
Garsington Rd (B480)	Hollow Way to Eastern Bypass	-4.1%	-4.1%	-8.2%	-4.5%
Iffley Rd	The Plain to Donnington Bridge Rd	7.7%	-1.0%	22.7%	-4.4%
Iffley/Henley Av	Donnington Bridge Rd to Church Cowley Rd	-7.3%	-11.2%	-15.0%	-11.0%
Henley Av/ Rose Hill/Oxford Rd	Church Cowley Rd to Eastern Bypass	-1.4%	-4.3%	+3.6%	-5.5%

Table 74 - Multiplier road segments towards and away from The Plain roundabout (percentage difference in speed)

Multiplier road segments (east to west)		Weekday 'Diff%'			
Road	Road Segment direction	AM-peak	Afternoon-peak	PM-peak	Evening
Between Towns Road	Cowley Rd to Iffley Rd	-13.7%	-11.3%	-22.2%	-7.7%
Hollow Way	Horspath Driftway to Cowley Rd	-13.6%	-13.6%	-38.2%	-9.2%
Donnington Bridge Rd	Iffley Rd to Abingdon Rd	0.0%	-2.7%	+24.2%	-10.6%

Multiplier road segments (west to east)		Weekday 'Diff%'			
Road	Road segment direction	AM-peak	Afternoon-peak	PM-peak	Evening
Between Towns Road	Iffley Rd to Cowley Rd	-11.4%	-8.7%	-9.8%	-7.7%
Hollow Way	Cowley Rd to Horspath Driftway	-16.1%	-8.2%	-10.0%	-10.9%
Donnington Bridge Rd	Abingdon Rd to Iffley Rd	+27.8%	-1.4%	9.9%	-9.4%

Reliability: Planning Time Index (PTI)

Table 75 - Boundary road segments towards and away from The Plain roundabout, planning Time Index (PTI) by time of day

Boundary road segments (towards 'The Plain roundabout')		AM-peak			
Road	Road segment direction	Pre PTI	Post PTI	PTI Diff	PTI Impact
St Clement's Str	The top of Morrell Av to The Plain roundabout	2.46	3.97	+61.3%	made worse
Morrell Av	Roundabout on Warneford L up to St Clements Str	1.32	1.64	+24.5%	made worse
Cowley Rd	Magdalen Rd.to The Plain	1.73	2.32	+34.1%	made worse
Cowley/Oxford Rd	Hollow Way to Magdalen Rd	1.98	2.10	+5.8%	made worse
Garsington Rd (B480)	Eastern Bypass to Hollow Way	3.91	3.69	-5.7%	Improved
Iffley Rd	Donnington Bridge Rd to The Plain	3.28	4.26	+30.1%	made worse
Iffley/Henley Av	Church Cowley Rd to Donnington Bridge Rd	4.57	1.82	-60.3%	Improved
Henley Av/ Rose Hill/Oxford Rd	Eastern Bypass to Church Cowley Rd	2.00	2.74	+37.2%	made worse

Boundary road segments (towards 'The Plain roundabout')		Afternoon-peak			
Road	Road segment direction	Pre PTI	Post PTI	PTI Diff	PTI Impact
St Clement's Str	The top of Morrell Av to The Plain roundabout	1.57	5.29	+236.3%	made worse
Morrell Av	Roundabout on Warneford L up to St Clements Str	1.15	1.44	+24.3%	made worse
Cowley Rd	Magdalen Rd.to The Plain	1.39	2.97	+113.7%	made worse
Cowley/Oxford Rd	Hollow Way to Magdalen Rd	1.56	1.44	-7.5%	Improved
Garsington Rd (B480)	Eastern Bypass to Hollow Way	1.58	1.73	+10.1%	made worse
Iffley Rd	Donnington Bridge Rd to The Plain	1.36	1.53	+13.0%	made worse
Iffley/Henley Av	Church Cowley Rd to Donnington Bridge Rd	1.84	1.51	-18.0%	Improved
Henley Av/ Rose Hill/Oxford Rd	Eastern Bypass to Church Cowley Rd	1.72	3.37	+96.5%	made worse

Boundary road segments (towards 'The Plain roundabout')		PM-peak			
Road	Road segment direction	Pre PTI	Post PTI	PTI Diff	PTI Impact
St Clement's Str	The top of Morrell Av to The Plain roundabout	5.03	8.25	+64.0%	made worse
Morrell Av	Roundabout on Warneford L up to St Clements Str	1.50	3.71	+147.7%	made worse
Cowley Rd	Magdalen Rd.to The Plain	1.71	3.60	+110.6%	made worse
Cowley/Oxford Rd	Hollow Way to Magdalen Rd	1.58	1.55	-2.3%	Improved
Garsington Rd (B480)	Eastern Bypass to Hollow Way	2.15	3.48	+61.8%	made worse
Iffley Rd	Donnington Bridge Rd to The Plain	1.73	1.62	-6.1%	Improved
Iffley/Henley Av	Church Cowley Rd to Donnington Bridge Rd	2.30	1.64	-28.7%	Improved
Henley Av/ Rose Hill/Oxford Rd	Eastern Bypass to Church Cowley Rd	2.37	2.99	+26.2%	made worse

Boundary road segments (away from 'The Plain roundabout')		AM-peak			
Road	Road segment direction	Pre PTI	Post PTI	PTI Diff	PTI Impact
St Clement's Str	The Plain roundabout to the top of Morrell Av	1.50	1.68	+12.4%	made worse
Morrell Av	St Clements Str, down to Warneford L. roundabout	1.24	1.16	-6.4%	Improved
Cowley Rd	The Plain to Magdalen Rd	1.11	1.10	-0.6%	Improved
Cowley/Oxford Rd	Magdalen Rd to Hollow Way	2.87	3.05	+6.3%	made worse
Garsington Rd (B480)	Hollow Way to Eastern Bypass	1.36	1.29	-5.4%	Improved
Iffley Rd	The Plain to Donnington Bridge Rd	3.63	1.77	-51.3%	Improved
Iffley/Henley Av	Donnington Bridge Rd to Church Cowley Rd	1.52	1.34	-11.8%	Improved
Henley Av/ Rose Hill/Oxford Rd	Church Cowley Rd to Eastern Bypass	2.01	1.49	-25.6%	Improved

Boundary road segments (away from 'The Plain Roundabout')		Afternoon-peak			
Road	Road segment direction	Pre PTI	Post PTI	PTI Diff	PTI Impact
St Clement's Str	The Plain roundabout to the top of Morrell Av	1.42	1.91	+34.8%	made worse
Morrell Av	St Clements Str, down to Warneford L. roundabout	1.16	1.15	-0.4%	Improved
Cowley Rd	The Plain to Magdalen Rd	1.35	1.54	+14.2%	made worse
Cowley/Oxford Rd	Magdalen Rd to Hollow Way	2.83	3.59	+27.1%	made worse
Garsington Rd (B480)	Hollow Way to Eastern Bypass	1.29	1.20	-6.8%	Improved
Iffley Rd	The Plain to Donnington Bridge Rd	1.65	1.32	-20.3%	Improved
Iffley/Henley Av	Donnington Bridge Rd to Church Cowley Rd	1.50	1.37	-9.0%	Improved
Henley Av/ Rose Hill/Oxford Rd	Church Cowley Rd to Eastern Bypass	1.86	1.29	-30.8%	Improved

Boundary road segments (away from 'The Plain roundabout')		PM-peak			
Road	Road segment direction	Pre PTI	Post PTI	PTI Diff	PTI Impact
St Clement's Str	The Plain roundabout to the top of Morrell Av	1.72	1.95	+13.5%	made worse
Morrell Av	St Clements Str, down to Warneford L. roundabout	1.23	1.22	-0.9%	Improved
Cowley Rd	The Plain to Magdalen Rd	1.61	1.56	-3.4%	Improved
Cowley/Oxford Rd	Magdalen Rd to Hollow Way	3.07	2.60	-15.2%	Improved
Garsington Rd (B480)	Hollow Way to Eastern Bypass	1.63	2.85	+75.1%	made worse
Iffley Rd	The Plain to Donnington Bridge Rd	5.35	1.75	-67.2%	Improved
Iffley/Henley Av	Donnington Bridge Rd to Church Cowley Rd	2.48	1.78	-28.1%	Improved
Henley Av/ Rose Hill/Oxford Rd	Church Cowley Rd to Eastern Bypass	3.13	1.44	-54.0%	Improved

Table 76 - Multiplier road segments towards and away from The Plain roundabout, planning Time Index (PTI) by time of day

Multiplier road segments (east to west)		AM-peak			
Road	Road segment direction	Pre PTI	Post PTI	PTI Diff	PTI Impact
Between Towns Rd	Cowley Rd to Iffley Rd	1.91	3.26	+70.5%	made worse
Hollow Way	Horspath Driftway to Cowley Rd	3.11	3.26	+4.7%	made worse
Donnington Bridge Rd	Iffley Rd to Abingdon Rd	2.05	2.80	+36.3%	made worse

Multiplier road segments (east to west)		Afternoon-peak			
Road	Road segment direction	Pre PTI	Post PTI	PTI Diff	PTI Impact
Between Towns Rd	Cowley Rd to Iffley Rd	1.57	1.85	+18.1%	made worse
Hollow Way	Horspath Driftway to Cowley Rd	2.05	2.53	+23.5%	made worse
Donnington Bridge Rd	Iffley Rd to Abingdon Rd	1.55	1.36	-12.1%	Improved

Multiplier road segments (east to west)		PM-peak			
Road	Road segment direction	Pre PTI	Post PTI	PTI Diff	PTI Impact
Between Towns Rd	Cowley Rd to Iffley Rd	2.57	3.42	+33.3%	made worse
Hollow Way	Horspath Driftway to Cowley Rd	3.65	4.26	+16.7%	made worse
Donnington Bridge Rd	Iffley Rd to Abingdon Rd	4.95	4.33	-12.4%	Improved

Multiplier road segments (west to east)		AM-peak			
Road	Road segment direction	Pre PTI	Post PTI	PTI Diff	PTI Impact
Between Towns Rd	Iffley Rd to Cowley Rd	2.00	1.89	-5.4%	Improved
Hollow Way	Cowley Rd to Horspath Driftway	2.09	2.26	+8.1%	made worse
Donnington Bridge Rd	Abingdon Rd to Iffley Rd	4.75	1.54	-67.5%	Improved

Multiplier road segments (west to east)		Afternoon-peak			
Road	Road segment direction	Pre PTI	Post PTI	PTI Diff	PTI Impact
Between Towns Rd	Iffley Rd to Cowley Rd	1.88	2.07	+10.2%	made worse
Hollow Way	Cowley Rd to Horspath Driftway	1.52	1.49	-2.0%	Improved
Donnington Bridge Rd	Abingdon Rd to Iffley Rd	1.57	1.26	-19.5%	Improved

Multiplier road segments (west to east)		PM-peak			
Road	Road segment direction	Pre PTI	Post PTI	PTI Diff	PTI Impact
Between Towns Rd	Iffley Rd to Cowley Rd	1.87	1.88	+0.6%	made worse
Hollow Way	Cowley Rd to Horspath Driftway	1.54	1.49	-3.0%	Improved
Donnington Bridge Rd	Abingdon Rd to Iffley Rd	2.30	1.50	-34.7%	Improved

Annex J

Bus analysis: change in stop-to-stop runtime

Table 77 - In-bound boundary roads and east to west, change in stop-to-stop runtime – including multiplier roads

Previous stop name	Stop name	Road group	AM-peak Diff%	Afternoon-peak Diff%	PM-peak Diff%	Evening Diff%
Garsington Road	The Original Swan	Cowley Rd	+43.60%	+40.28%	-2.64%	
The Original Swan	The Original Swan	Cowley Rd	+29.70%		+14.73%	
Templars Square	The Original Swan	Cowley Rd	+4.10%	+14.47%	+0.26%	+9.12%
Fern Hill Road	The Original Swan	Cowley Rd	+15.90%	+46.80%	+43.37%	-1.00%
The Original Swan	Clive Road	Cowley Rd	+8.90%	+23.61%	+1.94%	-10.47%
Clive Road	Marsh Road	Cowley Rd	-0.10%	+15.50%	-4.58%	-8.39%
Marsh Road	Shelley Road	Cowley Rd	-9.20%	+4.52%	+0.52%	-2.72%
Shelley Road	Howard Street east	Cowley Rd	-6.00%	+3.45%	-2.55%	-4.95%
Howard Street east	Magdalen Road east	Cowley Rd	-11.10%	-0.51%	-5.86%	+0.77%
Magdalen Road east	Manzil Way	Cowley Rd	-3.50%	+12.78%	-10.35%	-6.32%
Manzil Way	James Street east	Cowley Rd	-8.70%	+3.47%	-9.82%	-5.55%
James Street east	Stockmore Street	Cowley Rd	+13.40%	+32.29%	+27.02%	+5.02%
Stockmore Street	The Plain	Cowley Rd	+21.60%	+166.57%	+145.85%	+10.37%
		Cowley Rd Avg.	+7.58%	+30.27%	+15.22%	-1.28%

Spencer Crescent	Rose Hill Parade	Iffley Rd	+20.10%	+29.94%	+9.55%	+18.09%
Dudgeon Drive	Rose Hill Parade	Iffley Rd	+18.00%		+6.94%	
Rose Hill Parade	Courtland Road	Iffley Rd	+20.40%	+27.70%	+23.21%	+11.01%
Courtland Road	Westbury Crescent	Iffley Rd	+15.10%	+29.84%	+25.06%	+4.75%
Westbury Crescent	Iffley Turn	Iffley Rd	+37.50%	+117.11%	+77.35%	+3.21%
Iffley Turn	Henley Avenue	Iffley Rd	+7.00%	+23.45%	+7.91%	+3.45%
Henley Avenue	Freelands Road	Iffley Rd	-7.80%	+6.62%	-7.63%	+8.56%
Freelands Road	Howard Street west	Iffley Rd	-33.30%	-31.68%	-33.94%	-11.78%
Townsend Square	Howard Street west	Iffley Rd	+2.10%	+9.65%	-4.80%	
Howard Street west	Magdalen Road west	Iffley Rd	+18.50%	+0.21%	+2.31%	+7.51%
Magdalen Road west	Henley Street	Iffley Rd	+59.30%	+0.38%	-1.07%	-6.39%
Henley Street	James Street west	Iffley Rd	+92.60%	+5.00%	-0.20%	-0.37%
James Street west	The Plain	Iffley Rd	+148.60%	+20.85%	+10.79%	+12.45%
		Iffley Rd Avg.	+30.62%	+19.92%	+8.88%	+4.59%

Mortimer Drive	Crotch Crescent	Marston Rd	+4.94%	+32.97%	+6.19%	
Crotch Crescent	Jack Straws Lane	Marston Rd	-3.00%	+4.15%	-2.33%	+5.06%
Jack Straws Lane	Edgeway Road	Marston Rd	+2.21%	+13.37%	+6.22%	+19.25%
Edgeway Road	Clive Booth Hall	Marston Rd	+3.78%	+12.47%	+4.60%	+25.34%
Clive Booth Hall	Kings Mill Lane	Marston Rd	+18.02%	+47.95%	+27.41%	+52.97%
		Marston Rd Avg.	+5.19%	+22.18%	+8.42%	+25.65%

Warneford Hospital	Divinity Road	Morrell Ave	-7.00%	-15.12%	-17.87%	
Divinity Road	Stone Street	Morrell Ave	-2.94%	-22.62%	-29.72%	
Stone Street	East Avenue	Morrell Ave	-12.72%	-26.27%	-23.75%	
East Avenue	Union Street	Morrell Ave	-7.03%	-18.43%	+186.86%	
		Morrell Ave Avg.	-7.42%	-20.61%	+28.88%	

Brookes University	Glebe Street	St Clements Str	-3.60%	+101.11%	+258.97%	-5.60%
Brookes University	Glebe Street	St Clements Str	-9.77%	+104.89%	+228.87%	
Kings Mill Lane	Glebe Street	St Clements Str	-22.78%	+60.99%	+103.24%	+4.61%
Union Street	Glebe Street	St Clements Str	+48.11%	+219.78%	+243.82%	
Brookes University	St Clements Street	St Clements Str	+16.80%	+99.52%	+69.40%	+6.64%
Glebe Street	St Clements Street	St Clements Str	+11.50%	+98.38%	+42.74%	+20.14%
Glebe Street	St Clements Street	St Clements Str	+12.62%	+118.82%	+25.98%	+38.79%
		St Clements Str Avg.	+7.55%	+114.78%	+139.00%	+12.92%

Previous Stop Name	Stop Name	Road group	AM-peak Diff%	Afternoon-peak Diff%	PM-peak Diff%	Evening Diff%
The Original Swan	The Original Swan	Between Ts. Rd	+45.50%	+22.35%	+48.34%	+16.18%
Clive Road	The Original Swan	Between Ts. Rd	+14.18%	+83.26%	+22.19%	+1.41%
The Original Swan	Templars Square	Between Ts. Rd	-1.60%	+3.10%	-2.17%	+201.14%
		Between Ts. Rd Avg.	+19.36%	+36.23%	+22.78%	+72.91%

Howard Street west	Townsend Square	Donnington B.	-0.96%	-6.49%	-19.66%	
Townsend Square	Donnington Bridge	Donnington B.	+0.04%	-11.93%	-52.06%	
Donnington Bridge	Weirs Lane	Donnington B.	+21.59%	-38.69%	-54.57%	
		Donnington B. Avg.	+6.89%	-19.03%	-42.09%	

Cinnaminta Road	Corner House	Hollow Way Rd	-5.20%	+16.40%	+21.56%	+4.64%
Corner House	Paul Kent Hall	Hollow Way Rd	-3.60%	+36.27%	+18.91%	+2.29%
Paul Kent Hall	Barracks Lane	Hollow Way Rd	-2.60%	+11.42%	+46.15%	+1.35%
Rupert Road	Crescent Hall	Hollow Way Rd	+0.90%	+30.22%	+74.75%	+4.09%
Crescent Hall	Fern Hill Road	Hollow Way Rd	+45.90%	+12.36%	+177.21%	-2.31%
		Hollow Way Rd Avg.	+7.08%	+21.33%	+67.72%	+2.01%

Table 78 - Out-bound boundary roads and west to east, change in stop-to-stop runtime - including multiplier roads

Previous Stop Name	Stop Name	Road group	AM-peak Diff%	Afternoon-peak Diff%	PM-peak Diff%	Evening Diff%
Queens Lane	The Plain.	Cowley Rd	+3.89%	+13.51%	+4.01%	+16.59%
The Plain	James Street east	Cowley Rd	-0.53%	+2.55%	-23.52%	+8.54%
James Street east	Manzil Way	Cowley Rd	-2.16%	+2.24%	-12.08%	-4.27%
Manzil Way	Magdalen Road east	Cowley Rd	-2.95%	+1.80%	-8.49%	+4.67%
Magdalen Road east	Howard Street east	Cowley Rd	-4.77%	+1.31%	-3.57%	-0.39%
Howard Street east	Shelley Road	Cowley Rd	-2.16%	+71.45%	+7.05%	+6.92%
Shelley Road	Marsh Road	Cowley Rd	-3.09%	+167.03%	+18.68%	+3.46%
Marsh Road	Clive Road	Cowley Rd	+2.81%	+140.62%	+31.68%	+2.94%
Templars Square	The Original Swan	Cowley Rd	+59.90%	+49.06%	+19.33%	-0.89%
The Original Swan	Garsington Road	Cowley Rd	+31.85%	+1.64%	-25.33%	
		Cowley Rd Avg.	+8.28%	+45.12%	+0.78%	+4.18%

Queens Lane	The Plain	Iffley Rd	+1.50%	+9.87%	+8.54%	+17.08%
St Cross Road	The Plain	Iffley Rd	+12.06%	-0.56%	+31.64%	
The Plain	James Street west	Iffley Rd	+18.90%	+17.64%	-0.05%	-3.11%
James Street west	Henley Street	Iffley Rd	+4.62%	-4.41%	-33.01%	-5.97%
Henley Street	Magdalen Road west	Iffley Rd	+8.20%	-32.16%	-42.71%	-3.82%
Magdalen Road west	Howard Street west	Iffley Rd	+1.04%	-30.97%	-37.78%	+3.50%
Howard Street west	Freelands Road	Iffley Rd	+11.54%	+7.48%	+4.45%	-0.70%
Freelands Road	Iffley Turn	Iffley Rd	+6.02%	+15.40%	+6.71%	+1.80%
Iffley Turn	Westbury Crescent	Iffley Rd	+20.09%	+20.65%	+11.06%	+3.15%
Westbury Crescent	Rose Hill Parade	Iffley Rd	+27.03%	+16.88%	+5.68%	+7.55%
		Iffley Rd Avg.	+10.89%	+1.98%	-4.55%	+2.17%

St Clements Street	Cherwell Street	Marston Rd	+13.60%	+6.57%	+2.96%	+8.81%
Clive Booth Hall	Ferry Road	Marston Rd	+6.30%	-2.58%	+5.03%	+19.76%
Ferry Road	Edgeway Road	Marston Rd	-1.00%	-5.47%	+17.91%	+5.78%
Edgeway Road	Jack Straws Lane	Marston Rd	+4.90%	+6.92%	+13.14%	+27.28%
Jack Straws Lane	Crotch Crescent	Marston Rd	-9.40%	+6.67%	-13.81%	-6.44%
		Marston Rd Avg.	+2.88%	+2.42%	+5.05%	+11.04%

St Clements Street	South Park	Morrell Ave	+4.80%	+17.80%	+9.09%	+13.94%
South Park	Union Street	Morrell Ave	-6.10%	-10.64%	-22.69%	+115.92%
Union Street	East Avenue	Morrell Ave	-7.60%	-17.79%	-29.62%	+143.21%
East Avenue	Stone Street	Morrell Ave	-3.20%	-37.95%	-34.86%	+117.53%
		Morrell Ave Avg.	-3.03%	-12.15%	-19.52%	+97.65%

Queens Lane	St Clements Street	St Clements Str	+3.30%	+10.91%	+0.52%	+20.44%
Queens Lane	St Clements Street	St Clements Str	+11.30%	+5.57%	+2.39%	+22.00%
Queens Lane	St Clements Street	St Clements Str	+4.25%	+9.50%	+10.00%	+11.80%
St Cross Road	St Clements Street	St Clements Str	+2.80%	+15.13%	-4.38%	
		St Clements Str Avg.	+5.41%	+10.28%	+2.13%	+18.08%

Previous stop name	Stop name	Road group	AM-peak Diff%	Afternoon-peak Diff%	PM-peak Diff%	Evening Diff%
The Original Swan	Templars Square	Between Ts. Rd	-13.77%	-27.53%	-4.90%	-7.94%
		Between Ts. Rd Avg.	-13.77%	-27.53%	-4.90%	-7.94%

Canning Crescent	Weirs Lane	Donnington B.	-19.30%	-6.51%	-4.12%	
Weirs Lane	Donnington Bridge	Donnington B.	-31.70%	+16.46%	+8.41%	
Donnington Bridge	Townsend Square	Donnington B.	-60.40%	-7.84%	-16.92%	
		Donnington B. Avg.	-37.13%	+0.70%	-4.21%	

The Original Swan	Fern Hill Road	Hollow Way Rd	+33.37%	+17.53%	+20.96%	-3.93%
Fern Hill Road	Crescent Hall	Hollow Way Rd	+10.93%	-3.48%	+13.83%	-2.18%
Barracks Lane	Paul Kent Hall	Hollow Way Rd	+16.00%	-5.09%	+4.23%	+8.34%
Paul Kent Hall	Corner House	Hollow Way Rd	+25.37%	+10.32%	+5.73%	+8.12%
		Hollow Way Rd Avg.	+21.42%	+4.82%	+11.19%	+2.59%

Annex K

Road Safety - control comparison

265. For each year heading the period is May-Dec and Jan-Apr the following year.
The control area is Oxford 20mph + 30mph roads excluding the Cowley LTN and east Oxford LTN areas.

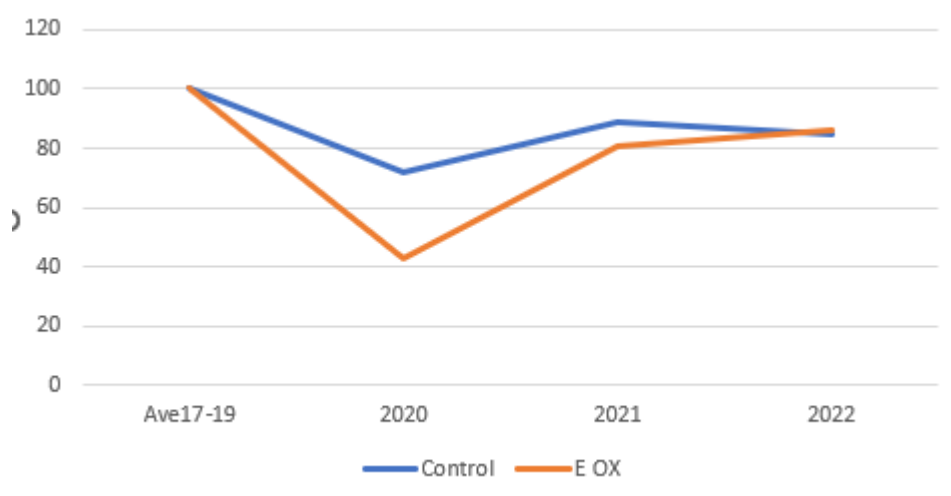
Table 79 - Comparison of control area versus east Oxford LTN area, all road safety incidents:

	2017	2018	2019	2020	2021	2022	Average 2017-2021	% Change
Control area	170	175	198	130	161	154	166.8	-7%
East Oxford LTN area	48	36	48	19	36	38	37.4	+1%

266. The east Oxford LTN area figure for 2022 shows a slight increase compared with the 5-year average before.

267. Using the 3-year 2017-2019 data and indexing on the average annual total shows that while the pandemic period saw a sharper fall in east Oxford compared to the control, there is no discernible difference in 2021 and 2022

Figure 39 - Comparison of control area versus east Oxford LTN: as a percentage of 2017-2019 average annual total.



268. Overall there has not been significant change in incidents in the LTN area compared to control.

Annex L

Background traffic volumes in Oxford

269. An analysis has been undertaken of traffic flows on the principal routes in and out of Oxford city using permanently installed, live ATCs (Blackcat sensors). The locations can be seen on the map, figure 40 and cross-referenced in table 80 below. The data has also been split to show counts near to the city centre (inner cordon) and at points further out from the city (outer cordon). The annual average daily traffic count (AADT) is used: flows are the sum of both directions and are shown as the average of all daily counts over a year or part year. This means that although data for 2023 stops at September, the average will not change much with the addition of the remaining four months of the year and is appropriate to use for a high-level analysis such as this. Where data is highlighted in 2019, it means that there were issues with data availability or quality and in these cases 2018 data in the main, has been substituted. Bus counts have been excluded from Abingdon Road data because of operational issues with sensors; this might add approximately 4000 on the count line, but as this is applied consistently across years then a comparison by year may be made.

Figure 40 - Location of count sensors used in analysis of overall trends in Oxford city traffic

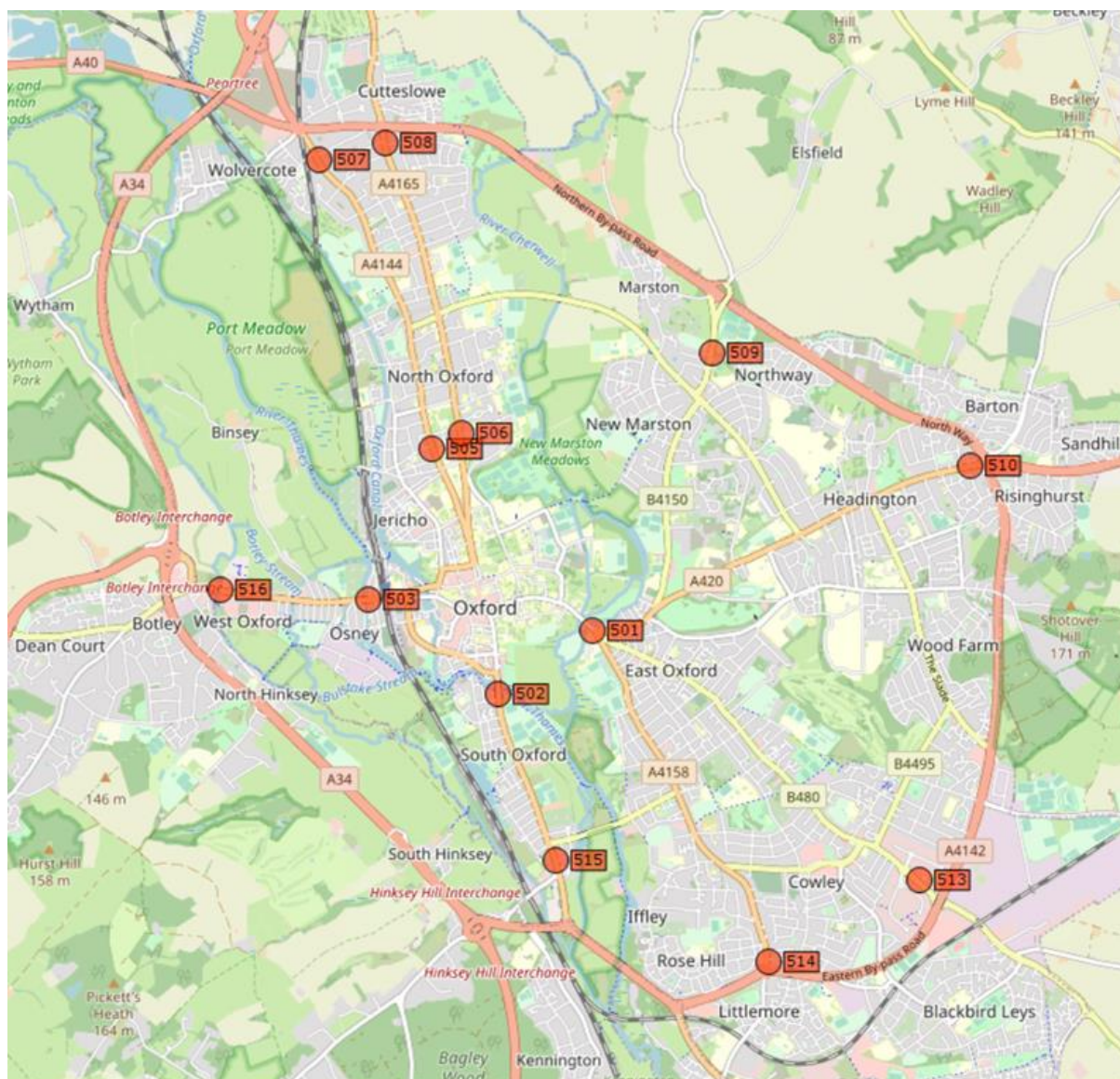
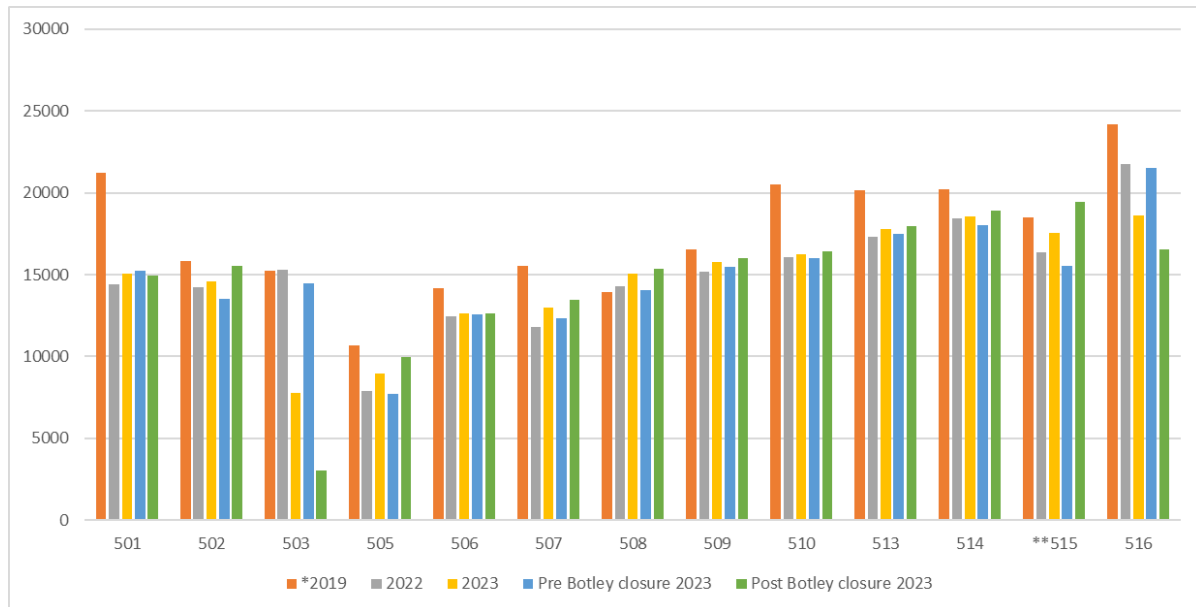


Table 80 - Annual average daily traffic (AADT) in Oxford

Site	Location	*2019	2021	2022	2023	2023 vs 2019	% change 2023 vs 2019	Pre Botley Closure 2023	Post Botley Closure 2023	Post versus pre Botley Closure	% change pre versus post Botley Closure
501	Magdalen Bridge	21227	14724	14385	15046	-6181	-29.1%	15215	14947	-268	-1.8%
502	Folly Bridge	15856	12197	14223	14597	-1259	-7.9%	13545	15528	1982	14.6%
503	Osney Bridge	15254	12769	15296	7739	-7515	-49.3%	14478	3027	-11451	-79.1%
505	Woodstock Rd Inner	10695	7212	7858	8955	-1740	-16.3%	7695	9979	2284	29.7%
506	Banbury Rd Inner	14194	11086	12447	12614	-1580	-11.1%	12583	12631	48	0.4%
	Inner Cordon	77226	57988	64209	58950	-18276	-23.7%	63517	56112	-7405	-11.7%
507	Woodstock Rd Outer	15526	11257	11785	12958	-2568	-16.5%	12319	13431	1112	9.0%
508	Banbury Rd Outer	13903	12700	14278	15074	1171	8.4%	14061	15380	1319	9.4%
509	Marsh Ln	16568	14390	15147	15796	-771	-4.7%	15486	16014	528	3.4%
510	London Rd Outer	20493	15443	16092	16252	-4241	-20.7%	16009	16421	412	2.6%
513	Garsington Rd Outer	20141	15388	17309	17782	-2359	-11.7%	17515	17968	454	2.6%
514	Oxford Rd (Rose Hill)	20191	17872	18445	18544	-1648	-8.2%	18049	18889	840	4.7%
**515	Abingdon Rd Outer	18509	16204	16375	17568	-941	-5.1%	15548	19453	3905	25.1%
516	Botley Rd Outer	24187	21319	21754	18586	-5601	-23.2%	21530	16528	-5002	-23.2%
	Outer Cordon	125331	103254	109431	113973	-11358	-9.1%	108987	117557	8570	7.9%
	Total	226744	182561	195394	191510	-35234	-15.5%	194033	190197	-3837	-2.0%
* Highlighted sites data is pre 2019											
** Bus lane counts not included											

270. 2023 has not yet seen a return to the overall traffic levels of 2019 (-16% change). This effect is more pronounced for the inner cordon (-24% change) than the outer cordon (-9% change). These figures include the effect of the Botley Road closure, itself having a -2% effect on overall traffic. Taking this into account the overall traffic in the city is down 14% in 2023 compared to 2019.

Figure 41 - Annual average daily Traffic (AADT) in Oxford



271. Figure 41 illustrates the same results graphically, showing 2019 traffic levels were higher than both 2022 and 2023 across all sensor positions except 508 Banbury Road Outer cordon.

References

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