Divisions Affected – St. Clement's & Cowley Marsh, Iffley Fields & St. Mary's

CABINET

17 October 2023

OXFORD: East Oxford Low Traffic Neighbourhoods (LTNs) – Traffic Regulation Order (TRO)

Report by Bill Cotton, Corporate Director Environment & Place

RECOMMENDATION

The Cabinet is RECOMMENDED to:

(a) **Approve the Traffic Regulation Orders (TROs) for the three East Oxford Low Traffic Neighbourhood (LTN) areas:**
   (i) **Divinity Road**
   (ii) **St. Clement's**
   (iii) **St. Mary's**

Officers are working on measures to mitigate the impacts of general congestion on bus services prior to the trial traffic filters being implemented in late 2024, with a package of measures that are due to be implemented during 2023 and 2024, city-wide. However, whilst the measures being considered are hoped to assist appreciably, they are not likely to fully mitigate bus service delays in the short term. Nevertheless, officers consider that it is essential that the associated measures are implemented. Therefore, Cabinet is recommended to:

(b) **Subject to the approval of (a) above, approve the replacement of the bollards in Divinity Road, James Street and Magdalen Road with automatic number plate recognition (ANPR) cameras.**

(c) **Subject to approval of (b) above, approve exemptions for emergency services, waste and postal vehicles, taxi and private hire vehicles through the restrictions enforced by ANPR on Divinity Road, James Street and Magdalen Road. The use of ANPR and/or exemptions will be reviewed prior to/during the trial of the traffic filters.**

(d) **Subject to the approval of (a) above, approve the introduction of bollards and/or planters at the junction of Jeune Street and St. Clement's, and make Jeune Street two-way south of the restriction.**

(e) **Subject to the approval of (a) above, relocate the residential parking bay in Marston Street.**

(f) **Subject to the approval of (a) above, move the filter location on Bullingdon Road to the southwest to a point to the east of the junction with Hurst Street.**

(g) **Approve the investigation of measures to improve public transport journey times and adequately resource the interventions.**

This report presents cabinet with a consideration of alternative options as well as the above officer recommendation to reflect the complexity of this project.

Executive Summary

1. Low traffic neighbourhoods (LTNs) are areas where motorised traffic is prevented from taking shortcuts through a residential area.

2. LTNs are part of the county council's local transport and connectivity plan (LTCP) and are intended to make residential streets safer and more comfortable for walking, wheeling, and cycling. Recent studies have shown that they can be a key policy tool for cutting reliance on cars.

3. As part of the Central Oxfordshire Travel Plan (COTP), LTNs are designed to work together with other measures to reduce congestion and improve air quality, and are a key policy designed to increase the use of sustainable modes of transport, as informed by the Oxford local cycling and walking infrastructure plan (LCWIP).

4. LTNs are also in line with the county council's priorities to take action to tackle the climate emergency and cut carbon emissions, prioritise the health and well-being of residents and invest in an inclusive, integrated, and sustainable transport network that is rebalanced in favour of pedestrians, cyclists, and public transport users.

5. The east Oxford LTNs are being trialled in three areas, Divinity Road, St. Clement's and St. Mary's. These locations were chosen as priority areas as monitoring showed high volumes of through traffic and indicating lower levels of cycling (as identified in the LCWIP for east Oxford).

6. Following engagement and consultation between March and June 2021, approval was given to implement the east Oxford LTNs in December 2021 using an Experimental Traffic Regulation Order (ETRO). The works, which consist of

installing planters, bollards, waiting restrictions and signs, were completed in May 2022. A six-month consultation ran from May to November 2022, to cover the first six months of the trial.

7. The trial of the east Oxford LTNs has been significantly impacted by frequent vandalism to the infrastructure. In particular, the removal of, and damage to, bollards, especially to the plastic bollards and damage to locking mechanisms and sockets, as well as removal of signage.

8. This has meant that for significant periods of the trial the full set of filters has not been in place and traffic has continued to pass freely through the restrictions irrespective of signage. Since the wooden bollards were installed, the vandalism has decreased significantly but there have still been incidents where bollards have been removed or damaged. Motor vehicles then use the roads as through routes again.

9. Following stakeholder engagement and internal review the county council proposed some amendments to the ETRO and promoted a Traffic Regulation Order (TRO) in June 2023 to enable the amendments to be made if the scheme was made permanent. A second six-week consultation ran in June 2023 to ask for people's views on proposed changes to the LTNs and for feedback on their impact since new bollards were introduced in March 2023.

10. The ongoing vandalism has made it extremely difficult to obtain reliable monitoring data to compare traffic levels, air quality, and travel modes with, and without, the restrictions. In addition, in some cases the only data available for the pre-implementation situation is from 2021, when travel habits were still impacted by the COVID-19 pandemic. Therefore, whilst efforts have been made where possible to adjust for external impacts, it is difficult to directly compare changing habits and vehicle volumes etc. for before and after installation. It has also meant that it has not been possible to tangibly achieve the full benefits of the project.

11. Despite this, the traffic monitoring data gathered shows improved air quality and decreased traffic within the east Oxford LTNs. While not fully conclusive, some locations show increases in walking and cycling, and others show decreases. These LTNs are therefore contributing to achieving the county council's policies.

12. However, it is also recognised that the LTNs have created disbenefits for some, including longer and more unpredictable journey times for less mobile individuals who cannot easily achieve modal shift away from a car, certain trades and professions, and (combined with other factors) public transport. Bus journey times have been particularly negatively affected, but there is evidence that this situation began to improve during the trial period. Communities outside the immediate area of the scheme haven't benefitted as much as those within LTN areas and have experienced inconvenience. However, they have benefitted from an improved walking and cycling network.

13. When assessing surrounding roads, the traffic volumes overall are still slightly higher (though some locations outside the LTNs have experienced reductions

in traffic) and air quality is slightly worse (although, for all but one location, still within the legal limit). However, the trend is improving and will continue to be monitored if the trial is made permanent.

14. The county council has consulted three times in three years on the east Oxford LTNs. Results from county council-run consultations show that more people oppose than support the east Oxford LTNs. However, rates of support tend to be higher among residents within LTN areas, and some independently run surveys show higher levels of support. Consultations are opportunities for feedback but are not referendums on issues. There are often limits on how representative of a whole community they can be.

15. Given the monitoring and evaluation findings show that the LTNs are beginning to contribute to wider county council policy aims, it is recommended that the consultation findings be taken alongside other data as well as compliance with adopted policy when cabinet makes their decision.

16. The current Experimental Traffic Regulation Orders (ETRO) covering the east Oxford LTNs come to an end in November 2023.

17. This paper presents an officer recommendation and alternative options considered to reflect the complexity of the decision required.

Background

18. Oxfordshire County Council approved an ETRO to trial LTNs in three areas of east Oxford in December 2021. The three LTN areas collectively known as the east Oxford LTNs, are:

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

19. The east Oxford LTNs were implemented on an experimental basis in May 2022 for an 18-month trial period ending in November 2023. The LTNs were initially funded from the government's Active Travel Tranche 2 programme allocation to the county council. Prior to the implementation of the ETRO, a public consultation on the proposals was run in 2021, using a series of workshops, engagement activities and a survey in June 2021. A CMD meeting approved the implementation of the ETRO in December 2021 following some supplementary engagement and resulting changes.

20. Closure points were initially introduced using a mixture of planters and/or plastic 'passive' bollards (droppable or over-runnable for quick emergency services access). Installation was completed and a six-month public consultation to gather views on the experimental trial opened on 20 May, closing on 30 November 2022.

21. During the first ten months of the trial the operation of the east Oxford LTNs was significantly impacted by vandalism and theft. In particular, the removal of, and damage to, plastic bollards, and damage to locking mechanisms and sockets. This has meant that for significant periods of the trial the full set of filters has not been in place, and some of the LTNs have continued to be used as through routes by motor vehicles.

22. In March 2023, wooden bollards were installed (in response to the level of vandalism), and the vandalism has decreased, resulting in a decrease in the number of motor vehicle traffic movements within the LTNs. This has also reduced the conflict within LTN areas between certain road users and residents. Therefore, a more reliable understanding of both the positive and negative impacts of the LTNs has only been ascertained over the last six-months (March to August 2023). As a direct result of the continued removal of bollards and use of the roads by motor vehicle through traffic it has not been possible to fully evaluate the longer-term impacts of the scheme as expected throughout an 18-month ETRO.

23. After reviewing the east Oxford LTNs, and engaging with stakeholders, the county council proposed to make the following changes to them – should they be made permanent at the end of their trial – through a statutory consultation which ran between 5 June until 20 July 2023:

    (a) Bollards to be removed and replaced with Automatic Number Plate Recognition (ANPR) camera(s) to enforce the traffic restrictions at:
        (i) Divinity Road, St. Clement's area LTN
        (ii) James Street, St. Mary's area LTN
        (iii) Magdalen Road, St. Mary's area LTN.

    (b) Jeune Street - new LTN filter 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.

    (c) Marston Street - relocation of the residential parking bay located to the south of the business entrance to outside number 47 Marston Street.

    (d) Bullingdon Road - move existing restriction along Bullingdon Road to the southwest, to a point east of the junction with Hurst Street.

24. Drawings illustrating the trial east Oxford LTNs are given in Annex 1, and drawings showing proposed revisions to Bullingdon Road and Marston Street are given in Annex 2.

ANPR Sites

25. The ANPR sites proposed were selected following stakeholder engagement including extensive liaison with the emergency services, internal reviews, and site visits. Consideration was given to the impact on the objectives of LTNs, including the aim to reduce through traffic on residential streets.

26. The use of ANPR at certain locations would allow for greater flexibility in managing the highway network. It would make it easier to increase police vehicle patrols as needed and to offer practicably quicker re-routing during unforeseen and/or emergency situations. ANPR would therefore enable competing demands on the network from emergency or unforeseen situations to be balanced until the trial traffic filters can be implemented. The traffic filter trial has been delayed because of the Oxford rail station redevelopment and the associated Botley Road roadworks. Enforcement would include the automatic issuing of penalty charge notices (PCNs/fines) to non-exempt vehicles travelling through the closure points.

27. Following the six-week TRO consultation and other stakeholder engagement, it is recommended that emergency service, public waste and postal service vehicles would be exempt from restrictions at the three ANPR locations and would be permitted to pass through the filters. Taxis and private hire vehicles are considered as part of the public transport network (as per the adopted Local Transport and Connectivity Plan) and so would also be exempt from restrictions at these locations. This will also assist those with disabilities as people with disabilities are more reliant on taxis than those without. The county council will investigate how health providers might also be accommodated at the ANPR sites.

28. There is concern from local residents within LTN areas that the implementation of ANPR with certain exemptions will lead to an unacceptable increase in traffic on residential streets. Whilst the county council recognises that this will lead to an increase of traffic on current 'LTN' levels, it feels that it is required to help mitigate the impact of the LTNs on certain road users. Although data directly related to the streets in question is not available, data from the Cowley LTN ANPR sites suggests that it would not lead to an unacceptable increase in traffic but would alleviate concerns of some key stakeholders. Indeed, traffic on some LTN streets has decreased by more than 80% (on Divinity Road this has decreased from approximately 7,000 vehicles per day to 1,000).

29. Therefore, the introduction of ANPR with certain exemptions is not likely to affect the nature of the LTNs significantly and traffic levels are still expected to be within thresholds for "most people" to feel comfortable walking and cycling as per Local Transport Note 1/20 guidance. If approved, the situation will be monitored carefully and reviewed when the trial traffic filters are implemented. It is felt this is an appropriate compromise to ensure that residents in LTN areas continue to benefit from lower traffic.

Jeune Street

30. Following the implementation of the trial east Oxford LTNs, Jeune Street has experienced a significant increase in traffic flows. Monitoring has shown that there has been an average 44% increase in daily traffic flows. The situation is much worse in the peak periods with increases of 80% and 63% in morning and evening peaks respectively. This has included an increase in larger vehicles.

31. Jeune Street is currently one way. There are numerous anecdotal reports of vehicles using the route in the wrong direction and site visits that confirm that there are frequent contraventions of the banned right turn at the St. Clement's end of the street. It is therefore proposed that an LTN traffic restriction is introduced in Jeune Street to mitigate the unintended consequences of through traffic and contraventions to traffic regulations.

Marston Street

32. Through consultation and engagement, issues with large vehicles being unable to access the businesses and organisations at a site on Marston Street has been identified. The site access is located between numbers 53 and 55 Marston Street. When the single parking bay on the northeast side of the street, near the site entrance, is occupied, turning movements into the site are restricted. It is therefore proposed to move the parking bay to a location outside number 47 Marston Street.

Bullingdon Road

33. There is currently an LTN traffic restriction on Bullingdon Road just to the west of the junction with St. Mary's Road. There have been numerous issues associated with vehicles making U-turns at this location. Whilst this was more of an issue during periods of unprecedented vandalism (road users taking the chance the bollard would not be in place) the issue is still acute for immediate residential properties. The solutions considered have included re-arranging car parking bays and relocating the cycle parking. However, it is thought that the best solution is to move the Bullingdon Road restriction to the west to a location just to the east of the junction with Hurst Street.

St. Clement's Bus Lane

34. The new St. Clement's bus lane was implemented during August 2023 to reduce delays to westbound buses. It is too early to fully understand the impact, but small changes will be made where necessary to maximise its benefits. Other measures may be required to enhance the route for buses once longer-term monitoring data has been collected and analysed. Its implementation seems to have assisted cyclists.

Additional Measures to Improve Bus Journey Times

35. Several other bus journey time improvement measures are being developed for implementation in the next six to nine months. They are designed to reduce bus journey times in the city, in advance of the implementation of the traffic filter trial and during the Network Rail works requiring the closure of Botley Road. They include:

- Roll-out of traffic signal bus priority at key junctions, with 14 sites already live and others to follow
- Adjustments to the road layout on Cowley Road, near Tesco, to remove several pinch-points for buses (subject to local consultation)

- Removal of on-street parking on the narrow section of Hollow Way (subject to local consultation)
- Potential trial of temporary peak-time only traffic signals at or near The Plain to help regulate flows
- Measures to help buses exit the Churchill hospital at peak times (subject to Oxford University Hospitals' agreement)
- School streets to help reduce school run traffic (subject to local consultation)
- Minor changes to parking and loading where this delays buses (subject to local consultation)
- Rearrangement of bus priority on the Woodstock Road (subject to local consultation).

36. It is likely that these investigations and any associated implementation will need to be fast-tracked even if the east Oxford LTNs are not made permanent. This will mean that staff resources and funding will need to be allocated to accelerate these projects.

The TRO Process

37. If the Cabinet decides to make the east Oxford LTNs permanent, then a TRO would have to be in place to enable implementation. Therefore, a TRO including the possible changes was published in June 2023. The implementation of the TRO is still solely dependent on the decision made at this Cabinet. A six-week consultation ran to gather feedback on the TRO proposals. A 'snapshot' monitoring and evaluation of the trial was also published.

Options

38. The east Oxford LTNs have generated a high level of interest and feedback, not without controversy. The decision to be reached by Cabinet is uniquely complex, and not a straightforward one to make. This report presents the Cabinet with a consideration of alternative options as well as an officer recommendation.

39. All of the three options below will require on-going staff resources and budget to implement and, in options 1 and 2, maintain the LTNs. A discussion of resources required for each option is given later in this paper. The Options are as follows:

Option 1 – Make trial LTNs permanent immediately

40. The east Oxford LTNs would be made permanent by approving the TRO which was subject to a six-week consultation in June 2023. If Cabinet opt for option 1 then a series of other measures would also need to be considered for implementation. These are:

- The implementation of ANPR cameras at Divinity Road, James Street and Magdalen Road to enforce the restrictions instead of using bollards/planters.
- Vehicle exemptions through the filters enforced by ANPR cameras. Emergency services vehicles, taxis and private hire, waste and postal vehicles.
- Inclusion of Jeune Street into the St. Clement's LTN area, and alterations to the LTN closure point in Marston Street and Bullingdon Road.
- Local measures to improve traffic flow and improve bus journey times. For example, investigation of temporary traffic signals at The Plain roundabout.

41. Should ANPR and associated exemptions be approved at the three east Oxford sites, the county council will also need to investigate how health providers might be accommodated.

42. Other reported issues would also need to be investigated, for example, reports of frequent contravention of the one-way restriction on Rectory Road and the request from Morrell Avenue residents to be included within the east Oxford LTNs. However, further monitoring, and investigation, of these issues is required prior to recommending solutions.

43. Should option 1 be approved, then works on street would be required to make the LTNs permanent. For example, the removal of redundant, illuminated signposts and the removal of line markings on road surfaces.

Option 2 – Make the LTNs permanent with delayed implementation

44. This option involves approving the TRO but delaying implementation until the proposed trial traffic filters in the city are implemented. The trial traffic filters will be implemented once Network Rail's works to upgrade Oxford rail station (where they affect Botley Road access) have been completed. The trial traffic filters are provisionally expected in autumn 2024.

45. It is possible that once the traffic filters are installed, then the form of enforcing LTN filters could be reviewed. For example, it could be possible for many, if not all, to be enforced by bollards instead of locations with ANPR and/or wider exemptions. Further work will be required to assess this need. It should be noted that four of the east Oxford LTN filter points are required for the start of the trial traffic filters expected in autumn 2024.

46. Should option 2 be approved, the LTNs would be removed and then reinstalled later. This would involve removing the traffic restrictions and some of the LTN infrastructure. All vehicular traffic would temporarily be able to pass through the streets as before the LTNs were installed. This would result in a significant increase of traffic levels on residential streets in the short term. The county council would investigate retaining some of the measures, for example the contra-flow cycle lane in Howard Street. It is likely that bollards would be removed, but planters retained where they provide traffic calming effects.

Option 3 – Reject the TRO

47. This option involves the rejection of the TRO and the removal of the east Oxford LTN infrastructure and through-traffic restrictions when the ETRO lapses in November 2023. Alterations to one-way and two-way working in streets would revert to the pre-trial LTN situation. However, as in option 2 the county council would consider retaining some of the measures where they provide benefit, for example, the contra-flow cycle lane in Howard Street

Monitoring and Evaluation

48. A two-stage monitoring and evaluation exercise has been undertaken. The first stage comprised the preparation of a Snapshot Report in June 2023 to accompany the TRO consultation. The second stage was a full evaluation prepared over the summer of 2023 to support the making of the Cabinet decision.

49. Due to the significant amount of vandalism to the LTN infrastructure, the LTNs can only really be considered to have been (mostly) fully in place and operating as intended since March 2023. It should be noted that this has impacted significantly on both stages of the evaluation. Ideally, a longer monitoring and evaluation period would be more beneficial but, due to vandalism and theft, this has not been possible. However, the experimental period is governed by the maximum 18-month trial period as set-out in the Road Traffic Regulation Act 1984 (as amended). A decision is therefore required by the end of the statutory period. Despite the shortened evaluation timescales, the data collected since March shows that people are beginning to change modes and bus journey times are improving compared to earlier months of the trial.

Snapshot Report

50. A Snapshot report (Annex 7) was prepared and published alongside the TRO in June 2023. This gave a partial evaluation of the impacts of the LTNs on a range of transport modes. For example, walking, cycling, traffic levels and air quality indicators. A first indication of hypothetical (simulated) impact on emergency services response times was also given. The timing indication was based on South Central Ambulance Service's (SCAS) modelled data using Optima Predict and did not use actual, 'real-life' data.

51. As a 'snapshot' it was not a full evaluation so did not cover all aspects in detail, for example on bus journey times as this data was not available at the time. The snapshot report was published to give respondents to the six-week TRO consultation as much information as was available at that time to help inform their responses.

52. In summary, the Snapshot report indicated that:

- overall, traffic levels within the east Oxford LTNs have decreased significantly, in line with the objective of the scheme
- cycling has seen some modest increases in some locations within the LTNs
- pedestrian movement within the LTNs shows decreases in some streets and increases in others.
- the impact on boundary roads is mixed, some roads have experienced increases in traffic, others, decreases in traffic.
- There has been variable levels of improvement in air quality with the LTNs and increases in pollutant levels along the boundary roads. Only one location has exceeded the legal limit (this location exceeded the limit with higher recorded levels in 2019 than in 2022)

Full Evaluation Report

53. Following the publication of the Snapshot report, a comprehensive monitoring and evaluation report (Annex 8) was prepared over the summer of 2023. It provides an evaluation of the effects of the east Oxford LTNs since their implementation on 20 May 2022. It updates and supersedes the Snapshot Report.

54. The following are presented in the report:

- Sensor-derived traffic volume changes by mode (car, pedestrian, cycle, LGV, HGV and 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 a specific analysis for bus journey times.
- The air quality analysis from Oxford City Council for Nitrogen Dioxide (NO2) both within the LTNs and on the boundary roads, including roads bounding the Cowley LTNs. This was used to consider whether the east Oxford LTNs have had any influence on air quality on roads immediately surrounding the Cowley LTNs.
- The impact on emergency services response times, based on SCAS modelled data using Optima Predict. It is not based on actual response time data.

- Safety data, based on collision statistics within and surrounding the LTN areas.

55. The report indicates that overall, traffic levels within the LTNs have decreased significantly, in line with the objectives of the scheme. A notable exception within the LTNs is Jeune Street, a one-way road with no traffic filter, which has seen sizable percentage increases in traffic.

56. Cycling has seen mixed changes, with movements across St. Mary's LTN between Iffley and Cowley Roads experiencing large percentage increases, particularly on Magdalen Road, whilst movements through St. Mary's LTN in- or out-bound from The Plain roundabout have decreased.

57. Pedestrian movement within the LTNs is also a mixed picture, with some streets showing decreases and others increases in flows. The locations where there are increases are near potential trip attractors, which could be an explanation for this variation.

58. In general, the impact has not been consistent across modes of transport, with some roads measured experiencing greater increases or reductions respectively than others.

59. 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.

60. In terms of the impact on the boundary roads immediately surrounding the LTNs, the picture is mixed. Some areas are experiencing higher traffic levels post-implementation compared to immediately pre-implementation, whilst other areas have seen reductions in traffic. Note that annual average daily traffic in Oxford in 2023 is still some 16% below 2019 levels overall. However, overall traffic levels across the city are quite similar in 2022 and 2023, suggesting some stabilisation of traffic levels. However, levels were lower in 2021, compared to 2022 and 2023.

61. 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 in 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.

62. Unlike the other key boundary roads on the approach to The Plain roundabout, at St. Clement's Street, the number of cars reduced. However, journey time data shows that the most significant delays experienced at any location in the vicinity are along this stretch of road, concentrated in the afternoon–peak and

evening-peak periods. It is likely that the delays are being caused by difficulty entering the roundabout from St. Clement's Street due to traffic from Cowley Road, Iffley Road and Magdalen Bridge having priority. The journey time and bus runtime delays are significantly greater in the in-bound direction. Whilst general journey time reliability worsened by 71% towards The Plain, out-bound journey times experienced a small, 10%, improvement in reliability overall. However, St. Clement's Street and some other locations still experience additional delays in journey times in the out-bound direction in some instances.

63. Where journey times have improved, it tends to be in locations away from The Plain roundabout, and in the mid-section of the route. Of all boundary roads, Iffley Road has 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.

64. 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 PM-peak period not mirrored in the journey time analysis. Otherwise, the pattern is very similar, with greatest bus runtime delays in the in-bound direction along St. Clement's Street (afternoon- and PM- peaks). Analysis from March 2023 on St Clement's Street indicates that although there are still delays for buses, these have improved since November 2022.

65. Generally, there has been a reduction in walking along boundary roads, with only one location (Iffley Road, near Donnington Bridge Road) experiencing increases. However, there is a generally positive picture with respect to cycling. All boundary roads show increases in cycling, in some cases significant percentage increases. Morrell Avenue shows the largest percentage increases in cycling levels (51%) of the boundary roads.

66. The air quality analysis generally matches the traffic evaluation, with variable levels of improvement in air quality within the LTNs themselves alongside an increase in pollutant levels along the boundary roads immediately surrounding east Oxford LTNs. Only one location has exceeded the legal limit – on St. Clement's Street, at The Plain. Levels also exceeded the limit in 2019 at this site and the 2019 levels were higher than the levels recorded in 2022. A further two sites in the immediate vicinity of the LTNs are at, or above, the local target for Nitrogen Dioxide (NO2) levels. These sites are St. Clement's Street near the junction with Alma Lane, and Hollow Way. All locations showed lower NO2 levels in 2022 than in 2019, where data was available for comparison.

67. 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). This provides a simulation of impacts, not the actual delays experienced. The response time delays from the east Oxford LTNs traffic restrictions are compared to a baseline without them.

68. The initial modelling assumed that 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 at 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).

69. Initial modelling (without ANPR) indicated delays of 45 seconds within the east Oxford LTN area in the most urgent Category 1 (life threatening). This was reduced to a seven second delay for this area and category when ANPR is introduced in the model. At the Oxfordshire-wide level, a four second delay without ANPR becomes a one second delay with ANPR in Category 1. Hypothetical modelling was also undertaken to assess the impact of congestion on the response times. When the surrounding roads had speeds reduced to 70% of historic speeds (based on data from 2019), the modelled delay was a five 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 five second delay is unlikely to be the reality of the situation.

70. Road safety analysis was undertaken to assess changes in collision statistics. The analysis showed that there is little change between the baseline period and post-implementation. However, due to the low numbers of incidents, the analysis over a single year post-implementation is not statistically significant and only indicative.

71. Overall, looking at the most significant findings, the effects of the 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%.

72. 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. As a result, journey times increase in the direction towards the city (by up to 290%), reducing reliability and creating delays for bus services. However, analysis of March 2023 data shows an improving trend in runtimes on routes leading into St. Clement's Street towards The Plain. Air pollution levels at The Plain have also worsened accordingly, in an area already problematic for air quality, although still an improvement compared to 2019.

73. Should the LTNs remain in place in order to maintain the beneficial effects, then the associated challenges also outlined require mitigation. Over time, modal

shift away from widespread, default reliance on single occupancy cars, potentially through the implementation of the trial traffic filters and other schemes, may lead to wider improvements. However, a short-term and joined-up solution should be investigated to mitigate the impact on bus services 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, and further monitoring should be undertaken to assess their efficacy in improving runtimes for buses.

74. 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 – seen as an important part of the public transport network. This is particularly relevant for those who do not have access to car and those with mobility issues. However, this does not overcome the key problem identified above in relation to the network in general. There is a need to address the level of traffic on a constrained road network by prioritising more space efficient, healthier and cleaner forms of transport.

75. Additionally, 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 extra measures might be needed to achieve the policy objectives. Further research should also be undertaken to review the road safety, use of space, social and health implications, including mental health, of the east Oxford LTNs, over a longer time period.

76. In summary, against the three key objectives of the LTNs: to reduce traffic in the LTNs, increase uptake of active travel and improve air quality in the area, evidence collected as part of the full monitoring and evaluation exercise suggests that the LTNs have:

- reduced car use within the LTNs themselves and enabled 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 compared to 2019 data).

Consultations

77. Prior to the implementation of the ETRO, a public consultation on the proposals was run in 2021, using a series of workshops, engagement activities and a survey in June 2021. Generally, the majority of residents supported the idea of implementing the east Oxford LTNs, but there were significant objections from those outside the area and local businesses. Further engagement was undertaken to address specific issues that had been identified. This resulted in some changes to the proposals which included:

- reducing the length of the two-way section in Howard Street, and providing a contraflow cycle lane

- relocating filters on Howard Street and Barnet Street

- redesigning the filter on Magdalen Road.

78. The recommendation to implement the proposals under an ETRO was approved in December 2021.

79. Whilst the ETRO has been in place, the county council has run two formal consultations for the east Oxford LTNs:

(a) Six-month consultation running from 20 May to 30 November 2022 for the ETRO. The consultation analysis report is in Annex 3.

(b) Six-week consultation running from 5 June to 20 July for the proposed TRO. The report giving the analysis from this consultation is shown in Annex 5.

80. In addition to these consultations, the county council continues to regularly engage with local partners, such as the emergency services, transport operators, health service providers and local business groups. The feedback from this engagement, as well as the results of the ongoing technical work, informed the proposed changes to the LTNs.

Consultation for the ETRO

81. The consultation period for the ETRO ran from 20 May until 30 November 2022, with key stakeholders and the public invited to respond. The online survey was posted on the county council's consultation website Let's Talk Oxfordshire. The survey was promoted by:

- letter to c.12,000 residences and businesses within and slightly outside the east Oxford LTN area.

- placing a notice of the consultation within the county council's regular travel bulletin and in the 'Your Oxfordshire' newsletter.
- providing two press releases, on 18 and 25 May 2022. There was also wider, third-party coverage through local media channels.
- posting on social media.
- emailing stakeholder contacts in May 2022.

82. A total of 3,938 responses were received, comprising 3,843 online responses and 95 paper copies. Officers reviewed the feedback, and all the responses were analysed by an independent company.

83. The survey received both positive and negative feedback. Overall, these responses gave the following results, shown in Table 1:

Table 1 – Overall Percentages of Support/Object/Neutral

Location	Object	Neutral	Support	Don't Know / No opinion
Divinity Road	59%	3%	34%	4%
St. Clement's	61%	3%	32%	4%
St. Mary's	59%	3%	33%	5%

84. Those providing positive feedback (c.33% of respondents) identified several benefits, including:

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

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

- 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 displacing traffic to other (boundary roads) and increasing pollution on them, safety impacts due to increased traffic
- Increase in travel times and associated fuel costs when making journeys by car
- Negative impacts on people's wellbeing and mental health due to stressful journeys.

Email correspondence

86. In addition to the feedback received via the questionnaire, the county council also received 269 letters or emails with comments relating to the proposals. These responses were not included in the analysis of the survey, as the feedback included more general overviews. In summary, the email responses comprised:

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

87. The themes from email responses from those who supported the LTNs were:

- General expression of support
- Reduction in traffic
- Feeling safer because of slower or lower traffic flows
- Area is quieter
- Able to change some travel behaviours
- Air feels fresher
- A greater sense of community.

88. The key concerns were:

- Concern about congestion on main roads.
- Concerns about local businesses.
- Concerns about access for emergency services and care givers.
- Mobility issues for those who are physically incapable or disabled.
- Increase in cost, travel time, congestion and pollution.

89. The email correspondence received is given in Annex 4.

Consultation for the TRO

90. The second formal consultation related to the publication of the TRO. This six-week consultation period ran from 5 June until 20 July 2023, again with key stakeholders and the public invited to respond. The online survey was posted on the county council's consultation website Let's Talk Oxfordshire. The TRO proposals were publicised with letters to addresses in the east Oxford LTNs areas, notices in local press, information on the county council website and social media, and in the city's libraries.

91. Responses were received through survey answers, direct correspondence to officers, and feedback provided to local county councillors. In addition to the 2,130 survey responses received (2,086 online and 44 paper responses) a further 139 submissions were received by email. The analysis of all the responses was undertaken by an independent company.

Travel habits post LTNs

92. Respondents were firstly asked whether the trial LTNs had led to a change in travel habits. Around 25% said they 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.

93. The survey received feedback from a broad range of respondent types. Businesses and other organisations (faith, education etc.) 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.

94. 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. Similarly, those who tended to drive said they were driving more. It should be noted that trip frequency increased generally from 2021 to 2022/23 due to habits returning to normal post-pandemic, but overall, car traffic has reduced.

95. 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

96. 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.

Divinity Road LTN area

97. 52% of all respondents had negative views on the Divinity Road LTN area. 39% of respondents had positive views. Overall, the most frequent theme from respondents' answers was that the area had become safer/more pleasant for cyclists and pedestrians, closely followed by it being quieter.

St. Clement's LTN area

98. 54% of all respondents had negative views on the St. Clement's LTN area. 34% 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/worsen/ed air quality, closely followed by increased journey times and costs.

St. Mary's LTN area

99. 50% of all respondents had negative views on the St. Mary's LTN area in east Oxford. 36% 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

100. Respondents were asked whether they wanted to comment on each of the 14 individual traffic filters. The main comments are shown in Table 2 for each filter below:

Table 2 - Views on LTN Traffic Filters

Location	**Top responses(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

101. Not all comments were negative, the highest mentioned positive comments for each proposal are shown in Table 3 below:

Table 3 – Positive Comments on LTN Filters

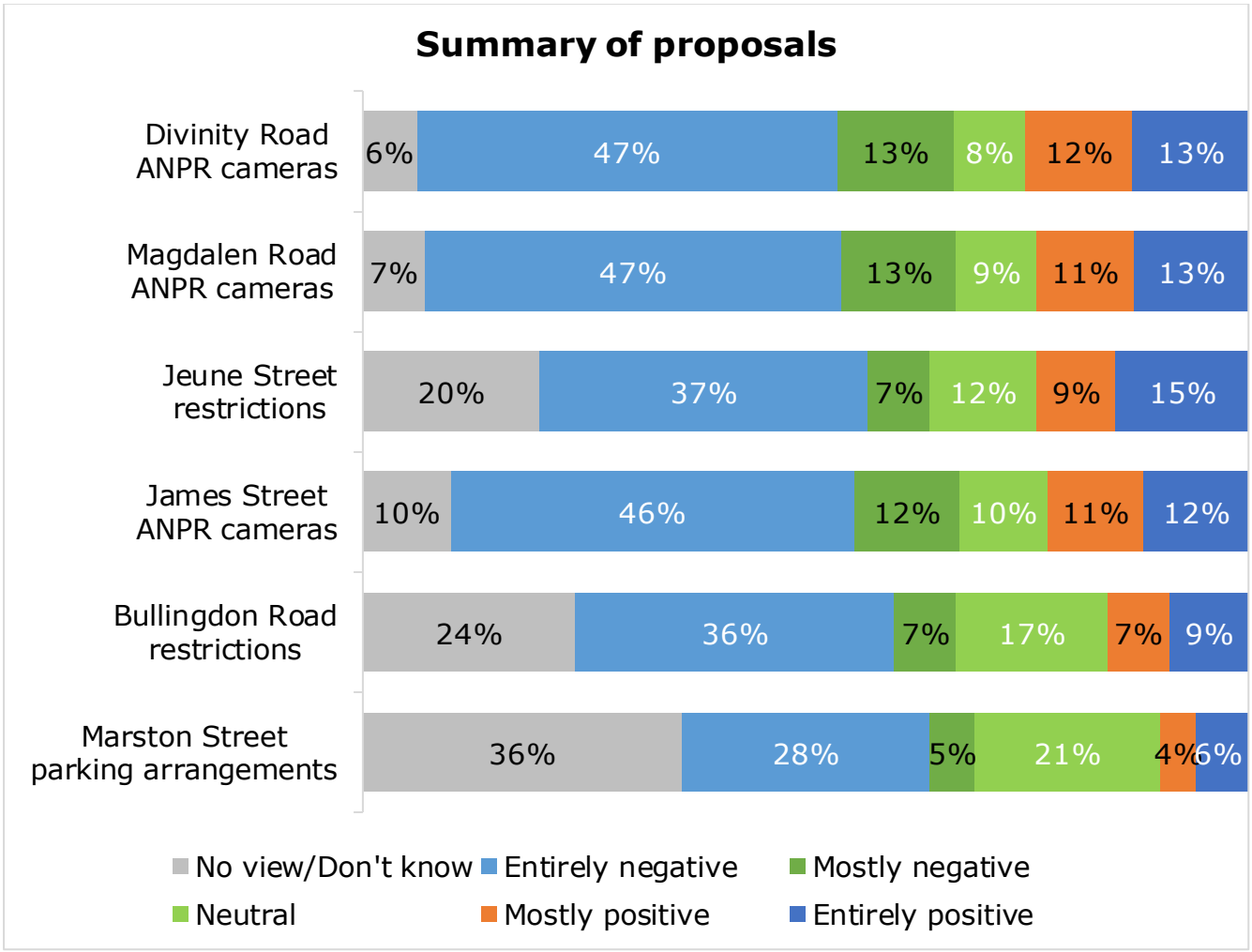
Location	Top positive responses(s)

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

102. 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%). There were higher 'neutral' and 'no view' / 'don't know' scores for the Marston Street parking arrangements proposal.

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



103. The high proportion of negative responses to the ANPR proposals was unsurprising. Those generally not in support of the principle of LTNs will not support any method of LTN enforcement. Those generally in favour of LTNs will commonly want to keep the traffic as low as possible so are more likely object to anything that may increase traffic, even slightly. However, ANPR does provide benefits for emergency services and other key road users, by releasing pressure on the network at key points, and so should be a consideration if the east Oxford LTNs are made permanent.

104. 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.

105. A petition was received from the Divinity Road Residents Association (DRARA). The key issue highlighted was an objection to the introduction of ANPR at the three sites. DRARA's view is that there would be too many vehicles using the

LTN roads if motor vehicles, in particular, if taxis and private hire vehicles are given an exemption. Thereby making the street more dangerous for cyclists.

106. C.O.L.T.A, the trade organisation representing black cab firms, expressed its desire for the Hackney Carriage trade to be given access through the three ANPR camera sites in the east Oxford area.

Divinity Road ANPR cameras

107. 61% of respondents had negative views of the proposed ANPR cameras for the Divinity Road filter in east Oxford. 25% of respondents had positive views. The most frequent theme from respondents' answers was concerned that the ANPR cameras would be ignored/abused or vandalised, or generally disagreed with the proposals to install ANPR cameras. Positively, respondents said that it was better for emergency services.

Magdalen Road ANPR cameras

108. 60% of respondents had negative views on the proposed ANPR cameras for the Magdalen Road filter in east Oxford. 24% 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

109. 58% of respondents had negative views on the proposed ANPR cameras for the James Street filter, 23% 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.

Bullingdon Road restrictions

110. 43% of respondents had negative views on the proposed moving of the restrictions on Bullingdon Road in east Oxford. 16% of respondents had positive views. The most frequent theme from respondents' answers was general disagreement for the moving of the restrictions on Bullingdon Road; more wide-ranging comments were provided, but by fewer respondents.

Marston Street parking arrangements

111. 33% 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 over one third 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

112. 44% 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. 24% of respondents had positive views. The most frequent theme from respondents' answers was a general disagreement, with a slightly lower proportion seeing the benefits of the proposal / supporting it.

113. The introduction of ANPR cameras is in response to requests from the emergency services, as ANPR is seen as best practice for ease of emergency access. It also mitigates against some of the resulting impacts on public transport of increased congestion by releasing pressure on the local network. ANPR cameras are a short-term measure designed to help resolve a short-term issue until the trial traffic filters are implemented. The trial was expected to be in place by now if the Botley Road had not been closed for the redevelopment of Oxford train station. The trial traffic filters are expected to further contribute towards a reduction in private car use and a move towards active, shared and public transport.

114. Some respondents commented that they felt that the introduction of ANPR would be used as a surveillance tool and a revenue raising mechanism. These suggestions are without foundation, as if that was the case, then the county council would have proposed to introduce ANPR at all LTN filter locations. The proposed three sites were chosen in consultation with the emergency services.

115. It should be noted that the proposal to replace some physical closures with automatic number plate recognition (ANPR) cameras generated comments from respondents across multiple questions, even if ANPR was not relevant to that question. This indicates that ANPR currently generates strong sentiment across the spectrum of opinion on LTNs.

116. For some respondents, their support for ANPR was dependent on who would receive an exemption. If an organisation they wanted to be exempt was made exempt, they would support, and if not, they would oppose. For others, their support was dependent on ANPR catching those who were circumventing the physical closures, such as mopeds.

117. Some respondents were sceptical that ANPR enforcement would work at all and felt it would undermine the benefits the LTN physical enforcement was bringing. The county council received a petition to this effect from a residents' association which expressed particular concern about taxis being made exempt.

118. There were concerns about ANPR being part of excessive surveillance or a wider plan to restrict freedom of movement. Some people felt ANPR would be used to inappropriately gather money through fines.

119. This suggests that if the east Oxford LTNs are made permanent there may be a need to focus on how ANPR is communicated about by the county council and be alert to any misinformation that may develop around the use of the cameras.

Email correspondence

120. 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.

121. 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.

122. 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.

123. 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. These are summarised in the independently commissioned report.

124. 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.

Responses from stakeholders

125. 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.

126. 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.

127. 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.

128. 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.

129. 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.

130. Oxfordshire Fire & Rescue Service. OFRS provided a general comment continuing to support the use of ANPR cameras to allow the negotiation of LTN sites.

131. 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.

132. Midcounties Co-operative. Again, the letter supports the proposed trial 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.

133. In addition, 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" and "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.

Officer response

134. LTNs remain one part of a wider set of policies designed to rebalance the local transport system in favour of pedestrians, cyclists and shared and public transport users.

135. With the traffic filters expected to be trialled from the end of 2024, vehicle traffic is expected to reduce within the Oxford ring road and more road space will be available for pedestrians, cyclists and shared and public transport vehicles.

136. While the monitoring and evaluation findings indicate an increase in traffic volume on some routes, there is also encouraging evidence that people are changing their travel habits either by adopting active or shared travel or rerouting as they approach the city centre. Considering the impact of vandalism, more time is likely to be needed for these changes to become further embedded. In addition, the county council has received numerous testimonials from residents about the many benefits of LTNs they have experienced since their introduction. These have included safer streets, especially for children and more active travel and healthy lifestyles. This support for LTNs and the benefits they bring needs to be considered in the context of the short-term compromises that may be required.

137. The county council is aware of the tough trading times for businesses across the county and country and that there will be many factors that contribute towards this. As part of consultation and engagement, east Oxford businesses have specifically shared their views on the impact of the LTNs on their trade with some businesses experiencing a reduction in trading of up to 40%. Some businesses have said that they may need to leave the local area and find premises that have higher accessibility by car. Although it should be noted that all areas are still accessible by car, albeit potentially by a longer route.

138. The Oxford City Council Retail and Leisure Study 2017 found that less than 4% of visitors to the Cowley Road travelled by car, whereas over 60% travelled by foot, 21% by bus and 13% by bicycle. The same study highlighted congestion (26.9% of respondents) as the most disliked feature of the Cowley Road. Therefore, congestion has been seen as a constant feature of the Cowley Road. It is likely that reductions in trading are due to a number of interlinked factors, such as the change in shopping habits due to the COVID-19 pandemic and the cost-of-living crisis, and not solely linked to the introduction of the LTNs.

139. It is appreciated that some businesses suffer more from the lack of car borne traffic than others especially those that deal with large or specialist goods. However, a continued rise in traffic volume and congestion is also not beneficial to business and not sustainable in the longer term.

140. The county council is investigating and implementing a range of enhancements to improve operating conditions for buses. This should benefit school bus services as well as commercial services in Oxford. The county council will

continue to work with schools to help them reduce car trips to their sites and increase active travel modes.

141. The county council has engaged, and will continue to engage, with a wide range of stakeholders. The local LTN mitigations are proposed in response to these discussions and the consultation results.

142. The inclusion of proposals for ANPR at three sites in east Oxford in the TRO is in response to feedback from the emergency services to improve their operations. ANPR is considered the most effective method of providing emergency service access through the LTNs. It is proposed that taxi and private hire vehicles are given exemptions as they considered part of the public transport system in Oxfordshire, as per the Local Transport and Connectivity Plan.

143. The very localised interventions proposed at Marston Street and Bullingdon Road have been investigated in response to feedback from stakeholders. They will have a very limited impact on the LTNs, and their operation. However, there will be beneficial effects on residential and business frontages if they are approved.

144. In summary, the county council recognises and acknowledges that there are both benefits and disbenefits to the east Oxford LTNs. As part of the officer recommendation to make them permanent, mitigations to reduce congestion (more widely) for bus passengers and other users are seen as essential.

145. The needs of residents within LTN streets must be balanced with the needs of the travelling public. The traffic filters will help rebalance this approach in future. Both the Cowley and east Oxford LTNs provide quiet routes for cyclists; they were planned together for this reason. If the county council does not provide for active travel, then congestion will not be reduced in the long term, and the associated health benefits will not be realised.

Comparison of Sentiment between 2022 ETRO and 2023 TRO Surveys

146. LTNs and other traffic measures continue to be a contentious issue for the county council. When comparing sentiment across all three county council-run consultations it appears there has been a slight increase in positive sentiment and slight decrease in negative sentiment over time. However, broadly the findings remain the same, that more people oppose than support. This long-running “noise” around the project may have led to a response bias over time, especially with the six-month ETRO survey. Likert scales often used to measure sentiment can also illicit very negative or very positive answers.

147. Rates of support tend to be higher among residents within LTN areas, although they are not generally the largest proportion of respondents to county council-run surveys.

148. Two independent surveys have shown a higher support level for LTNs, with a 2022 YouGov poll among Oxford residents showing that 56% of respondents supported LTNs, while 29% opposed them. The total sample size was 249 adults, and the figures were weighted and considered representative of all adults aged 18+ in Great Britain.

149. A separate survey was run by the Divinity Road Area Residents Association in early 2021. The survey asked 446 residents for their views on trialling an LTN in their area and 90% of residents across all streets were in support or neutral.

150. Consultation feedback forms one part of the data that is presented to cabinet. Reports outlining the 2022 and 2023 consultation findings have been produced by independent research companies and should be considered alongside other feedback, the wide-ranging monitoring and evaluation data and alignment with policy.

151. Significance testing has been applied at the 95% confidence level to determine whether the differences observed between surveys are statistically significant. Any significant differences are signified by letters at the side of each percentage, e.g., in the Divinity Road LTN area, positive views are significantly higher in the pre-installation consultation (2021) and TRO (2023) than in ETRO (2022), signified by the letter [b] next to the higher percentages, and negative views are significantly higher in ETRO (2022) than pre-installation consultation (2021) and TRO (2023), signified by the letters [a,c] next to the highest percentage in Table 4 below.

Table 4 - Comparison of Sentiment – Three Surveys (2021, 2022 and 2023)

	Pre-installation consultation (2021) SDNPA2017 report (oxfordshire.gov.uk) **2,010 responses**	**ETRO (2022)** **3,938 responses**	**TRO (2023)** **2,130 responses**
	(a)	**(b)**	**(c)**
Divinity Road LTN area	NET: Positive 39%[b] NET: Negative 52% Base: 1,958	NET: Positive 34% NET: Negative 59%[a,c] Base: 3,907	NET: Positive 39%[b] NET: Negative 52% Base: 2,122

St Clement's	NET: Positive 39%[b,c] NET: Negative 52% Base: 1,905	NET: Positive 32% NET: Negative 61%[a,c] Base: 3,893	NET: Positive 34% NET: Negative 54% Base: 2,116
St Mary's	NET: Positive 39%[b] NET: Negative 55% Base: 1,924	NET: Positive 33% NET: Negative 59%[a,c] Base: 3,890	NET: Positive 36%[b] NET: Negative 50% Base: 2,108
		Filters were not analysed in the same way (qualitative not quantitative question asked)	
Divinity Road ANPR	Questions not asked during consultation.	Questions not asked during consultation.	NET: Positive 25% NET: Negative 60% Base: 2,043
Magdalen Road ANPR			NET: Positive 24% NET: Negative 60% Base: 2,023
James Street ANPR			NET: Positive 23% NET: Negative 58% Base: 2,012
Bullingdon Road movement of restrictions			NET: Positive 16% NET: Negative 43% Base: 1,993
Marston Street parking			NET: Positive 10% NET: Negative 33% Base: 1,989
Jeune Street filter and two way			NET: Positive 24% NET: Negative 44% Base: 1,994

Sentiment towards LTN areas and proposed improvement from all respondents. Note: these findings are not exactly comparable due to the differences in surveys.

County council Policies, Priorities and Plans

152. The implementation of the east Oxford LTNs would contribute to the county council's priorities, in particular the priorities highlighted below:

- Put action to address the climate emergency at the heart of our work.
- Tackle inequalities in Oxfordshire.
- Prioritise the health and wellbeing of residents.
- Invest in an inclusive, integrated and sustainable transport network.
- Create opportunities for children and young people to reach their full potential.

Local Transport and Connectivity Plan (LTCP)

153. LTNs are part of the county council's Local Transport and Connectivity Plan and are intended to make residential streets feel safer and more comfortable for walking, wheeling, and cycling. They are designed to work together with other measures to reduce congestion and improve air quality.

154. This section sets out how the recommendations from this report support the county council's LTCP vision and key themes, and what they are likely to mean for the county council's adopted LTCP targets.

155. The vision contained within the county council's Local Transport and Connectivity Plan is:

"Our Local Transport and Connectivity Plan vision is for an inclusive and safe net-zero Oxfordshire transport system that enables all parts of the county to thrive. It will tackle inequality, be better for health, wellbeing and social inclusivity and have zero road fatalities or life-changing injuries. It will also enhance our natural and historic environment and enable the county to be one of the world's leading innovation economies. Our plan sets out to achieve this by reducing the need to travel and private car use through making walking, cycling, public and shared transport the natural first choice."

156. The LTCP also sets out the county council's transport user hierarchy:

"Policy 1 – We will develop, assess and prioritise transport schemes, development proposals and policies according to the following transport user hierarchy:

- *Walking and wheeling (including running, mobility aids, wheelchairs and mobility scooters)*
- *Cycling and riding (bicycles, non-standard cycles, e-bikes, cargo bikes, e-scooters and horse riding)*
- *Public transport (bus, scheduled coach, rail and taxis)*
- *Motorcycles*

- *Shared vehicles (car clubs and carpooling)*
- *Other motorised modes (cars, vans and lorries)"*

157. The county council's priority is to develop a more balanced transport system and encourage more walking, cycling, public and shared transport use. Private cars will still play a role in Oxfordshire's future transport network and our plans include trying to prioritise essential journeys made by cars. Rebalancing the transport network in favour of pedestrians, cyclists, and public transport users aims to keep more vulnerable road users safe and is a key objective of our LTCP and the east Oxford LTNs are beginning to contribute to this objective. Oxford's road-space is limited and if nothing is done, congestion will continue to worsen.

158. It should also be noted that the road user hierarchy clearly demonstrates that the county council considers taxis to be part of the public transport system in Oxfordshire.

Table 5 – Assessment of Option 1 against LTCP Vision and Themes

	Option 1 **Approve LTNs as proposed in the TRO**
Vision	The LTNs support the vision by reducing private car use. **Immediate and ongoing effect.**
Themes	
Environment Outcome: Sustainable communities that are resilient to climate change, enhance the natural and historic environment, improve biodiversity, reduce greenhouse gas emissions and are supported by our net-zero transport network.	The LTNs support the environment outcome by helping to achieve a net-zero transport network. **Immediate and ongoing effect.**
Health Outcome: Improved health and wellbeing and reduced health inequalities, enabled through active and healthy lifestyles, improved road safety and inclusive communities.	The LTNs support the health outcome. LTNs encourage active travel modes and improved road safety. **Immediate and ongoing effect.**
Healthy place shaping Outcome: Sustainable, well designed, thriving communities where healthy behaviours are the norm and which provide a sense of belonging, identity and community.	LTNs support the healthy place shaping outcome by promoting healthy behaviours, and a sense of local community rather than streets seen as just for the passage of traffic. **Immediate and ongoing effect.**
Inclusivity Outcome: Barriers to access are removed and all communities are supported by our inclusive transport system to play a full role in society and have independence, choice and control.	Alongside other key policies, removing traffic on some streets enabling people to feel safer.

By 2030: • Replace or remove 1 out of every 4 current car trips in Oxfordshire • Increase the number of cycle trips in Oxfordshire from 600,000 to 1 million cycle trips per week • Reduce road fatalities or serious injuries by 50%	The LTNs support the achievement of the 2030 targets, by reducing car trips, encouraging the use of sustainable modes, and making residential streets safer. **Immediate effect.**
By 2040: • Deliver a net-zero transport network • Replace or remove an additional 1 out of 3 car trips in Oxfordshire	The LTNs support the achievement of the 2040 targets by reducing car trips and encouraging the use of sustainable modes. **Immediate effect.**
By 2050: • Deliver a transport network that contributes to a climate positive future • Have zero, or as close as possible, road fatalities or serious injuries	The LTNs support the achievement of the 2050 targets, by reducing car trips, encouraging the use of sustainable modes, and making residential streets safer. **Immediate effect.**

The Central Oxfordshire Travel Plan

159. In September 2023, the county council published its final Central Oxfordshire Travel Plan (COTP) which will look at options to free up limited road space where buses are fast, affordable and reliable and where people can walk and cycle in pleasant and safe environments whilst at the same time reducing high polluting individual car journeys. LTNs are part of a much wider strategy in achieving these goals.

160. In March 2020, the county council approved the Oxford Local Cycling Walking Infrastructure Plan (LCWIP). This sets out an ambition to increase cycling in Oxford by 50% by 2031. The Oxford LCWIP includes LTNs as one of its eight core policies to promote cycling and walking.

161. LTNs are therefore a key policy to increase use of sustainable modes of transport in Oxfordshire, and are designed to support:

- promoting a healthy liveable society, addressing health inequalities and obesity levels in Oxfordshire
- improving air quality
- creating an inclusive, active and sustainable travel network
- providing safer streets for children and young people

162. The data so far suggests that the east Oxford LTNs are encouraging some people to leave their car at home and cycle, for example, in conjunction with wider measures like the Quickways cycle routes. However, sustained behaviour change takes time to embed and further investment and other interventions may be needed to increase active travel across the area.

Financial Implications

163. A broad estimate of the costs of each option has been made in Table 6 below.

Table 6 – Estimated Budget Requirements

	Option 1	**Option 1A**	**Option 2**	**Option 3**
	Approve LTNs No ANPR	**Approve LTNs with ANPR**	**Approve LTNs. Delay implementation. Remove and then re-instate LTNs. No ANPR.**	**Removal of LTNs**
Total	51,500	236,500	162,500	88,000
Contingency 20%	10,300	47,300	32,500	17,600
Total	**66,800**	**283,800**	**195,000**	**105,600**
Inflation @ 6%	0	0	11,700	0
Grand Total	**66,800**	**283,800**	**206,700**	**105,600**

Notes:

1 The budget required to investigate, and potentially implement, other mitigation measures, for example, for Rectory Road and Morrell Avenue is not included within this table.

2 The mitigation measures being considered to improve bus journey times is excluded from these costs.

3 Site surveys will also be required to assess the suitability of exact locations for ANPR at the three sites.

4 For the options where ANPR is implemented then, through time, the ANPR implementation costs, c.£60,000 per site, will be re-couped.

5 Any monitoring requirements would be undertaken by Transport Planning and covered by revenue funding, which is not included within this table. The impacts of the LTNs would also be picked up by the monitoring of the Traffic Filters Trial.

6 The figures exclude county council staff time, which should be covered by existing budgets until c. March 2024.

7 The figures provided are broad estimates and the final totals could be greater or less than those quoted above.

164. Although the levels of vandalism have decreased with the introduction of the wooden bollards in March 2023, it is expected that there will be a continuation of some level of vandalism to the LTN infrastructure. Whilst ANPR cameras will be, in effect, self-funding, there will be a requirement to maintain bollards and locks etc., which will require budget allocation. Revenue from Part 6 enforcement will be used to maintain the highway assets and for any continued

vandalism. Staff resources will also be required until the LTNs are handed over to Highway Maintenance.

165. The Change Request submitted and approved in June 2023 included the monies estimated to be required for the Cowley and east Oxford LTNs until November 2023. Generally, spend over the summer of 2023 has been less than anticipated. It is now expected that there will be sufficient budget to cover county council staff costs from November 2022 to the end of March 2024, as well as the budget required to maintain the LTNs, until they are handed over to Highway Maintenance. It is assumed that staff costs will continue at approximately £35,000 - £40,000 per month. This would give a total requirement of c.£160,000 for staff costs (December 2023 – end of March 2024). It is considered that this amount can be accommodated within the existing budget whilst still having funds available to maintain the LTNs and complete the tasks budgeted for in the Change Request.

166. There is no committed funding for the east Oxford or Cowley LTNs beyond c. March 2024. At that point the completed projects will be handed over to Highway Maintenance.

Comments checked by: Prem Salhan - Finance Business Partner (Finance)

Legal Implications

167. The project has been led by Oxfordshire County Council as Highway Authority. The county council will continue to receive legal advice from the legal team in the development and implementation of the TRO(s).

168. The legislation the TRO is being progressed under the Road Traffic Regulation Act 1984 and related legislation and guidance and takes account of the Councils network management duty under the Traffic Management Act 2004.

169. Since the implementation of LTNs, the county council has been successful in its application to the Department for Transport for power to enforce certain moving traffic offences to enable authorities to manage specific problem areas through Automatic Number Plate Recognition camera enforcement (similar to bus gates). Income from fines is retained by the authority and may be spent on recouping costs of enforcement, public transport provision, highway improvement projects and environmental improvements (The Civil Enforcement of Road Traffic Contraventions (Approved Devices, Charging Guidelines and General Provisions) (England) Regulations 2022). These powers were granted in July 2022.

170. Due to the challenges and issues highlighted through the initial implementation of the LTNs, it is considered that enforcement of the restriction and associated traffic order through camera enforcement rather than a physical restriction is required to help address some of these concerns.

171. The proposed change of enforcement from a physical restriction to camera also presents an opportunity to review and change the restriction (and associated traffic order).

Comments checked by: Jennifer Crouch, Principal Solicitor (Legal)

Staff Implications

172. As noted in the finance section above, the LTNs programme for Cowley and east Oxford has no committed funding for officer resource from c. March 2024. It is anticipated that the LTNs will be transferred to Asset at this point.

173. Ongoing dedicated resource will be required to support the engagement and delivery process throughout implementation and beyond. Should any of the recommendations or options be approved, then additional project resources will be required. Resources will be required for the intended mitigation, for example, the ANPR implementation and bus journey time reliability proposed improvements. The latter are already planned but will need to be accelerated.

174. Experience shows that these types of transport schemes generate high levels of correspondence which requires a significant level of resource to manage. The east Oxford LTNs scheme has so far required considerable amount of officer input and this is not expected to change (including in the event that the east Oxford LTNs are removed).

175. The approval of the TRO will impact on the LTN, Communications and FOI teams in the short term and, additionally, Asset in the medium term.

Equality & Inclusion Implications

176. An Equalities Impact Assessment has been undertaken for this project (Annex 10). The findings of the assessment include:

- In particular, children, young people and women benefit from an environment which is safer to walk and cycle in.
- Air quality has improved within the LTN areas, which benefits everyone who lives, works or passes through the LTN areas.
- People who cannot use sustainable methods of travel, such as those with some disabilities and some older people, will have longer journey times. However, some disabled people will benefit from lower traffic levels within the LTNs and more space due to a reduction in traffic.
- Increased journey times and travel costs for groups reliant on cars, such as some disability groups, health care workers and voluntary carers
- Increased journey times, reducing number of visits possible for health care workers, and impact on some services

- Concerns that pupils using Special Educational Needs Transport will have longer journeys. However, SEND vehicles are able to apply for an exemption through the ANPR sites.
- Impact on funeral and burial ceremonies, particularly for those who must conclude the ceremony by dusk, with increased journey times
- Some local schools are reporting issues regarding journey times, with those travelling further afield having more difficulties using alternative modes of transport
- People on low incomes in areas of deprivation benefit from better active travel options, as the costs of owning a car has a disproportionate impact on their finances. They are also more likely to experience negative health impacts associated with car traffic.

Sustainability Implications

177. A Climate Impact Assessment has been completed for this project (Annex 9). Making the east Oxford LTNs permanent would contribute to supporting the county council's climate objectives.

178. The east Oxford LTNs form a part of the Oxford LCWIP and are consistent with Oxfordshire County Council's aim to achieve zero carbon emissions by 2050. They also support the wider central Oxfordshire transport plan (part of the Local Transport and Connectivity Plan (LTCP)) which promotes increased cycling, walking and use of public transport.

179. The east Oxford LTNs encourage the use of sustainable transport modes, and increased walking and cycling in the east Oxford area. This supports the delivery of wider transport initiatives, including the Oxford LCWIP target of increasing cycling by 50%.

Risk Management

180. Legal challenges could be made by those that strongly oppose or support the scheme. However, the scheme has gone through one informal and two statutory consultation process (ETRO and TRO) and a robust monitoring exercise has been undertaken (within the environment of unprecedented vandalism). Whilst most consultation responses are not favourable, monitoring suggests that a change in behaviours in line with corporate policies is happening. As such the aims and objectives of the scheme are beginning to be met.

181. East Oxford LTNs were implemented under the Department for Transport's (DfT) Active Travel initiative, within the Tranche 2 funding stream which had a limited budget. The project is currently funded, together with the Cowley LTNs, until the end of March 2024. Funding would need to be identified for any substantial future changes. This will be dealt with through the normal county council budget process.

182. An unprecedented level of vandalism impacted the LTN closures, including bollards and locks being damaged or stolen, putting added pressure on the maintenance budgets to replace irreparably damaged street furniture and make vandalised locations safe again. Following the implementation of the wooden bollards in March 2023, vandalism significantly reduced. Measures continue to be considered and applied to mitigate these issues and should also be considered in relation to ANPR cameras.

183. Monitoring has identified that there have been some immediate negative impacts on traffic volumes / journey times on boundary roads. However, there is evidence that travel behaviours are starting to change and impacts starting to reduce. As has been seen in other authorities' LTN implementations, behaviour change is not instantaneous and it can take several years for changes in travel habits to take effect. Engagement continues with public transport providers and mitigations are planned.

184. OCC social care, NHS and community nurses, continue to express concerns about the impacts on their services, including reduction in the number of patients they can see, delivery of medical goods/healthcare and delays. The county council continues to engage with health providers to try to find solutions to these issues. Should ANPR and associated exemptions be approved at the three east Oxford sites, the county council will investigate how health providers might be accommodated.

Comments checked by: Jennifer Crouch, Principal Solicitor (Legal)

Bill Cotton – Corporate Director Environment & Place

Background Papers available on request are as follows:-

Annexes

Annex 1	Drawings showing the existing east Oxford LTNs.
Annex 2	Drawings showing proposed revisions to Bullingdon Road, Jeune Street and Marston Street
Annex 3	East Oxford LTN Consultation Analysis Report (Let's Talk Oxford) – DJS Research Company. (Report setting out the results of the six-month consultation which ran from May – November 2022.)
Annex 4	Email Correspondence relating to the six-month ETRO consultation, 2022.

Annex 5	East Oxford Low Traffic Neighbourhoods – Traffic Regulation Order (TRO) – Report on Consultation. August 2023. (Report setting out the results of the six-week consultation which ran from June – July 2023)
Annex 6	Email Correspondence relating to the six-week TRO consultation, 2023.
Annex 7	East Oxford LTNs Evaluation - Snapshot Report. June 2023.
Annex 8	East Oxford LTNs - Monitoring and Evaluation Full Report. October 2023.
Annex 9	Climate Impact Assessment.
Annex 10	Equalities Impact Assessment.
Annex 11	Spreadsheet analyses showing Cross Tabs of data from ETRO and TRO consultations.
Annex 12	Stakeholder TRO Correspondence
Annex 13	General Feedback

Contact Officer: Bill Cotton – Corporate Director Environment & Place
Contact Team: East Oxford LTN Team

October 2023