



ADVANCED PUBLICATION OF REPORTS

This publication gives five clear working days' notice of the decisions listed below.

These decisions are due to be signed by individual Cabinet Members
and operational key decision makers.

Once signed all decisions will be published on the Council's
Publication of Decisions List.

- 1. BOWES PRIMARY AREA QUIETER NEIGHBOURHOOD (Pages 1 - 494)**

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Please note Part 2 report is now confidential appendix.

London Borough of Enfield

Portfolio Report

Report of: **Richard Eason, Healthy Streets Programme Director**

Subject: Bowes Primary Area Quieter Neighbourhood

Cabinet Member: Cllr Caliskan

Executive Director: Sarah Cary

Ward: Bowes

Key Decision: KD 5402

Purpose of Report

1. The purpose of this report is to provide details of the Bowes Primary Area Quieter Neighbourhood (Bowes QN) trial measures introduced by means of Experimental Traffic Orders (ETOs) in Summer 2020. This report invites a decision on making the trial permanent.
2. The Bowes QN project objectives are to:
 - Create healthier streets in the Bowes Primary Area in line with the Healthy Streets Indicators¹ as set out in the Mayor's Transport Strategy².
 - Significantly reduce the volume of through motor traffic on minor roads within the project area.
 - Enable a longer-term increase in levels of walking and cycling within and through the scheme area.
3. This report sets out the activities undertaken during the trial and reviews the outcomes against the project objectives, along with an impact assessment on the pre-published³ range of project monitoring areas of focus.

Proposal(s)

4. That, in order to retain the operation of the Bowes Primary Area Quieter Neighbourhood, it is recommended that the provisions of the following

¹ <https://tfl.gov.uk/corporate/about-tfl/how-we-work/planning-for-the-future/healthy-streets#on-this-page-3>

² <https://tfl.gov.uk/corporate/about-tfl/the-mayors-transport-strategy>

³ <https://letstalk.enfield.gov.uk/2794/widgets/9476/documents/10683>

experimental traffic orders continue in force by means of permanent orders made under sections 6, 45, 46 and 84(1) of the Road Traffic Regulation Act 1984.

- The Enfield (Prescribed Routes) (No. 4) Experimental Traffic Order 2020,
 - The Enfield (Waiting and Loading Restriction) (No. 185) Experimental Traffic Order 2020
 - The Enfield (20 m.p.h. Speed Limit) (Amendment No. 1) Experimental Traffic Order 2020
 - The Enfield (Waiting and Loading Restriction) (Amendment No. 170) Experimental Traffic Order 2019 (Variation No. 1) Experimental Traffic Order 2020
 - The Enfield (Residents' Parking Places) (Bowes Park) (No. 1) Experimental Traffic Order 2019 (Variation No. 1) Experimental Traffic Order 2020
5. Taking into account the various matters set out in the body of the report, the factors in favour of making the experimental traffic orders permanent outweighs the disbenefits and/or disadvantages. This report sets out how the volume of local traffic has dropped within the area and the number of people walking and cycling in the area has increased.
6. It is further recommended that no Public Inquiry into this project takes place on the basis that there has been significant opportunity for all views to be canvassed during an extended consultation period, including objections to making the orders permanent, and for these views to be presented to the decision-maker for consideration; the proposal does not contain issues which are particularly complex.
7. These recommendations should be considered in the knowledge that:
- A subsequent report is to be produced as soon as possible which explores mitigation measures to improve access for residents with disabilities through potential exemptions and includes consideration of those with caring responsibilities.
 - A subsequent report is produced which recommends the implementation of a School Street at Bowes Primary.
 - The filter on Maidstone Road at its junction with Warwick Road is amended from a bollard to camera controlled filter, increasing permeability for any exemptions, including the emergency services.
 - The filter on Maidstone Road at its junction with Warwick Road is reviewed to determine whether further public realm improvements could be implemented at this location.
 - A review is undertaken of traffic speed and volume on the unclassified roads, monitored as part of this project, that are outside the Bowes QN area. This will inform the potential residential areas of focus for further QN style interventions.

- A post-project monitoring plan is developed to continue to carry out some high-level monitoring in this area of the Borough.
 - A decision on the implementation of a bus gate on Brownlow Road is taken when further monitoring has occurred following the implementation of Haringey's Bounds Green LTN, enabling a full assessment of network impact.
 - Measures to improve an East / West walking and cycling route through the area are investigated.
8. Note that the Leader must make the decision in relation to the proposals in this report on the basis that the Council may reject or accept the future proposals set out in this paragraph 7.

Reason for Proposal(s)

9. A number of experimental traffic orders were made to bring into operation the trial measures implemented in the Bowes QN. To enable the scheme to be retained, further orders need to be made under sections 6, 45, 46 and 84(1) of the Road Traffic Regulation Act 1984. To help inform the decision, the report sets out the progress against project objectives and objections to the scheme being made permanent, as well as details of the monitoring of this trial.
10. The primary objectives of the project were to create healthier streets within the area, significantly reduce the volume of through motor traffic and enable a longer-term increase in walking and cycling levels. With transport accounting for 39% of the Borough emissions, it is essential that this sector plays a key role in moving towards the goal of being a carbon neutral Borough by 2040. In transport terms, no singular project will provide the answer. The Healthy Streets programme consists of a comprehensive range of interventions that collectively will enable more sustainable transport choices. As projects are knitted together and a coherent network of quiet streets and safe walking and cycling infrastructure on primary roads is delivered, longer-term change will be enabled. This report sets out the impacts for consideration of this particular project, considered against this wider context.

Relevance to the Council's Corporate Plan

11. Good homes in well-connected neighbourhoods. This project supports the Council's commitment to encourage people to walk and cycle, which improve connectivity of neighbourhoods.
12. Sustain strong and healthy communities. The project, and the underlying Enfield Healthy Streets Framework⁴, seeks to create healthier streets. This

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https://governance.enfield.gov.uk/documents/s87876/Enfield%20Healthy%20Streets%20Cabinet%20Report%20-%20Final_020621.pdf

approach puts people and their health at the heart of decision making. It is a long-term plan for improving the user experience of streets, enabling everyone to be more active and enjoy the subsequent health benefits.

13. Build our local economy to create a thriving place. Wider investment in the walking & cycling network forms part of the Council's strategy to support our high streets and town centres by providing safe and convenient access to local shops and services.

Background

14. Low traffic neighbourhoods (LTNs) have been in use in London since the 1960s. They are increasingly being used in London and other cities in the UK and beyond to reduce through traffic in residential areas and aim to increase levels of walking and cycling. The Enfield Healthy Streets Framework sets out a range of interventions, including Low Traffic Neighbourhoods, which was endorsed by the Council Cabinet. However, prior to the implementation of the more recent projects, there is a range of historic measures that the Borough has taken to 'filter' unclassified roads to address the problem of excessive motor traffic on roads that were not designed with that function.
15. The Bowes QN project aims to align with the policy context of local, regional and national policies and strategies that seek to respond to the climate emergency and increase levels of physical activity, and post-pandemic to enable a green recovery. The project objectives are to:
 - Create healthier streets in the Bowes Primary Area in line with the Healthy Streets Indicators⁵ as set out in the Mayor's Transport Strategy.
 - Significantly reduce the volume of through motor traffic on minor roads within the project area.
 - Enable a longer-term increase in levels of walking and cycling within and through the scheme area.
16. In September 2020, the current trial was implemented with funding provided by the Department for Transport Emergency Active Travel Fund. Restrictions of the funding were that work must start within four weeks of receiving the allocation and be complete within eight weeks of starting. A copy of the Department for Transport letter setting out the timeframe and consequences for not complying is at Appendix 1. The interventions are shown in Annex 1. Restrictions to through motor traffic were introduced at:
 - a. Maidstone Road at its junction with Warwick Road.
 - b. York Road at its junction with Brownlow Road.
 - c. Palmerston Road at its junction with the A406 North Circular Road.
 - d. Warwick Road, near the junction with Maidstone Road. This restriction is enforced via camera which allows unhindered access for emergency vehicles.
 - e. Palmerston Road at the junction with Kelvin Avenue, via a new traffic island restricting right turns from Palmerston Avenue into Kelvin Avenue.

⁵ <https://tfl.gov.uk/corporate/about-tfl/how-we-work/planning-for-the-future/healthy-streets#on-this-page-3>

Additional to the above restrictions, a 20mph maximum speed limit was implemented on Beech Road, Elvendon Road, Goring Road, Hardwicke Road and Westbury Road, and parts of Brownlow Road and Queens Road within Enfield.

17. The current trial was introduced using a number of Experimental Traffic Orders (ETOs), which are valid for a maximum of 18 months. The Orders came into effect on 31st July 2020 and expire on 31st Jan 2022. The Local Authorities' Traffic Orders (Procedure) (England and Wales) Regulations 1996 make provision for orders to be made giving permanent effect to the experimental orders, subject to a number of requirements being met, including
- The notice of making containing the required statements;
 - The deposited documents being available for inspection (allowing for the temporary arrangements made during the Covid-19 pandemic);
 - The deposited documents including a statement of the reason for making the experimental order;
 - No variation or modification of the experimental orders was made more than 12 months after the order was made.
18. The above requirements have been met in this instance.
19. In June 2021, an interim report on the Bowes QN was published⁶ that set out the monitoring that had taken place up to that point. A decision was made that the Bowes QN trial should continue to enable further traffic data collection to take place post the lifting of lockdown. This decision was scrutinised by the Overview and Scrutiny Committee.

Main Considerations for the Council

Alignment with strategic context

20. The Bowes Primary Area QN is delivered in the context of local, regional and national policies and strategies that seek to respond to the climate emergency, reduce traffic congestion and increase levels of physical activity, and post-pandemic response to enable a green recovery.
21. The Climate Change Act, amended in 2019, commits the UK to achieving net zero carbon emissions by 2050. The Government is supporting local authorities to encourage sustainable travel through its Active Travel Fund and the 2020 national walking and cycling strategy, Gear Change. The strategy includes:
- *“That physical inactivity is responsible for one in six UK deaths (equal to smoking) and is estimated to cost the UK £7.4 billion annually”*
 - *“In order to really deliver a step-change in the UK, we must go further, faster. Millions more journeys need to be walked or cycled.”*
 - *“Low-traffic neighbourhoods will be created in many more groups of residential streets.”*

⁶ <https://governance.enfield.gov.uk/ieListDocuments.aspx?CID=107&MID=13728>

22. The Government's Net Zero Strategy: Build Back Greener⁷, released in October 2021, sets out the Government's long-term plan to end the UK's domestic contribution to man-made climate change by 2050. Two transport key commitments in this plan are:

- *"Increase the share of journeys taken by public transport, cycling and walking"*
- *"Invest £2 billion in cycling and walking, building first hundreds, then thousands of miles of segregated cycle lane and more low-traffic neighbourhoods with the aim that half of all journeys in towns and cities will be cycled or walked by 2030."*

23. Additional guidance was published by the Secretary of State for Transport in July 2021⁸ to assist local authorities to meet their statutory network management duty. The guidance sets out high-level principles to help local authorities to manage their roads and identify what actions they should take, bearing in mind the ambitions set out in 'Gear Change'⁹. In particular, the guidance emphasises the need to implement and retain schemes that support a green recovery from the Coronavirus pandemic by encouraging walking and cycling.

24. The 2018 Mayor's Transport Strategy (MTS) sets the overall direction and objectives for transport across London. The MTS, and the supporting evidence¹⁰ for the MTS, includes the following statements:

- *"A target for 80% of all trips to be made on foot, by bicycle or by public transport by 2041."*
- *"74% of car trips could be made by a more sustainable mode, for example cycling, walking or public transport."*
- *"The majority (58%) of car trips are made by London residents in outer London."*
- *"Without further action, the average Londoner will waste 2.5 days a year sitting in congested traffic by 2041. Most congestion is caused by there being more traffic on a day-to-day basis than there is space for – traffic methods can help but ultimately, we need to reduce traffic volumes."*
- *"Even in a densely populated city such as London, some journeys can only reasonably be made by car. But the amount of space that can or should be taken up by private road transport is limited, and the population is growing. As well as prioritising more space-efficient and sustainable modes, research suggests that most people agree that the limited remaining space should be prioritised for 'essential' traffic."*
- *"Poor air quality causes the equivalent of up to 9,400 deaths per year and an annual health cost of £1.4 - £3.7 billion."*
- *"Without further action, London is expected to exceed World Health Organisation levels of PM2.5 until well after 2030."*

25. Quieter Neighbourhoods align closely with the following policies in the MTS:

⁷ <https://www.gov.uk/government/publications/net-zero-strategy>

⁸ <https://www.gov.uk/government/publications/reallocating-road-space-in-response-to-covid-19-statutory-guidance-for-local-authorities/traffic-management-act-2004-network-management-in-response-to-covid-19>

⁹ <https://www.gov.uk/government/publications/cycling-and-walking-plan-for-england>

¹⁰ <https://content.tfl.gov.uk/mts-supporting-evidence-challenges-opportunities.pdf>

- *“Policy 1: The Mayor, through TfL and the boroughs, and working with stakeholders, will reduce Londoners’ dependency on cars in favour of active, efficient and sustainable modes of travel, with the central aim for 80 per cent of all trips in London to be made on foot, by cycle or using public transport by 2041.”*
- *“Policy 2: The Mayor, through TfL and the boroughs, and working with stakeholders, will seek to make London a city where people choose to walk and cycle more often by improving street environments, making it easier for everyone to get around on foot and by cycle, and promoting the benefits of active travel. The Mayor’s aim is that, by 2041, all Londoners do at least the 20 minutes of active travel they need to stay healthy each day.”*
- *“Policy 6: The Mayor, through TfL and the boroughs, and working with stakeholders, will take action to reduce emissions – in particular diesel emissions – from vehicles on London’s streets, to improve air quality and support London reaching compliance with UK and EU legal limits as soon as possible. Measures may include retrofitting vehicles with equipment to reduce emissions, promoting electrification, road charging, the imposition of parking charges/ levies, responsible procurement, the making of traffic restrictions/ regulations and local actions.”*
- *“Policy 10: The Mayor, through TfL and the boroughs, and working with stakeholders, will use the Healthy Streets Approach to deliver coordinated improvements to public transport and streets to provide an attractive whole journey experience that will facilitate mode shift away from the car.”*

26. TfL’s Healthy Streets for London¹¹ document sets out how TfL will put people and their health at the centre of decision making, helping everyone to use cars less and to walk, cycle and use public transport more. The Healthy Streets Approach is the framework underpinning the MTS. Key to the Healthy Streets Approach, are the ten Healthy Streets Indicators¹².

27. The Enfield Healthy Streets Framework was approved by Cabinet in June 2021. The report sets out the framework for developing and delivering Healthy Streets projects which incorporates the Healthy Streets Approach. The framework identifies activities to deliver on local, London and national policy objectives. Low Traffic Neighbourhoods are identified and discussed in Activity 1 (creating a high-quality walking and cycling network) of the Healthy Streets Framework. Annex A¹³ of the framework sets out the following:

- *“Enfield’s share of sustainable transport trips is amongst the lowest in London, with 31% trips walked, <1% cycled and 22% made on public transport. Correspondingly, the proportion of car trips exceeds the London average with 48% of trips made by private vehicles in Enfield, compared to 35% in London.”*

¹¹ <https://content.tfl.gov.uk/healthy-streets-for-london.pdf>

¹² <https://tfl.gov.uk/corporate/about-tfl/how-we-work/planning-for-the-future/healthy-streets#on-this-page-3>

¹³ https://governance.enfield.gov.uk/documents/s87877/Enfield%20Health%20Streets%20Annex%20A_Additional%20Information.pdf

- *“Findings from the 2016 analysis of Walking Potential conducted by TfL highlights that Enfield is within the top five Boroughs in terms of potentially walkable trips and of cycling potential. The analysis suggested that an additional 315,000 trips could be cycled daily.”*
- *“Between 2008 and 2019, the number of miles driven on Enfield’s roads increased by 313,000,000.”*
- *“While the level of traffic on ‘main roads’ (A and B roads and motorways) has remained relatively constant since the 1990s, the volume of traffic using ‘minor roads’ (C and unclassified roads) has increased substantially since the late 2000s. “*
- *“Continued growth in population is expected to cause further strain on the road and public transport network if the modal split trends remain. “*

28. Government guidance¹⁴ on roads classification states:

- *“The system of roads classification is intended to direct motorists towards the most suitable routes for reaching their destination. It does this by identifying roads that are best suited for traffic.*
- *All UK roads (excluding motorways) fall into the following 4 categories:*
 - *A roads – major roads intended to provide large-scale transport links within or between areas*
 - *B roads – roads intended to connect different areas, and to feed traffic between A roads and smaller roads on the network*
 - *classified unnumbered – smaller roads intended to connect together unclassified roads with A and B roads, and often linking a housing estate or a village to the rest of the network. Similar to ‘minor roads’ on an Ordnance Survey map and sometimes known unofficially as C roads*
 - *unclassified – local roads intended for local traffic. The vast majority (60%) of roads in the UK fall within this category”*

29. The key routes in the vicinity of the Bowes QN are:

- A406 North Circular Road (Bowes Road), part of the Transport for London Road Network
- A109 Bounds Green Road, for which Haringey Council is the traffic and highway authority
- A105 Green Lanes
- B106 Brownlow Road.

30. As set out in the Bowes QN Project Rationale¹⁵ document published on the project page, it is acknowledged that it will take a number of years to deliver the range of infrastructure projects that are necessary to enable longer-term change. An example of longer-term growth in active travel observed is described in a study¹⁶ of LTNs in Waltham Forest. The study concluded that

¹⁴ <https://www.gov.uk/government/publications/guidance-on-road-classification-and-the-primary-route-network/guidance-on-road-classification-and-the-primary-route-network>

¹⁵ <https://letstalk.enfield.gov.uk/2794/widgets/9476/documents/10682>

¹⁶ <https://findingspress.org/article/17128-low-traffic-neighbourhoods-car-use-and-active-travel-evidence-from-the-people-and-places-survey-of-outer-london-active-travel-interventions>

after three years, LTN residents did 115 minutes more walking per week and 20 minutes more cycling per week, compared to the control group.

Monitoring of the trial

31. The monitoring data and outcomes are discussed in further detail in Table 1. The project Monitoring and Evaluation Plan¹⁷ sets out the areas of focus for monitoring. In Table 1 each of the areas have been considered individually and the impacts assessed. Where the monitoring data refers to ‘Internal Roads’, ‘Boundary Roads’, and ‘Surrounding Roads’, they are defined as per Figure 1. Two areas of focus set out in the Monitoring and Evaluation Plan are discussed in later sections within this report; ‘Residents, businesses and stakeholder’s views’, are discussed in paragraphs 113 to 135 and ‘equality considerations’ are discussed in paragraphs 143 to 169.

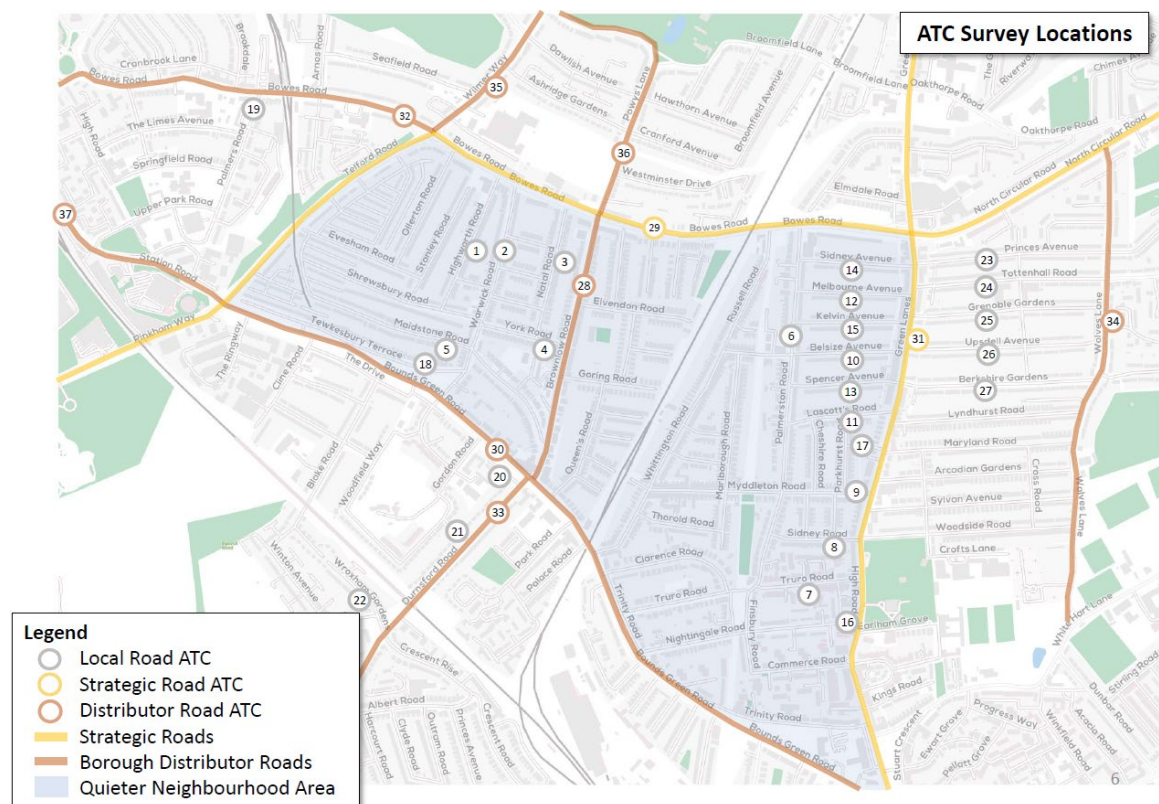


Figure 1: Monitored roads for traffic volumes and speeds and locations of Automatic Traffic Counts (ATCs)

Table 1: Project Monitoring

<p>Traffic volumes</p>	<p>32. Traffic volumes were monitored via Automatic Traffic Counts (ATCs) at locations shown in Figure 1. Pre-implementation and post-implementation data have been compared to inform how the QN has influenced the local and surrounding highway network. Details of the analysis is in included in Appendix 2 and Addendum 1.</p>
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¹⁷ <https://letstalk.enfield.gov.uk/2794/widgets/9476/documents/10717>

Local roads (within Bowes QN)

33. Based on 18 surveyed sites, the average reduction in traffic on local roads within the QN is 16%.

The three roads within the QN area with the greatest decrease in the average daily number of vehicles are shown below:

	Pre	Post	Difference	% Difference
Palmerston Road	3075	1186	-1889	-61%
York Road	1925	141	-1784	-93%
Maidstone Road	1111	174	-937	-84%

34. The three roads within the QN area with the greatest increase in the average daily number of vehicles are shown below:

	Pre	Post	Difference	% Difference
Nightingale Road	2612	3459	847	32%
Spencer Avenue	635	1324	690	109%
Truro Road	3184	3695	511	16%

35. Nightingale Road, Spencer Avenue and Truro Road have seen an increase in motor traffic as these are some of the routes which remain available for through traffic. They have remained as through routes largely as a result of the Bowes QN ending at the Borough boundary. However, it is now clear that Haringey Council intends to implement an LTN in the area¹⁸. If they proceed, it is anticipated the volumes on these roads would significantly reduce as the Haringey interventions will complete an area wide approach to preventing through traffic.

36. Highworth Road experienced an increase in traffic volume, but due to an initial low volume of traffic (520 vehicles in 24 hours), the increased volume (613 vehicles in 24 hours) remains low. However, this road includes a school and therefore any increase in traffic is a concern and mitigating measures are recommended. Therefore, the Council is investigating a School Street on Highworth Road as part of a further Borough wide rollout of School Streets.

37. Queens Road was not initially identified for monitoring, however Haringey Council has advised that residents on Queens Road have reported an increase in motor traffic. This is likely due to vehicles bypassing the banned right turn at the Brownlow Road / Bounds Green Road junction.

Strategic / Distributor Roads

¹⁸ <https://www.haringey.gov.uk/parking-roads-and-travel/travel/transport-strategy/low-traffic-neighbourhoods-haringey>

38. Brownlow Road – The Bowes QN project included the opportunity to explore a ‘bus gate’ on Brownlow Road. This feature would restrict private motor vehicles from passing through a particular point on the road, on either a 24/7 or timed basis. Feedback was requested as part of the engagement and consultation. Work has commenced to understand the network impact of declassifying what is currently a Borough distributor road (the impact on wider bus routes needs to be considered, in addition to those bus routes that use Brownlow Road). Having regard to both authorities’ network management duty, it is not possible to conclude this assessment until further monitoring has taken place post the implementation of the Haringey Bounds Green LTN. On this basis, it is recommended that further data collection takes place a minimum of 6 months after the Haringey LTN is fully implemented. Haringey & Enfield Council have agreed to work together on the collection of data to enable a joint process of analysis. It is acknowledged that Brownlow Road is currently showing a 2% traffic increase in traffic volume. Average traffic speeds are 15mph in either direction. It is understood that the uncertainty over the bus gate will be of concern to a number of residents living on Brownlow Road. However, the recommendation is that a decision on the implementation of a bus gate on Brownlow is taken when further monitoring is complete, post the implementation of Haringey’s LTNs, enabling a full assessment of network impact. Enfield Council is looking to install a permanent traffic monitoring site on Brownlow Road to help inform this assessment.
39. Boundary to the QN – Based on the three sites surveyed (A406 Bowes Road, Green Lanes and Bounds Green Road), the average reduction in traffic on strategic / distributor roads on the boundary of the QN is 2%.
40. External to the QN – In addition to the boundary roads, six further strategic / distributor roads around the QN area were surveyed. Based on these sites, the average increase on traffic on strategic / distributor roads outside the QN is 2%.
- Local Roads (external to the QN)*
41. Woodfield Way & Rhys Avenue – these roads experienced an increase in traffic volumes. Wroxham Gardens experienced a decrease. Haringey Council is investigating implementing an LTN in the area. If they proceed, it is anticipated the volumes on these roads would significantly reduce.
42. Palmers Road - experienced an increase in traffic volumes. The Council proposes to carry out further investigation in this area.

	<p>43. Ladder roads between Green Lanes and Wolves Lane (Princes Avenue to Berkshire Gardens) – data from 2016 for Grenoble and Berkshire Gardens has been compared to the measured data in September 2021. There has been a slight reduction in flows on these roads since 2016. The average 24 hour traffic volume on Grenoble Gardens in 2016 was 1906 vehicles, compared to 1845 vehicles in September 2021. The corresponding flows in Berkshire Gardens is 1838 and 1683 vehicles.</p> <p><i>Limitations of data</i></p> <p>44. The reported changes in the network should not be considered as only influenced by the Bowes QN. This project has been implemented during the pandemic which has created changes in travel patterns. It is not known what longer-term impacts the pandemic will have. Pre-implementation surveys were undertaken in July 2020 while some lockdown restrictions were in place and some schools were closed. Post-implementation surveys were undertaken in September 2021. The analysis includes a ‘sensitivity test’ where a factor has been applied to mitigate the impacts of Covid on the data. Details of the analysis methodology is in Appendix 2 and Addendum 1.</p> <p>45. Acknowledging the limitations in the data, the unprecedented impacts of the pandemic and that Haringey are exploring further mitigation measures, the impacts associated with traffic volume do not, in isolation, suggest that the trial should not be made permanent.</p>
Vehicle speeds	<p>46. Vehicle speeds were monitored via Automatic Traffic Counts (ATCs). Details of the analysis methodology and results is in Appendix 2.</p> <p><i>Local roads (within Bowes QN)</i></p> <p>47. Across the 18 surveyed locations, vehicle speeds have reduced by an average of 1mph.</p> <p><i>Strategic / Distributor Roads</i></p> <p>48. Across the three surveyed locations of the boundary roads (A406 Bowes Road, Green Lanes and Bounds Green Road), vehicle speeds have reduced by an average of 4mph.</p> <p>49. Across the six surveyed locations of the surrounding strategic / distributor roads, vehicle speeds have changed by less than 1mph over the 24 hour period.</p> <p><i>Local Roads (external to the QN)</i></p> <p>50. Across the four surveyed locations of the surrounding local roads, vehicle speeds have increased by an average 1 mph.</p> <p>51. The observed changes in traffic speed before and after the trial do not suggest that the trial should not be made permanent.</p>

<p>Bus journey times</p>	<p>52. Bus journey times in the area have been analysed using iBus data supplied by TfL. Pre-scheme journey times are an average journey between November 2019 and February 2020, before travel restrictions were introduced due to Covid-19. Post-scheme journey times are an average journey between September and October 2021 after the pandemic restrictions were lifted (29 July 2021), and following the summer holidays.</p> <p>53. Details of the analysis and methodology is in Appendix 2 and Addendum 1.</p> <p>54. Overall, bus journey times have generally improved. In the AM peak, 60% of trips in the area have shown a decrease in journey time. In the PM peak, 85% of the trips in the area have shown a decrease in journey time. In the AM peak hour, bus journey times were between 39 seconds faster and 74 seconds slower. In the PM peak hour, bus journey times were between 151 seconds faster and 41 seconds slower. As with traffic volumes, there may be a range of factors, beyond the Bowes QN project, that are contributing to the overall results.</p> <p>55. The three journeys that have increased by over 60 seconds have been analysed in more detail:</p> <ul style="list-style-type: none"> • 184 northbound in the AM peak (74 seconds) • 221 westbound in the AM peak (63 seconds) • 232 eastbound in the AM peak (61 seconds) <p>56. All routes northbound on Brownlow Road have increased by some degree, with the most affected being the 184 northbound in the AM peak, which is showing an increase in journey time of 74 seconds.</p> <p>57. The increase for the 221 westbound in the AM peak (63 seconds) is mainly a result of some delays experienced on Bounds Green Road between the stops at Nightingale Road and Palace Road.</p> <p>58. The main source of delay in the 232 eastbound was identified on Bowes Road east of Telford Road between the stops at New Southgate Station and Telford Road.</p> <p>59. The impacts on bus journey times identified above, when considered in isolation, are not considered to be significant enough to not make the trial permanent.</p> <p>60. Enfield has an ongoing work programme to work with TfL to identify measures to improve the operation of buses. As part of this ongoing programme, Enfield has been working to develop a proposal to improve journey times and reliability on Green Lanes. This work was underway prior to the Covid-19 pandemic and the implementation of the Bowes QN. In October</p>
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	<p>2021, plans to extend the operational hours of the northbound bus lanes were published. More information can be found on the Enfield Let's Talk website¹⁹.</p> <p>61. The Council will continue to work with TfL to identify ways in which bus journey times can be improved across the Borough.</p>
Pedestrians	<p>62. A sample of three locations were monitored for pedestrian volumes in July 2019 and July 2021. These locations were:</p> <ul style="list-style-type: none"> • Warwick Road • Brownlow Road • Palmerston Road <p>63. Across the three sites, pedestrian volumes increased by an average of 14%. Warwick Road and Brownlow Road increased by 26% and 16% respectively, and Palmerston Road decreased by 9%.</p> <p>64. Further details are included in Appendix 2.</p> <p>65. The pandemic may have impacted on walking levels, and whilst there are limitations to the data, this overall increase in pedestrian activity appears to be a positive trend.</p>
Cycling	<p>66. Cycle volumes were monitored via Automatic Traffic Counts (ATCs).</p> <p>67. <i>Local roads (within Bowes QN)</i> Across the surveyed locations, the results show an overall increase in cycle activity by around 20%. Significant increases were observed on Maidstone Road and York Road, with 81 and 61 more cycles recorded in an average 24 hour period, up from pre implementation volumes of less than 5 on each road.</p> <p><i>Strategic / Distributor Roads</i></p> <p>68. Brownlow Road observed a decrease of 29 fewer cycles recorded in an average 24 hour period, down from a pre implementation volume of 203.</p> <p>69. The only boundary road where before and after data is available is Bounds Green Road which has seen a reduction of around 40%, down from a pre implementation volume average 24 hour volume of 129.</p> <p>70. The reductions on Brownlow Road and Bounds Green Road are likely indicators that cyclists are choosing to reassign to the quieter roads within the QN.</p>

¹⁹ <https://letstalk.enfield.gov.uk/bus-priority-scheme>

71. Across the surveyed locations of other strategic / distributor roads, excluding the boundary roads, the results show an overall increase in cycle activity by around 16%.

Local Roads (external to the QN)

72. Across the surveyed locations, the results show Palmers Road has increased significantly, with small reductions on two of the sites and a larger reduction on Wroxham Road.

73. Further details of cycle volumes by road and the analysis methodology are in Appendix 2.

Cycle parking

74. Occupancy data from cycle hangars within the Bowes QN area show that demand for cycle parking in the area is higher than the Enfield average. This is shown in Figure 2. Demand for cycle parking in the QN area is also high, as shown in Figure 3. Whilst these trends cannot be directly attributable to the QN, they indicate strong demand for cycle parking in the area.

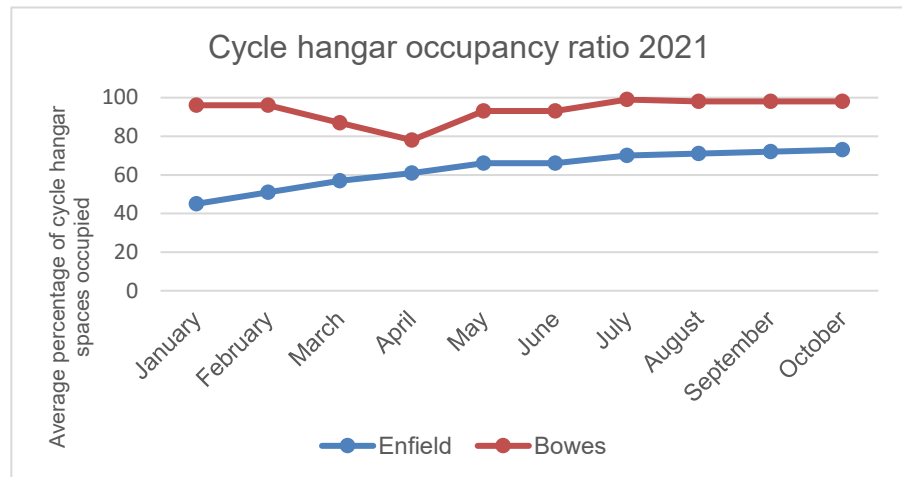


Figure 2: Cycle hanger occupancy in the Bowes QN and Enfield

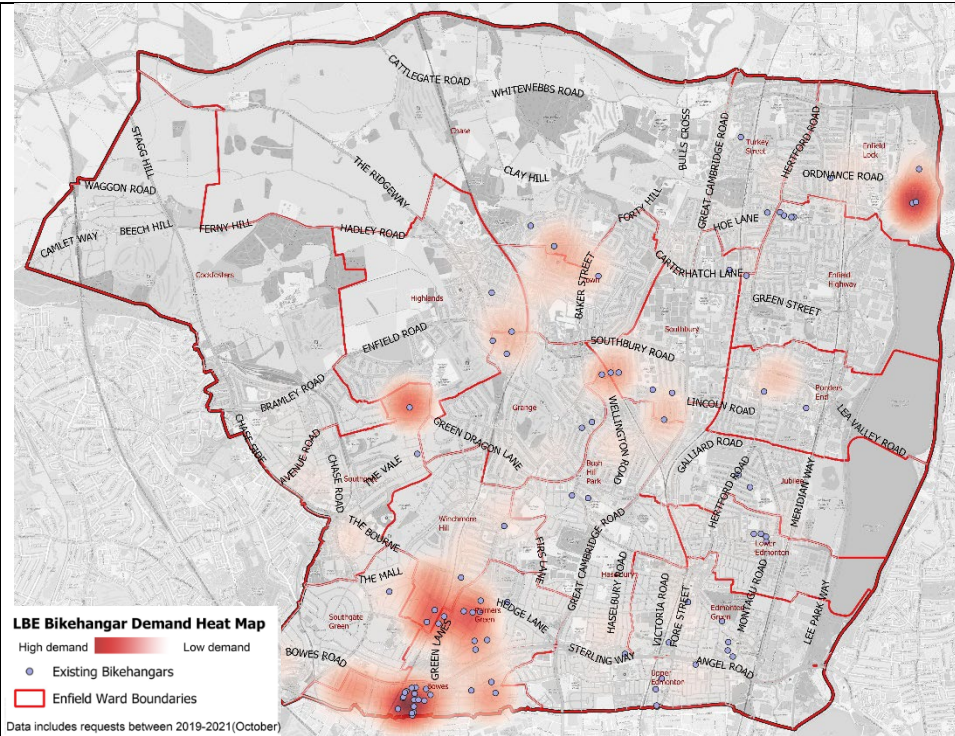


Figure 3 Bike hangar demand heat map of requests between January 2019 and October 2021

75. One of the aims of projects such as this is to create a network of streets that when connected together will enable the development of safe corridors for walking and cycling on quiet streets. Where space allows, and as part of the development of a wider network, this approach can be complemented by segregated cycling facilities on primary roads. It should be acknowledged that changing travel behaviours is part of a longer-term programme that the Council is pursuing. The data suggests the start of a trend in the right direction.

76. The Council is investigating options to improve the environment for cycle movements across Brownlow Road. This aims to provide greater connectivity to Bowes Park station, the Myddelton Road shops and Palmerston Road which leads to a safe cycle crossing at the A406. Implementation will be subject to funding, approvals and further community engagement.

Emergency services

London Ambulance Service (LAS)
 77. Since the implementation of the trial in August 2020, there have been three incidents reported by the LAS. The incidents involved a delay to an ambulance travelling east-west through the project area as a result of a filter. It is unclear how the delayed crew were navigating to and from the scene. Any patient impacts are not divulged by the LAS when reporting delays. The LAS were asked to provide input into this report. This representation has been included at Annex 2. This response has been provided by a LAS representative who was not involved in the project in the earlier stages and was

therefore not involved in the conversations that the Council had with local LAS representatives and the consultation that took place on the designs prior to the implementation. The Council have clarified this point in its response to the LAS at Annex 3.

78. As part of the implementation of the project, the Council has invested in technological solutions to ensure that updates are effectively made to commercially available navigation solutions such as Google, TomTom and Bing. This enables the emergency services to update their own navigational systems as they deem necessary. The Council continues to work with the emergency services to gain more insight into the navigational approach that crews are taking if any delays occur, to help determine whether there are any further steps that can be taken to minimise any issues. The solution provider is now working with TfL and the large commercial providers to examine how changes can be made to support emergency services more effectively by providing navigation data which understands exemptions for emergency vehicles. This is a highly technical and developing market which will require a lot of development over time.

79. To improve permeability for east-west movements within the QN area, the Council will investigate converting the fixed modal filter at Maidstone Road to a camera enforced filter. This location has been selected as it will also respond to feedback received through the EQIA process that this road is used by Blue Badge holders to facilitate pick up and drop off at Bounds Green tube station.

London Fire Brigade (LFB)

80. LFB has informed the Council that the Bowes QN has had little or no effect on their response as a service and has not reported any issues regarding the QN. The Council has not received any objections from the LFB.

Metropolitan Police Service (MPS)

81. The MPS has not raised any incidents of delayed response due to this project. The Council has not received any objections from the MPS. However, in preparing for this report the MPS were contacted, informed that the report was been produced, and were offered an opportunity to provide comment. The MPS did not provide any specific comments other than confirmation that the project has not directly affected their core policing responsibilities. Considerations on crime are addressed in the following section.

82. It should be noted that during the trial, where removeable bollards were used, these have been upgraded to a more advanced locking mechanism that the LFB carry keys for. The LAS and MPS have made their own operational decisions to not carry keys to removable bollards.

	<p>83. The Council remain committed to working with the emergency services and through regular dialogue will continue to be responsive to any issues raised. On the basis of no objections from the emergency services, there is no suggestion that the scheme should not be made permanent.</p>
Crime and anti-social behaviour	<p>84. Public mappable Police data has been reviewed in the Bowes Primary Area QN and Bowes ward. The 2019/2020 period (September 2019 to August 2020) has been compared to the 2020/2021 period (September 2020 to August 2021). There has been a 2% decline overall in offence numbers since implementation of the QN. Offences across the Bowes and Southgate Green wards have increased by an average of 7% within the same time period.</p> <p>85. Further details, including a breakdown of offences by crime category, is included in Appendix 3.</p>
Noise	<p>86. To understand the impact on noise the Council employed noise specialist consultants. The noise model used in the assessment is dependent on traffic data, which to the extent possible, took into the account of the Covid-19 pandemic. The assessment is primarily a study focussed on the change in noise levels associated with the project (as opposed to absolute levels), which is not significantly impacted by total traffic volumes.</p> <p>87. The scale of change in noise levels are categorised based on industry guidance to determine perceptible differences. The assessment predicts that the project has led to moderate to major decreases in noise levels along York Road and Maidstone Road, as well as moderate decreases on Palmerston Road during the night period. The scheme is predicted to have increased noise levels moderately along Spencer Avenue and on occasion Sidney Road and Woodfield Way. These impacts are likely to be mitigated if Haringey proceed with their Bounds Green LTN. Although the project led to small changes to noise levels on other roads, the scale of the changes are unlikely to be perceptible, are within the margin of error and may not be directly attributable to the project.</p> <p>88. The noise assessment report is included in Appendix 4.</p>
Air quality	<p>89. Nitrogen dioxide (NO₂) and particulate matter (PM₁₀ and PM_{2.5}) are reported as these are the main pollutants of concern and road transport contributes to a significant proportion of these pollutants.</p> <p>90. Local air quality monitoring by Enfield Council includes one automatic station within the project area adjacent to the A406</p>

North Circular Road by Bowes Primary School, and diffusion tubes located on Brownlow Road and Warwick Road. Additionally, Haringey Council has a diffusion tube adjacent to the project area at Bounds Green Primary School. Monitoring is long-term, and national objectives are an annual value, due to the natural variation in air quality meaning measurements from a short period of time cannot be directly compared to others. NO₂ concentrations were below national objectives at all locations in 2019, and PM₁₀ concentrations as measured at Bowes Primary School, have been well below objectives since 2014. PM_{2.5} is not measured at this location.

Air quality assessment

91. An air quality assessment was carried out by an external agency. Their report was conducted using measured traffic data and calculated changes in traffic attributable to the project to estimate the associated impacts on local air quality.
92. The assessment takes into account the volume and behaviour of traffic which directly impacts air quality, including vehicle speeds, time of the day, fleet composition (e.g. light vehicles/cars through to heavy vehicles/trucks), vehicle emissions and junctions (due to congestion and the combined effect of several road links).
93. The assessment shows that the project led to slight decreases in nitrogen dioxide concentrations on some roads and some slight increases in concentrations on some roads. However, based on industry standard guidance, the scale of these changes is associated with negligible impact at all locations, with the exception of one location with a slight adverse impact at the junction of Truro Road and the A105 High Road in Haringey, and one location at the intersection of the A105 Green Lanes and the A406 North Circular Road with a moderate adverse impact. The latter location is however associated with uncertainties in the model, as addressed in Appendix 5 paragraphs A4.8 and A4.9.
94. The trends of PM₁₀ and PM_{2.5} concentrations are similar to those of nitrogen dioxide, but because concentrations are influenced by a wider range of sources, the changes observed due to the project are smaller. The predicted changes in annual mean PM₁₀ and PM_{2.5} concentrations are associated with negligible impacts at all locations in the study area.
95. Reasonable assumptions were made in adjusting the data for the air quality assessment, including for impacts of Covid-19 on the traffic data. Sensitivity testing, which tested the boundaries of the Covid-19 assumptions, predicted negligible impacts for all PM₁₀ and PM_{2.5} concentrations, and for all nitrogen dioxide concentrations with the exception of one location on the A105 Green Lanes near its junction with the

	<p>A406 North Circular Road, where a moderate adverse impact is predicted, and one location on York Road, where a slight beneficial impact is predicted.</p> <p>96. The full report on air quality is included in Appendix 5.</p> <p>97. The project is set within the context of a wider programme of work and takes a long-term view of improving air quality. The assessment does not indicate that the project is having a broad negative impact on air quality. This is relevant to note as the perception of a very negative impact on air quality has been a particular cause for concern of residents.</p> <p><i>Update following air quality assessment report</i></p> <p>98. The assessment report included in Appendix 5 was carried out informed by data collected in November 2020. Council has sought a review of the traffic data collected in September 2021 against the November 2020 traffic data.</p> <p>99. The outcome of this review is that at locations where the traffic flows collected in 2021 are lower than that collected post-implementation in 2020, the conclusions of the original assessment still stand. In some cases, the positive impacts of the scheme may be increased. At locations where traffic flows increased in 2021, in comparison with the post-scheme data collected in 2020, at most locations large increases would be required to trigger a change from negligible to 'slight adverse'. On this basis, conclusions at all locations were considered unlikely or very unlikely to be affected by the difference in traffic flows, except for one location on Durnsford Road. At this location, there is potential for a slight adverse impact but this would not change the overall conclusion that the scheme does not have a significant effect on air quality.</p> <p>100. One of the borough's permanent monitoring sites is located at Bowes Primary. Average monthly readings for NO₂ are presented in Figure 4. The horizontal line shows the annual mean objective set by the government²⁰. The objective is a 'standard' below which the pollutant concentration, averaged over a year, shall be.</p>
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²⁰ Objectives for use by local authorities are prescribed within the Air Quality (England) Regulations (2000) and the Air Quality (England) (Amendment) Regulations (2002).

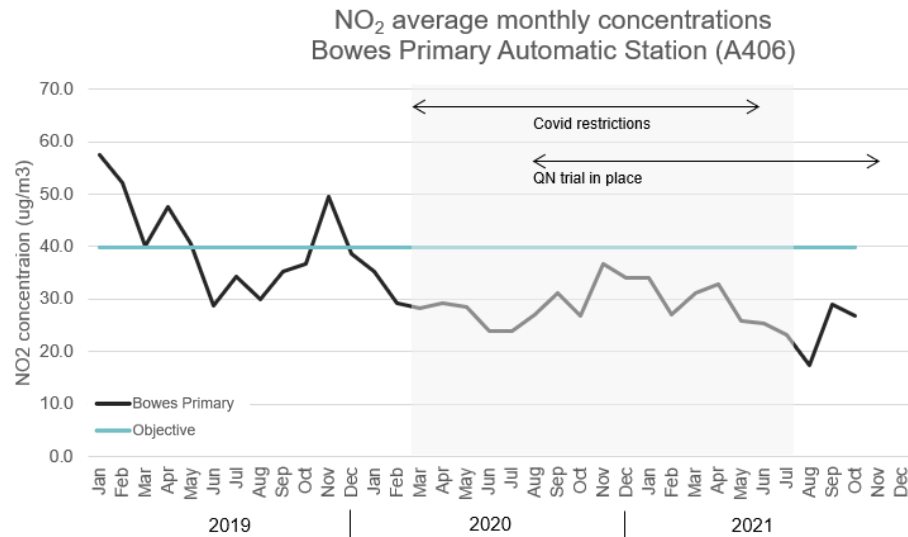


Figure 4 NO₂ average monthly concentrations at Bowes Primary monitoring station 2019-2021, and the annual mean objective

101. Figures 3 shows that since the implementation of the Bowes QN, concentrations of NO₂ at the Bowes Primary monitoring station have been below the annual mean objective. Further details are included in Annex 4 which presents NO₂ and PM₁₀ concentrations at Bowes Primary and diffusion tube data for Brownlow Road and Warwick Road.

Road collisions

102. Personal injury collision data is collected when the police attend an incident; this data is then collated by Transport for London and passed on to boroughs six monthly. The data available at the time of report preparation is up to 30 June 2021.

103. Typically for area wide schemes such as a Low Traffic Neighbourhood (LTN), personal injury collision data for the most recent three-year period is considered adequate to identify collision patterns that engineering measures could address.

104. A personal injury collision search for the three-year period prior to implementation shows that there were 28 personal injury collisions within the Bowes Primary Area QN, excluding those on the A406 and Green Lanes²¹. Of these 28 collisions, 24 involved slight injuries and 4 serious injuries.

105. If the A406 and Green Lanes are included in the analysis, the number of personal injury collisions increases to 119 during the same three-year period, with particular clusters at the A406/Green Lanes and A406/Bowes Road junctions. Of these 119 collisions, 100 involved slight injuries, 17 serious injuries and 2 fatal injuries.

²¹ The table and plot in Appendix 6 show 30 collisions, two of which actually occurred on the A406 (one fatal and one slight).

	<p>106. A personal injury collision search has been completed post-implementation. Data is available up to 30 June 2021 providing 10 months of data. The results of this search indicate there have been 9 personal injury collisions within the QN area post implementation (excluding the A406 and Green Lanes). Of these collisions, eight involved slight and one involved serious. 40 personal injury collisions are recorded if those on the A406 and Green Lanes are included, 36 involving slight and 4 involving serious injuries.</p> <p>107. Whilst a trend cannot be established based on just 10 months of data, the information available to date does not suggest the Bowes Primary Area QN has had a significant impact on personal injury collisions.</p> <p>108. A summary of the personal injury searches and associated plans are included in Appendix 6.</p>
Healthy Streets Indicators	<p>109. The Healthy Streets check for designers has been utilised to review the Healthy Streets score for several roads in the QN. The tool is designed for use on a corridor, so a sample of streets within the QN and boundary roads have been assessed.</p> <p>110. Several streets within the QN have increased their Healthy Streets score. Key to improving the score is an improvement on several roads of the 'reducing private car use' metric by introducing access restrictions for motorised traffic. This metric contributes to a higher score in seven out of the 10 indicators.</p> <p>111. Further details of the assessment are included in Appendix 7.</p>

Alignment against project objectives

112. The project had a number of objectives and an overall assessment of how these have been achieved is set out below.

Table 2: Alignment against project objectives

Project Objective	Project Outcomes
Create healthier streets in the Bowes Primary Area in line with the Healthy Streets Indicators as set out in the Mayor's Transport Strategy.	Several streets within the QN have increased their Healthy Streets score. Key to improving the score is an improvement on several roads of the 'reducing private car use' metric by introducing access restrictions for motorised traffic. This metric contributes to a higher score in seven out of the 10 indicators.

Significantly reduce the volume of through motor traffic on minor roads within the project area	Traffic volumes have decreased on monitored local roads within the QN by an average of 16%, without a significant impact on boundary roads.
Enable a longer-term increase in the levels of walking and cycling within and through the scheme area	<p>Monitoring data indicates an overall increase in pedestrian and cycling activity within the area.</p> <p>At the three monitored sites within the QN, overall pedestrian movements increased by 14%. At the monitored sites on local roads within the QN, cycling activity increased by 20%. With the further improvements identified to improve the east/west cycling provision and the proposals for future LTN areas in Haringey, there is the potential to maintain and build upon this upward trend.</p>

Community engagement

113. Enfield Council has heard concerns from residents in the Bowes area for many years about the impact of motor traffic passing through the area. In November 2018 a number of Bowes area residents petitioned the local MP²². He took this petition to parliament. In his speech he talked about speeding, road danger and high levels of air pollution affecting children at Bowes Primary School.
114. In October and November 2019, a perception survey was conducted with residents in the area to gather perceptions on traffic speeds and volumes in response to ongoing traffic concerns raised by residents and Councillors.
115. Following the release of funding for active travel in response to the Covid-19 pandemic, communications with the community regarding the project included:
- A project flyer detailing the project background, a plan of the project, and information on the consultation delivered in July 2020
 - A notification letter with details of the construction delivered in August 2020
 - Launch of Let's Talk project page in October 2019, hosting information on the project, FAQs, documents, the electronic consultation survey, and project updates posted to the page
 - A letter inviting residents to participate in the consultation and providing details of how to do so, delivered in September 2020
 - The Deputy Leader and Healthy Streets Programme Director met with the following community groups as part of the ongoing engagement and consultation process, to provide an opportunity to listen to different perspectives on the project:

²² <http://betterstreets.co.uk/bowes-ward-petitions-for-a-low-traffic-neighbourhood/>

- Bounds and Bowes Voice (2/12/2020)
 - Bounds and Bowes Together (7/12/2020)
 - Warwick Road Action Group (15/12/2020)
 - Friends of Brownlow Road (21/12/2020)
 - Healthy Streets Bounds Green (6/1/2021)
- A letter inviting residents to join an online public webinar delivered in March 2021
 - A letter advising residents of the closing date of the consultation, delivered in April 2021. This letter was delivered to a larger distribution area in response to feedback provided
 - The Deputy Leader and Healthy Streets Programme Director answered questions from the community at the Bowes Ward Forum on 17 June 2021
 - A letter detailing information on plans by the London Borough of Haringey to introduce a Low Traffic Neighbourhood adjacent to the Bowes Primary Area QN, delivered in August 2021
 - A letter advising residents of a further period to provide feedback delivered in November 2021.
116. Notice of the making of the ETO was published in the London Gazette and Enfield Independent newspapers on 22 July 2020. Any person may object to the making of the permanent Orders, within a period of six months beginning with the date on which the experimental Orders came into operation. The six-month statutory period for objections ended on 31 January 2021. The Council extended the period of consultation to continue to consider objections and representations made to 2 May 2021.
117. The Council received feedback during the consultation period via two means:
- As per the instructions regarding objections or representations written in the ETO; in writing and must state the grounds on which any objection is made and be sent to the Head of Traffic and Transportation, or by email to traffic@enfield.gov.uk quoting the reference TG52/1454
 - Participating in the consultation survey hosted on the Let's Talk Enfield website. A paper copy of the consultation survey, or in an alternative language, was available upon request. Feedback could also be sent to healthystreets@enfield.gov.uk or in writing to the Council.
118. Statutory consultees were sent notice of the traffic order and invited to provide an objection or representation on 17 July 2020. A formal response was received from the Metropolitan Police who shared concerns about the introduction of a 20mph speed limit on Brownlow Road, namely the enforceability of this limit. No further formal responses were received on the final designs²³ however stakeholders such as the London Fire Brigade and London Ambulance Service were engaged and communicated with during the design phase and their input helped to shape the designs. Communication has continued throughout the trial period.

²³ An objection was received from the LAS earlier in the process, but further discussion clarified that this was based on potential travel time for employees and was not with regard to LAS operations.

119. Grounds for objections that were raised have been extracted from the consultation report and listed in Annex 5. The Council has carefully considered these and provided a response to each objection.
120. A further opportunity to share comments was provided in November 2021. Feedback has been reviewed and objections received collated into Annex 5. This opportunity was communicated through a letter delivered to the area, the publishing of a notice in the London Gazette and Enfield Independent newspapers, a website update on the Let's Talk Enfield site and social media posts on the Council's social media channels.
121. Consultation responses received up to 2 May 2021 have been analysed by an external company and consolidated into a report which is at Appendix 7. An overview of the September 2020 – May 2021 consultation report is discussed in Table 3. Responses received between 1-21 November is discussed in paragraph 135.

Table 3: Overview of the consultation report

Number of responses	122. There were a total of 1756 responses from 1301 unique respondents to the online consultation, plus 24 responses received via a paper copy of the survey. In addition to this, 863 emails were received by the Council (this includes letters sent as attachments within an email) from 563 unique email addresses.
Car ownership	<p>123. Overall, car owners were much more likely to report negative impacts on the scheme than non-car owners. Conversely, non-car owners were much more likely to report positive impacts than car owners. This is evidenced by Figure 4-9 of Appendix 8:</p> <ul style="list-style-type: none"> • 53% of non-car owners perceived the impacts of the QN positively, compared to 20% of car owners • 28% of non-car owners perceived the impacts of the QN negatively, compared to 56% of car owners <p>124. Car owners were over-represented in the consultation survey, based on the 2011 Census as shown in Figure 5.</p>

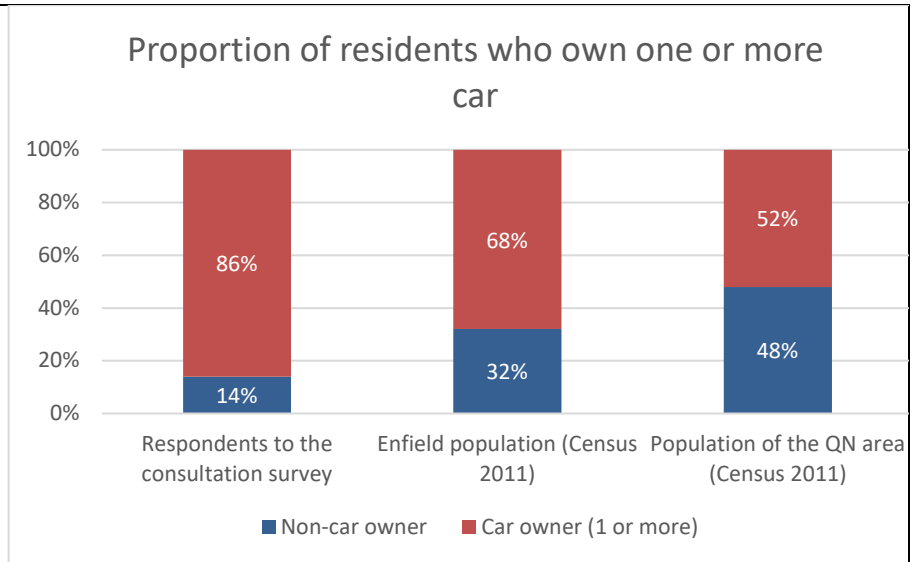


Figure 5 Proportion of residents who own one or more car

125. The overall responses are therefore influenced by the higher proportion of car owners who participated in the survey. This should be considered in the context of a project where a key aim is to reduce the dominance of the private car.

126. Perceptions about the effectiveness of the scheme varied by car ownership (Figure 6-2 of Appendix 8). Responses to these questions, for example about the perceived scheme’s effectiveness on ‘creating a general feeling of safety’ showed a significantly larger portion of non-car owners reported a somewhat or very positive effect compared to car owners. ‘Maintaining visitor access’, and ‘improved air quality’ had the fewest respondents perceiving positive effects out of the questions asked for both car and non-car owners.

127. The importance of ‘slower speeds of vehicles travelling in the area’, ‘feeling safe to walk and cycle in the area’, and ‘improved air quality throughout the area’ were considered ‘somewhat important’ or ‘very important’ by the majority of respondents indicating support from respondents for these aspirations. When broken down by car ownership, fewer respondents who own one or more cars considered the aspiration ‘somewhat’ or ‘very important’ compared to those who do not own a car, indicating non-car owners place higher importance on these aspirations than non-car owners.

Location	<p>128. Of the respondents, 940 (71%) live within the scheme area. There were a further 353 respondents from people living outside the area, and 38 who did not provide the relevant information. There is an estimated population of 25,256 based on the 2011 Census living within the project area and surrounding roads. The 940 respondents living within the scheme area represent approximately 4% of those residents. These numbers do not include the emails received from 563</p>
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unique email addresses as demographic information was not available.

129. Some questions received significant variation in responses depending on whether the respondent was inside or outside the scheme area. Examples of this can be seen in Figure 6-2 of Appendix 8. In contrast to those outside the area, who reported significantly more negative perceptions than positive perceptions, those inside the area reported similar levels of positive and negative perceptions of the scheme on:

- 'Reducing motor vehicle volumes': 50% positive, 41% negative
- 'Reducing traffic noise': 41% positive, 46% negative
- 'Enabling more walking and cycling': 37% positive, 42% negative
- 'Creating a general feeling of safety': 34% positive, 33% negative

130. Whilst there are a range of views of residents living within the area, it is clear that those residents living outside of the area were typically more dissatisfied with the trial.

131. An underlying reason for this is evidenced by only 43% of respondents outside the area considered it 'somewhat' or 'very important' to 'reduce the number of vehicles cutting through the area'. This shows many respondents outside the area do not support the primary mechanism of the trial, and therefore their responses are reflective of that. This is further evidenced by 74% of respondents outside the area considered it 'very important' or 'somewhat important' to 'drive right through the area'. Preventing this is a direct objective of the project, and as a result is likely a key factor for those who object to the scheme.

132. The importance of 'slower speeds of vehicles travelling in the area', 'feeling safe to walk and cycle in the area', and 'improved air quality throughout the area' were considered 'somewhat important' or 'very important' by the majority of respondents indicating support from respondents for these aspirations. When broken down by location, fewer respondents outside the area considered the aspiration 'somewhat' or 'very important' compared to those inside the area, indicating respondents inside the area place higher importance on these aspirations than those outside the area.

133. The perceived effectiveness of the scheme on 'maintaining visitor access' and 'improved air quality' was reported negatively by both those who live outside and within the area. These indicate that maintaining the existing visitor access has been a challenge for all residents in the area. With regards to air quality, it is clear this is an important focus area for

	residents. Accordingly, this report includes air quality monitoring data for the area in addition to the modelling report.
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134. A letter to Blue Badge holders was sent to residents in the area on 26 February 2021. The letter invited residents to participate in a survey, separate to the main consultation survey. This survey aimed to find out more about how people with disabilities and carers perceive the scheme to help inform the Equalities Impact Assessment for the scheme. A paper copy of the survey was included in the letter delivery. Additionally, all respondents to the main consultation survey who indicated they have a disability, receive care, or provide care to someone in the area, were sent an email advising them of the additional survey and how to participate. Outcomes of this survey is discussed in 'Equality Considerations' in paragraphs 143 to 169.
135. During the November 2021 period for feedback 533 emails and 5 letters were received. These numbers include several responses which were submitted more than once, or multiple responses by the same respondent. Given this was a further opportunity to comment, it is understood that a number of the responses received during this period were from respondents who had also provided a response during the statutory consultation period detailed above. The purpose of this further opportunity to comment was to ensure all grounds for which respondents had made objections and representations had been captured for consideration in this report following periods of COVID-19 restrictions being lifted. Analysis focused on understanding different or new themes raised in addition to those captured during the statutory consultation period.

Safeguarding Implications

136. None identified.

Public Health Implications

137. The Bowes QN project as outlined in this report can help make transport in the area more health-promoting by increasing physical activity through encouraging walking and/or cycling as a normal, everyday transport mode. Data from the trial appears to support this with general increased levels of physical activity and cycling observed in the area—although there is some variation by street and the data is slightly limited, as it was collected during the COVID-19 pandemic which may have impacted the observed trends.
138. The positive effects of increased physical activity on health and wellbeing are well documented; it can help prevent and/or ameliorate a range of lifestyle related conditions, e.g. obesity, type 2 diabetes, heart disease, stroke, some cancers, musculoskeletal issues, and poor cognitive and mental health. Prevention of lifestyle related conditions can also lead to significant cost savings within health and social care services.

139. Achieving a modal shift towards active travel can also help reduce the health-damaging effects of motorised transport e.g. road traffic injuries, air pollution, community segregation, noise and other crime or antisocial behaviour.
140. Climate change been named as one of greatest threat to human health in the 21st century. Reducing motorised traffic and promoting forms of active travel can help lower local greenhouse gas emissions that contribute to climate change and will lead to improvements in the health of residents and the environment in the long run.
141. This report highlights that the Bowes QN project has had limited impacts on the journey times of emergency services. The London Fire Brigade and the Metropolitan Police Services have confirmed that the project has not impacted on their ability to carry out services and responsibilities. The London Ambulance Service indicated that there were three episodes of a delayed ambulance trip during the trial, although the cause of the delays was not clear; this needs to continue to be monitored moving forward to ensure there are no significant impacts on the travel time of ambulances.
142. An Equality Impact Assessment was carried out and findings are detailed in the relevant section below. The potentially disproportionate negative impacts of the project on disabled groups, older individuals, and the Asian and Gypsy Roma Traveller Communities, needs to be carefully considered and addressed as per the assessment and recommendations.

Equalities Impact of the Proposal

143. The Council is required to abide by the Public Sector Equality Duty under the Equality Act 2010 which states;
- Eliminate unlawful discrimination, harassment and victimisation and other conduct prohibited by the Act.
 - Advance equality of opportunity between people who share a protected characteristic and those who do not.
 - Foster good relations between people who share a protected characteristic and those who do not.

These can be referred to as the three aims or arms of the general equality duty. The Act explains that having due regard for advancing equality involves:

- Removing or minimising disadvantages suffered by people due to their protected characteristics.
 - Taking steps to meet the needs of people from protected groups where these are different from the needs of other people.
 - Encouraging people from protected groups to participate in public life or in other activities where their participation is disproportionately low.
144. A full Equality Impact Assessment is attached at Appendix 9 and the scheme has been presented to the Enfield Council Members Equalities Board. A bespoke survey for blue badge holders was undertaken and focus groups have been run with disabled people to understand their needs better and delve deeper into the consultation responses. Protected characteristic data was

collected during the consultation and breakdowns are included in the associated report.

145. The Equality Impact Assessment does not consider that there are particular impacts on groups with the following protected characteristics;
- Gender reassignment
 - Religion and belief
 - Marriage and civil partnership
 - Sexual orientation.
146. The predominant theme for other protected characteristic groups is concern around increased journey times. These journey times are particularly relevant to disabled people who may have limited travel choices as a result of their disability.
147. It should be noted that the current position in relation to congestion and journey times is not static. In the 12 months before the implementation of the scheme, open source data from Uber shows that journey times had increased by over 3% between the centre of Bowes and Enfield Town Centre. Traffic volumes are growing year on year and the current position will not remain static. Without a significant change in trend, congestion and therefore journey times will increase irrespective of whether the quieter neighbourhood is in place or not. In that respect, some of the matters raised will present themselves over time in both cases.
148. Getting a representative sample of all age groups in consultation has proved to be challenging with persons under 29 representing only 4% of the sampled responses against a 2011 Census value that they represent 25% of the population with ages between 40 and 69 having double the volume of responses than the proportion of the population.
149. Younger people are more likely to benefit from the scheme long term as they are likely to adopt more active travel behaviours on a long-term basis and less likely to drive.
150. Older people are more likely to have age related mobility issues which do not qualify as disability but may result in less likelihood of taking active travel choices owing to the discomfort experienced in extended periods of walking.
151. As a group, disabled people felt that the scheme had negatively impacted them significantly more than other protected characteristic groups had indicated. It is also important to note that the scheme was in place during Covid lockdown measures which affected disabled people significantly more than non-disabled people, potentially amplifying feelings of frustration or anxiety. People who were shielding reported that they avoided public transport and had reverted to car journeys in many cases.
152. In the survey for disabled residents, respondents reported an increase in journey times, congestion and a difficulty in accessing appointments with healthcare providers.

153. Carers in focus groups indicated that as the people charged with delivering goods or services for the benefit of disabled people, they were concerned about journey times to and from the person they care for. This was particularly true when people had multiple carer responsibilities and other responsibilities such as work or children.
154. Disabled people and carers also described difficulties in getting services such as caring services (formal and informal), ride hailing services and social visits to come to them inside the scheme area. In some cases, ride hailing services or taxis cancelled pickups at short notice. Recent articles in London Cab trade publications identified that although a pickup may be a short distance as the crow flies, it could take several minutes to get to the pickup point owing to the route required to be taken. Discussions were held with the local RMT representative for cab drivers who indicated that their members may not understand the exact nature of restrictions and may assume locations to be unreachable.
155. Carers reported that commercial care providers were changing a package of care delivered to them by reducing the number of daily visits or reducing the duration of appointments. In many cases, carers pay commercial providers directly and are apportioned a care budget to spend on these services.
156. These impacts increased feelings of social isolation, anxiety and increased frustration in that community who were in parallel dealing with the impact of the pandemic.
157. Disabled residents and carers living outside the area also reported increased journey times for appointments as a result of increased traffic on roads outside the area. Where respondents had a condition which resulted in discomfort when travelling, they reported experiencing this discomfort for longer which meant some journeys were cancelled rather than taken.
158. Some disabled people and by association their carers are uniquely impacted by the scheme and the EQIA has recommended that an exemption system be considered as described in the early part of the report to alleviate the impact on those people and those providing care for them.
159. In respect of pregnancy and maternity, expectant mothers and mothers who have recently given birth may have increased numbers of medical appointments. Where this travel is made by car it may take slightly longer, but where the journey is walked or cycled through the experimental area, it is likely to be less polluted and have reduced volumes of traffic. The Royal college of Midwives recommends exercise such as brisk walking for new and expectant mothers are safer and quieter in the scheme area.
160. In respect of race, the consultation analysis showed that responses from people who identified as having an Asian background stated that the scheme affected them 'very negatively' at a rate of 70%, versus an average of 51%. Around half of the Asian respondents were also disabled with an average age of 50 yrs.

161. In addition, the number of respondents identifying from black backgrounds was only 1% of the responses against a 2011 census proportion of 14%. The average age of this group was around 53 years with around 10% of that group identifying themselves as disabled. Some comments in the survey related to a fear of using public transport during Covid which disproportionately affects people in this group.
162. The scheme will benefit ethnic groups who are disproportionately likely to walk ('Asian or Asian British', 'Mixed or multiple ethnic groups' and 'Other Ethnic Groups'), as well as 'Black and Black British' and 'Other Ethnic Groups' who are disproportionately likely to use public transport (as every public transport journey starts or ends on foot or cycle).
163. In respect of gender, females are more likely to use the bus, but less likely to drive or cycle. The scheme will improve access to bus stops on foot by reducing motor vehicle traffic in the area but there will be a slight negative impact in respect of bus journey times which have increased slightly.
164. There has been an increase in concern around public safety particularly for women. A study of the impact of Low Traffic Neighbourhoods on crime rates in Waltham Forest over several years indicated a 10% decrease in total street crime with further significant decreases in violent crime and sex offences. The effect increased with the passage of time. Females have reported feeling vulnerable with lower traffic volumes in the scheme area.
165. Car usage in Enfield is high, particularly for Gypsy or Irish Travellers. For this reason, the scheme may disproportionately affect this ethnic group – such as causing slightly longer journey times for trips made by car.
166. In terms of socio-economic status, over half of respondents did not disclose their income. From that information, we can see that within that cohort people in the lower income brackets also had higher instances of being disabled.
167. The equalities impact assessment indicates impacts on several characteristics both positive and negative. Negative impacts are predominantly concerned with increases in journey times by bus or car in and out of the area, which the monitoring report has assessed.
168. The positive effects are based around groups who already use active travel more readily. Improved safety for vulnerable people, improved access to public transport
169. It is recommended that work be undertaken to implement an exemption system for disabled people. The challenges faced by disabled people travelling are significant and limited travel choices are available for some disabled people.

Environmental and Climate Change Considerations

170. In the longer term, as part of a wider programme to encourage active and sustainable modes of travel, the project is expected to reduce the negative environmental impacts of private motor vehicle use through reduced carbon

emissions, lower rates of road traffic collisions and improved public realm. It should also be noted that the project area is now part of the Ultra Low Emission Zone as of 25 October 2021. It has therefore been identified as a priority for the installation of electric vehicle charging infrastructure, which should further reduce localised emissions.

Risks that may arise if the proposed decision and related work is not taken

171. Several risks have been identified:

Table 4: Risks that may arise if the proposed decision and related work is not taken

Risk	Risk Description
Motor traffic returns to previous volumes on the unclassified/ local roads within the project area	Without the protection of the modal filters preventing traffic cutting through this residential area, volumes will return and subject to historic trends of increasing motor vehicles on unclassified/ local roads, traffic volumes are likely to continually increase.
Reduction in walking and cycling levels	With a return to traffic dominated unclassified/ local streets, the early indications of uptakes in walking & cycling could stall or be reversed.
Failure to provide a contribution to tackle the climate crisis	Risks associated with this include continued traffic volume increases on unclassified/ local roads within the area, restricting the opportunity for mode shift to more sustainable transport options. Transportation emits 39% of the borough's emissions, making it the largest source of emissions of all sectors.
Reputational damage with regards to project assessment	The Council has committed to considering a series of factors when measuring the impact of the trials. Whilst a number of residents have demonstrated that they do not support the interventions, on balance, the view of the Council is that the benefits outweigh the dis-benefits, particularly when taking a longer-term view. Whilst the views of residents are a key consideration, the views of those participating in the engagement and consultation do not necessarily become a deciding factor. The Council needs to demonstrate that it is able to objectively assess the broad impacts of projects and be willing to make decisions, in the context of a climate crisis and in the interest of public health, that may not be universally popular.
Reputational damage with regards to action on the climate emergency	The public's confidence in Enfield Council's ability to deliver on its Climate Action Plan may be reduced.

Risks that may arise if the proposed decision is taken and actions that will be taken to manage these risks

172. Several risks have been identified:

Table 5: Risks that may arise if the proposed decision is taken and actions that will be taken to manage these risks

Risk	Risk Description and mitigating action
Negative impact to some people with disabilities	The Council will work with groups to develop options to improve access for residents with disabilities by means of an exemption from the camera enforced filter. In addition, the Council will look to adjust the Maidstone Road filter so that it is camera controlled rather than through the use of a bollard, this will create further options for those with exemptions.
Potential for further incidents of navigational issues with the LAS	Whilst the Council has not received reports from the Police or London Fire Brigade, three reports have been received by the LAS over the trial period from August 2020. Other anecdotal reports from members of the public have been received but are unable to be verified with the LAS. The Council will continue to work with the LAS to gain greater insights into the causes of any delays and will respond to any further measures that are identified, beyond the work already done, to ensure that LAS navigational systems have access to the latest data. Furthermore, the Council will look to adjust the Maidstone Road filter so that it is camera controlled rather than through the use of a bollard, this will increase the permeability of the area for the LAS and other emergency services.
Traffic volumes significantly increase	The 'new normal' of motor traffic volume is currently uncertain. Should the worst case occur and traffic volumes continue to increase then this could lead to more significant impacts than those outlined in this report. The Council will therefore continue with some monitoring activity in the area to be able to identify any significant changes.
Active travel trends will not continue to increase	A key objective of this project was to enable a longer-term increase in walking & cycling levels. Whilst the early trend indicates an uplift, the Council needs to continue to take a comprehensive approach to enabling a shift to sustainable travel. This will include the continued provision of cycle parking, cycle training, Dr Bikes along with continuing to grow the network of safe cycle routes through a combination of segregated cycling facilities and linking together a network of quiet roads where the volume of motor traffic is not hostile to walking & cycling.

<p>Reputational damage with regards to suggestions that the Council does not listen to residents</p>	<p>The Council is often accused of not listening when it makes a decision that may not have universal acceptance. The Council has ensured that consultation feedback has been carefully analysed and collated into a report by an external organisation. This report is fully published in Appendix 8 and the key themes have been discussed. The range of objections have been listed in Annex 5 and a response provided to each, demonstrating that all the issues raised have been considered. The Council has a responsibility to balance up these views with long term benefits to the local and regional areas and how these contribute towards national and global challenges.</p>
<p>Some minor roads continue to see an increase in vehicle volume</p>	<p>Further investigation of minor roads has been recommended to address the increase in traffic volumes identified on Palmers Road to the west of the QN area. Enfield is continuing to work with Haringey as they consider plans to implement measures on Haringey controlled streets within the QN and adjacent to the area.</p>
<p>Traffic volumes as a whole increase more than anticipated over the coming months as London continues to move forward following Covid-19 restrictions on travel</p>	<p>Data from TfL indicates that traffic volumes have been relatively consistent since summer 2021. The data shows flows are down an average of 4% in Outer London compared to the same period in 2019. A post-project monitoring plan will be developed to continue to carry out some high-level monitoring in this area of the Borough.</p>
<p>Haringey amend or withdraw their planned scheme</p>	<p>Council would work with Haringey to review the outcome of their decision and Enfield's monitoring data to identify next steps.</p>

Financial Implications

173. The cost of implementing initiatives in the Bowes Primary Area Quieter Neighbourhood capital scheme (project code C201710) has been £215,263 in 2020/21 and £121,268 as at 6th December 2021. A further £19,732 is expected to be incurred by 31 March 2022. Total cost for 2021/22 is anticipated to be £141,000. This will bring the total cost of implementing the respective initiatives to £356,263, which has been capitalised.

174. Costs incurred in 2020/21 were financed by external grants: a £100,000 grant from the Department for Transport (DFT) Emergency Active Travel Fund; and £115,263 was financed from Transport for London grants.

175. Costs that have been, and projected to be, incurred in 2021/22 will be financed by a £141,000 grant from Transport for London.

Legal Implications

176. Section 122 of the Road Traffic Regulation Act (RTRA) 1984 places a duty on the Council to exercise its functions, so far as practicable having regard to certain specified matters, to secure, as far as reasonably practicable, the 'expeditious, convenient and safe movement of vehicular and other traffic (including pedestrians) and the provision of suitable and adequate parking facilities on and off the highway'. The specified matters are Council must also have regard to such matters as the desirability of securing and maintaining reasonable access to premises, and the effect on the amenities of any locality affected, the national air quality strategy, the importance of facilitating the passage of public service vehicles and of securing the safety and convenience of persons using or desiring to use such vehicles, and other relevant matters. In taking a decision as to whether to make the experimental measures permanent, regard needs to be had to this duty.
177. Section 6 of the RTRA enables experimental traffic management orders made under section 9 to be made permanent by the Council.
178. A decision as to whether to make the trial measures permanent must also be consistent with the Council's network management duty under section 16 of the Traffic Management Act 2004 ("the 2004 Act"). That is, the duty "to manage their road network with a view to achieving, so far as may be reasonably practicable having regard to their other obligations, policies and objectives, the following objectives (a) securing the expeditious movement of traffic on the authority's road network; and (b) facilitating the expeditious movement of traffic on road networks for which another authority is the traffic authority".
179. Procedures for making the experimental traffic orders permanent are set out in the Local Authorities' Traffic Orders (Procedure) (England and Wales) Regulations 1996 ("the 1996 Regulations"). Regulation 23 of the 1996 Regulations provides that where the provisions of an experimental order are reproduced and continued in force indefinitely, it is not necessary to carry out further consultation, provide further notice, or allow for further objections.
180. Regulation 9 of the 1996 Regulations provides that the Council may cause a Public Inquiry in reaching a decision on whether to make the Orders that are the subject of this report, permanent. This is not mandatory but due consideration has nevertheless been given as to whether or not the Council will hold an Inquiry in the main body of this report.
181. Section 149 of the Equality Act 2010 requires the Council to pay due regard to public sector equality considerations in the exercise of its functions. Such due regard should be had when taking the decision as to whether or not to make the experimental traffic orders permanent.
182. The recommendations contained within the report are in accordance with the Council's powers and duties as the Highway Authority.
183. In arriving at the recommendations set out in this report, Officers have sought advice from Legal Services and Queen's Counsel.

Workforce Implications

184. None identified.

Property Implications

185. None identified.

Other Implications – Network Management

186. S122 of the Road Traffic Regulation Act 1984 requires the Council to exercise the powers provided by the Act, so far as reasonably practical, to secure the 'expeditious, convenient and safe movement of vehicular and other traffic (including pedestrians). Section 16 of the Traffic Management Act 2004 also places a specific network management duty on local traffic and highway authorities:

“It is the duty of a local traffic authority or a strategic highways company (“the network management authority”)] to manage their road network with a view to achieving, so far as may be reasonably practicable having regard to their other obligations, policies and objectives, the following objectives:

(a) securing the expeditious movement of traffic on the authority's road network; and

(b) facilitating the expeditious movement of traffic on road networks for which another authority is the traffic authority”

187. Guidance on this duty was originally published in 2004 and has been more recently updated in light of the coronavirus pandemic to place emphasis on active travel and reallocating road space for pedestrians and cyclists.

188. The guidance sets out techniques that have proved effective in improving the management of road networks, recognising that not all will be applicable to all local traffic authorities, including:

- Identifying and managing different road types
- Monitoring the road network
- Identifying locations where regular congestion occurs
- Co-ordination and direction of works
- Dealing with planned events
- Management of incidents
- Making the best use of technology
- Managing parking and other traffic regulation
- Enforcing road traffic regulation
- Accommodating essential service traffic
- Regular reviews of the network
- Consultation and engagement with stakeholders
- Provision of travel information to road users and the community

189. The guidance acknowledges that management of demand can play a role in helping meet the network management duty. In particular, paragraph 38 states:

"Government and local authorities have been looking at ways of reducing the demand so as to moderate or stem traffic growth even when the economy is growing. This has resulted in changes to land use plans, the establishment of school and workplace travel plans, and the promotion of tele-working amongst other things. More directly this has led to the desire to make cycling and walking safer and more attractive and the encouragement of public transport through ticketing schemes or better information, bus priority and quality initiatives, and congestion charging. These can all help to secure the more efficient use of the road network and successful measures can have an impact on its operation. They should not be seen as being in conflict with the principles of the duty and it is for the LTA to decide on the most appropriate approach for managing demand on their own network." ²⁵

190. Further network management guidance was published by the Secretary of State in July 2021 in response to the Coronavirus pandemic. This makes it clear that local authorities should continue to reallocate road space to people walking and cycling. A range of measures are highlighted to maintain this 'green recovery', including:

- *"modal filters (also known as filtered permeability); closing roads to motor traffic, for example by using planters or large barriers. Often used in residential areas, when designed and delivered well, this can create low-traffic or traffic-free neighbourhoods, which have been shown to lead to a more pleasant environment that encourages people to walk and cycle, and improved safety"* ²⁴

191. Table 1 above summarises the results of the monitoring carried out before and after implementation of the scheme, with Appendix 2 and Addendum 1 providing further details. From a network management perspective, some of the key point to note are:

- TfL are the traffic authority for the North Circular Road and Haringey Council for Bounds Green Road. Both have been closely involved with the scheme and neither have raised objections to the scheme being made permanent.
- Traffic flows on the strategic roads bounding the QN area have seen a reduction in traffic in 2021 compared to 2020 on Green Lanes and Bounds Green Road, with a slight increase (1% over a 24 hour period) on the A406 Bowes Road. Whilst the long-term impact of the Covid pandemic on traffic patterns may not be known for some time, there is no clear evidence that the QN scheme has had a negative impact on the functioning of these strategic routes.
- The increase in westbound bus journey times on certain sections of Bounds Green Road roads needs to be considered as this may indicate

²⁴ <https://www.gov.uk/government/publications/reallocating-road-space-in-response-to-covid-19-statutory-guidance-for-local-authorities/traffic-management-act-2004-network-management-in-response-to-covid-19>

additional points of congestion. However, there is likely to be no single cause of these additional bus delays, with some potentially due to other network changes, such as Haringey's upgrade to the cycle lanes in Bounds Green Road.

- Most but not all of the 'internal roads' have seen a reduction in traffic flows. The changes in Brownlow Road are particularly significant from a network management perspective as it is currently classified as a B road, carrying traffic between Bounds Green Road and the North Circular Road. In the northbound direction, bus journey times have increased by 27 seconds on Brownlow Road in the morning peak, suggesting some additional congestion. During the evening peak, flows have not increased on Brownlow Road and bus route journey times appear to have reduced.
- Changes to conditions on the wider network also need to be considered, with particular attention paid to roads with a more strategic function, including Durnsford Road (part of the B106) and Bowes Road (part of the A1110) where flows have increased.

192. Weight also needs to be given to the recently published network management duty guidance undated by the Secretary of State for Transport in July 2021. This does not replace the original guidance published in 2004 but provides additional advice that needs to be taken into account. In particular, it helps guide traffic authorities in how to meet the ambitions set out in the Department for Transport's vision for cycling and walking set out in 'Gear Change', published in July 2020. The 2021 guidance stresses the need for local authorities to 'continue to make significant changes to their road layouts to give more space to cyclists and pedestrians and to maintain the changes they have already made'.

Options Considered

193. The following alternative options have been considered:

Table 6: Options considered

Option	Comment
Removing the trial	Removing the trial would return the network to the situation prior to implementation, seeing the return of through traffic across the unclassified/local streets within the project area and therefore prevent the opportunity to realise the benefits that the project objectives can deliver. There could also be further traffic impacts should Haringey continue with their LTN proposals without the Bowes QN scheme in place.
Holding a Public Inquiry prior to a decision	Consideration was given to referring this project to a Public Inquiry however it is recommended that no Public Inquiry into this project takes place on the basis that there has been significant opportunity for all views to be canvassed during an extended consultation

	<p>period, including objections to making the orders permanent, and for these views to be presented to the decision-maker for consideration; the proposal does not contain issues which are particularly complex. Therefore, a Public Inquiry, where the decision would ultimately be returned to the Council, would add no further value to the process.</p>
<p>Residents only access, for example via ANPR</p>	<p>One of the aims of the project is to enable a longer-term increase in the levels of walking and cycling within and through the scheme area. Allowing residents exemptions from the modal filters, via ANPR or other means, could restrict the level of changes in travel behaviour by those residents who drive and live within the project area. Furthermore, the additional motor traffic within the area from trips made by residents would 'dilute' the benefits to others in the area and potentially limit the potential for growth in walking and cycling in the area.</p> <p>However, the Council is committed to developing an approach to improve access for residents with disabilities by means of an exemption from the camera enforced filter.</p>
<p>Relocating the modal filters from their current location to the junctions at the A406 North Circular Road</p>	<p>This option was considered in detail. In principle this would involve the relocation of the Warwick Road filter to its junction with the A406, and new filters would be implemented on Ollerton Road, Highworth Road and Natal Roads at their junctions with the A406.</p> <p>Figure 5-2 of Appendix 8 shows there is a slight preference for access in and out of the area via Bounds Green Road (81% of respondents considered access 'somewhat' or 'very important') over access via the A406 (72% of respondents). Reasoning provided by those who suggested relocating the filters generally provided reasoning that they more regularly access amenities and carry out visits to the south than to the north of the area. Some expressed feeling uncomfortable driving on the A406.</p> <p>The recommendation in this report to improve access for residents with disabilities by means of an exemption from the camera enforced filters, would enable access for these residents to and from the area from both the A406 and Bounds Green Road.</p>

	<p>The current design has the following advantages over this option:</p> <ul style="list-style-type: none"> • Residents have had time to adjust to the changes implemented. • There are currently four entry points to this area within the QN²⁵, (noting the implementation of a School Street on Highworth Road may change this). This disperses the local access traffic across these streets. The relocation of filters to the A406 would reduce the number of access points concentrating traffic entering/exiting the area onto fewer roads. • Warwick Road at the A406 is signal controlled, providing a controlled exit from the area, and management of traffic flows at the junction. <p>These advantages are not considered to be fundamental flaws in a design that relocates the filters to the A406. However, following consideration of these factors, the limited preference displayed by respondents, and recommended exemptions for disabled residents, on balance it was considered that the current layout offered the best solution at this time.</p>
Other changes to the modal filters, such as removing one or more modal filters	Removing one of the modal filters, for example York Road or Maidstone Road, would create an additional access point for residents, but it would also create an opening for through traffic to pass, channelling all through traffic onto that particular route. It may also induce traffic demand for through trips, which isn't currently travelling through the area. It has therefore been discounted.
Removing the trial and implementing an alternative treatment, such as one-way streets, traffic calming, or more speed enforcement	This would not be in line with the project objective to significantly reduce the volume of through motor traffic on minor roads within the project area, which has been achieved through the trial. York Road, for example, has speed cushions along the street, however traffic volumes remained high prior to the trial. This project is aimed at generating longer-term changes in travel behaviour, rather than simply managing the flow and speed of motor traffic through a particular neighbourhood.

²⁵ This is the area which includes the streets bounded by the A406 and the filters on Warwick, Maidstone and York Roads. Access roads to this area are Natal, Warwick, Highworth and Ollerton Roads.

<p>Timed access restrictions</p>	<p>Timed access restrictions would have the following benefits:</p> <ul style="list-style-type: none"> • Improved motor vehicle access for journeys outside of camera operating times • Improved motor vehicle access for work based trips into the area, such as deliveries <p>Changing the camera enforced filter(s) to a timed restriction would however result in through traffic travelling through the area outside of the camera operating hours, which is not in line with the project objectives. There is also potential for vehicles to queue whilst waiting for the end of the restriction time.</p> <p>However, the Council is committed to developing an approach to improve access for residents with disabilities by means of an exemption from the camera enforced filter.</p>
<p>Removing the trial and implementing other access restrictions, for example banning the right turn from Warwick Road onto the A406, or various width / weight restrictions.</p>	<p>This project is aimed at generating longer-term changes in travel behaviour, rather than simply managing the flow of motor traffic through a particular neighbourhood.</p>
<p>Remove the trial and rely on the electrification of motor vehicles.</p>	<p>Electric vehicles are an important part of Enfield's plan to be a carbon neutral borough by 2040, and efforts are being made in accordance with the Enfield Climate Action Plan 2020 to increase electric vehicle charging provision. They however are not a solution on their own.</p> <p>As much as 50% of particle pollution from vehicles comes from brake wear, tyre wear and road surface wear²⁶. These particles contribute to what is known as 'non-exhaust emissions' particulate matter. Non-exhaust emissions increase with vehicle mass and electric vehicles tend to be heavier than their petrol/diesel counterparts due to the battery mass. An effective way to reduce these emissions is to reduce traffic volumes.</p>

²⁶ https://uk-air.defra.gov.uk/assets/documents/reports/cat09/1907101151_20190709_Non_Exhaust_Emissions_typeset_Final.pdf

	Further, other problems associated with motor vehicle use, for example collisions, congestion and parking availability, will not be solved by a transition to electric vehicles.
Removing the banned right turn at the A406 / Bounds Green Road junction	An external report investigated the feasibility of re-introducing the right turn from Bounds Green Road into the North Circular, which was introduced in 2012 by TfL. The outcome of this study concluded that the junction operates at absolute capacity in both the AM and PM peak periods and has a relatively efficient method of control. Adding a right turn movement could be done in theory but this would reduce the junction capacity, generating significant queuing that would likely result in vehicles re-routing to other local roads and the peak periods would be significantly extended. No feasible physical changes to the junction could be identified and introducing the right turn is not considered to be viable.

Conclusions

194. The Bowes Quieter Neighbourhood project has been delivered against a challenging backdrop. The pandemic has brought its own challenges in which to introduce a comprehensive traffic management scheme. The criteria and pace of delivery, set out by the Department of Transport, led to less community engagement pre-implementation than the Council has delivered for other similar projects. Lockdown and the impacts on travel patterns has created further challenges in measuring the impacts of the project.
195. This project has elicited strong views from the community, and this is reflected in similar projects across London. Views are often polarised between those who fundamentally disagree with a Low Traffic Neighbourhood approach and those who are extremely strong advocates. This is not necessarily untypical in active travel projects and this theme can be seen in other projects that are consulted on prior to implementation. In a project that is still at conceptual stage, it can be challenging for decision makers to understand the views of the many people who have not contributed to the consultation process. This is not dissimilar in this project, although here the Experimental Traffic Order process enables the community to provide feedback in light of their actual experiences post implementation. Feedback to this consultation remains low when looking at the overall population, with approximately 4% of residents living within the Bowes QN area making their voices heard through the consultation survey (approx. 1300 responses). Whilst the pandemic has impacted the ability to hold in person events, the level of communication to homes in the area has been high with a series of letters delivered to homes. Community groups with different perspectives on

the trial have also actively encouraged people to participate in the consultation.

196. We have seen strong levels of engagement from an older demographic, suggesting that a digital first approach has not led to under-representation from older people, indeed the opposite is the case. Conversely, the views of younger people have been underrepresented. Naturally views vary between those living inside and outside the area, it is to be expected that those who live outside the area and who now have to take alternative routes during car journeys, are more likely to be unsupportive of the plans. Views from inside the area are more mixed, with resident views dependent upon the balance of benefit vs dis-benefit that they perceive from the project. For example, a car owning resident on an already filtered road within the area is likely to perceive more dis-benefit than a non-car owning resident who lives on a road which was previously carrying lots of through traffic. The core aims of this project are to contribute towards a longer-term shift away from an overreliance on the private motor vehicle and a move towards more active forms of travel. It is inevitable that there will be some resistance to this. Whilst it is crucial to carefully consider the full range of community views, there are also other aspects of the impact assessment that also need to be considered.
197. The report sets out a summary of the other monitoring categories, with further detail contained within a series of annexes and appendixes, which form a vital part of the reading when making an overall assessment on this project. The reality is that we remain unclear on what a 'new normal' looks like in terms of motor vehicle volume. With lockdown fully lifted, the volume of motor traffic has returned to a rate of approximately 96% of pre-pandemic levels. Within this context, this report has outlined that there has been limited impact on the emergency services, bus impacts across the routes are not deemed to be significant, noise impacts are mostly positive and there are no significant issues in terms of air quality. Close collaboration continues with the emergency services to ensure that the Council does everything it can do to ensure changes to the network are effectively communicated and that emergency service colleagues are involved in the design process for this and similar projects.
198. The primary objectives of the project were to create healthier streets in the project area, significantly reduce the volume of motor traffic and enable a longer-term increase in walking and cycling levels. The Healthy Streets score assessment and the reduction in motor vehicle levels within the area illustrates the improvements on the internal roads, without significant detrimental impacts on the surrounding roads. The early indications of an uptake in cycling and larger increases in people walking provide a foundation upon which levels can increase into the longer-term. The Council should continue to align other services such as continued Dr Bike provision, cycle training and continued delivery of residential cycle hangars along-side the delivery of Quieter Neighbourhood intervention. Building further active travel links in and out of the area, such as a stronger east/west link, will contribute towards the ongoing development of a wider active travel network. Collectively, this approach should help build upon the increased walking and cycling trends identified in this report.

199. This report and the associated annexes and appendixes set out a wide range of information relevant to this project. It is acknowledged that a number of objections have been raised on making these changes permanent. These objections and the assessment of the wider impacts need to be carefully considered against the context of a climate emergency and ongoing national and international concerns about lack of action. Transportation accounts for 39% of the Borough emissions. In order to enable longer-term change and to create an environment where many more people can walk and cycle, we need to take bold action. Minor local roads cannot continue indefinitely to be used as an overflow for the primary network, encouraging private motor vehicle use to continue to grow unabated. The opposite approach is believed to be necessary, bringing forward projects and services that will enable an increasing number of people from a wide cross section of the community to choose to walk and cycle more of their journeys.

200. This report also sets out a number of further measures that should be taken forward as quickly as possible which include increased permeability at Maidstone Road, a School Street on Highworth Road and most importantly exploring mitigation measures for residents with disabilities alongside considering the needs of carers. Furthermore, a series of ongoing monitoring measures should continue to help inform whether any future changes are appropriate. On the basis of these further recommendations and balancing the nature of the objections with the impact assessments from the monitoring of the trial, it is recommended that the Bowes QN traffic orders should be made permanent.

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Annexes

Annex 1 Plan of interventions

Annex 2 Feedback from London Ambulance Service, November 2021

Annex 3 Response from LBE to London Ambulance November 2021 feedback

Annex 4 Air quality monitoring data

Annex 5 Responses to objections

Appendices

Appendix 1 Department for Transport letter Emergency Active Travel Fund

Appendix 2 Traffic, bus journey times, pedestrian and cycle analysis

Appendix 3 Crime analysis

Appendix 4 Noise assessment

Appendix 5 Air quality assessment

Appendix 6 Personal collision search and reports

Appendix 7 Healthy Streets Indicators assessment

Appendix 8 Consultation analysis

Appendix 9 Equalities Impact Assessment (EqIA)

Addendum

Addendum 1 Bowes Primary Area Quieter Neighbourhood Post Scheme
Monitoring Addendum to Appendix 2

Background Papers

None

Bowes Primary Area Quieter Neighbourhood

Post Scheme Monitoring Addendum

LB Enfield



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1 BOWES PRIMARY AREA QUIETER NEIGHBOURHOOD

1.1 Post Scheme Monitoring Addendum – 16th December 2021

- 1.1.1 This document has been produced as an addendum to the Bowes Primary Area Quieter Neighbourhood report PL 21.056 P to provide clarification around the post scheme monitoring traffic assessment (Appendix 2 of the report) and the fuel crisis in September 2021. In addition, it provides some adjustments to some of the reported data within Appendix 2. This addendum should be considered alongside the Bowes Primary Area Quieter Neighbourhood report.
- 1.1.2 A fuel crisis was triggered by comments in the media on Thursday 23rd September 2021 relating to lorry driver shortages resulting in the temporary closure of some petrol stations. This triggered panic buying over the weekend 25th/26th September 2021 and onwards.
- 1.1.3 For the Bowes Primary Area Quieter Neighbourhood monitoring assessment, ATC surveys were installed on the 16th and 17th September 2021 and data was collected up to 28th September 2021.
- 1.1.4 Weekend data was removed from the assessment as the peak periods differ from weekdays. For consistency across the analysis, the summary of the post consultation traffic flow data, was used from Monday 20th to Friday 24th September only, for all sites except three.
- Green Lanes
 - Nightingale Road
 - Sidney Road
- 1.1.5 The data from Monday the 27th September was included at these locations because there was a lack of reported data during the initial days of data recording. This can occur if the counter is vandalised, or if there is a technical fault with the equipment. As a result, data captured on the 27th September was initially used to include more days in the assessment. This decision was taken following a review of a TfL count site in the local area, which has data for every day in September. The data from this site indicated that the drop in traffic flow was only 1% below average on the 27th September, compared to the weekdays from the 2nd to 22nd September, and therefore it was reasonable to include in the analysis.
- 1.1.6 Since that analysis was completed, additional surveys undertaken across the borough of Enfield have been analysed. A review of this data indicated a greater drop in traffic on the 27th September, compared to the previous week.
- 1.1.7 Therefore the decision has been taken to remove 27th September from the 3 Bowes sites assessed using that day.
- 1.1.8 The results of the removal do not change the conclusions of the assessment, with the changes summarised below.

Table 1.1: Previously reported values

Location	24hrs				AM				PM			
	Pre	Post	Difference	% Difference	Pre	Post	Difference	% Difference	Pre	Post	Difference	% Difference
Sidney Road	709	682	-27	-4%	34	54	20	59%	55	40	-15	-27%
Nightingale Road	2612	3351	739	28%	168	212	44	26%	197	243	46	23%
Green Lanes	16084	10114	-5970	-37%	885	481	-404	-46%	861	457	-404	-47%

Table 1.2: Adjusted values

Location	24hrs				AM				PM			
	Pre	Post	Difference	% Difference	Pre	Post	Difference	% Difference	Pre	Post	Difference	% Difference
Sidney Road	709	896	187	26%	34	44	10	29%	55	51	-4	-7%
Nightingale Road	2612	3459	847	32%	168	221	53	32%	197	248	51	26%
Green Lanes	16084	14898	-1186	-7%	885	770	-115	-13%	861	632	-229	-27%

1.1.9 The adjusted numbers change the summaries, as follows.

- The average reduction in traffic on the surveyed local roads within the Quieter Neighbourhood changes from 17% to 16% in the 24-hour period. In the AM peak the average increase remains 18%. In the PM peak the average reduction changes from 26% to 25%.
- The average reduction in traffic on the strategic/ distributor roads on the boundary of the Quieter Neighbourhood changes from 7% to 2% in the 24-hour period. In the AM peak the reduction changes from 9% to 3%. In the PM peak the reduction changes from 11% to 8%.
- There is an increase on Sidney Road over the 24-hour period, rather than just the AM peak.

1.1.10 The post scheme monitoring assessment reviewed bus journey time data for September and October 2021. The bus journey time data were reviewed in light of the fuel crisis issue during the initial assessment of bus journey times. From this assessment, it was determined that only bus route 221 showed a significant impact on certain days during the fuel crisis period (journey time increases of up to 250%), so journey times for some days were removed for this route. The other routes were reviewed but did not indicate any significant changes in journey times from the 25th September onwards, over and above variations in bus journey times for the other periods of September and October. The reported bus journey times have not changed since the original publication of the Quieter Neighbourhood assessment.

1.1.11 This addendum clarifies how the impact of the fuel crisis was mitigated during the assessment of the surveys and bus journey times. An adjustment has been made to 3 of the 37 reported survey locations but as previously stated, the conclusions within the monitoring report have not been affected by these adjustments.

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Point closure to traffic (except cyclists).

Existing width restriction replaced with point closure for all vehicles except for emergency and service vehicles – monitored with CCTV camera.

Point closure to traffic (except cyclists).

Bespoke island on Palmerston Road enabling cyclists to turn right into Kelvin Avenue.



An example of traffic island which prohibits right-turn for motor vehicles.

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BOWES AREA QUIETER NEIGHBOURHOOD

KEY

- Existing one-way street
- Existing left in turns only
- Existing left in / left out turns only
- Existing exit only
- Existing ban turn at junction
- Existing street closure
- Borough boundary
- Consultation area

BOWES EXPERIMENTAL MEASURES

- Banned right turn
- 20mph speed limit area
- Point closure
- Point closure for all vehicles except for emergency and service vehicles with CCTV camera

All existing one-way streets remain operating

All existing access restrictions, including banned movements remain in place.

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Please find the below feedback from the London Ambulance Service regarding the Bowes Low Traffic Neighbourhood (LTN) scheme and filters;

The Low Traffic Neighbourhood (LTN) schemes around Bowes in the Borough of Enfield were originally implemented at pace under the COVID-19 travel measures to improve active forms of travel and create environmental improvements, this meant the usual consultation period was not undertaken with the emergency services in order to gain a proper understanding of the impacts these schemes pose for emergency services access and egress. However, through early feedback from the LAS and as a result of incidents reported by responding emergency ambulance crews in Enfield, meetings were established with Enfield Council to review the Bowes LTN scheme and other schemes across the borough. These meetings were a useful opportunity for local council traffic officers to work collaboratively with emergency services to review existing schemes, provide feedback on new schemes and highlight any incidents of delay.

It gave the emergency services the opportunity explain the challenges hard physical closures like bollards and planters have on responding emergency crews and to request the greater use of camera enforced modal filter closures to aid unhindered emergency access and egress into, through and out of LTN areas.

London Ambulance Service (LAS) is the busiest ambulance service in the country; our focus is on achieving the best outcomes for ill and injured patients and ensuring we reach them in response times set by the government.

On the implementation of LTN schemes it is important to highlight that we support measures to improve public health by reducing traffic and encouraging walking and cycling but we know that changes to road layouts, traffic management schemes, and road closures all have the potential to impede our response to the most critically-ill people. This is why we are asking that emergency vehicle access is properly considered in all LTN schemes, by looking at ways to implement traffic management changes that avoid introducing physical barriers, like the planters and lockable bollards, in preference for automatic number plate recognition cameras (ANPR) which enable unimpeded emergency access and egress.

On 5 July 2020, LAS Chief Operating Officer formally wrote Transport for London (TfL) and all London Boroughs, including Enfield, informing them of our concerns regarding hard closures and requesting that, where possible, hard closures should be avoided and camera enforced soft closures be implemented to all LTN's for unhindered emergency vehicle access and egress, due to the potential risk hard closures could have in delaying an ambulance response and therefore impacting patient safety.

With patient safety our utmost priority, we engage regularly with traffic teams at TfL and local authorities, like Enfield Council, to discuss traffic issues and to ensure traffic schemes better reflect our operational needs. Where our response is delayed our crews have the ability to log this on our reporting system (Datix), to date the LAS has reported two incidents of delayed access or egress to Enfield Council relating to the Bowes LTN. Each report is reviewed, and if it relates to road conditions or closures, we raise the issues with TfL and the relevant borough(s) and work closely with them to adapt the schemes.

As a result of feedback given by the emergency services to council traffic officers, the Bowes LTN scheme has been adapted to introduce a greater number of camera enforced modal filter closures in place of the originally proposed and implemented hard closures. The LAS has actively engaged with

further consultations and provides feedback on LTN and other traffic schemes across Enfield Borough.

Through this collaboration, the Bowes scheme has been re-designed and adapted to better take into consideration the importance of unhindered emergency service vehicle access and egress, through implementing more permeable LTN schemes, such as the use of soft closures including camera enforced modal filters instead of hard physical closures.

Regarding the current schemes the LAS still has concerns regarding hard physical closures that are present within the Bowes LTN.

Overall; the permeability of the Bowes LTN scheme has been improved following the initial design stage, thorough feedback and collaborative working with Enfield traffic officers. The LAS continues to monitor all schemes across London, including the Bowes LTN, and will continue to feed back any incidents of delays or concerns raised by operational crews operating in Enfield to borough traffic officers.

In addition to the LTN road layout changes, the LAS is concerned about the combined impact of the volume of road layout changes have on traffic movements and congestion within Enfield and surrounding road networks. The full extent of any impacts currently cannot be fully understood due the vast variation in traffic levels over the past 18 months as a result of lockdowns and changes in travel habits. As an ambulance trust we need to fully understand these impacts through continued monitoring and review of traffic data in order ensure emergency ambulance progression is not impacted, service delivery is maintained and journey cycle times of ambulances are not increased, in order for patient safety to be maintained.

LAS feedback regarding the proposed plan to consider:

London Fields:		
Concern:	LAS feedback:	LAS ask:
Bowes LTN		
	Overall the schemes permeability allows emergency vehicle access and egress, however the hard physical closures still present within the scheme are a cause for concern.	Consideration to the removal of all hard physical closures in favour of camera enforced modal filters.
General	The planned implementation of further restrictions scheduled to be implemented in the neighbouring of Haringey could further impact on main routes through the area.	Better understanding of the combined impact of the boroughs LTN schemes on the major trunk roads and routes within the borough and neighbouring boroughs.

Annex 3

Response to London Ambulance Service submission to Bowes QN report – December 2021

Thank you for your comments in respect of the Bowes Quieter Neighbourhood (Bowes QN) Project.

The scheme in Bowes was implemented under the Emergency Active Travel Fund guidelines issued by the DfT and was part of a series of measures designed to mitigate significant increases in private car use during the Covid Pandemic.

The scheme was implemented under the Experimental provisions of the Road Traffic Regulation Act, which allow for the implementation of a scheme and formal consultation to be conducted whilst the scheme is in place. This approach enables feedback in light of experience of the trial. The scheme contained a number of interventions to deal with primary issues of complaint in the Bowes area relating to traffic volume and motor vehicles cutting through the area. Low Traffic Neighbourhoods are increasingly being implemented to combat the rises of traffic volume in residential areas – an outcome of persistent year on year increases in motor car traffic competing for the same area of road space.

The experimental scheme was considered appropriate in this instance to allow for the project to be monitored and to enable recommendations to be made based on the overall data collected throughout the trial period.

Prior to the design being implemented, the Programme Director, Programme Manager and Project Manager had discussions with the local Ambulance Senior Staff as a result of forming relationships with them in October 2019 as a result of other schemes being developed. Following this, a number of conversations were held with LAS staff prior to implementation of the Bowes QN to discuss the design. These discussions included agreement on adjusting the Warwick Road width restriction, which was preventing ambulances from passing through this point. It was agreed that this would be amended to a camera controlled filter, which would enable the unhindered passage of LAS vehicles. With no objections in place on the final design, the project was implemented, with local LAS staff kept informed of progress during the implementation phase.

Since then, our meetings have evolved into a helpful and collaborative forum, as they have with partners in Fire and Police Services. We understand that camera enforced filters are the preference for the London Ambulance service; but the challenge is that these may not be suitable in all cases and they can be viewed as punitive and ineffective in achieving the objectives. Having the London Ambulance service as a critical friend has been very helpful in understanding the importance of certain routes and access points. We have in several cases responded to feedback by amending the design or supplementing measures to make the scheme more effective and mitigate any negative impacts. We will continue to review and monitor the measures to understand how we can best amend and adapt the network to changing travel patterns post Covid and are keen to continue working with the LAS to develop schemes for the future.

We understand that navigation has become challenging for those driving ambulances owing to the changing environment during the pandemic and so we have invested in commercial technological solutions to ensure changes are made in as live a way as possible to commercial navigation providers such as TomTom, Google and Bing. This means that where mapping is streamed to a device such as an iPhone, the most up to date information is available. As the road network increasingly becomes congested through the growth in motor vehicle use, dynamic calculation of routing will become increasingly important to all drivers. However we understand that mapping in the LAS fleet does not dynamically update and is reliant on periodic updates. Our understanding is that all vehicles receive this update on a 6 monthly basis, which would suggest that at this point in the trial all vehicles should have received that update. We understand that changes are being made to the in-vehicle solution and we remain keen to work with the supplier of the system to ensure that navigation data is updated as regularly as possible to optimise the response to any incident.

We have also continued to improve signage and provide information on the layout of the schemes, to improve the ability of drivers to get to a destination inside the area. Our recommendation will be to consider further improvements to the Bowes scheme in 2022, to include an amendment of the Maidstone Road filter, removing the bollard and installing camera enforcement that will enable the LAS a further entry / exit point.

We share common objectives around the health and wellbeing of our residents. The positive effects of increased physical activity on health and wellbeing are well documented; it can help prevent and/or ameliorate a range of lifestyle related conditions, e.g. obesity, type 2 diabetes, heart disease, stroke, some cancers, musculoskeletal issues, and poor cognitive and mental health. Prevention of lifestyle related conditions can also lead to significant cost savings within health and social care services.

Achieving a modal shift towards active travel can also help reduce the health-damaging effects of motorised transport e.g. road traffic injuries, air pollution, community segregation, noise and other crime or antisocial behaviour. We will therefore continue to seek ways to improve how we support emergency service navigation and access whilst simultaneously delivering against these outcomes.

Automatic Monitoring Station - Bowes Primary, Bowes Road (ENF5)

Mean concentration of NO₂ (ug/m³)

As at 18/11/2021

2019	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
	57.6	52.1	40.1	47.7	40.6	28.9	34.3	30.0	35.4	36.8	49.6	38.7

2020	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
	35.4	29.3	28.3	29.2	28.6	24.0	24.0	27.0	31.3	26.8	36.8	34.0

2021	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct
	34.0	27.2	31.1	32.8	26.0	25.4	23.2	17.5	29.0	26.9

Automatic Monitoring Station - Bowes Primary, Bowes Road (ENF5)

Mean concentration of PM10 (ug/m3)

As at 18/11/2021

2019	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	19.3	24.4	14.5	34.4	15.9	13.2	12.9	18.8	16.6	18.2	20.1	17.4

2020	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	17.7	15.0	18.9	22.2	14.6	12.2	10.7	12.3	14.2	9.7	20.1	12.2

2021	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
	13.0	15.0	18.9	16.2	11.5	11.5	13.2	12.2	22.0	15.6

Diffusion Tubes - Warwick Road (Enfield 9) and Brownlow Road (Enfield 10)
Concentration of NO2 (ug/m3)

As at 18/11/2021

Warwick Road

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2019	45.1	38.7	33.1	42.5	27.3	26.2	26.4	19.8	26.5	32.5	36.7	34.6
2019 bias adjusted¹	33.8	29.0	24.8	31.9	20.5	19.7	19.8	14.9	19.9	24.4	27.5	26.0
2020	36.1	26.8	17.5	24.5	18.2	²	17.0	25.0	20.3	26.1	33.9	27.7
2020 bias adjusted¹	27.1	20.1	13.1	18.4	13.7	²	12.8	18.8	15.2	19.6	25.4	20.8
2021	1.3	26.2	31.5	20.8	18.1	18.4	16.6	16.1	43.1			
2021 bias adjusted¹	1.0	19.7	23.6	15.6	13.6	13.8	12.5	12.1	32.3			

Brownlow Road

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2019	54.5	48.8	43.6	66.5	39.5	45.6	44.5	38.3	44.7	49.1	58.9	51.0
2019 bias adjusted¹	40.9	36.6	32.7	49.9	29.6	34.2	33.4	28.7	33.5	36.8	44.2	38.3
2020	51.6	38.4	29.6	45.2	31.8	²	31.6	42.3	32.9	37.9	51.2	²
2020 bias adjusted¹	38.7	28.8	22.2	33.9	23.9	²	23.7	31.7	24.7	28.4	38.4	²
2021	46.4	41.7	41.9	33.0	37.5	28.3	30.3	25.9	43.1			
2021 bias adjusted¹	34.8	31.3	31.4	24.8	28.1	21.2	22.7	19.4	32.3			

Notes:

¹ In association with various local authorities around the UK, Defra undertake colocation studies for diffusion tube suppliers. This is to provide data correction factors so the data can be more comparable to real-time analysers as these are more accurate than diffusion tubes. A colocation study involves locating diffusion tubes next to real-time analyser inlets to compare the two results. These studies are undertaken at many sites all over the country.

² Diffusion tube not in place.

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Annex 5

Bowes Primary Area Quieter Neighbourhood – Response to Objections

1 Objections raised

Objections have been taken from all communications throughout the consultation periods; from implementation through to 2 May 2021, and between 1 to 21 November 2021. This annex is in addition to the main report and other supporting documents that form part of the report, which should also be considered as they also provide an indirect response to many of the themes raised. Objections raised broadly fell into the groupings below. Some may fall across more than one category but have only been listed once.

- Motor traffic, traffic related impacts, mobility and access
- Physical and mental health and / or safety
- Equalities
- Process and decision making of the project
- Communications and engagement
- Design and infrastructure
- Miscellaneous
- Impacts outside of the scope of the traffic order

They are listed in each category in no specific order.

2 Motor traffic, traffic related impacts, mobility and access		
Ref	Nature of objection	LBE response
2.1	Objection that traffic is being displaced or worsened	<p>Traffic volumes have been monitored in a number of locations in the area. Detailed analysis of the pre and post implementation traffic volumes are included in Appendix 2 of the main report and discussed in paragraphs 32-45 of the main report.</p> <p>Acknowledging the limitations in the data, the unprecedented impacts of the pandemic and that Haringey are exploring further mitigation measures, the impacts associated with traffic volume do not, in isolation, suggest that the trial should not be made permanent.</p>
2.2	<p>Objection that there has been an increase in journey times, including specific objections about:</p> <ul style="list-style-type: none"> • Increase in fuel bills or higher taxis fares. • Impact on work / working fewer hours • Impact on providing or receiving care, due to the carer having less time after / before travelling • Students and children's education is being affected by increased journey times 	<p>The Council accept that some individual journeys that continue to be taken by private car may be longer than the same journey prior to the trial.</p> <p>It is proposed that a subsequent report is to be produced as soon as possible which explores mitigation measures to improve access for residents with disabilities through potential exemptions and includes consideration of those with caring responsibilities.</p> <p>The School Street on Highworth Road is intended to help increase the number of young people who walk and cycle to school.</p>
2.3	Objection that vehicles are speeding on roads	Vehicle speeds have been assessed as part of the monitoring of the trial. The change in vehicle speeds before and after implementation are not considered to be significant enough to not make the scheme permanent.

2.4	Objection that noise pollution had increased	<p>Noise has been assessed as part of the monitoring of the trial and the assessment is that any negative impacts are not considered to be significant enough to not make the scheme permanent.</p> <p>Further detail can be seen by referring to the 'Noise' section in Table 1 of the main report.</p>
2.5	Objection that there has been an increase in air pollution	<p>Air quality has been assessed as part of the monitoring of the trial and the assessment is that any negative impacts are not considered to be significant enough to not make the scheme permanent.</p> <p>Further detail can be seen by referring to 'Air quality' section in Table 1 of the main report.</p>
2.6	Objection that the scheme has had little/no impact on traffic/pollution	<p>Traffic volumes have been monitored on boundary and several surrounding roads.</p> <p>The impacts associated with traffic volume and air quality do not suggest that the trial should not be made permanent.</p> <p>Further detail can be seen by referring to 'Traffic volumes' in Table 1 of the main report.</p>
2.7	Objection that traffic would become worse after lockdown (from responses received during the COVID-19 lockdowns that occurred while the survey was live)	<p>Traffic volumes have been monitored on boundary and several surrounding roads, and the analysis included in the report is based on post implementation surveys collected in September 2021, after restrictions due to Covid-19 had been eased.</p>

2.8	<p>Objection that there has been an increase in congestion as a result of the QN is negatively affecting public transport</p>	<p>Bus journey times in the area have been analysed and details of this is included in Appendix 2, and discussed in paragraphs 52-61 of the main report.</p> <p>The impacts on bus journey times identified, when considered in isolation, are not considered to be significant enough to not make the scheme permanent. The Council will continue to work with TfL to identify ways in which bus journey times can be improved across the Borough.</p>
2.9	<p>Objection that there has been an increase in congestion as a result of the QN is negatively affecting active travel</p>	<p>Pedestrian and cycling volumes have been monitored in the area. Details are included in Appendix 2 and discussed in paragraphs 62-65 for pedestrians, and 66-76 for cycling.</p> <p>Whilst the pedestrian data is limited to particular locations, the overall increase in pedestrian activity observed appears to be a positive trend. One of the aims of projects such as this is to create a network of streets that when connected together will enable the development of safe routes for walking and cycling on quiet streets. Where space allows, and as part of the development of a wider network, this approach can be complemented by segregated cycling facilities on primary roads. It should be acknowledged that changing travel behaviours is part of a longer-term programme that the Council is pursuing. The data suggests that the project has enabled the start of increase in active travel levels which can continue to be built upon.</p>

2.10	Objection that there has been an impact on work/local businesses or deliveries	<p>All properties, including businesses within the QN remain accessible by private motor vehicle, whilst the route taken to access a property or business may be different than before the trial was implemented.</p> <p>As part of the implementation of the project, the Council have invested in technological solutions to ensure that updates are effectively made to commercially available navigation solutions such as google, TomTom and Bing.</p>
2.11	Objection that tradespeople and taxis struggle to access properties	<p>All properties within the QN remain accessible by private motor vehicle, whilst the route taken to access a property may be different than before the trial was implemented.</p> <p>Council met with the Secretary of the National Union of Rail, Maritime and Transport Workers (RMT) to discuss the Quieter Neighbourhood project. At this meeting, it was explained to project team members that there was a perception among some taxi drivers that some roads were closed and unable to be accessed. The project team members clarified that the roads remain open, and every address remains accessible by private motor vehicle.</p>
2.12	Objection that delivery vehicles have been hampered as a result of the QN	<p>It was anticipated that there would be a period of time for drivers to adjust to the changes.</p> <p>For those who continue to visit the area by motor vehicle, all properties within the QN remain accessible by private motor vehicle, whilst the route taken to access a property may be different than before the trial was implemented.</p> <p>As part of the implementation of the project, the Council have invested in technological solutions to ensure that updates are effectively made to commercially available navigation solutions such as google, TomTom and Bing.</p>

2.13	Objection based on friends/family finding it harder to visit.	<p>Whilst the project does not impact journeys by public transport and/or walking/cycling, it was anticipated that there would be a period of time for residents and their visitors who travel by private car to adjust to the changes.</p> <p>For those who continue to visit the area by motor vehicle, all properties within the QN remain accessible by private motor vehicle, whilst the route taken to access a property may be different than before the trial was implemented.</p> <p>As part of the implementation of the project, the Council have invested in technological solutions to ensure that updates are effectively made to commercially available navigation solutions such as google, TomTom and Bing.</p>
2.14	Objection that it is harder to access healthcare, or for careers to gain access to patients, childcare/school	<p>It is proposed that a subsequent report is to be produced as soon as possible which explores mitigation measures to improve access for residents with disabilities through potential exemptions and includes consideration of those with caring responsibilities.</p> <p>The School Street on Highworth Road is intended to help increase the number of young people who walk and cycle to school.</p>
2.15	Objection that it is harder to access Bounds Green Industrial Estate	Bounds Green Industrial Estate remains accessible by private motor vehicle, whilst the route taken to access the estate may be different than before the trial was implemented.
2.16	Objection that there has been a reduction in mobility, including for disabled, general population and older people	It is proposed that a subsequent report is to be produced as soon as possible which explores mitigation measures to improve access for residents with disabilities through potential exemptions and includes consideration of those with caring responsibilities.

2.17	Objection that there has been an obstruction to emergency services	Communication has taken place prior and post implementation of the project. Any impact on the emergency services has been carefully considered and is set out in para 77 – 83 of the main report. None of the emergency services have objected to the traffic orders being made permanent.
2.18	Objection that emergency services do not have access to all filters	The MPS and LAS have each made their own operational decision not to carry keys to the removable bollards that have been implemented as part of the project. The LFB carry the appropriate keys for the locks installed on the bollards. None of the emergency services have objected to the traffic orders being made permanent.
2.19	Objection that non-residential traffic cutting through the area had increased/not been stopped by the LTN	The design of the QN limits the ability for non-residential traffic cutting through the area. The design of the QN at present continues to enable through trips on some roads. These roads are controlled by Haringey Council. Haringey Council is investigating implementing an LTN in the area. If they proceed, it is anticipated the volumes on these roads would significantly reduce.
2.20	Objection that the narrowing of streets for bike lanes has caused congestion	There are no cycle lanes deployed in this scheme. By significantly reducing motor vehicle volume, the roads within the QN area become suitable for cycling without dedicated cycling lanes, effectively creating a network of safe cycling streets.
2.21	Objection that emergency services delays because the bollard key does not work	The Council work closely with the London Fire Brigade and have received no reports of any delays as a result of this. The bollards have remained under review throughout the trial and improvements made to the locking mechanism to reduce the number of incidents from the public who have at times interfered with the locks.

2.22	Objection that the number of journeys being made by car have increased due to the inability to car share as a result of the QN	<p>Detailed analysis of the pre and post implementation traffic volumes are included in Appendix 2 of the main report and discussed in paragraphs 30-42 of the main report.</p> <p>Acknowledging the limitations in the data, the unprecedented impacts of the pandemic and that Haringey are exploring further mitigation measures, the impacts associated with traffic volume do not, in isolation, suggest that the trial should not be made permanent.</p>
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3 Physical and mental health and / or safety		
Ref	Nature of objection	LBE response
3.1	Objection regarding damaging their own or other's physical health, such as by aggravating breathing conditions due to a perceived increase in pollution	<p>Air quality has been assessed in the area. The air quality modelling report concluded that the scale of the changes in concentrations of nitrogen dioxide area associated with negligible impacts at all locations reviewed, with the exception of one at the junction of Truro Road and the A105 High Road in Haringey and one location at the intersection of the A105 Green Lanes and the A406 North Circular Road with a moderate adverse impact. The predicted changes in PM10 and PM2.5 concentrations are associated with negligible impacts at all locations in the study area.</p> <p>The air quality modelling report was informed by data collected in November 2020. Reasonable assumptions were made in adjusting the data for the air quality assessment, including for impacts of Covid-19 on the traffic data. Sensitivity testing, which tested the boundaries of the Covid-19 assumptions, predicted negligible impacts for all PM10 and PM2.5 concentrations, and for all nitrogen dioxide concentrations with the exception of one location on the A105 Green Lanes near its junction with the A406 North Circular Road, where a moderate adverse impact is predicted, and one location on York Road, where a slight beneficial impact is predicted.</p> <p>Data from the automatic monitoring station at Bowes Primary shows that the nitrogen dioxide concentrations have been below the annual mean objective.</p> <p>The project is set within the context of a wider programme of work and takes a long-term view of improving air quality. The assessment does not indicate that the project is having a broad negative impact on air quality.</p>

3.2	Objection regarding damaging their own or other's mental health, including feeling 'trapped' or isolated	Whilst it is acknowledged that some people may feel this way, the project aims to increase the sense of community within the area and to encourage more interaction between neighbours in an environment that is not dominated by motor traffic.
3.3	Objection based on feeling unsafe due to traffic	Road collisions before and after implementation have been reviewed and is discussed in paragraphs 102-107 of the main report. Whilst a trend cannot be established based on just 10 months of data, the current information does not suggest the Bowes Primary Area QN has had a significant impact on personal injury collisions.
3.4	Objection based on feeling unsafe due to crime, or that crime has increased, including that women feel unsafe walking in the QN, elderly and vulnerable people along with feeling unsafe due to moped/scooter/motorbike related crime.	The Council acknowledges that some people have reported feeling less safe in the area due to crime. Crime data has been reviewed to see if there are any underlying trends in the data which may indicate negative changes in the crime landscape. Public mappable Police data has been reviewed before and after implementation. The data is included in Appendix 3 and discussed in paragraphs 82-83. There has been a 2% decline overall in offence numbers since implementation of the QN. Offences across the Bowes and Southgate Green wards, which the QN falls within, have increased by an average of 7% within the same time period. An increase in more walking and cycling can create more 'natural surveillance' out on the streets.
3.5	Objection based on the perception that the QN poses a potential risk to life.	Based on the available information set out in Table 1 of the main report, the Council does not consider the QN poses a higher risk to life than before the QN was implemented.
3.6	Objection based on the view that the health of children at Bowes Primary School has been negatively affected.	The air quality monitoring station at Bowes Primary School does not indicate that the QN has resulted in a negative impact at this location. The proposed School Street will further improve conditions.

3.7	Objection based on a perception that cycling is not a suitable alternative to car journeys for children as they cannot cycle longer distances and/or over tougher terrain	The QN encourages mode shift by making active travel more attractive within the QN area. It is acknowledged not all trips are able to be made by modes other than private car, however many are. The 2016 TfL's Analysis of Cycling Potential confirmed that Enfield is within the top five London boroughs in terms of cycling potential. The analysis suggested that an additional 315,000 trips could be cycled daily – with over 250,000 trips made currently by private vehicles.
3.8	Objection that cycle lanes are dangerous.	There are no cycle lanes deployed in this scheme. By significantly reducing motor vehicle volume, the roads within the QN area become suitable for cycling without dedicated cycling lanes, effectively creating a network of safe cycling streets.
3.9	Objection that the junctions to enter / exit the area are unsafe, eg the Warwick Road / A406 junction	A Road Safety Audit was completed for the scheme which included a review of this junction and did not identify any areas of concern. The collision history does not indicate significant safety concerns at these junctions.
3.10	Objection that drivers ignore the restrictions leading to safety concerns	Enforcement is in place for camera operated filters. Traffic remains on all roads as no road has been closed to traffic so the risk of vehicles on the road cannot be eliminated. Efforts have been made to restrict the width of filters so drivers do not circumvent the physical filters.

4 Equalities		
Ref	Nature of objection	LBE response
4.1	Objection based on the quality of the equalities impact assessment.	The equality impact assessment is attached as an appendix to the report. It has been updated from a number of sources including census data, ward profiles, TfL research, academic research, focus groups, questionnaires and email feedback.
4.2	Objection based on the Equalities Duty not fully considered	The decision report contains the equality impact assessment for consideration by the decision maker when they make the decision.
4.3	Objection based on the view that the scheme breaches the Equality Act 2010 and that the Council has not met legal requirements.	The equality impact assessment does not consider that there has been a breach of the equality act. The Council will in making its decision comply with all legal duties.
4.4	Objection based on the view that the QN has negatively affected BAME groups	The decision report contains the equality impact assessment where the impact on Race is considered.
4.5	Objection based on the view that women are affected more negatively by the QN as they are perceived to be more likely to act as caregivers	In responses to consultation, females viewed the scheme slightly more negatively. The responses and comments of carers have been considered and are captured in the equalities section of the report.
4.6	Objection based on a perception from members of the BAME community that they are being placed at a greater risk of COVID-19 by being encouraged to use public transport by the QN	Medical evidence suggests that Covid affects people from certain BAME communities. Concern about using public transport was expressed in the survey responses. The project encourages more sustainable transport choices as part of a green recovery from the pandemic. However it is recognised that individuals will make personal choices about how they travel which may be influenced by Covid precautions that may be personal to their circumstances.
4.7	Objections based on the view that the streets in the QN are not fit for the disabled	Roads across the Borough are reviewed for their condition and upgrade works prioritised based. Site visits have taken place to gain a greater perspective on the condition of the footways and some areas for improvements identified. The Council does not consider this a reason to not make the trial permanent.

5 Process and decision making of the project		
Ref	Nature of objection	LBE response
5.1	Objection based on the view that the scheme is unfair on residents	The Council does not hold the view that the scheme is unfair on residents and considers that the benefits outweigh any disbenefits / disadvantages.
5.2	Objection based on the view that traffic in the area wasn't a problem	<p>Enfield Council has heard concerns from residents in the Bowes area for many years about the impact of motor traffic passing through the area. In November 2018 a number of Bowes area residents petitioned the local MP¹. He took this petition to parliament. In his speech he talked about speeding, road danger and high levels of air pollution affecting children at Bowes Primary School.</p> <p>In October and November 2019 a perception survey was conducted with residents in the area to gather perceptions on traffic speeds and volumes in response to ongoing traffic concerns raised by residents and Councillors.</p> <p>The project objectives are not solely focussed on reducing traffic in the area. Improving provision for modes of active travel strongly aligns with national, regional and local guidance as set out in paragraphs 18 -28.</p>
5.3	Objections based on the view that the project has created a social or community divide, or a class divide	There is no evidence at this time of the scheme creating a social or class divide. In fact, transport ² and sociological ³ research has shown that high levels of motor traffic on residential streets are associated with poor health and weakened social cohesion among residents.

¹ <http://betterstreets.co.uk/bowes-ward-petitions-for-a-low-traffic-neighbourhood/>

² Hart, J., & Parkhurst, G. (2011). Driven to excess: Impacts of motor vehicles on the quality of life of residents of three streets in Bristol UK. *World Transport Policy and Practice*, 17(2), 12-30

³ APPLEYARD, D., 1981. *Livable Streets*. Berkeley: University of California Press.

5.4	Objections based on a perceived lack of data provision and/or collection	<p>Traffic data was collection prior to the implementation of the trial, and several times post implementation. Analysis of the most recent data collection in September 2021, and comparisons to the pre implementation data is presented in Appendix 2, and discussed in 30-73.</p> <p>Other monitoring data, such as air quality and crime, is presented in the main report.</p>
5.5	Objections based on a lack of evidence being used to support decisions or impacts of the QN - some refer to this as a lack of 'KPIs'	<p>The project published a monitoring plan which set out the areas of focus for the monitoring and assessment of the trial. A webinar was also held to help explain each of these areas to the community, with a view to increasing the understanding of how the project would be assessed. Each of those areas of focus have been reported against in this project report so that the decision maker can consider each of these pre-defined aspects when considering a decision.</p>
5.6	Objections based on a perception that there was a lack of project objectives	<p>The project published a project rationale document to help explain the rationale for the project, this included a set of project objectives which were also reinforced in the project monitoring plan. These objectives and how the trial has met them has been discussed in the main body of the report.</p>
5.7	Objections based on misuse of funds/a waste of money / exploited the pandemic as a reason to implement	<p>This project was implemented using funds from the Department for Transport specifically for schemes to help increase levels of active travel. The funding could not have been used for any other purpose and had Enfield Council not used it for this type of project is would likely have been allocated to a different local authority for the same purpose. Letters provided as an appendix to this report set out the use of the funds within the context of the ongoing pandemic.</p>
5.8	Objection based on the perception that the disbenefits of the QN outweigh the benefits – a view that there is a lack of beneficial outcomes	<p>The Council have considered the impacts of the project and are of the view that the benefits the scheme brings outweighs</p>

		any dis-benefits, the rationale for this is set out in the project report.
5.9	Objection based on the perception that the QN is a revenue-generating scheme	The use of ANPR cameras in this project have been at the request of the emergency services to enable their continued access to the area. Enforcement revenue is only generated where motorists fail to comply with the traffic signs that are in place. Accounts from enforcement activity must be kept and any surplus can only be used for prescribed purposes, including supporting public transport and other highway and transport improvements. In previous years surpluses have been used to pay towards the contribution the Council has to make to pay for concessionary travel for qualifying older and disabled residents.
	Objection based on the perception that the QN is undemocratic	The decision to make the trial permanent or not lies with elected members. Consultation has been undertaken to seek feedback on the trial. Outcomes of the consultation and Council's responses are presented in the report.
5.10	Objections based on a perception that levels of air pollution will be reduced by a transition to electric vehicles and / or ULEZ and that, therefore, there is no need to reduce the number of vehicles on the roads	<p>Transition to electric vehicles, and / or ULEZ, is expected to reduce emissions. It is however not expected that on its own would result in meeting the project objectives of the Bowes Primary Area QN.</p> <p>Electric vehicles are an important part of Enfield's plan to be a carbon neutral borough by 2040, and efforts are being made in accordance with the Enfield Climate Action Plan 2020 to increase electric vehicle charging provision. They however are not a solution on their own.</p> <p>As much as 50% of particle pollution comes from brake wear, tyre wear and road surface wear⁴. These particles contribute to what is known as 'non-exhaust emissions' particulate</p>

⁴ https://uk-air.defra.gov.uk/assets/documents/reports/cat09/1907101151_20190709_Non_Exhaust_Emissions_typeset_Final.pdf

		<p>matter. Non-exhaust emissions increase with vehicle mass and electric vehicles tend to be heavier than their petrol/diesel counterparts due to the battery mass. An effective way to reduce these emissions is to reduce traffic volumes.</p> <p>Further, other problems associated with motor vehicle use, for example collisions, congestion and parking availability, will not be solved by a transition to electric vehicles.</p>
5.11	Objection based on a perception that the number of cars is greater than the number of pedestrians and cyclists on most roads and therefore should be prioritise	The Bowes QN is delivered in the context of local, regional and national policies and strategies that seek to respond to the climate emergency, reduce traffic congestion and increase levels of physical activity, and post-pandemic response to enable a green recovery. Improving on the current ratio of cars to pedestrians and cyclists, ie 'mode share' is key to these policies. An example of this is the Mayor's Transport Strategy which aims for 80% of all trips to be made on foot, by bicycle or by public transport by 2041.
5.12	Objection based on the view that the ULEZ will force more traffic onto the A406 which will increase pollution and congestion on this road	Transport for London will continue to monitor the volume of traffic on the A406 and the Enfield Council permanent air quality monitoring station will continue to provide air quality data. As set out in this report, neither excessive congestion or pollution on this road is identified as a reason to not make the trial permanent at this time.
5.13	Objection based on the view that conducting the QN trial during a period of multiple COVID-19 lockdowns does not give a representative reflection of the effect that the QN will have on traffic flow in the future	A decision was made, as presented in the interim report presented to decision makers in June 2021, to continue the trial to enable collection of traffic data following the removal of restrictions due to Covid-19. Further traffic data was collected in September once lockdown was lifted and at a time when TfL are reporting that traffic has returned to 96% of pre-pandemic levels.

5.14	Objection based on a perception that introducing the trial during the COVID-19 pandemic was poor timing	The Department for Transport released funding under the Emergency Active Travel Fund for authorities to create an environment that is safe for both walking and cycling. This was to enable people to get around whilst maintaining social distance and helping to avoid overcrowding on public transport. It was also an opportunity to embed walking and cycling as part of new long-term commuting habits and reap the associated health, air quality and congestion benefits.
5.15	Objection based on a perception that results from the perceptions survey should not have been used to justify the QN	The perception survey helped inform the Council of how residents perceived various issues in the area and identified that traffic volume and speed was considered a problem in the area.
5.16	Objection on concerns over how the success of the QN will be measured	The Council responded to these concerns by publishing two documents to provide information on this; the Project Rationale sets out the rationale for the project and its objectives, and the Monitoring and Evaluation Plan sets out the various area of monitoring to consider the outcomes of the trial. The report provides an assessment against each of those monitoring areas of focus.
5.17	Objection on the grounds that the QN objectives fail due to the impossibility to prove the scheme's success	The main report sets out several areas of measured data to inform the extent of success of the trial. The provision of the data, acknowledging that the pandemic has created some limitations, is considered sufficient to inform a decision. The data is presented alongside other aspects of the report, such as the policy direction and context around climate and public health.
5.18	Objection that QN supporters have been receiving threats	Any concerns around personal threats are a matter for the Police and individuals are encouraged to report issues of threat or abuse, which is clearly unacceptable, irrespective of whether individuals support or do not support this scheme. It is recognised that different people will have different views and this should be respected.

5.19	Objection that others outside the QN area have been unfairly treated and discriminated against	People outside of the QN area have been able to participate in the consultation and people have done so. It is acknowledged that some people who have previously travelled through this area to get to somewhere else may now have to take alternative routes. A key objective of the trial was to reduce this through traffic for the reasons set out in the main report.
5.20	Objection that LTN schemes should be used rarely and only when absolutely necessary; and restricted to a "micro area/road"; and not whole estate/geographical area.	The Council is of the view that area wide schemes can be appropriate to prevent the displacement of motor traffic from one unclassified road in an area to another unclassified road within the same area. Schemes are designed to reassign traffic to the primary network. Where a scheme does create impacts on other unclassified roads then further measures should be consider to mitigate this.

6 Communications and engagement		
Ref	Nature of objection	LBE response
6.1	Objections based on lack of and/or poor communication and consultation	<p>Following the release of funding for active travel in response to the Covid-19 pandemic, communications with the community regarding the project included:</p> <ul style="list-style-type: none"> • A project flyer detailing the project background, a plan of the project, and information on the consultation delivered in July 2020 • A notification letter with details of the construction delivered in August 2020 • Launch of Let's Talk project page in October 2019, hosting information on the project, FAQs, documents, the electronic consultation survey, and project updates posted to the page • A letter inviting residents to participate in the consultation and providing details of how to do so, delivered in September 2020 • A letter inviting residents to join an online public webinar and the subsequent webinar in March 2021 • A letter advising residents of the closing date of the consultation, delivered in April 2021. This letter was delivered to a larger distribution area in response to feedback provided <ul style="list-style-type: none"> • The Deputy Leader and Healthy Streets Programme Director answered questions from the community at the Bowes Ward Forum on 17 June 2021. • A letter detailing information on plans by the London Borough of Haringey to introduce a Low Traffic Neighbourhood adjacent to the Bowes Primary Area QN, delivered in August 2021 • A letter advising residents of a further period to provide feedback delivered in November 2021 • Social media posts on Enfield Council's Facebook and Twitter pages throughout the consultation period.

		Notice of the making of the ETO was published in the London Gazette and Enfield Independent newspapers on 22 July 2020.
6.2	Objections over lack of transparency	The Council reflected on feedback received and provided more information during the trial, for example the Monitoring Plan was published in March 2021. Information was hosted on the project page on the Let's Talk Enfield site. The link for this was provided in all communications. The report and all associated data collected during the trial has been published online.
6.3	Objections based on the perceptions that the Council only contacted those within the QN / a small group of people	The Council reflected on feedback received at the start of the trial and significantly increased the distribution area for letters during the trial.
6.4	Objections based on views that the trial and consultation was conducted undemocratically	The Council adhered to the process and all that is required when implementing a project using an Experimental Traffic Order, including the conduct of the statutory consultation. In addition to the Council's statutory obligations, the Council provided additional communications as outlined above, extended the period of consultation and responded to many enquiries about the trial. The approach of an ETO is that consultation follows implementation, in able for feedback to be received in light of experience of the trial.
6.5	Objections regarding Councillors	Residents with concerns regarding Councillors were often in direct contact with the Councillor in question who responded to their concerns. There is a process in place to handle complaints against Councillors which can be found on the Council webpage.
6.6	Objections based on the perceptions that residents felt they were being ignored or not listened to by the Council	The statutory consultation was the formal process by which residents could provide their comments on the trial. Further, the Council received and responded to a high volume of correspondence throughout the trial period.
6.7	Objections based on issues with the online survey	There were no significant issues with the operation of the online survey. Any individual issues that were raised were promptly dealt with and comments were collected by email and letter for those who did not have the means or want to complete the online survey.

6.8	Objections based on the perception that the consultation was biased	The Council is committed to delivering Quieter Neighbourhood projects across the borough to enable more people to walk and cycle safely in their local areas. Given the Council's commitment to this initiative and at this stage of implementation, rather than asking residents a closed question of whether they want the Quieter Neighbourhoods project to be made permanent or not, the statutory consultation gathered feedback on how the scheme is working in practice, suggestions for amendments and other information on what is and isn't working. We engage residents, businesses and other stakeholders on issues that they can have influence over, and then work to incorporate their ideas and feedback into future iterations of projects such as the Bowes Primary and Surrounding Streets Quieter Neighbourhood.
6.9	Objections based on the view that lack of technology ability/access excluded some from being consulted	Non-electronic means of participating in the consultation were available including paper copies of the survey or submitting comments by email or letter. Letters delivered to the area provided details of these means.
6.10	Objections based on the views that some respondents reported that they felt unhappy with the reasons provided for a lack of advance notice regarding the project.	The project was implemented following the successful funding bid to the DfT. The requirements of the funding meant that there were short timelines for implementation. The Council gave residents as much notice as possible ahead of the trial being implemented.
6.11	Objections based on views of insufficient consultation of disabled people	In addition to the communications detailed above, further engagement with disabled people and carers took place in March 2021 following an early review of consultation responses provided by this group. The consultation findings report outlines the views of people with disabilities.
6.12	Objection on the grounds of having to sign up to the Council's website to participate in the consultation survey	All consultations run through the Let's Talk Enfield site require sign in or registration. This enables the Council to better understand and communicate with the people who take part in these processes.
6.13	Objection that letters about the QN were hard to read for non-English speakers	This feedback was responded to early on during the consultation. Subsequently, text in Greek, Polish and Turkish was added to all

		letters. The project page can also be translated into languages other than English.
6.14	Objection that maps given to residents were too small	The map of the project was available to download via the project page, and residents were provided with information on how to request alternative formats of the information provided.
6.15	Objection that the tone of all communications was designed to make car-users feel guilty	The project team planned communications to be informative, transparent, clear and respectful. The aims of the project include reducing the number of short journeys by private motor vehicles through the area. This was recognised throughout the project communications, however it was also stated that the Council recognise that there are reasons as to why car use is necessary for some people, for example for use by people with limited mobility.
6.16	Objection that emergency services were not fully consulted (objection raised by resident(s))	Emergency services were consulted prior to the implementation of the trial, and the project team remained in regular communication throughout the trial period.
6.17	Objection that schools have not been consulted (objection raised by resident(s))	A series of conversations have been held with Bowes Primary School with discussions now focused on the potential introduction of a School Street on Highworth Road.
6.18	Objection that the scheme is only supported by a vocal minority	The consultation findings report sets out the feedback received. Anyone is able to respond to the consultation survey. The response rate of the population of the Bowes QN area was approximately 4% of the local population who live within the area of the QN.
6.19	Objection that a petition to remove the trial has been ignored	The purpose of the consultation and experimental phase is to allow people to give their view prior to a decision being made. A petition was received by the Council and was debated in accordance with the governance process of the Council.
6.20	Objection that an impact assessment for businesses wasn't carried out	The consultation period has allowed businesses to provide their responses to the scheme.
6.21	Objection that there was no information available to the public to advise on where the filters were located	The location of filters was detailed in the traffic order. A map of the filters was delivered to residents ahead of the scheme being implemented. This map was also available online on the project page.

7 Design and infrastructure		
Ref	Nature of objection	LBE response
7.1	<p>Objection that public transport or active travel are not suitable alternatives:</p> <ul style="list-style-type: none"> • in general • due to disability • due to age • for children as they cannot cycle longer distances and/or over tougher terrain • for families • due to covid-19 • due to family commitments • due to work commitments • due to longer journey times • due to safety 	<p>The QN encourages mode shift by making active travel more attractive within the QN area. It is acknowledged not all trips are able to be made by modes other than private car. The Mayor's Transport Strategy 2018 estimates that 74% of car trips could be made by a more sustainable mode. It is Enfield's portion of these trips being targeted by the QN project.</p>
7.2	<p>Objection that there is not enough infrastructure inside / outside of the QN for safe active travel routes</p>	<p>Over time the Council will continue to deliver projects to support active travel which will continue to develop a borough wide network of safe walking and cycle routes and infrastructure. The Bowes QN connects directly to Cycleway 20 via the recently upgraded walking and cycling across the A406 by Palmerston Road.</p>
7.3	<p>Objection based on the view that the removal of street furniture and landscaping suggests the Council had already decided to make the trial permanent</p>	<p>In the implementation of the trial the Council has used temporary materials, including movable planters, secured with rubber bolt down kerbs. A series of bollards have also been used, which can be readily removed. Some posts and the historic width restriction gate on Warwick Road has also been removed. All of these items can be returned should a decision be reached not to make the ETO permanent.</p>
7.4	<p>Objection that there are not enough amenities to sustain a LTN</p>	<p>It is not only amenities that generate a journey to be made. In addition to shops and other amenities located in places such as a high street, journeys can be made for a number of reasons on foot or cycle within</p>

		<p>walking / cycling distance, by those who are able to. Some examples are:</p> <ul style="list-style-type: none"> • To access other modes of transport, for example a bus stop or train / tube station • To visit friends or family • To access educational facilities, healthcare, recreational facilities, or the journey itself may be for recreation. <p>In addition, the longer-term intention is to connect one QN project to another, creating a 'bridge' where necessary across dividing strategic roads. This approach will enable people to reach amenities in nearby communities.</p>
7.5	Objection that the A406 must be travelled on to access some roads / unwilling or reluctant to use A406	The A406 is an important road in the area and it carries significant volumes of traffic across a 24 hour period. However where the access roads meet the A406 (Ollerton, Highworth Warwick, Natal and Brownlow Roads), they are either signal controlled, or where not signal controlled, the priority junctions are left in left out. The Council does not consider the A406 is an 'inappropriate' road to access the area, however acknowledges that some drivers have expressed a preference for a different access road (eg Bounds Green Road). This option has been discussed in more detail in Table 7 of the main report. On balance, it was considered that the current layout offers the best solution at this time.
7.6	Objection based on a perceived lack of understanding of the different residential 'cells' within the area	The Council recognises that adopting a Low Traffic Neighbourhood approach creates individual 'cells' that may not be able to be readily traversed by a motor vehicle. Preventing these th
7.7	Objection that drivers ignoring Palmerston/Kelvin no-right turn / u-turning around the island / unsafe manoeuvre	The Council installed an enforcement camera during the trial to encourage drivers not to bypass the traffic island on Palmerston Road. The Council has observed drivers making u-turns around the island. Should Haringey proceed with implementing the Bounds Green LTN, it is expected that, by removing through traffic from the area, the 'demand' for this manoeuvre will be minimised.
7.8	Objection that parking issues have been created	The issue of parking in the area has been raised with the Council prior to the implementation of the trial and the QN scheme is not likely

		to have made the parking situation materially worse. The Council has investigated implementing a Controlled Parking Zone in the area in the past but there was insufficient public support at the time. This can be re-looked at in the future if there is sufficient support and funding available.
7.9	Objection on the basis that Haringey have not yet implemented their LTN.	Haringey have now published their intention to implement a LTN in the adjacent area and both Enfield and Haringey are committed to continuing to work together and conduct some joint monitoring.
7.10	Objection to the Brownlow Road bus gate	A bus gate on Brownlow Road is not within the scope of the experimental traffic orders. The report outlines how further data will be required post the implementation of the Haringey LTN to enable a further assessment to be made.
7.11	Objection on the grounds of road layout issues associated with the QN	We do not consider that there are any fundamental road layout issues associated with the QN.
7.12	Objection that signage regarding the QN is not clear enough	The signage at the camera enforced modal filters is fully compliant with relevant guidelines.
7.13	Objection that there is inadequate street lighting in the QN	The lighting levels have been set in accordance with national design standards and have been checked during the trial. The Council will continue to check any further queries that are raised about views of insufficient lighting at specific locations.
7.14	Objection that the Brownlow Road bus gate should have been introduced in Phase 1	The funding allocated, and time for implementation, was such that only the Phase 1 measures implemented were suitable. An initial review of the Bus Gate was included in the second phase of funding that was received and it was concluded that this could not be fully assessed until Haringey have delivered their intended LTN. Further engagement with Transport for London and Haringey Council will be required.
7.15	Objection that there is a lack of electric charging points	In the Council's Climate Action Plan there is a commitment to provide an additional 250 charging sockets for electric vehicles on public highways and public car parks by 2025. This will be a rolling programme with delivery reliant on funding, so the number provided each year will vary.

		<p>The aim is to provide charging points where there is the greatest need. This includes areas covered by the extended Ultra-Low Emission Zone, where there are more people living without off-street parking, and where they support other carbon reduction interventions such as low traffic neighbourhoods.</p> <p>See here for more information: https://new.enfield.gov.uk/services/roads-and-transport/electric-vehicle-charging/</p>
7.16	Objection that the QN was poorly designed and by non-highway specialists	The design that was brought forward was considered the best approach when considering the objectives and the other constraints in the area (i.e. a number of banned movements that are not set by Enfield Council). The original designs were developed by Traffic Engineers within Enfield Council and have since been considered by other design engineers. Other designs have been considered and are set out in the alternative options section of the main report.
7.17	Objection to parking restrictions	Some additional double yellow lines have been introduced at the filters. These are considered necessary to create turning points at these locations.
7.18	Objection that there are not enough roads to get on to the A406	The entry and exit points into the area were considered during the design process and the design allows movements in and out, albeit at fewer points, with the key entry / exit at the northern end of Warwick Road, where signalised infrastructure is in place to facilitate movements in and out of the area.
7.19	Objection that cycle lanes in the area are under-utilised	Cycle lanes in the area, such as those on the A406 are useful but do not yet form part of a coherent network. This is necessary to encourage mode shift. Enfield Council is working to develop a coherent cycle network which is anticipated to increase cycle journeys.
7.20	Objection that the camera-operated road filters are not effective	Camera enforced restrictions may not be as effective in reducing motor traffic as a physical closure, because some drivers will not comply. However, camera enforced filters allow emergency service vehicles to pass through key routes. We work with emergency

		services to understand their needs and may make amendments to designs as a result.
7.21	Objection that pedestrian infrastructure is of low quality/in poor condition	Programme staff have visited the area with a local disabled resident. Some areas for improvement of the footway have been identified and are being assessed.
7.22	Objection to no right-turns, for example the no right turn from Bounds Green Road onto the A406 Eastbound	The banned turns have been in place for a number of years. The no right turn at the A406 / Bounds Green Road junction was investigated. The study concluded no feasible physical changes to the junction could be identified and the right turn is not considered to be viable. The banned turns at either end of Brownlow Road in relation to the QN area are under the jurisdiction of TfL (A406 junction) and Haringey (Bounds Green Road junction).
7.23	Objection that infrastructure on the area is poorly maintained	The Council has a maintenance programme in place. The programme is borough wide and makes an assessment on the condition of current roads and footways and priorities a works schedule accordingly.
7.24	Objection on the grounds that a School Street should have been implemented	The Council is investigating a School Street on Highworth Road as part of a further Borough wide rollout of School Streets.
7.25	Objection that cycle storage in the area is an issue and has no cycle hangars.	The Council has a programme to increase cycle parking provision across the Borough to meet objectives of the Mayor of London's Transport Strategy. The Bowes QN area currently has the highest concentration of cycle hangars and more can be installed to match increasing demand as funding is identified.
7.26	Objection that the scheme should have been designed to provide access to and from the Bounds Green Rd side of the QN area.	The scheme was designed to provide access for most residents west of Brownlow Road to/from the A406. Respondents to the survey were asked about access to / from the area from different directions. The responses show only a slight preference for access to / from the south. Relocating the filters to the A406 to provide access to / from the south is discussed further in Table 7 of the main report.
7.27	Objection that traffic signal timings at specific junctions surrounding the area are poor or 'not right', for example at Brownlow Road / A406	The signals along the North Circular Road operates a system of Urban Traffic Control that enables signal timing to be adjusted to reflect live traffic conditions. However, it is acknowledged that some junctions operate at capacity at certain times and delays can occur.

		Transport for London are responsible for setting the signal timings and seek to balance the competing demands of traffic and pedestrians on all arms.
7.28	Objection that Highworth Rd is not wide enough to be one of the major access roads to the QN area, causing obstructions.	Highworth Road, and other access roads, are in line with many other similar roads across the borough.
7.29	Objection that motorbikes pass through the bollard filters	Bollard spacing is designed to allow pedestrians and cyclists to pass through depending on their location. It is not feasible to physically prevent motorbikes from passing through the bollard filters, without obstructing other users, including those on larger cycles, such as cargo bikes used by families / deliveries.
7.30	Objection that the streets are shady due to overgrown and uncared trees	This objection is not directly related to the QN scheme. However, the Council has a programme in place to maintain trees and plants in the area. In addition, the owner or occupier of a property has a legal responsibility (Highway Act 1980 s154) to ensure that the public highway adjacent to a property is not obstructed by vegetation from their property.
7.31	Objection based on the perception that there has been no consideration of the alternatives.	A number of alternatives have been considered and these are set out in the main body of the report – ‘Options Considered’. A range of alternatives have been considered with further commentary on reasons why these may not have been pursued.
7.32	Objection that the public transport system/infrastructure to support public transport (eg bus network) was insufficient	The area’s Public Transport Accessibility Level (PTAL) ranges from 3 to 6, reflecting the fact that it is well served by several bus routes and is close to both Underground and overground rail services.

8 Miscellaneous		
Ref	Nature of objection	LBE response
8.1	Objection that the QN had impacted house sales/values or made people move from the area	Evidence from Waltham Forest suggests the opposite is true. Savills ⁵ report property within LTN areas rose by 4% more than property outside of the LTN from 2016 to 2020.
8.2	Objection that those who cannot afford to live close enough to their place of work to be able to use active travel or public transport conveniently to commutes are being punished	It is acknowledged that different people will make different transport choices and that this will be influenced by the distance required to travel.
8.3	Objection that vibrations from heavy goods vehicles being redirected as a result of the QN are causing structural damage to houses	There is no evidence of any structural damage. All roads are constructed to the appropriate standards.
8.4	Objection that damage to parked cars has increased since the start of the QN	There is no evidence that damage to parked cars has increased.
8.5	Objection that the QN has had a negative effect on children's education	Council does not consider there is an overall negative effect on children's education as a direct result of the QN.
8.6	Objection that disruptions from accidents are magnified by the QN	Accidents cannot unfortunately be avoided. In the rare event of the A406 being closed to traffic at the Warwick Road junction, the Council will suspend enforcement with the aim to avoid issuing PCNs during the period of the closure. Residents will then be able to use the camera filter point at the southern end of Warwick Road. This situation has not occurred during the trial.
8.7	Objection that the enforcement of measures is not strong enough	Council considers the enforcement of measures to be adequate.
8.8	Objection that cyclists still travel on Brownlow Road and on pavements	There is no restriction on the use of Brownlow Road by cycles. Cycling on footways is still unlawful and a matter for the local police.
8.9	Objection that wildlife is being harmed by a perceived increase in traffic as a result of the QN	There is no evidence of wildlife being adversely affected.

⁵ <https://www.savills.co.uk/blog/article/311069/residential-property/low-traffic-neighbourhoods-see-housing-values-rise.aspx>

8.10	Objection based on the view that assessment has not been made in consideration of the Fox Lane Quieter Neighbourhood and how that project is impacting traffic and bus journey times	The traffic data collected in September 2021 and contained in detail within the report, including the impact on bus journey times, was collected with the Fox Lane Quieter Neighbourhood trial currently in place. This project will be subject to its own report and analysis.
8.11	Objection that those paying 'road tax' over not being able to use all roads in the QN	All roads within the QN are able to be accessed by motor vehicle.
8.12	Objection that increased exercise is not as important as diet in tackling obesity	Increased physical activity has numerous benefits other than tackling obesity. Both are relevant to a healthy lifestyle.
8.13	Objection based on the view that there must be a clear majority buy-in to the project.	The Council has set out in the monitoring plan a range of factors that would be considered when assessing the project. The views of the community are an important factor to consider, but not necessarily a deciding factor. The Council has a responsibility to consider the wider context when reaching a balanced decision.
8.13	Objection based on the uncertainty around TfL finances.	The outcome of financial discussions between TfL and the Government are not yet announced. However, both organisations remain committed to future measures which promote active and sustainable travel, the Bowes QN project has already received funding to enable delivery.

9 Impacts outside the scope of the traffic order		
Ref	Nature of objection	LBE response
9.1	Objection to the Haringey QN	Haringey Council is conducting their own consultations in relation to their schemes.
9.2	Objection that those who want to live in an area with low traffic levels should not live in a busy city	The Council view is that the Borough can improve the living environment, contribute to the climate crisis and improve public health by reducing the volume of car trips and increasing levels of sustainable travel. In a place with a growing population, this will enable the transport network to continue to function.
9.3	Objection that Haringey proposals will increase the difficulty to access some roads in the area.	Haringey Council is conducting their own consultations in relation to their schemes and Enfield residents will have the opportunity to continue to feedback into this process.
9.4	Objection that there is no lift in Palmers Green nor Bowes Park stations	We would support any improvements to accessibility across the public transport network.
9.5	Objection to the no left turn from Bounds Green Road (north) onto Brownlow Road	This junction is under the jurisdiction of Haringey. Haringey Council is aware of some resident's suggestions to remove the no left turn at this junction.
9.6	Objection that the Government only subsidises domestic chargers for people that live in houses with driveways or private parking	This is outside of the scope of the QN and not something that Council controls.
9.7	Objection that there is reduced bus service in the area	There have been no reductions in bus services.
9.8	Objection to the Shrewsbury Road barrier.	There is no filter on Shrewsbury Road under the Traffic Orders.
9.9	Objection that there is/has been a lack of investment/improvement of A406 junctions on the perimeter of the QN	The A406 and its junctions are controlled by Transport for London. Transport for London have recently invested in an upgrade of walking and cycling facilities across the A406 at Palmerston Road.

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Department
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Web Site: www.gov.uk/dft

Our Ref:
Your Ref:

28 May 2020

To Chief Executives and London Borough Transport Officers and
Transport for London

Emergency Active Travel Funding Indicative Allocations

On behalf of the Department of Transport, I am pleased to give details of the indicative allocations for the first tranche of the emergency active-travel fund [announced on 9 May](#). This new funding is designed to help you use pop-up and temporary interventions to create an environment that is safe for both walking and cycling in your boroughs. Active travel allows people to get around whilst maintaining social distance and will have an essential role to play in helping us avoid overcrowding on public transport systems as we begin to open up parts of our economy. We have a window of opportunity to act now to embed walking and cycling as part of new long-term commuting habits and reap the associated health, air quality and congestion benefits.

Of the total £250 million fund, £225 million will be provided directly to local transport authorities and London boroughs, while £25 million will help support cycle repair schemes.

The £225 million allocated to combined and local authorities will be released in two phases. The first tranche of £45 million will be released as soon as possible so that work can begin at pace on closing roads to through traffic, installing segregated cycle lanes and widening pavements.

London's indicative share of the £225m will be £25 million over the rest of the financial year, with £5 million in the first tranche. This takes into account the fact that TfL has recently had its own separate funding settlement from the Department, £55 million of which is to be spent on active travel measures on both TfL and borough roads. The indicative allocations are in addition to this £55 million and the Department expects that the measures supported by this additional £25 million will be closely coordinated with TfL's active travel investment programme.

For the first tranche of funding, the Department has indicatively allocated a sum of £100,000 to each individual borough and the balance of £1.7m to Transport for London. This is to speed up the process of individual boroughs receiving an appropriate share of the funding, and also recognises the fact that allocating the funding by a formula based on public transport usage by those resident in each borough (as we have done for the rest of the country) would lead to some anomalies in London. It also recognises that TfL has recently had its own separate funding settlement from the Department, part of which is to be spent on active travel measures on both TfL and borough roads.

The amounts are only indicative. To receive any money under this or future tranches, boroughs and TfL will need to satisfy the Department that there are swift and

meaningful plans in place to reallocate road space to cyclists and pedestrians, including on strategic corridors.

The quickest and cheapest way of achieving this will normally be point closures. These can be of certain main roads (with exceptions for buses, access and for disabled people, and with other main roads kept free for through motor traffic); or of parallel side streets, if sufficiently direct to provide alternatives to the main road. Point closures can also be used to create low-traffic filtered neighbourhoods.

Pop-up segregated cycle lanes will also be funded, but are likely to be more difficult to implement quickly. As [the guidance](#) states, they must use full or light segregation. We will also fund the swift implementation, using temporary materials, of existing cycle plans that involve the meaningful reallocation of road space.

We expect all these measures to be delivered quickly using temporary materials, such as barriers and planters. Elaborate, costly materials will not be funded at this stage. Anything that does not meaningfully alter the status quo on the road will not be funded.

As [the guidance](#) makes clear, 20mph zones can form part of a package of measures, but will not be sufficient on their own.

If work has not started within four weeks of receiving your allocation under this tranche of funding, or has not been completed within eight weeks of starting, the Department will reserve the right to claw the funding back by adjusting downwards a future grant payment to your authority. This is also likely to have a material impact on your ability to secure any funding in tranche 2.

To allow changes to be put in place more quickly, [a temporary process](#) for new emergency traffic orders was announced on 23 May halving the time needed for approval.

The second tranche of £180m will be released later in the summer to enable authorities to install further, more permanent measures to cement cycling and walking habits.

In order to access a share of this funding, we will require the completion of an online proforma to allow us to assess your plans on how the money will be spent. The proforma is intended to be as simple and light-touch as possible and should not be onerous for you to complete. The proforma for tranche one should be completed as soon as possible and no later than Friday 5 June. It can be found online here: <https://www.smartsurvey.co.uk/s/ActiveTravelFund/>. We will write to you again shortly with instructions on how to access the second tranche of funding, together with a new proforma.

We will make the payments via a grant under section 31 of the Local Government Act 2003 together with a formal grant determination letter as soon as possible after you have submitted the proforma. In the event that any borough does not wish to receive a share of the funding or does not submit proposals which meet the Department's expectations, we will reserve the right to decrease indicative allocations and reallocate the funding elsewhere. If you have any questions on any aspect of this funding, please email: activetravel.pmo@dft.gov.uk

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'R Furness', with a long, sweeping horizontal stroke extending to the right.

Rupert Furness
Deputy Director, Active and Accessible Travel

Annex A – Terms and conditions

Annex A: Terms and conditions

We expect each local authority to use this funding as proposed in their completed pro forma.

This funding will be paid via a grant under Section 31 of the Local Government Act 2003. Available online here: <http://www.legislation.gov.uk/ukpga/2003/26/section/31>

For any grant, Government is required to monitor the effectiveness of any public investment. We therefore expect you to have robust monitoring and evaluation plans in place. Funding for the second tranche of money will be conditional on demonstrating that bids represent value for money and evidence of suitable evaluation plans.

This grant may be subject to State Aid regulations. It is the responsibility of local authorities to satisfy themselves that they are State Aid compliant when using the Emergency Active-Travel Fund. Local authorities should ensure that their project teams are versed on State Aid law, as they are better placed to provide support on the operational matters within the authority. Guidance on State Aid is available from: <https://www.gov.uk/state-aid>.

Bowes Primary Area Quieter Neighbourhood

Post-Scheme Monitoring

Data Analysis v2.0

17th December 2021

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Introduction

- The Bowes Quieter Neighbourhood scheme was implemented in September 2020.
- Traffic surveys have been undertaken before the scheme was implemented (in July 2020) and after (in September 2021), to understand how the scheme has influenced the local and surrounding highway network.
- The data collected includes: traffic volumes, traffic speeds, bus journey times as well as pedestrian and cycle volumes for the study area.
- This report provides a summary of the analysis undertaken comparing the pre-scheme and post-scheme data, as part of the post-scheme monitoring.
- Both the pre-implementation and post-implementation surveys were carried out when COVID restrictions were in place and therefore traffic volumes have been affected by COVID travel restrictions. Travel patterns have changed as a result of COVID, for example, more people are working from home, and this is likely to continue to some extent going forward, so traffic conditions are likely to be different in the future, compared to Pre-COVID conditions. A sensitivity test has been undertaken which applies a factor to the surveyed traffic data, to mitigate the impacts of COVID, with further information found in the [Appendix](#). Enfield will also continue to monitor traffic levels across the area.

Traffic Flow Analysis



Traffic Surveys

- Traffic volumes and speeds have been captured using Automated Traffic Count (ATC) loops that measure traffic volumes by vehicle type and the speed of traffic.
- ATC data has been collected at sites shown on the following slide, to understand both the changes in traffic volumes and speeds within the Quieter Neighbourhood area, as well as the changes in traffic volumes and speeds on external roads where potential increases are anticipated. Unless specified, the surveys were undertaken over the following dates:
 - Pre-scheme surveys 18th - 24th July 2020
 - Post-scheme surveys 16th - 28th September 2021
- The following slides compare the surveyed traffic flows between the two survey dates.
- The sensitivity test, where a factor has been applied to mitigate the impacts of COVID on both the pre-implementation and post-implementation surveys, can be found in [Appendix](#). As previously stated, traffic patterns have changed as a result of COVID, for example, people will continue to work from home, so the sensitivity test is only an estimate and Enfield will continue to monitor traffic flows across the area.

ATC Survey Locations



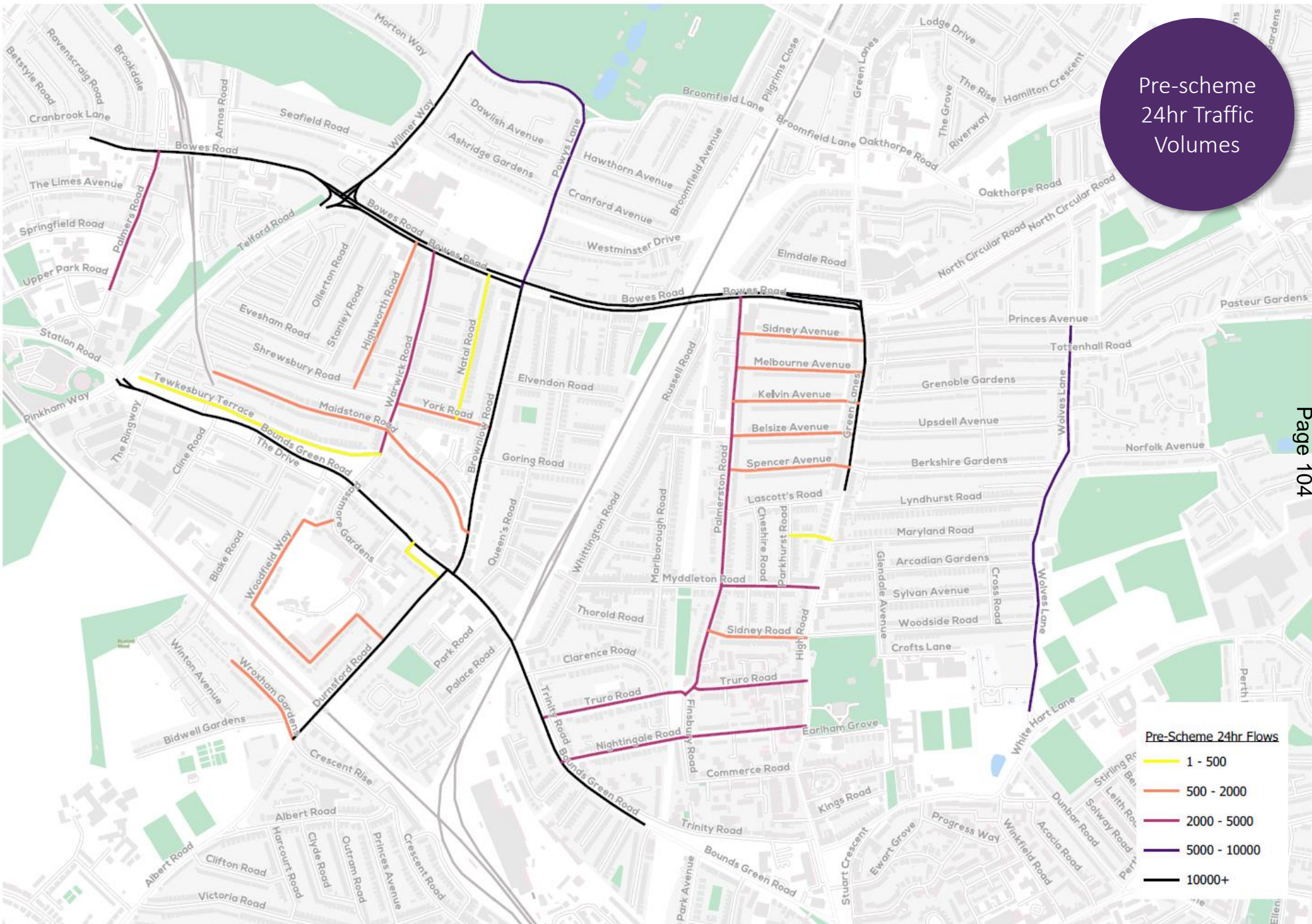
Legend

- Local Road ATC
- Strategic Road ATC
- Distributor Road ATC
- Strategic Roads
- Borough Distributor Roads
- Quieter Neighbourhood Area

Traffic Surveys

- The data is presented in both graphic and tabular format for the following time periods.
 - 24-hour weekday period
 - Weekday AM peak hour
 - Weekday PM peak hour
- As shown in the previous slide the surveyed roads have been categorised in the following way:
 - **Local roads** - which are predominantly residential roads, which are not expected to carry significant volumes of through traffic
 - **Borough distributor roads** - which are roads feeding the local roads in the area
 - **Strategic roads** - which are roads carrying larger volumes of traffic, the majority of which is passing through an area
- Pre-scheme ATC data for Wilmer Way and Powys Lane (site ref 35 and 36) was collected in 2019. The pre-scheme data for sites 23 to 27 are from earlier years and therefore these sites have been assessed separately from the majority of the sites, with details included in the Appendix.

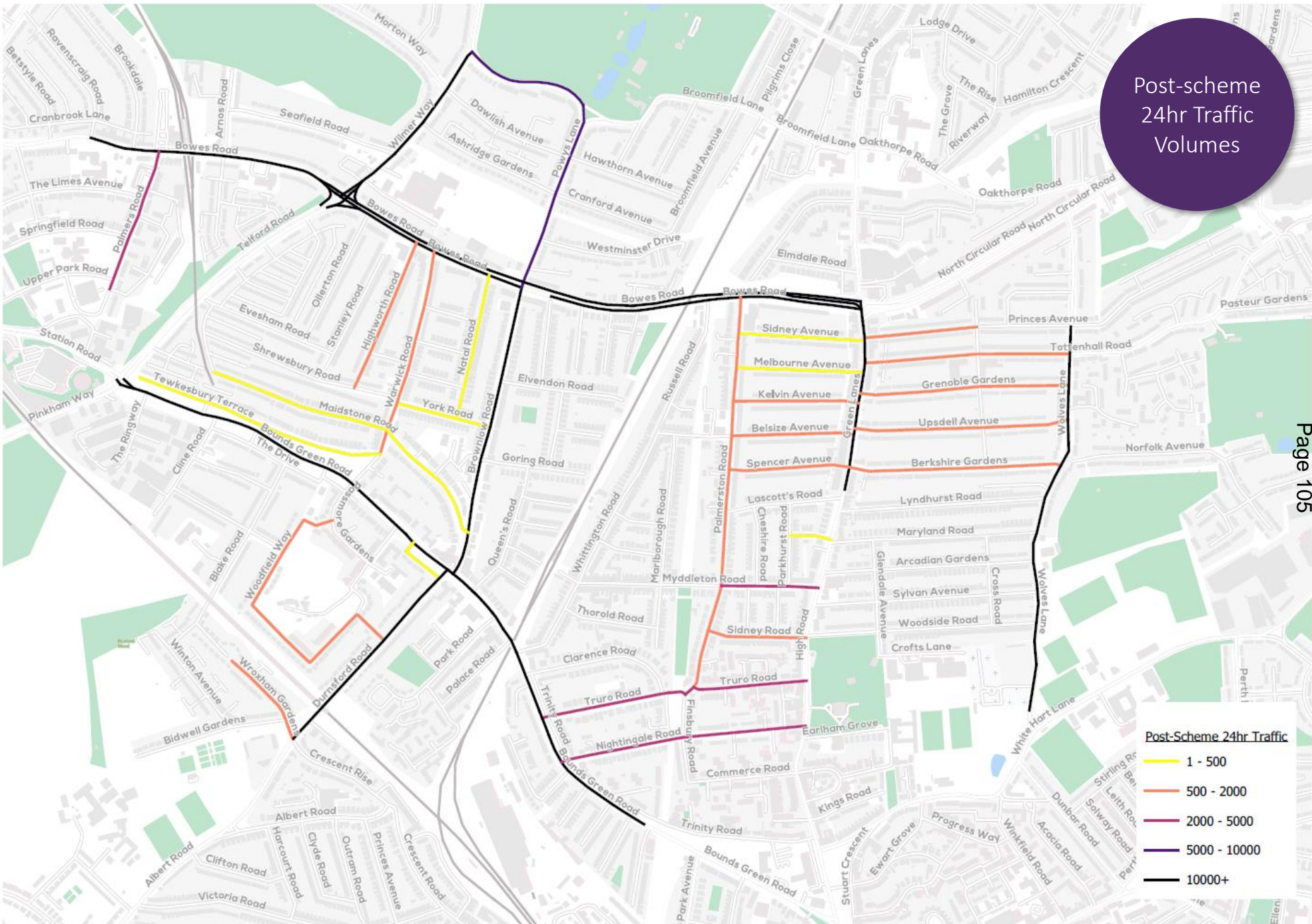
Pre-scheme
24hr Traffic
Volumes



Pre-Scheme 24hr Flows

- 1 - 500
- 500 - 2000
- 2000 - 5000
- 5000 - 10000
- 10000+

Post-scheme
24hr Traffic
Volumes



Post-Scheme 24hr Traffic

- 1 - 500
- 500 - 2000
- 2000 - 5000
- 5000 - 10000
- 10000+

Difference in 24hr Traffic Volumes



Difference 24hr Traffic
 — Traffic Decreases
 — Traffic Increases

Local Road Total Traffic Volumes – 24hrs

Area	Ref	ATC Location	Pre-scheme 24hr vehicle flows (veh)	Post-scheme 24hr vehicle flows (veh)	Difference	% Difference
QN Local Roads	1	Highworth Road	520	613	93	18%
	2	Warwick Road	2750	1863	-887	-32%
	3	Natal Road	438	477	39	9%
	4	York Road	1925	141	-1784	-93%
	5	Maidstone Road	1111	174	-937	-84%
	6	Palmerston Road	3075	1186	-1889	-61%
	7	Truro Road	3184	3695	511	16%
	8	Sidney Road	709	682	-27	-4%
	9	Myddleton Road	2081	2227	146	7%
	10	Belsize Avenue	1266	1058	-208	-16%
	11	Lascotts Road	1004	912	-92	-9%
	12	Melbourne Avenue	565	493	-72	-13%
	13	Spencer Avenue	635	1324	689	109%
	14	Sidney Avenue	516	439	-77	-15%
	15	Kelvin Avenue	1629	1177	-452	-28%
	16	Nightingale Road	2612	3351	739	28%
	17	Marquis Road	448	431	-17	-4%
	18	Tewkesbury Terrace	389	285	-104	-27%
External Local Roads	19	Palmers Road	2603	3669	1066	41%
	20	Rhys Avenue	51	174	123	241%
	21	Woodfield Way	1208	1848	640	53%
	22	Wroxham Gardens	1523	1165	-358	-24%

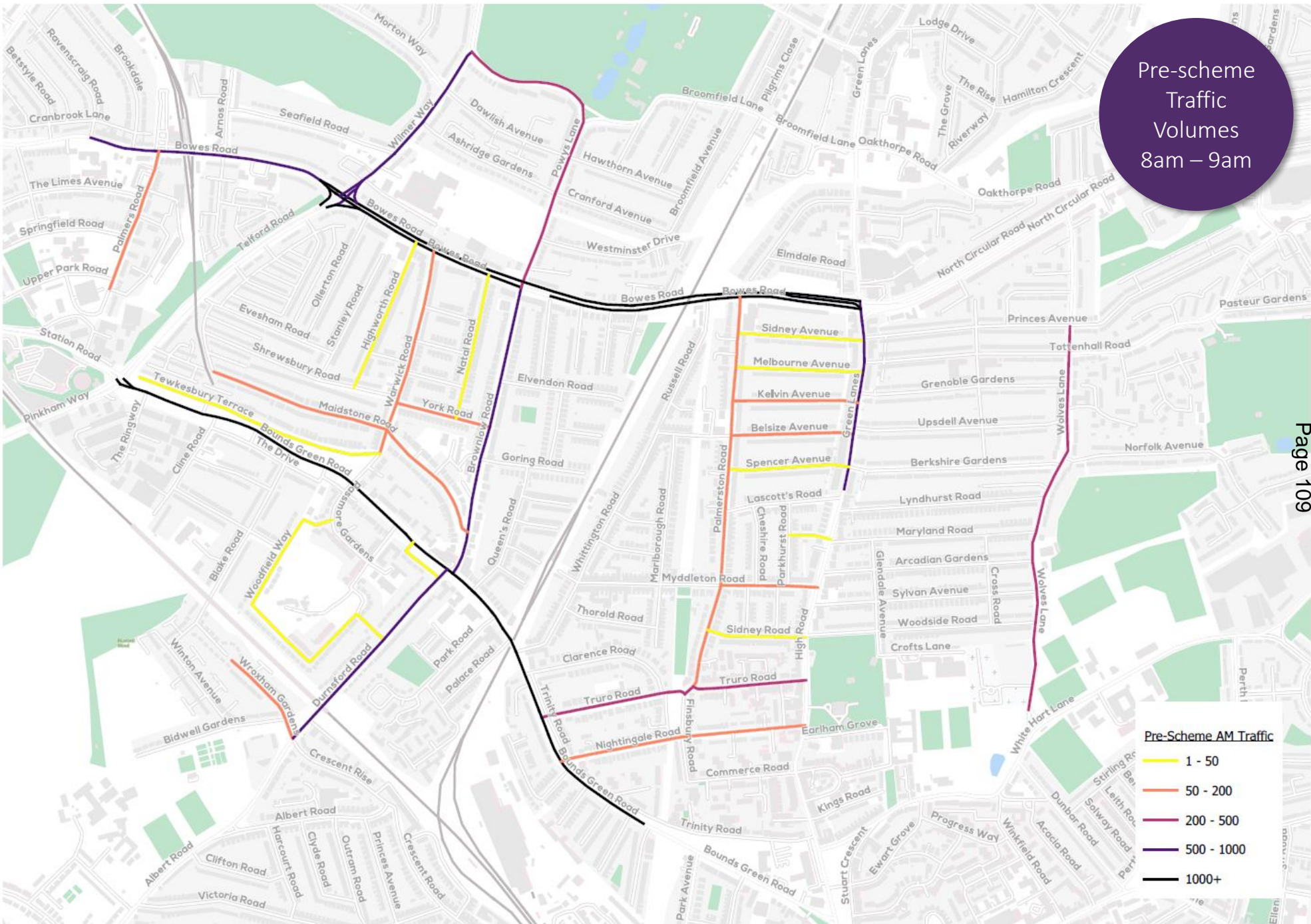
- Overall there has been a reduction in traffic on the surveyed local roads within the Quieter Neighbourhood with an average reduction of 17%.
- Some roads have seen an increase, such as Spencer Avenue, Myddleton Road, Nightingale Road and Truro Road - Mitigation to reduce traffic on these roads is proposed as part of Haringey Council's Bounds Green Low Traffic Neighbourhood.
- 3 of the 4 sites surveyed outside the Quieter Neighbourhood have seen an increase in traffic on local roads.
- Of these, mitigation as part of Haringey Council's Bounds Green Low Traffic Neighbourhood is included for Rhys Avenue and Woodfield Way, with Enfield Council investigating mitigation measures for Palmers Road.

Strategic/Distributor Road Total Traffic Volumes – 24hrs

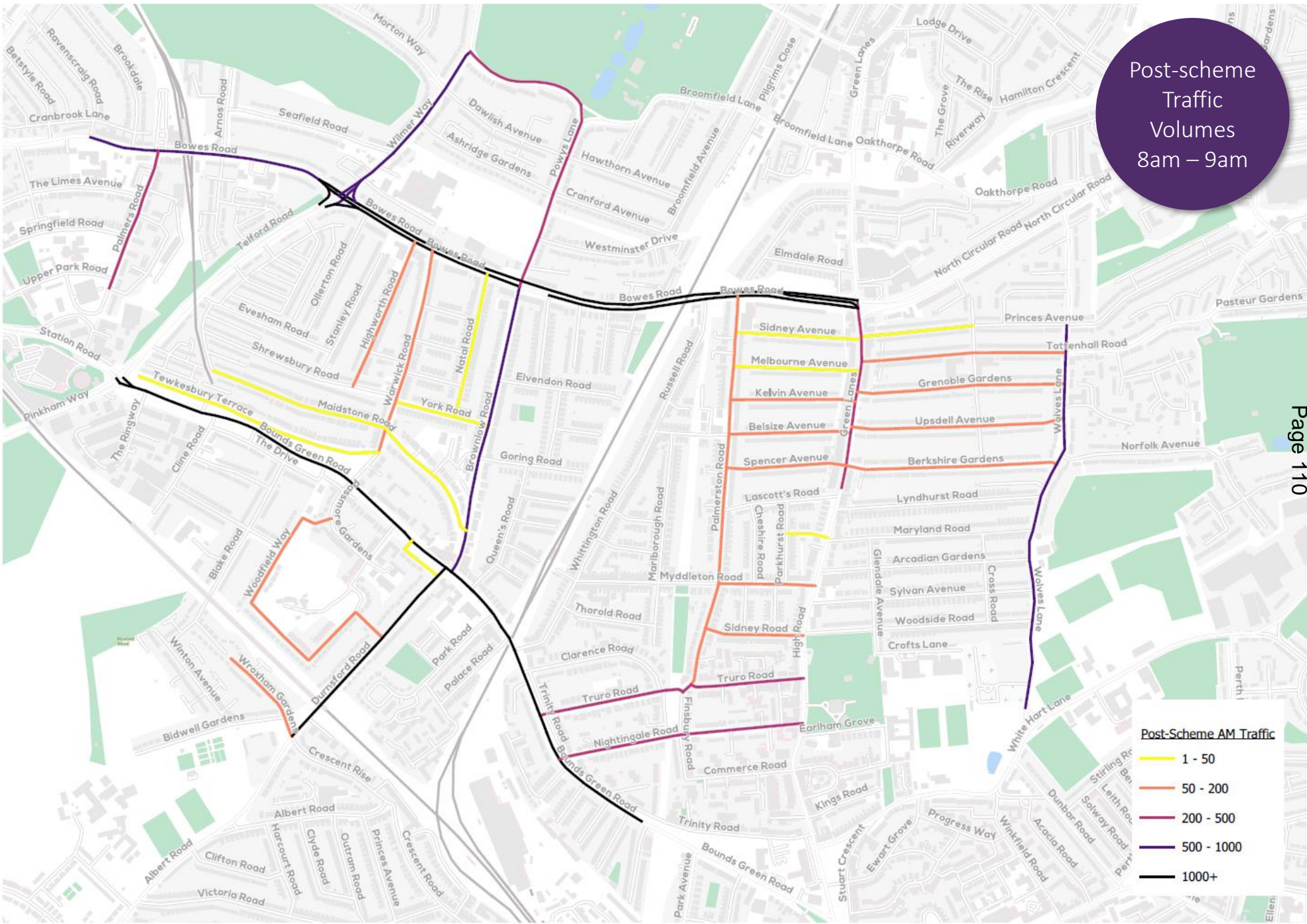
Area	Ref	ATC Location	Pre-scheme 24hr vehicle flows (veh)	Post-scheme 24hr vehicle flows (veh)	Difference	% Difference
QN	28	Brownlow Road	13319	13601	282	2%
Boundary to the QN	29	A406 Bowes Road	72117	73123	1006	1%
	30	Bounds Green Road	21703	19253	-2450	-11%
	31	Green Lanes	16084	10114	-5970	-37%
Wider network	32	A1110 Bowes Road	12788	14073	1285	10%
	33	Durnsford Road	12566	13415	849	7%
	34	Wolves Lane	9198	11213	2015	22%
	35	Wilmer Way	12979	11237	-1742	-13%
	36	Powys Lane	8159	7796	-363	-4%
	37	Station Road	14424	13697	-727	-5%

- Brownlow Road, which runs north/south through the Quieter Neighbourhood, has seen an increase of 2% over a 24 hour period.
- Based on the 3 sites surveyed, the strategic/distributor roads on the boundary of the Quieter Neighbourhood have seen an average decrease in traffic of 7%.
- Based on the 6 sites surveyed, the strategic roads on the wider network have seen an average increase in traffic of 2%.

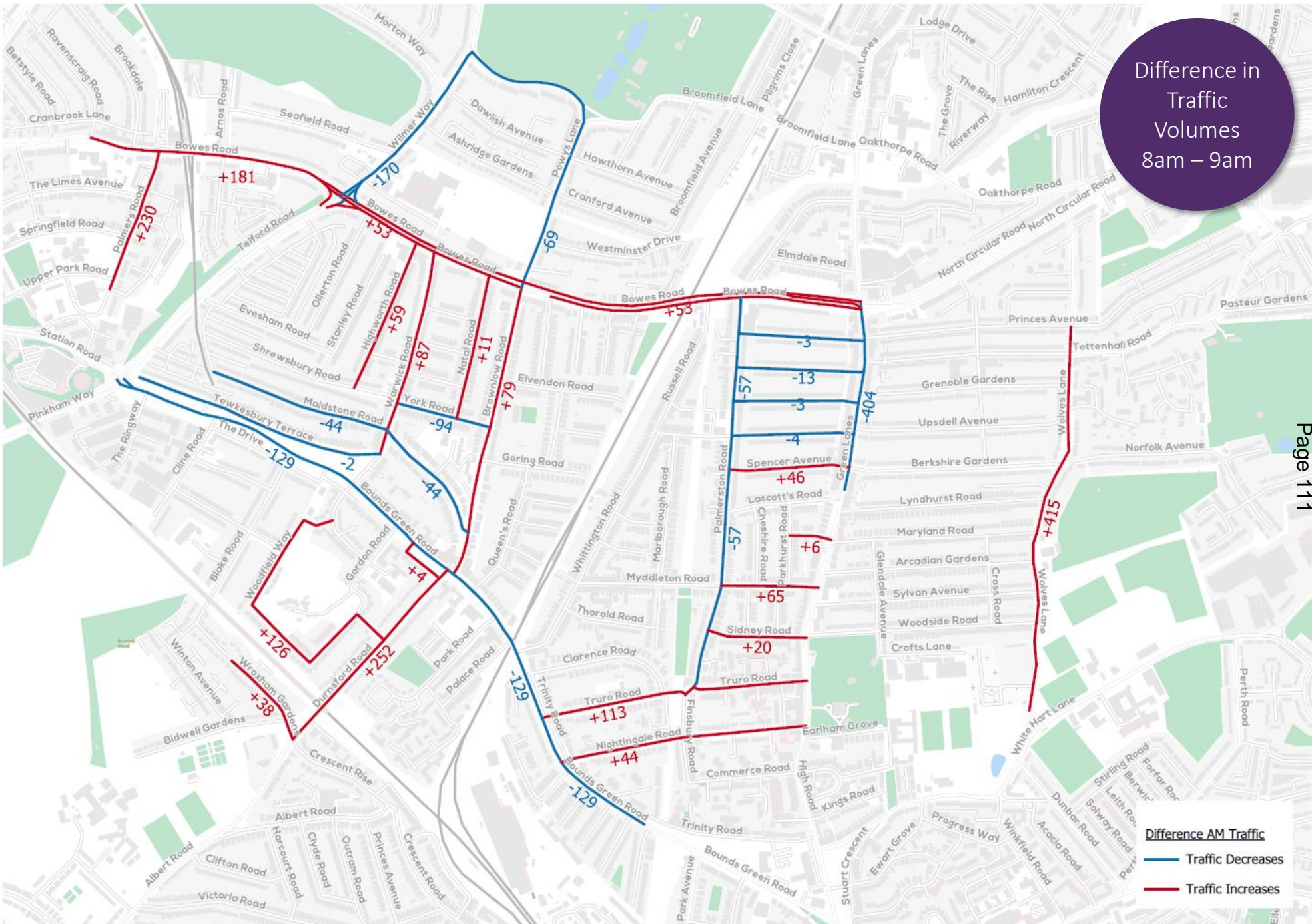
Pre-scheme
Traffic
Volumes
8am – 9am



Post-scheme
Traffic
Volumes
8am – 9am



Difference in Traffic Volumes 8am – 9am



Difference AM Traffic
 — Traffic Decreases
 — Traffic Increases

Local Road Total Traffic Volumes – AM Peak

Area	Ref	ATC Location	Pre-scheme AM vehicle flows (veh)	Post-scheme AM vehicle flows (veh)	Difference	% Difference
QN Local Roads	1	Highworth Road	11	70	59	483%
	2	Warwick Road	66	153	87	132%
	3	Natal Road	16	27	11	69%
	4	York Road	99	5	-94	-95%
	5	Maidstone Road	54	9	-45	-83%
	6	Palmerston Road	124	68	-56	-45%
	7	Truro Road	247	360	113	46%
	8	Sidney Road	34	54	20	59%
	9	Myddleton Road	101	166	65	64%
	10	Belsize Avenue	69	65	-4	-6%
	11	Lascotts Road	47	43	-4	-9%
	12	Melbourne Avenue	36	23	-13	-36%
	13	Spencer Avenue	30	76	46	153%
	14	Sidney Avenue	26	23	-3	-12%
	15	Kelvin Avenue	66	63	-3	-5%
	16	Nightingale Road	168	212	44	26%
	17	Marquis Road	17	22	5	29%
	18	Tewkesbury Terrace	19	17	-2	-11%
External Local Roads	19	Palmers Road	130	361	231	178%
	20	Rhys Avenue	3	7	4	133%
	21	Woodfield Way	41	167	126	307%
	22	Wroxham Gardens	68	107	39	57%

- In the AM peak hour, on the local roads within the Quieter Neighbourhood there is an average increase of 18% on the surveyed sites. This is primarily due to increases on the roads in the south-east of Quieter Neighbourhood, such as Truro Road, Myddleton Road, Spencer Avenue and Nightingale Road, with traffic cutting through the area between Green Lanes and Bounds Green Road. The increases on these roads would be mitigated by Haringey's proposed Bounds Green Liveable Neighbourhood, which is likely to reduce traffic flows on these roads to below pre-scheme levels.
- Where increases are seen west of Brownlow Road, this appears to be the result of local traffic changing how they access the area, following the implementation of the scheme, with some roads seeing increases and others decreases.
- On the external local roads all the sites have seen an increase. These roads are also likely to see a reduction in traffic, if the Bounds Green Liveable Neighbourhood is implemented. Enfield Council will also investigate potential mitigation for Palmers Road.

Strategic/Distributor Road Total Traffic Volumes – AM peak

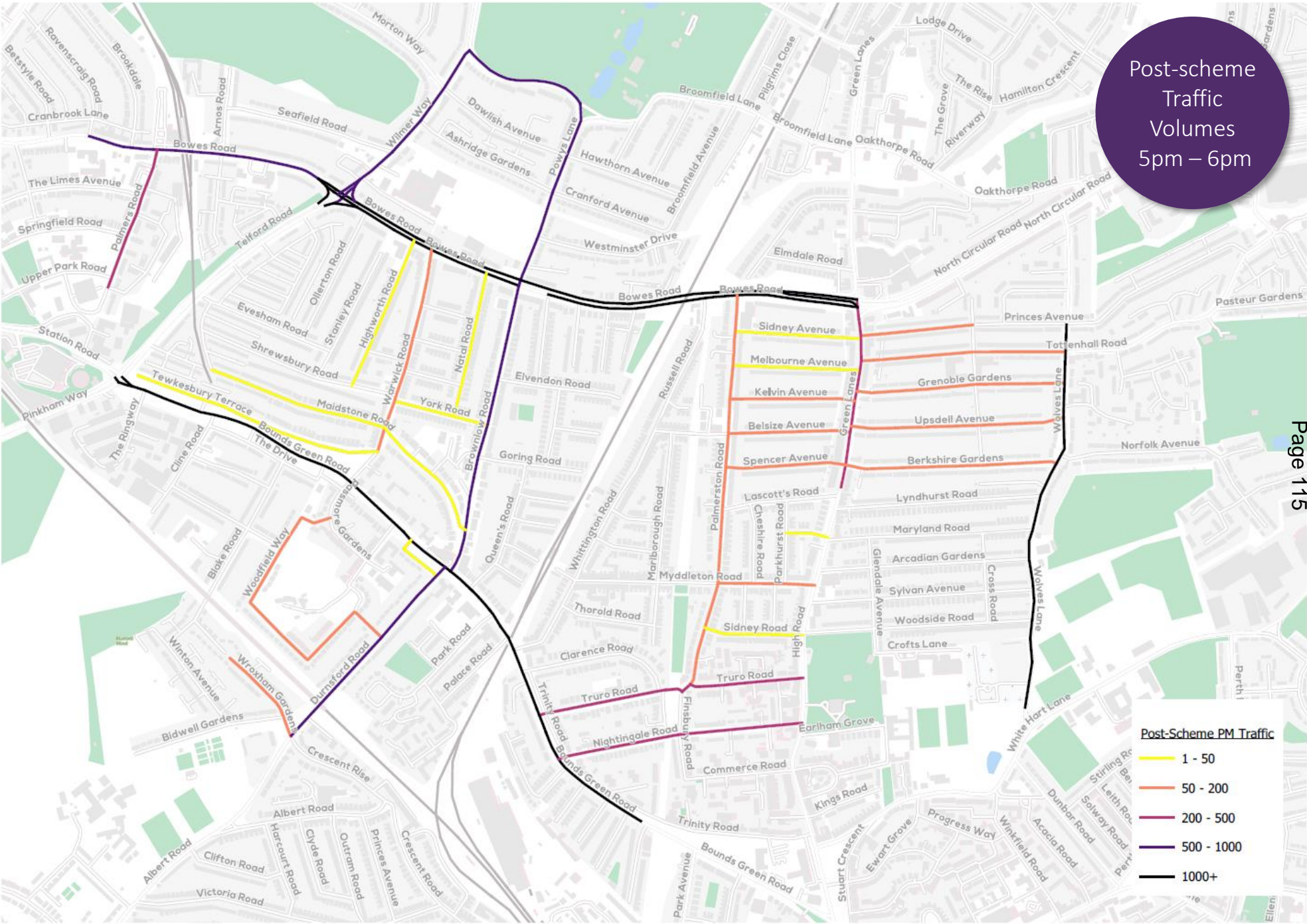
Area	Ref	ATC Location	Pre-scheme AM vehicle flows (veh)	Post-scheme AM vehicle flows (veh)	Difference	% Difference
QN	28	Brownlow Road	811	891	80	10%
Boundary to the QN	29	A406 Bowes Road	3443	3496	53	2%
	30	Bounds Green Road	1317	1188	-129	-10%
	31	Green Lanes	885	481	-404	-46%
Wider network	32	A1110 Bowes Road	639	819	180	28%
	33	Durnsford Road	810	1062	252	31%
	34	Wolves Lane	409	824	415	101%
	35	Wilmer Way	792	622	-170	-21%
	36	Powys Lane	490	421	-69	-14%
	37	Station Road	971	880	-91	-9%

- Traffic on Brownlow Road increases by 10% during the AM peak.
- Based on the 3 sites surveyed the strategic/distributor roads on the boundary of the Quieter Neighbourhood have seen an average decrease in traffic of 9%.
- Based on the 6 sites surveyed the strategic/distributor roads on the wider network have seen an average increase in traffic of 13%.

Pre-scheme
Traffic
Volumes
5pm – 6pm



Post-scheme
Traffic
Volumes
5pm – 6pm



Local Road Total Traffic Volumes – PM Peak

Area	Ref	ATC Location	Pre-scheme PM vehicle flows (veh)	Post-scheme PM vehicle flows (veh)	Difference	% Difference
QN Local Roads	1	Highworth Road	51	39	-12	-24%
	2	Warwick Road	262	127	-135	-52%
	3	Natal Road	36	37	1	3%
	4	York Road	138	10	-128	-93%
	5	Maidstone Road	96	11	-85	-89%
	6	Palmerston Road	295	118	-177	-60%
	7	Truro Road	240	270	30	13%
	8	Sidney Road	55	40	-15	-27%
	9	Myddleton Road	156	133	-23	-15%
	10	Belsize Avenue	88	69	-19	-22%
	11	Lascotts Road	84	63	-21	-25%
	12	Melbourne Avenue	34	26	-8	-24%
	13	Spencer Avenue	50	96	46	92%
	14	Sidney Avenue	29	28	-1	-3%
	15	Kelvin Avenue	119	98	-21	-18%
	16	Nightingale Road	197	243	46	23%
	17	Marquis Road	31	39	8	26%
	18	Tewkesbury Terrace	36	30	-6	-17%
External Local Roads	19	Palmers Road	220	289	69	31%
	20	Rhys Avenue	5	14	9	180%
	21	Woodfield Way	135	129	-6	-4%
	22	Wroxham Gardens	203	116	-87	-43%

- The PM shows a reduction in traffic on local roads within the Quieter Neighbourhood , with an average of 26%, based on the surveyed sites.
- On the external local roads, traffic flows remain higher than the pre-scheme surveys at 2 of the 4 sites, with mitigation proposed to improve this.

Strategic/Distributor Road Total Traffic Volumes – PM peak

Area	Ref	ATC Location	Pre-scheme PM vehicle flows (veh)	Post-scheme PM vehicle flows (veh)	Difference	% Difference
QN	28	Brownlow Road	883	851	-32	-4%
Boundary to the QN	29	A406 Bowes Road	3881	3865	-16	0%
	30	Bounds Green Road	1404	1173	-231	-16%
	31	Green Lanes	861	457	-404	-47%
Wider network	32	A1110 Bowes Road	806	901	95	12%
	33	Durnsford Road	843	776	-67	-8%
	34	Wolves Lane	873	1063	190	22%
	35	Wilmer Way	881	755	-126	-14%
	36	Powys Lane	623	508	-115	-18%
	37	Station Road	1052	957	-95	-9%

- Traffic on Brownlow Road decreased by 4% during the PM peak.
- The strategic/distributor roads on the boundary the Quieter Neighbourhood have seen a reduction in traffic of 11% on average.
- There is also an average reduction of traffic on the strategic/ distributor roads on the wider network of 2%.

Traffic Flow Analysis- Conclusions

- Analysis of the traffic data has shown that overall there has been a reduction in traffic on the local roads within the Quieter Neighbourhood.
- Some of the internal roads have seen increases including Highworth Road, Warwick Road (AM only), Natal Road, Truro Road, Sidney Road (AM only), Myddleton Road, Spencer Avenue, Nightingale Road and Marquis Road.
- The increases on roads such as Highworth Road, Natal Road, Sidney Road, Spencer Avenue, Nightingale Road and Marquis Road are, on average, less than an additional vehicle per minute and are not likely to be noticeable, or have a significant impact.
- Increases in traffic volumes experienced on Highworth Road, Warwick Road, Natal Road, Truro Road, Sidney Road, Myddleton Road, Spencer Avenue, Nightingale Road and Marquis Road would be mitigated through the implementation of the London Borough of Haringey's Bounds Green Low Traffic Neighbourhood scheme.

Traffic Flow Analysis- Conclusions

- Analysis of the traffic data on local roads external to the Quieter Neighbourhood show increases on Palmers Road, Rhys Avenue, Woodfield Way and Wroxham Gardens (AM only).
- Increases reported on Wroxham Gardens, Rhys Avenue and Woodfield Way will be mitigated through the implementation the London Borough of Haringey Bounds Green Low Traffic Neighbourhood scheme.
- Enfield Council plan to undertake a study to look at Palmers Road to understand what mitigation may be required.
- Increases reported on the strategic/borough distributor roads are a result of the through traffic that was previously on the local roads reassigning onto the roads designed to accommodate higher volumes of traffic. A concern surrounding the increases in traffic on these roads is the impact any congestion may have on bus journey times.
- The impact on bus journey times is explored in more detail later in the report. This analysis is also a good indication of the impact on general traffic journey times. This analysis indicates that overall there is not a significant impact on bus journey times on the strategic/local distributor roads as a result of the Bowes Quieter Neighbourhood.

Traffic Speed Analysis



Traffic Speeds

- The ATCs have also been used to measure changes in vehicle speeds before and after the Quieter Neighbourhood scheme was implemented.
- Vehicle speeds have been assessed for the same locations as the traffic volumes.
- Speeds have been captured in miles per hour and have been provided as an average over a 24hr period.
- The average speeds have also been compared for each road for both the AM peak (8-9am) and PM peak (5-6pm) periods.

Average Vehicle Speeds – Local Roads within the QN

Ref	Location	Direction	24hr			AM Peak (8-9am)			PM Peak (5-6pm)		
			Pre-scheme Vehicle Speed (mph)	Post-scheme Vehicle Speed (mph)	Difference (mph)	Pre-scheme Vehicle Speed (mph)	Post-scheme Vehicle Speed (mph)	Difference (mph)	Pre-scheme Vehicle Speed (mph)	Post-scheme Vehicle Speed (mph)	Difference (mph)
1	Highworth Road	NB	20	16	-4	20	15	-5	21	16	-5
		SB	25	21	-4	17	19	2	17	18	1
2	Warwick Road	NB	20	19	-1	21	18	-3	20	18	-2
		SB	25	23	-2	21	18	-3	20	19	-1
3	Natal Road	NB	19	17	-2	18	16	-2	18	17	-1
		SB	25	23	-2	19	15	-4	17	16	-1
4	York Road	EB	18	15	-3	19	13	-6	18	14	-4
		WB	22	21	-1	18	13	-5	17	15	-2
5	Maidstone Road	EB	21	15	-6	20	12	-8	22	16	-6
		WB	26	22	-4	22	14	-8	22	17	-5
6	Palmerston Road	NB	15	14	-1	14	14	0	15	15	0
		SB	20	19	-1	15	15	0	15	15	0
7	Truro Road	EB	17	17	0	17	17	0	17	17	0
		WB	21	20	-1	19	18	-1	18	18	0
8	Sidney Road	EB	13	17	4	13	18	5	13	15	2
		WB	16	22	6	14	18	4	14	16	2
9	Myddleton Road	EB	13	18	5	13	18	5	13	16	3
		WB	16	22	6	13	17	4	13	16	3
10	Belsize Avenue	WB	19	13	-6	20	11	-9	20	13	-7

Average Vehicle Speeds – Local Roads within the QN

Ref	Location	Direction	24hr			AM Peak (8-9am)			PM Peak (5-6pm)		
			Pre-scheme Vehicle Speed (mph)	Post-scheme Vehicle Speed (mph)	Difference (mph)	Pre-scheme Vehicle Speed (mph)	Post-scheme Vehicle Speed (mph)	Difference (mph)	Pre-scheme Vehicle Speed (mph)	Post-scheme Vehicle Speed (mph)	Difference (mph)
11	Lascotts Road	EB	15	12	-3	15	13	-2	16	11	-5
		WB	19	15	-4	17	13	-4	17	12	-5
12	Melbourne Avenue	WB	16	14	-2	22	19	-3	20	20	0
13	Spencer Avenue	EB	20	22	2	20	22	2	20	21	1
14	Sidney Avenue	WB	17	16	-1	19	20	1	17	19	2
15	Kelvin Avenue	EB	21	21	0	21	21	0	21	21	0
16	Nightingale Road	EB	17	17	0	18	17	-1	17	18	1
		WB	21	21	0	17	17	0	17	17	0
17	Marquis Road	EB	16	16	0	14	15	1	16	14	-2
		WB	20	19	-1	16	16	0	16	16	0
18	Tewkesbury Terrace	EB	17	16	-1	15	15	0	17	18	1
		WB	23	21	-2	15	17	2	14	18	4

- Across the 18 surveyed local roads within the Quieter Neighbourhood, vehicle speeds have reduced by an average of 1 mph.

Average Vehicle Speeds – Local Roads Outside the QN

Ref	Location	Direction	24hr			AM Peak (8-9am)			PM Peak (5-6pm)		
			Pre-scheme Vehicle Speed (mph)	Post-scheme Vehicle Speed (mph)	Difference (mph)	Pre-scheme Vehicle Speed (mph)	Post-scheme Vehicle Speed (mph)	Difference (mph)	Pre-scheme Vehicle Speed (mph)	Post-scheme Vehicle Speed (mph)	Difference (mph)
19	Palmers Road	NB	17	18	1	17	17	0	17	18	1
		SB	22	23	1	17	17	0	14	15	1
20	Rhys Avenue	EB	13	19	6	11	16	5	12	15	3
		WB	15	19	4	14	18	4	14	14	0
21	Woodfield Way	EB	13	12	-1	13	12	-1	13	12	-1
		WB	15	15	0	14	13	-1	14	11	-3
22	Wroxham Gardens	NB	14	13	-1	13	12	-1	14	13	0
		SB	16	16	0	14	13	-1	13	16	3

- Across the 4 local roads surveyed outside the Quieter Neighbourhood, vehicle speeds have increased by an average of 1 mph over the 24 hour period, with a similar increase in the AM and PM peak.

Average Vehicle Speeds – Boundary Roads

Ref	Location	Direction	24hr			AM Peak (8-9am)			PM Peak (5-6pm)		
			Pre-scheme Vehicle Speed (mph)	Post-scheme Vehicle Speed (mph)	Difference (mph)	Pre-scheme Vehicle Speed (mph)	Post-scheme Vehicle Speed (mph)	Difference (mph)	Pre-scheme Vehicle Speed (mph)	Post-scheme Vehicle Speed (mph)	Difference (mph)
28	Brownlow Road	NB	19	15	-4	21	16	-5	16	14	-2
		SB	24	15	-9	25	23	-2	23	23	0
30	Bounds Green Road	EB	23	20	-3	24	18	-6	22	18	-4
		WB	29	26	-3	24	24	0	23	23	0
31	Green Lanes	NB	20	19	-1	23	17	-6	16	13	-3
		SB	27	26	-1	21	18	-3	19	18	-1

- Across the 3 surveyed boundary roads, vehicle speeds have reduced by an average of 4 mph across the 24 hour period, with a similar reduction seen in the AM peak and a reduction of approximately 2 mph in the PM peak.

Average Vehicle Speeds – Strategic Roads

Ref	Location	Direction	24hr			AM Peak (8-9am)			PM Peak (5-6pm)		
			Pre-scheme Vehicle Speed (mph)	Post-scheme Vehicle Speed (mph)	Difference (mph)	Pre-scheme Vehicle Speed (mph)	Post-scheme Vehicle Speed (mph)	Difference (mph)	Pre-scheme Vehicle Speed (mph)	Post-scheme Vehicle Speed (mph)	Difference (mph)
32	Bowes Road	EB	28	21	-7	26	13	-13	26	15	-11
		WB	33	29	-4	28	24	-4	27	24	-3
33	Durnsford Road	NB	19	19	0	23	18	-5	14	13	-1
		SB	26	26	0	24	22	-2	23	22	-1
34	Wolves Lane	NB	18	16	-2	18	16	-2	17	14	-3
		SB	22	20	-2	20	17	-3	17	16	-1
35	Wilmer Way	EB	24	24	0	22	19	-3	23	24	1
		WB	22	30	8	18	18	0	22	23	1
36	Powys Lane	EB	23	22	-1	23	19	-4	21	22	1
		WB	20	26	6	16	16	0	19	20	1
37	Station Road	EB	25	23	-2	24	21	-3	25	23	-2
		WB	27	22	-5	26	21	-5	27	21	-6

- Across the 6 surveyed strategic roads on the wider network, average speeds have changed by less than 1mph over the 24 hour period, with reduction or 2-3mph in the AM and PM peaks.

Traffic Speeds – Conclusions

- Analysis of the traffic speeds shows that the proposed Quieter Neighbourhood has not had a significant impact of average vehicle speeds either within the Quieter Neighbourhood or the wider surrounding highway network.
- Speed analysis of the boundary roads suggests an average reduction of approximately 4mph. This reduction in speed is not considered significant.
- Bowes Road has seen an increase in vehicular traffic following the implementation of the Quieter Neighbourhood, which is likely to have contributed to lower vehicle speeds along the corridor. Changes in speeds on Bounds Green Road and Green Lanes may not be directly related to the Quieter Neighbourhood and could be due to other factors.

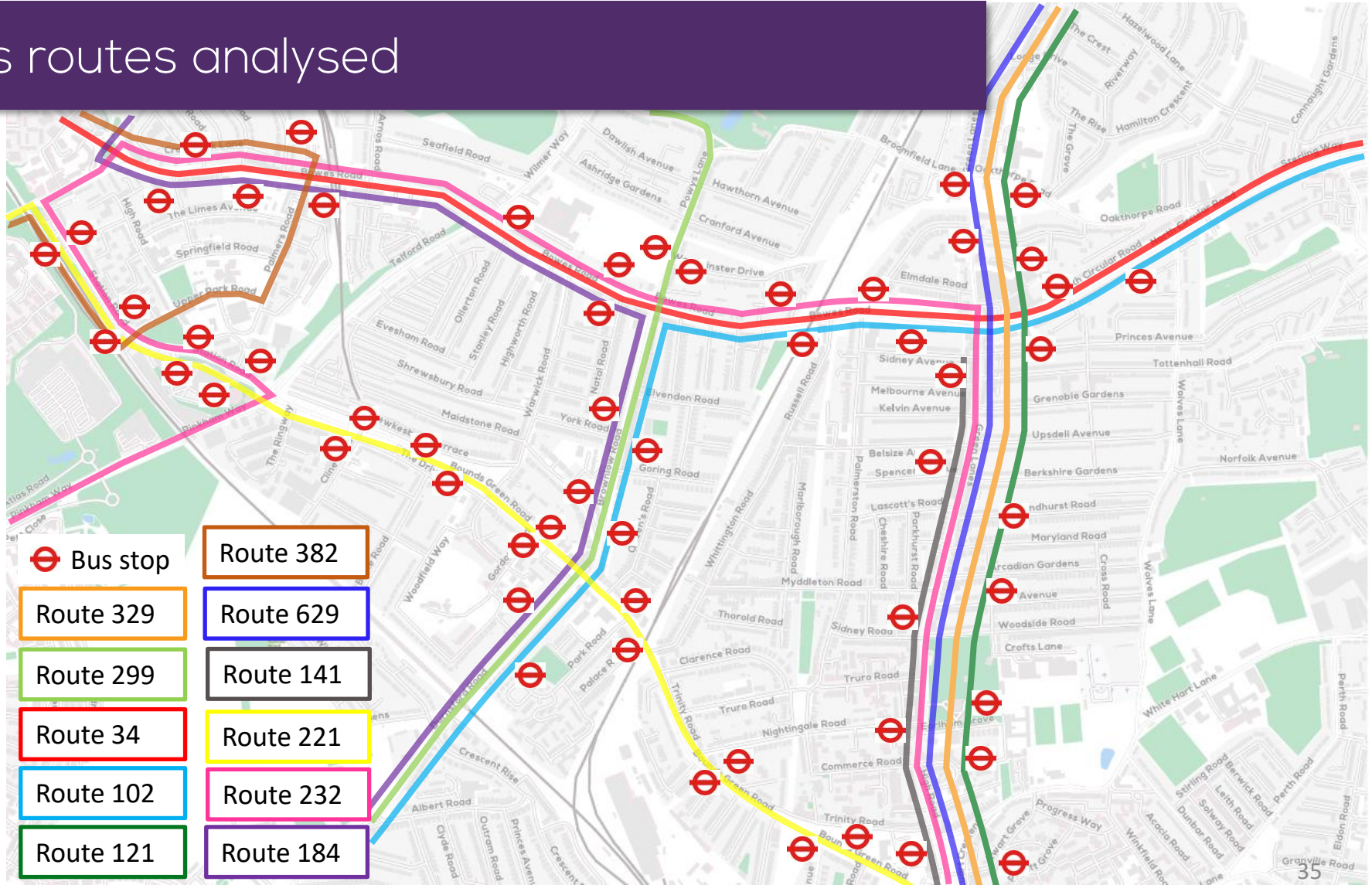
Bus Journey Time Analysis



Bus Journey Time Data

- TfL bus journey time data has been used to understand the impact the scheme has had on local bus routes through the area.
- TfL record the time it takes for bus services to travel between stops. The data is referred to as iBus data. TfL iBus data has been recorded from October 2019 to October 2021 for all the buses within the local area that could be influenced by the scheme.
- Reported pre scheme journey times are an average of the journey times for a bus route (in seconds) for the period from November 2019 to Feb 2020, before COVID travel restrictions were introduced.
- Post scheme journey times are an average of the journey times for a bus route (in seconds) following the relaxation of lockdown restrictions from September 2021 to October 2021.
- The following slide shows the routes that have been assessed as part of the monitoring.

Bus routes analysed



Bus Journey Time Data

- The bus journey time data has been assessed for the AM and PM peak periods, with the following slides showing the results.
- The data indicates that some bus journey times have increased and some have decreased. There are 3 routes (all during the AM Peak) that have seen increases of more the 60 seconds.
 - 184 Northbound
 - 221 Westbound
 - 232 Eastbound
- For these 3 routes, the route through the area has been broken down into sections (showing the journey times between bus stops) to determine the source of delay.

Bus Route Journey Time Results – AM peak

Bus Route	From	To	Pre-scheme Bus Journey Time (s)	Post-scheme Bus Journey Time (s)	Change in Bus Journey Time (s)
34 EB	Telford Rd GP	Green Lanes P	413	420	7
34 WB	Green Lanes V	Arnos Grove Swimming Pool	571	590	19
102 NB	Woodfield Way GD	Green Lanes P	603	628	25
102 SB	Green Lanes V	Woodfield Way GZ	731	718	-13
121 NB	Haringey Civic Centre BP	North Circular Road L	692	675	-17
121 SB	North Circular Road M	Haringey Civic Centre BY	623	617	-6
141 NB	Haringey Civic Centre BP	Tottenham Road T	474	447	-27
141 SB	Tottenham Road W	Haringey Civic Centre BY	485	467	-18
184 NB	Woodfield Way GD	Arnos Grove Swimming Pool	423	497	74
184 SB	Telford Rd GP	Woodfield Way GZ	415	413	-2
221 EB	Hobart Corner GG	Nightingale Road BD	434	452	18
221 WB	Nightingale Road BK	Hobart Corner GF	468	531	63
232 EB	Alexandra Road CW	Wood Green Station D	1507	1568	61
232 WB	Wood Green Station H	Alexandra Road CU	1448	1498	50
299 NB	Woodfield Way GD	Broomfield Lane N	367	399	32
299 SB	Broomfield Lane S	Woodfield Way GZ	547	533	-14
329 NB	Haringey Civic Centre BP	North Circular Road L	736	697	-39
329 SB	North Circular Road M	Haringey Civic Centre BY	644	613	-31
382 NB	New Southgate Station J	Betstyle Circus D	387	384	-3
382 SB	Betstyle Road S	New Southgate Station K	376	375	-1
W4 NB	Wood Green Bus Garage C	Beale Close E	436	424	-12
W4 SB	Pasteur Gardens	Wood Green Bus Garage D	667	654	-13

Bus Route Journey Time Results – PM peak

Bus Route	From	To	Pre-scheme Bus Journey Time (s)	Post-scheme Bus Journey Time (s)	Change in Bus Journey Time (s)
34 EB	Telford Rd GP	Green Lanes P	528	457	-71
34 WB	Green Lanes V	Arnos Grove Swimming Pool	573	510	-63
102 NB	Woodfield Way GD	Green Lanes P	927	889	-38
102 SB	Green Lanes V	Woodfield Way GZ	695	660	-35
121 NB	Haringey Civic Centre BP	North Circular Road L	927	823	-104
121 SB	North Circular Road M	Haringey Civic Centre BY	590	550	-40
141 NB	Haringey Civic Centre BP	Tottenham Road T	709	601	-108
141 SB	Tottenham Road W	Haringey Civic Centre BY	442	410	-32
184 NB	Woodfield Way GD	Arnos Grove Swimming Pool	630	577	-53
184 SB	Telford Rd GP	Woodfield Way GZ	459	418	-41
221 EB	Hobart Corner GG	Nightingale Road BD	446	452	6
221 WB	Nightingale Road BK	Hobart Corner GF	489	530	41
232 EB	Alexandra Road CW	Wood Green Station D	1734	1748	14
232 WB	Wood Green Station H	Alexandra Road CU	1608	1457	-151
299 NB	Woodfield Way GD	Broomfield Lane N	547	529	-18
299 SB	Broomfield Lane S	Woodfield Way GZ	467	458	-9
329 NB	Haringey Civic Centre BP	North Circular Road L	996	898	-98
329 SB	North Circular Road M	Haringey Civic Centre BY	626	590	-36
382 NB	New Southgate Station J	Betstyle Circus D	415	391	-24
382 SB	Betstyle Road S	New Southgate Station K	413	387	-26
W4 NB	Wood Green Bus Garage C	Beale Close E	617	530	-87
W4 SB	Pasteur Gardens	Wood Green Bus Garage D	650	590	-60

Bus Journey Time Analysis – 184 NB AM peak

Bus Route Section		Journey Time (s)		
From	To	Pre-scheme	Post-scheme	Difference
Woodfield Way	Bounds Green Station	106	133	27
Bounds Green Station	York Road	48	61	13
York Road	Bowes Road	56	70	14
Bowes Road	Warwick Road	96	101	5
Warwick Road	Arnos Grove Swimming Pool	117	132	15
Total		423	497	74

- The data for the 184 northbound route indicates that the delay for this route is spread across the study area, in the AM peak.

Bus Journey Time Analysis – 221 WB AM peak

Bus Route Section		Journey Time (s)		
From	To	Pre-scheme	Post-scheme	Difference
Nightingale Road	Palace Road	129	194	65
Palace Road	Bounds Green Station	118	121	3
Bounds Green Station	Warwick Road	44	39	-5
Warwick Road	Cline Road	84	75	-9
Cline Road	Hobart Corner	93	102	9
Total		468	531	63

- The data for the 221 westbound route indicates that the delay for this route is focussed on the section from Nightingale Road to Palace Road during the AM peak.

Bus Journey Time Analysis – 232 EB AM peak

Bus Route Section		Journey Time (s)		
From	To	Pre-scheme	Post-scheme	Difference
Alexandra Road	Bounds Green Road	91	115	24
Bounds Green Road	Hobart Corner	37	35	-2
Hobart Corner	Lower Park Road	30	29	-1
Lower Park Road	Whitmore Close	42	37	-5
Whitmore Close	New Southgate Station	41	32	-9
New Southgate Station	Betstyle Road	219	229	10
Betstyle Road	Arnos Grove Station	100	111	11
Arnos Grove Station	Telford Road	191	227	36
Telford Road	Brownlow Road	62	62	0
Brownlow Road	Pymmes Road	93	74	-19
Pymmes Road	Tottenham Road	146	175	29
Tottenham Road	Berkshire Gardens	76	66	-10
Berkshire Gardens	Arcadian Gardens	52	47	-5
Arcadian Gardens	Nightingale Road	86	81	-5
Nightingale Road	Canning Crescent	46	49	3
Canning Crescent	Haringey Civic Centre	52	55	3
Haringey Civic Centre	Wood Green Station	143	144	1
Total		1507	1568	61

- The data for the 232 eastbound route, in the AM peak, suggests the journey time differences fluctuate through the study.
- The key increases are from Alexandra Road to Bounds Green Road, Arnos Grove Station to Telford Road and Pymmes Road to Tottenham Road.

Bus Journey Time Analysis – Conclusions

- Overall, bus journey times have generally improved, with around 60% in the AM and 85% in the PM showing a reduction in bus journey times (i.e. routes are quicker compared to before the scheme was implemented and pre-COVID conditions). This is likely to be caused by reductions in traffic on some of the bus route corridors.
- All routes northbound on Brownlow Road have increased by some degree, with the worst affected being the 184 northbound in the AM peak.
- The increase for the 221 westbound in the AM peak is mainly a result of delays experienced between the Nightingale Road and Palace Road stops.
- The increase for the 232 eastbound in the AM peak correlates to the increase in traffic on Bowes Road, east of Telford Road, with the main source of delay between the New Southgate Station and Telford Road.

Pedestrian and Cycle Analysis



Pedestrian Assessment

- The volume of pedestrians has been compared before and after the scheme was implemented.
- Pedestrian flows have been observed from video surveys for a 12hr period for three key locations within the study area:
 - Warwick Road
 - Brownlow Road
 - Palmerston Road
- As with the traffic surveys, the surveys for pedestrian and cycle volumes could potentially be affected by the COVID pandemic, with people changing their travel patterns, for example many people started working from home during the pandemic and continue to do so.

Pedestrian Flows

Ref	Street	Pre-scheme 12hr Pedestrian flows	Post-scheme 12hr Pedestrian flows	Difference	% Diff
1	Warwick Road	1156	1458	302	26%
2	Brownlow Road	1287	1489	202	16%
3	Palmerston Road	701	638	-63	-9%

- Across the three surveyed sites, there is a reported increase in pedestrian activity at 2 of the 3 the sites, equating to an average 14% increase in pedestrian activity across the surveyed sites.

QN Local Road Cycle Counts - 24hr

Area	Ref	ATC Location	Pre-scheme 24hr cycle flows (veh)	Post-scheme 24hr cycle flows (veh)	Difference
QN Local Roads	1	Highworth Road	8	16	8
	2	Warwick Road	16	30	14
	3	Natal Road	11	21	11
	4	York Road	3	64	61
	5	Maidstone Road	1	83	81
	6	Palmerston Road	193	237	45
	7	Truro Road	41	21	-20
	8	Sidney Road	26	5	-21
	9	Myddleton Road	110	86	-24
	10	Belsize Avenue	19	32	13
	11	Lascotts Road	39	28	-12
	12	Melbourne Avenue	23	24	1
	13	Spencer Avenue	25	31	6
	14	Sidney Avenue	19	20	1
	15	Kelvin Avenue	33	26	-7
	16	Nightingale Road	47	44	-4
	17	Marquis Road	17	11	-6
	18	Tewkesbury Terrace	45	34	-11
External Local Roads	19	Palmers Road	8	65	57
	20	Rhys Avenue	10	3	-7
	21	Woodfield Way	36	44	7
	22	Wroxham Gardens	28	6	-22

- The results show an overall increase in cycle numbers of around 20% on the surveyed local roads within the Quieter Neighbourhood.
- The results for the local roads outside the Quieter Neighbourhood show a significant increase on Palmers Road, with small reductions on two of the sites and a larger reduction on Wroxham Road.

Strategic/Distributor Road Cycle Counts - 24hr

Area	Ref	ATC Location	Pre-scheme 24hr cycle flows (veh)	Post-scheme 24hr cycle flows (veh)	Difference
QN	28	Brownlow Road	203	173	-29
Boundary to the QN	29	A406 Bowes Road*	n/a	n/a	n/a
	30	Bounds Green Road	129	79	-51
	31	Green Lanes *	316	n/a	n/a
Wider network	32	A1110 Bowes Road	76	66	-11
	33	Durnsford Road	195	176	-19
	34	Wolves Lane	70	62	-8
	35	Wilmer Way	27	61	34
	36	Powys Lane	135	223	88
	37	Station Road	88	96	8

* data not available

- There has been a decrease in cycle numbers of around 15% on Brownlow Road that runs through the Quieter Neighbourhood.
- The only boundary road where before and after data is available is Bounds Green Road which has seen a reduction of around 40%. Reductions on boundary roads as well as Brownlow Road are likely indications that cyclists are choosing to reassign to the quieter roads within the Quieter Neighbourhood, which have seen increases, rather than stay on roads with higher volumes of traffic.
- The results for the wider network indicate an overall increase in cycle numbers of around 16% as a result of increases on with Wilmer Way and Powys Lane.

Appendix



Data Collection Dates

Street	Baseline data		Post implementation	
	From	To	From	To
Palmers Road	18/07/2020	24/07/2020	16/09/2021	28/09/2021
Bowes Road	18/07/2020	24/07/2020	16/09/2021	28/09/2021
Highworth Road	31/07/2020	06/08/2020	16/09/2021	28/09/2021
Warwick Road	17/07/2020	23/07/2020	16/09/2021	28/09/2021
Natal Road	20/07/2020	26/07/2020	16/09/2021	28/09/2021
Brownlow Road	18/07/2020	24/07/2020	16/09/2021	28/09/2021
York Road	23/07/2020	29/07/2020	16/09/2021	28/09/2021
Maidstone Road	18/07/2020	24/07/2020	16/09/2021	28/09/2021
Bounds Green Road	18/07/2020	24/07/2020	16/09/2021	28/09/2021
Rhys Ave	18/07/2020	24/07/2020	16/09/2021	28/09/2021
Durnsford Road	21/07/2020	27/07/2020	16/09/2021	28/09/2021
Woodfield Way	18/07/2020	24/07/2020	16/09/2021	28/09/2021
Palmerston Road	18/07/2020	24/07/2020	16/09/2021	28/09/2021
Green Lanes	18/07/2020	24/07/2020	16/09/2021	28/09/2021
Wolves Lane	18/07/2020	24/07/2020	16/09/2021	28/09/2021
Sidney Ave	18/07/2020	24/07/2020	16/09/2021	28/09/2021
Melbourne Ave	18/07/2020	24/07/2020	16/09/2021	28/09/2021
Kelvin Ave	19/07/2020	25/07/2020	16/09/2021	28/09/2021
Belsize Ave	23/07/2020	29/07/2020	16/09/2021	28/09/2021
Spencer Ave	18/07/2020	24/07/2020	16/09/2021	28/09/2021
Lascotts Road	18/07/2020	24/07/2020	16/09/2021	28/09/2021
Marquis Road	18/07/2020	24/07/2020	16/09/2021	28/09/2021
Myddleton Road	18/07/2020	24/07/2020	16/09/2021	28/09/2021
Sydney Road	18/07/2020	24/07/2020	16/09/2021	28/09/2021
Truro Road	18/07/2020	24/07/2020	16/09/2021	28/09/2021
Nightingale Road	18/07/2020	24/07/2020	16/09/2021	28/09/2021
Tewkesbury Tce	18/07/2020	24/07/2020	16/09/2021	28/09/2021
Wroxham Gardens	18/07/2020	24/07/2020	16/09/2021	28/09/2021
Station Road	21/03/2019	27/03/2019	16/09/2021	28/09/2021
Wilmer Way	04/06/2019	10/06/2019	16/09/2021	28/09/2021
Powys Lane	21/03/2019	27/03/2019	16/09/2021	28/09/2021
Grenoble Gardens	14/01/2016	20/01/2016	16/09/2021	28/09/2021
Princes Ave		N/A	16/09/2021	28/09/2021
Tottenham Road		N/A	16/09/2021	28/09/2021
Upsdell Ave		N/A	16/09/2021	28/09/2021
Berkshire Gardens	14/01/2016	20/01/2016	16/09/2021	28/09/2021

- The table provides the survey dates for all surveys analysed.

Appendix – Sites 23-27

- ATC sites 23-27 are separate from the main analysis as no 2020 (pre-scheme data) is available to conduct the same analysis as the other sites.
- For Grenoble Gardens and Berkshire Gardens historic survey data from January 2016 has been used to compare against the 2021 survey. The data presented shows a comparison of the surveyed flows for Grenoble Gardens and Berkshire Gardens, both of which show a slight reduction in flows.

Period	Site	Pre-scheme survey	Post-scheme survey	Difference	% Difference
24 hour	25. Grenoble Gardens	1906	1845	-61	-3%
	27. Berkshire Gardens	1838	1683	-155	-8%

- No historic data is available for Princes Avenue, Tottenham Road or Upsdell Avenue. However, the post scheme data for these locations has been provided for information and compared to other local roads within the study area, the traffic volumes on these roads appear consistent with other local residential roads.

Period	Site	Post-scheme survey
24hour	23. Princes Avenue	971
	24. Tottenham Road	1351
	26. Upsdell Avenue	1551

Appendix – Sites 23-27

- The 12-hour, AM Peak hour and PM peak hour flows for sites 23-27 are shown in the tables below.

Period	Site	Pre-scheme survey	Post-scheme survey	Difference	% Difference
12 hour	25. Grenoble Gardens	1520	1386	-134	-9%
	27. Berkshire Gardens	1434	1266	-168	-12%
AM Peak	25. Grenoble Gardens	190	136	-54	-28%
	27. Berkshire Gardens	185	144	-41	-22%
PM Peak	25. Grenoble Gardens	147	131	-16	-11%
	27. Berkshire Gardens	115	109	-6	-6%

Period	Site	Post-scheme survey
12 hour	23. Princes Avenue	628
	24. Tottenham Road	916
	26. Upsdell Avenue	1151
AM Peak	23. Princes Avenue	47
	24. Tottenham Road	86
	26. Upsdell Avenue	104
PM Peak	23. Princes Avenue	65
	24. Tottenham Road	77
	26. Upsdell Avenue	90

Appendix – Sensitivity Test

- The traffic flow data presented in the main section of the report reflects the surveyed vehicle volumes and does not consider the impact that COVID may have had on traffic flows in the area.
- To provide an estimate of the potential impact of the scheme, if the COVID pandemic had not happened, a sensitivity test has been undertaken, with a summary provided on the following slides.
- This sensitivity test applies a factor to the flows based on pre-COVID (2019) traffic conditions. It should be noted that travel patterns have changed as a result of COVID with, for example, more people working from home, and this is likely to continue to some extent going forward, so traffic conditions are likely to be different in the future. Therefore the assessment in the main body of the report, which is based on actual flows is considered robust, with the sensitivity test an indication of what could happen in the future.
- Enfield will continue to monitor traffic levels across the area to understand future travel patterns and associated impacts.

Appendix – Sensitivity Test – COVID Factors

- A factor has been calculated to apply to surveyed traffic flows due to COVID. This factor has been calculated using ‘Control sites’ away from the study area, which are unlikely to be impacted by the Quieter Neighbourhood scheme, but will show the impacts COVID has had on traffic flows. The three control sites are:
 - Windmill Hill
 - Southbury Road
 - Lancaster Road
- Week long surveys have been undertaken in March 2019, July 2020 and September 2021 at these locations, with the latter two dates being the same time periods as the traffic surveys for the Bowes Quieter Neighbourhood area and surrounding roads. By understanding the difference in traffic flows at these sites, compared to 2019 (Pre-COVID) a factor can be applied to the 2020 and 2021 data for the Bowes Quieter Neighbourhood area and surrounding roads.

Appendix – Sensitivity Test – COVID Factors

- Survey data used to inform this study has been collected from two different months of the year. The pre-scheme data was collected in July 2020 and the post-scheme data was collected in September 2021. Therefore an annualisation figure has also been applied to negate any seasonal variations in traffic flow.
- An ATC survey site on the A406-Pinkham Way continually records data, so the annualisation factor has been applied based on 2019 pre-COVID surveys at this site and a factor produced for the relevant months for the 2020 (July) and 2021 (September) surveys.
- As a result the factor applied to the July 2020 surveys is 5%, to take account of COVID and seasonal variations, and the equivalent value for the September 2021 surveys is 3%.
- The following slides provide a comparison between the factored pre-scheme and factored post-scheme traffic flows.
- The data is presented for the following time periods.
 - 24-hour weekday period
 - Weekday AM peak hour
 - Weekday PM peak hour

Local Road Factored Traffic Volumes – 24hrs

Area	Ref	ATC Location	Pre-scheme 24hr vehicle flows (veh)	Post-scheme 24hr vehicle flows (veh)	Difference	% Difference
QN Local Roads	1	Highworth Road	500 to 1000	500 to 1000	0 to 500	10% to 20%
	2	Warwick Road	2000 to 3000	1000 to 2000	-1000 to -500	-40% to -30%
	3	Natal Road	0 to 500	0 to 500	0 to 500	0% to 10%
	4	York Road	2000 to 3000	0 to 500	-2000 to -1000	-100% to -90%
	5	Maidstone Road	1000 to 2000	0 to 500	-1000 to -500	-90% to -80%
	6	Palmerston Road	3000 to 4000	1000 to 2000	-3000 to -2000	-70% to -60%
	7	Truro Road	3000 to 4000	3000 to 4000	0 to 500	10% to 20%
	8	Sidney Road	500 to 1000	500 to 1000	-500 to 0	-10% to 0%
	9	Myddleton Road	2000 to 3000	2000 to 3000	0 to 500	0% to 10%
	10	Belsize Avenue	1000 to 2000	1000 to 2000	-500 to 0	-20% to -10%
	11	Lascotts Road	1000 to 2000	500 to 1000	-500 to 0	-20% to -10%
	12	Melbourne Avenue	500 to 1000	500 to 1000	-500 to 0	-20% to -10%
	13	Spencer Avenue	500 to 1000	1000 to 2000	500 to 1000	100% +
	14	Sidney Avenue	500 to 1000	0 to 500	-500 to 0	-20% to -10%
	15	Kelvin Avenue	1000 to 2000	1000 to 2000	-500 to 0	-30% to -20%
	16	Nightingale Road	2000 to 3000	3000 to 4000	500 to 1000	20% to 30%
	17	Marquis Road	0 to 500	0 to 500	-500 to 0	-10% to 0%
	18	Tewkesbury Terrace	0 to 500	0 to 500	-500 to 0	-30% to -20%
External Local Roads	19	Palmers Road	2000 to 3000	3000 to 4000	1000 to 2000	30% to 40%
	20	Rhys Avenue	0 to 500	0 to 500	0 to 500	100% +
	21	Woodfield Way	1000 to 2000	1000 to 2000	500 to 1000	50% to 60%
	22	Wroxham Gardens	1000 to 2000	1000 to 2000	-500 to 0	-30% to -20%

- When the factors have been applied, overall there is a reduction in traffic on the local roads within the Quieter Neighbourhood of 15-20% on average.
- Some roads continue to see an increase, such as Spencer Avenue, Myddleton Road, Nightingale Road and Truro Road – As previously stated, mitigation to reduce traffic on these roads is proposed as part of the Bounds Green Low Traffic Neighbourhood.
- Highworth Road and Natal Road also see increases but these are low.
- 3 of the 4 sites surveyed on local roads outside the Quieter Neighbourhood see an increase in traffic. Of these, mitigation as part of Bounds Green Low Traffic Neighbourhood is included for Rhys Avenue and Woodfield Way, with Enfield Council investigating mitigation measures for Palmers Road.

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Strategic/Distributor Road Factored Traffic Volumes – 24hrs

Area	Ref	ATC Location	Pre-scheme 24hr vehicle flows (veh)	Post-scheme 24hr vehicle flows (veh)	Difference	% Difference
QN	28	Brownlow Road	13000 to 14000	14000 to 15000	0 to 500	0% to 10%
Boundary to the QN	29	A406 Bowes Road	75000 to 76000	75000 to 76000	-500 to 0	-10% to 0%
	30	Bounds Green Road	22000 to 23000	19000 to 20000	-2000 to -1000	-20% to -10%
	31	Green Lanes	16000 to 17000	10000 to 11000	-6000 to - 5000	-40% to -30%
Wider network	32	A1110 Bowes Road	13000 to 14000	14000 to 15000	1000 to 2000	0% to 10%
	33	Durnsford Road	13000 to 14000	13000 to 14000	0 to 500	0% to 10%
	34	Wolves Lane	9000 to 10000	11000 to 12000	1000 to 2000	10% to 20%
	35	Wilmer Way	13000 to 14000	11000 to 12000	-2000 to -1000	-20% to -10%
	36	Powys Lane	8000 to 9000	8000 to 9000	-500 to 0	-10% to 0%

- Brownlow Road, which runs north/south through the Quieter Neighbourhood, sees a negligible change, once the factors have been applied.
- Based on the 3 sites surveyed on the strategic/distributor roads on the boundary of the Quieter Neighbourhood the average decrease is 5-10%.
- Based on the 5 sites surveyed on strategic roads on the wider network, the average increase in traffic is 0-5%.

Local Road Factored Traffic Volumes – AM Peak

Area	Ref	ATC Location	Pre-scheme AM vehicle flows (veh)	Post-scheme AM vehicle flows (veh)	Difference	% Difference
QN Local Roads	1	Highworth Road	0 to 50	50 to 100	50 to 100	100% +
	2	Warwick Road	50 to 100	100 to 200	50 to 100	100% +
	3	Natal Road	0 to 50	0 to 50	0 to 50	60% to 70%
	4	York Road	100 to 200	0 to 50	-100 to -50	-100% to -90%
	5	Maidstone Road	50 to 100	0 to 50	-50 to 0	-90% to -80%
	6	Palmerston Road	100 to 200	50 to 100	-100 to -50	-50% to -40%
	7	Truro Road	200 to 300	300 to 400	100 to 200	40% to 50%
	8	Sidney Road	0 to 50	50 to 100	0 to 50	50% to 60%
	9	Myddleton Road	100 to 200	100 to 200	50 to 100	60% to 70%
	10	Belsize Avenue	50 to 100	50 to 100	-50 to 0	-10% to 0%
	11	Lascotts Road	0 to 50	0 to 50	-50 to 0	-20% to -10%
	12	Melbourne Avenue	0 to 50	0 to 50	-50 to 0	-40% to -30%
	13	Spencer Avenue	0 to 50	50 to 100	0 to 50	100% +
	14	Sidney Avenue	0 to 50	0 to 50	-50 to 0	-20% to -10%
	15	Kelvin Avenue	50 to 100	50 to 100	-50 to 0	-10% to 0%
	16	Nightingale Road	100 to 200	200 to 300	0 to 50	20% to 30%
	17	Marquis Road	0 to 50	0 to 50	0 to 50	30% to 40%
	18	Tewkesbury Terrace	0 to 50	0 to 50	-50 to 0	-20% to -10%
External Local Roads	19	Palmers Road	100 to 200	300 to 400	200 to 300	100% +
	20	Rhys Avenue	0 to 50	0 to 50	0 to 50	100% +
	21	Woodfield Way	0 to 50	100 to 200	100 to 200	100% +
	22	Wroxham Gardens	50 to 100	100 to 200	0 to 50	50% to 60%

- In the AM peak hour, on the local roads within the Quieter Neighbourhood there is an average increase of 10-20% on the surveyed sites. As with the main assessment, this is primarily due to increases on the roads to the west of Green Lanes, such as Truro Road, Myddleton Road, Spencer Avenue, Nightingale Road, Sidney Road and Marquis Road.
- Highworth Road and Warwick Road also see increased but predicted post scheme flows remain relatively low
- On the external local roads all the sites have seen an increase and to a greater degree than 24-hour surveys but these roads, along with those west of Green Lanes listed above, are likely to see a reduction in traffic to below pre-schemes levels, following the proposed Bounds Green Liveable Neighbourhood, with Enfield Council investigating mitigation measures for Palmers Road.

Strategic/Distributor Factored Total Traffic Volumes – AM peak

Area	Ref	ATC Location	Pre-scheme AM vehicle flows (veh)	Post-scheme AM vehicle flows (veh)	Difference	% Difference
QN	28	Brownlow Road	800 to 900	900 to 1000	50 to 100	0% to 10%
Boundary to the QN	29	A406 Bowes Road	3600 to 3700	3600 to 3700	-50 to 0	-10% to 0%
	30	Bounds Green Road	1300 to 1400	1200 to 1300	-200 to -100	-20% to -10%
	31	Green Lanes	900 to 1000	400 to 500	-500 to -400	-50% to -40%
Wider network	32	A1110 Bowes Road	600 to 700	800 to 900	100 to 200	20% to 30%
	33	Durnsford Road	800 to 900	1000 to 1100	200 to 300	20% to 30%
	34	Wolves Lane	400 to 500	800 to 900	400 to 500	90% to 100%
	35	Wilmer Way	800 to 900	600 to 700	-200 to -100	-30% to -20%
	36	Powys Lane	500 to 600	400 to 500	-100 to -50	-20% to -10%

- In the AM peak Brownlow Road increases by 5-10%, when the factors are applied.
- Based on the 3 sites surveyed on strategic/distributor roads on the boundary of the Quieter Neighbourhood the average decrease in traffic is approximately 10%.
- Based on the 5 sites surveyed on strategic/distributor roads on the wider network, the average increase in traffic is 15-20%.

Local Road Factored Traffic Volumes – PM Peak

Area	Ref	ATC Location	Pre-scheme PM vehicle flows (veh)	Post-scheme PM vehicle flows (veh)	Difference	% Difference
QN Local Roads	1	Highworth Road	50 to 100	0 to 50	-50 to 0	-30% to -20%
	2	Warwick Road	200 to 300	100 to 200	-200 to -100	-60% to -50%
	3	Natal Road	0 to 50	0 to 50	0 to 50	0% to 10%
	4	York Road	100 to 200	0 to 50	-200 to -100	-100% to -90%
	5	Maidstone Road	100 to 200	0 to 50	-100 to -50	-90% to -80%
	6	Palmerston Road	300 to 400	100 to 200	-200 to -100	-70% to -60%
	7	Truro Road	200 to 300	200 to 300	0 to 50	10% to 20%
	8	Sidney Road	50 to 100	0 to 50	-50 to 0	-30% to -20%
	9	Myddleton Road	100 to 200	100 to 200	-50 to 0	-20% to -10%
	10	Belsize Avenue	50 to 100	50 to 100	-50 to 0	-30% to -20%
	11	Lascotts Road	50 to 100	50 to 100	-50 to 0	-30% to -20%
	12	Melbourne Avenue	0 to 50	0 to 50	-50 to 0	-30% to -20%
	13	Spencer Avenue	50 to 100	50 to 100	0 to 50	90% to 100%
	14	Sidney Avenue	0 to 50	0 to 50	-50 to 0	-10% to 0%
	15	Kelvin Avenue	100 to 200	100 to 200	-50 to 0	-20% to -10%
	16	Nightingale Road	200 to 300	200 to 300	0 to 50	20% to 30%
	17	Marquis Road	0 to 50	0 to 50	0 to 50	20% to 30%
	18	Tewkesbury Terrace	0 to 50	0 to 50	-50 to 0	-20% to -10%
External Local Roads	19	Palmers Road	200 to 300	200 to 300	50 to 100	20% to 30%
	20	Rhys Avenue	0 to 50	0 to 50	0 to 50	100% +
	21	Woodfield Way	100 to 200	100 to 200	-50 to 0	-10% to 0%
	22	Wroxham Gardens	200 to 300	100 to 200	-100 to -50	-50% to -40%

- In the PM peak the average reduction in traffic on local roads within the Quieter Neighbourhood is approximately 25-30%, based on the surveyed sites.
- On the external local roads, traffic flows remain higher than the pre-scheme surveys on 3 of the 4 sites, with mitigation proposed to improve this.

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Strategic/Distributor Road Factored Traffic Volumes – PM peak

Area	Ref	ATC Location	Pre-scheme PM vehicle flows (veh)	Post-scheme PM vehicle flows (veh)	Difference	% Difference
QN	28	Brownlow Road	900 to 1000	800 to 900	-50 to 0	-10% to 0%
Boundary to the QN	29	A406 Bowes Road	4000 to 4100	3900 to 4000	-100 to -50	-10% to 0%
	30	Bounds Green Road	1400 to 1500	1200 to 1300	-300 to -200	-20% to -10%
	31	Green Lanes	900 to 1000	400 to 500	-500 to -400	-50% to -40%
Wider network	32	A1110 Bowes Road	800 to 900	900 to 1000	50 to 100	0% to 10%
	33	Durnsford Road	800 to 900	800 to 900	-100 to -50	-10% to 0%
	34	Wolves Lane	900 to 1000	1000 to 1100	100 to 200	10% to 20%
	35	Wilmer Way	900 to 1000	700 to 800	-200 to -100	-20% to -10%
	36	Powys Lane	600 to 700	500 to 600	-200 to -100	-20% to -10%

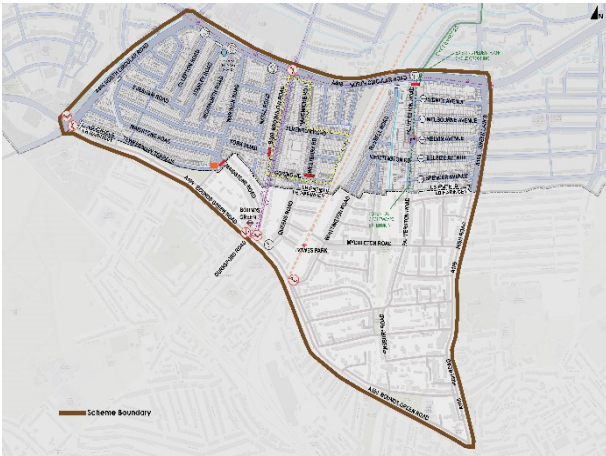
- In the PM Peak Brownlow Road has decreased by approximately 5% when the factored flows have been applied.
- The average reduction in traffic on the strategic/ distributor roads on the boundary of the Quieter Neighbourhood is 10-15%.
- The average decrease in traffic on the strategic/distributor roads on the wider network is predicted to be 0-5%.

Appendix – Sensitivity Test – Conclusions

- Analysis of the factored traffic data has shown that overall there has been a reduction in traffic on the local roads within the Quieter Neighbourhood.
- Some internal roads see increases including Highworth Road, Warwick Road (AM only), Natal Road, Truro Road, Sidney Road (AM only), Myddleton Road, Spencer Avenue, Nightingale Road and Marquis Road.
- The increases on roads such as Highworth Road, Natal Road, Sidney Road, Spencer Avenue, Nightingale Road and Marquis Road are, on average, less than an additional vehicle per minute and are not likely to be noticeable, or have a significant impact.
- Similar to the main assessment, mitigation as a result of the Bounds Green Low Traffic Neighbourhood scheme, will see local road traffic levels reduce to pre-COVID levels, where they have increased significantly under the sensitivity test, with Enfield Council investigating mitigation measures for Palmers Road.
- Increases reported on the strategic/borough distributor roads, are a result of the through traffic that was previously on the local roads reassigning onto the roads designed to accommodate higher volumes of traffic. This will continue to be monitored to establish whether traffic trends do start to increase which may cause congestion and/or journey times impacts on general traffic or buses.

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Crime within Bowes LTN and associated wards



Public mappable Police data from <https://data.police.uk/> for the 2 years from 1st September 2019 to 31st August 2021 was used to provide the following information - this was the most recent crime data available at the time of compiling this report.

Boundary lines were drawn around the data replicating the map of Bowes LTN as provided.

This LTN includes areas from Southgate Green and Bowes wards and so crime for these wards was also analysed for comparison.

The resulting crimes recorded by the Police within the LTN area is summarised below:

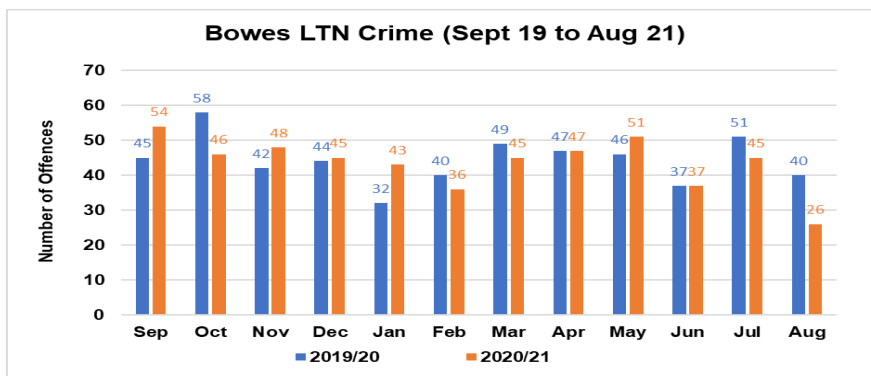
Bowes LTN Crime - Sept 2019 to Aug 2021					
Crime Category	2019/20	2020/21	Total	Diff	% Diff
Violence and sexual offences	177	180	357	3	2%
Vehicle crime	134	117	251	-17	-13%
Criminal damage and arson	39	48	87	9	23%
Burglary	36	48	84	12	33%
Public order	34	44	78	10	29%
Other theft	36	33	69	-3	-8%
Drugs	19	13	32	-6	-32%
Theft from the person	13	11	24	-2	-15%
Robbery	15	9	24	-6	-40%
Other crime	10	8	18	-2	-20%
Possession of weapons	11	3	14	-8	-73%
Bicycle theft	6	2	8	-4	-67%
Shoplifting	1	7	8	6	600%
Total	531	523	1054	-8	-2%

There was a **2% decline overall in offence numbers in the LTN**, however within that there were increases in some offences as indicated in red, particularly in Burglary, Public Order and Criminal Damage and Arson.

Violence and Sexual Offences is a very broad category and includes the sub categories of Assault with Injury, Common Assault, Harassment, Murder (Homicide), Offensive Weapon, Other Violence and Wounding/GBH and include domestic and non-domestic related assaults.

It should be noted however that offences without injury, such as harassment form the majority of offences reported in Enfield. Therefore, due to the low numbers of offences in some of these categories they are combined in this public data source to preserve confidentiality.

Below is the monthly distribution of the above crimes in the LTN over the review period:



In the last year the highest numbers of offences were recorded in September and May 2021.

For further context the crimes for both wards combined are shown in the table below. There was an overall 2% reduction in the LTN area when compared to the average 7% increase in the 2 wards:

Bowes & Southgate Green Sept 2019 to Aug 2021					
Crime Category	2019/20	2020/21	Total	Diff	% Diff
Violence and sexual offences	576	679	1255	103	18%
Vehicle crime	497	525	1022	28	6%
Burglary	181	199	380	18	10%
Criminal damage and arson	140	152	292	12	9%
Other theft	126	124	250	-2	-2%
Public order	111	131	242	20	18%
Drugs	78	67	145	-11	-14%
Robbery	73	69	142	-4	-5%
Theft from the person	42	27	69	-15	-36%
Other crime	27	29	56	2	7%
Possession of weapons	24	13	37	-11	-46%
Bicycle theft	17	13	30	-4	-24%
Shoplifting	16	14	30	-2	-13%
Total	1908	2042	3950	134	7%

Below are the charts showing the figures for the individual wards and the borough for further comparison:

Bowes					Southgate Green				
Crime Category	Sept 2019 to Aug 2021				Crime Category	Sept 2019 to Aug 2021			
	2019/20	2020/21	Total	% Diff		2019/20	2020/21	Total	% Diff
Violence and sexual offences	257	309	566	20%	Violence and sexual offences	319	370	689	16%
Vehicle crime	211	211	422	0%	Vehicle crime	286	314	600	10%
Burglary	73	84	157	15%	Burglary	108	115	223	6%
Criminal damage and arson	69	67	136	-3%	Other theft	78	79	157	1%
Public order	53	68	121	28%	Criminal damage and arson	71	85	156	20%
Other theft	48	45	93	-6%	Public order	58	63	121	9%
Drugs	34	39	73	15%	Robbery	51	45	96	-12%
Robbery	22	24	46	9%	Drugs	44	28	72	-36%
Theft from the person	25	15	40	-40%	Theft from the person	17	12	29	-29%
Other crime	15	15	30	0%	Other crime	12	14	26	17%
Possession of weapons	12	7	19	-42%	Shoplifting	16	9	25	-44%
Bicycle theft	9	3	12	-67%	Bicycle theft	8	10	18	25%
Shoplifting	0	5	5	N/A	Possession of weapons	12	6	18	-50%
Total	828	892	1720	8%	Total	1080	1150	2230	6%

73% of all crime analysed in Bowes and Southgate Green (both wards) over the 2-year review period were recorded as outside of the Bowes LTN area.

Enfield				
Crime Category	Sept 2019 to Aug 2021			
	2019/20	2020/21	Total	% Diff
Violence and sexual offences	8360	9173	17533	10%
Vehicle crime	5615	5729	11344	2%
Other theft	2426	2734	5160	13%
Burglary	2774	2133	4907	-23%
Criminal damage and arson	1803	1881	3684	4%
Public order	1657	1830	3487	10%
Drugs	1327	1115	2442	-16%
Robbery	1351	943	2294	-30%
Shoplifting	950	917	1867	-3%
Theft from the person	570	689	1259	21%
Other crime	372	382	754	3%
Bicycle theft	205	239	444	17%
Possession of weapons	212	166	378	-22%
Total	27622	27931	55553	1%

- **Location accuracy.** Inconsistent geocoding policies in police forces mean they cannot be confident that the location data provided is fully accurate or consistent. This is especially true of crimes where the exact location is not known, which could be because it happened somewhere not included in the force gazetteer system or because the victim is not sure where it happened. Differences in the quality of gazetteer systems is also a big factor. Estimates of geocoding accuracy in different forces range from 60% to 97% - <https://data.police.uk/>

Prepared by [REDACTED] - Community Safety Unit - 3rd November 2021

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Noise Assessment:
Bowes Primary Area
Quieter Neighbourhood,
Enfield

June 2021



Experts in noise and vibration
assessment and management

Document Control

Client	Enfield London Borough Council	Principal Contact	Christina Gordon
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Job Number	J1132
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Report Prepared By:	██████████ (Consultant)
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Document Status and Review Schedule

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J1132A/1/D1	4 June 2021	Final	██████████ (Managing Director)

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1 Introduction

- 1.1 This report describes the potential noise impacts associated with the Bowes Low Traffic Neighbourhood scheme in the London Borough of Enfield (LB Enfield), which is being implemented through the Quieter Neighbourhoods project. The assessment has been carried out by Noise Consultants Ltd (NCL) on behalf of Enfield London Borough Council (Enfield LBC). This noise assessment has been delivered in conjunction with an air quality assessment undertaken by NCL's sister company Air Quality Consultants Ltd.
- 1.2 The scheme was introduced in October 2020 and, in alignment with the Mayor's Transport Strategy 2018 (GLA, 2018), aims to reduce neighbourhood motor traffic within the recently delivered cycling and walking infrastructure in the area, where *"through motor vehicle traffic is discouraged or removed"*.
- 1.3 The assessment has been carried out using traffic data provided by Enfield LBC, consisting of traffic flows measured over two seven-day periods in July and November 2020 (pre- and post-scheme implementation). This has been used to calculate the changes in traffic attributable to the scheme, and to estimate associated impacts on local noise levels. The traffic data were processed into the appropriate format for noise modelling through adjustments to represent an annual mean. Uncertainties associated with this process, as well as with other parameters that would have influenced measured traffic data (i.e., school holidays, the COVID-19 pandemic), have, to some extent, been taken into account within the assessment and conclusions, as discussed further in this report.
- 1.4 The assessment takes the approach of a comparison of ambient road traffic noise levels with and without the scheme in place. The report describes the modelling and assessment of daytime and night-time noise exposure levels for each scenario in terms of $L_{day,12hr}$, $L_{eve,4hr}$, $L_{night,8hr}$, and $L_{Aeq,16hr}$. These indicators allow consideration of perceptible changes in road traffic noise as a result of the scheme.
- 1.5 The predicted noise levels with and without the scheme in place, and associated impacts, are also described in **Appendix A2.15**.
- 1.6 This report has been prepared taking into account all relevant local and national guidance and regulations.

2 Relevant Policy and Guidance

National Noise Policy

Noise Policy Statement for England (NPSE, 2010)

- 2.1 The Noise Policy Statement for England (NPSE, 2010) sets out the Government's Noise Policy Vision to:

"Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development".

- 2.2 This long-term vision is supported by three Noise Policy Aims that can be delivered through effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development. These aims are to:

1. *avoid significant adverse impacts on health and quality of life;*
2. *mitigate and minimise adverse impacts on health and quality of life; and*
3. *where possible, contribute to the improvement of health and quality of life.*

- 2.3 The explanatory note to the NPSE sets out 'effect levels' which are aligned to the Policy Aims. Drawing upon established concepts from toxicology, the NPSE defines the following noise effect levels:

- NOEL - 'No Observed Effect Level';
- LOAEL - 'Lowest Observed Adverse Effect Level'; and
- SOAEL - 'Significant Observed Adverse Effect Level'.

- 2.4 The explanatory note describes SOAEL as the effect level above which significant adverse effects on health and quality of life occur, aligning this level with the first policy aim.

- 2.5 LOAEL is described as the level at which adverse effects begin and the second aim of the NPSE refers to a situation where the effect lies somewhere between LOAEL and SOAEL. It requires that all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also taking into account the guiding principles of sustainable development (paragraph 1.8 of the NPSE) however this does not mean that such adverse effects cannot occur.

- 2.6 NOEL is described as a level of noise exposure below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life.

- 2.7 The third aim seeks, where possible, to positively improve health and quality of life through the proactive management of noise while also taking into account the guiding principles of sustainable

development, recognising that there will be opportunities for such measures to be taken and that they will deliver potential benefits to society.

- 2.8 The protection of quiet places and quiet times as well as the enhancement of the acoustic environment will assist with delivering this aim.
- 2.9 NPSE states that it is not possible have a single, numerical definition of the SOAEL that is applicable to all sources of noise in all situations, since the SOAEL is likely to be different for different noise sources, for different receptors and at different times.
- 2.10 The setting of LOAELs and SOAELs for transportation sources has however reached a form of consensus following a number of high-profile infrastructure projects in England, namely HS2 and a series of Highways England road schemes which have been successful through the Government's Hybrid Bill and Development Consent Order (DCO) consenting processes.
- 2.11 In these projects, the setting of SOAEL has been aligned to Government policy and legislation in relation to the provision of noise insulation where it has been argued that significant adverse effects can be avoided through these means. **Table 1** provides a summary of the LOAEL and SOAEL values applied on these projects.

Table 1: LOAELs and SOAELs for Road and Railway Infrastructure Projects

Source / Project	Period	LOAEL	SOAEL
Road Traffic (Highway Agency A14 DCO)	Daytime	50 dB L _{Aeq} , 16hr	63 dB L _{Aeq} , 16hr
	Night-time	40 dB L _{Aeq} , 8hr	55 dB L _{Aeq} , 8hr
Rail (HS2)	Daytime	50 dB L _{Aeq} , 16hr	63 dB, L _{Aeq} 16hr
	Night-time	40 dB L _{Aeq} , 8hr 60 dB L _{Amax}	55 dB L _{Aeq} , 8hr 80/85 dB L _{Amax}

Planning Policy

National Planning Policy

National Planning Policy Framework (NPPF, 2019)

- 2.12 The National Planning Policy Framework (NPPF, 2019) sets out the Government's planning policies for England and how these should be applied. The NPPF provides a framework within which locally-prepared plans for housing and other development can be produced.
- 2.13 In relation to noise, it states:

"170. Planning policies and decisions should contribute to and enhance the natural local environment by: ...

- *preventing new and existing development from contributing to, and being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability”*

2.14 The NPPF includes policy which makes reference to ‘significant adverse impacts on health and quality of life’, as per the NPSE. NPPF policy states:

180. Planning policies and decisions should aim to ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

- *mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;...”*

2.15 The NPPF makes reference to the NPSE in respect of achieving these aims.

2.16 Notably, NPPF has also recently introduced the ‘Agent of Change’ principle as follows:

182. Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or ‘agent 60 See Explanatory Note to the Noise Policy Statement for England (Department for Environment, Food & Rural Affairs, 2010). 53 of change’) should be required to provide suitable mitigation before the development has been completed.

2.17 Whilst the development is in proximity to existing commercial uses, Section 182 is not considered applicable to the proposed development. The existing site comprises residential uses as well as there being significant amounts of residential use nearby. Therefore, potential noise constraints upon nearby business and community facilities will be unchanged.

[Planning Practice Guidance – Noise \(PPG-Noise, 2019\)](#)

2.18 The Planning Practice Guidance (PPG-Noise, 2019) provides further detail about how the effects of noise can be described in terms of perception and outcomes. It aligns this to increasing effect levels as defined in the NPSE. In addition, the PPG-Noise adds a fourth term and corresponding effect level:

- UAEL – ‘Unacceptable Adverse Effect Level’.

Table 2: Planning Practice Guidance – Noise Exposure Hierarchy

Perception	Examples of Outcomes	Increasing Effect Level	Action
No Observed Effect Level			
Not present	No Effect	No Observed Effect	No specific measures required
No Observed Adverse Effect Level			
Present and not intrusive	Noise can be heard, but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.	No Observed Adverse Effect	No specific measures required
Lowest Observed Adverse Effect Level			
Present and intrusive	Noise can be heard and causes small changes in behaviour and/or attitude, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
Significant Observed Adverse Effect Level			
Present and disruptive	The noise causes a material change in behaviour and/or attitude, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
Present and very disruptive	Extensive and regular changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory	Unacceptable Adverse Effect	Prevent

- 2.19 This effect level is higher than the significant adverse effect on health and quality of life (SOAEL) and requires that unacceptable adverse effects are to be prevented. In PPG-Noise, prevention is not in the context of Government policy on sustainable development. **Table 2** presents the noise exposure hierarchy described in PPG-Noise.
- 2.20 This noise exposure hierarchy is based on the principle that once noise or vibration becomes perceptible, the effect on people and other receptors increases as the level increases. PPG-Noise presents example outcomes to help characterise these effects using non-technical language. In general terms, an observed adverse effect is characterised as a perceived change in quality of life for occupants of a building or a perceived change in the acoustic character of an area, whereas a significant observed adverse effect disrupts activities.
- 2.21 PPG-Noise also provides guidance in terms of what factors may influence whether noise could become a concern, and how adverse effects of noise can be mitigated. Examples of mitigation provided include:
- *“engineering: reducing the noise generated at source and/or containing the noise generated;*
 - *layout: where possible, optimising the distance between the source and noise-sensitive receptors and/or incorporating good design to minimise noise transmission through the use of screening by natural or purpose built barriers, or other buildings;*
 - *using planning conditions/obligations to restrict activities allowed on the site at certain times and/or specifying permissible noise levels differentiating as appropriate between different times of day, such as evenings and late at night, and;*
 - *mitigating the impact on areas likely to be affected by noise including through noise insulation when the impact is on a building”.*

Local and Regional Policy

London-Specific Policies

The London Plan

- 2.22 The London Plan (GLA, 2016) sets out the spatial development strategy for London consolidated with alterations made to the original plan since 2011. It brings together all relevant strategies, including those relating to noise.
- 2.23 Policy 7.15, ‘*Reducing and Managing Noise, Improving and Enhancing the Acoustic Environment and Promoting Appropriate Soundscapes*’, addresses the spatial implications of the Mayor’s Ambient Noise Strategy and how development and land use can help achieve its objectives. It recognises that London Boroughs should have policies in place to manage the impact of noise from noise

making uses, and to identify, nominate, and protect Quiet Areas in line with the procedure in Defra's Noise Action Plan for Agglomerations (2006).

2.24 The 'Publication London Plan' is a new version of the new London Plan published in December 2020 (GLA, 2020), incorporating consolidated changes to previous versions suggested by the Mayor of London, as well as addressing the Inspectors' recommendations following the 2019 Examination in Public and subsequent directions from the Secretary of State. Despite not yet being formally approved by the Secretary of State, the Publication London Plan is a material consideration in planning decisions and is afforded considerable weight. Policy D14 on 'Noise' states that:

"In order to reduce, manage and mitigate noise to improve health and quality of life, residential and other non-aviation development proposals should manage noise by:"

2.25 It goes on to detail measures such as:

- *"avoiding significant adverse noise impacts on health and quality of life".*
- *"improving and enhancing the acoustic environment and promoting appropriate soundscapes".*
- *"separating new noise-sensitive development from major noise sources".*
- *"promoting new technologies and improved practices to reduce noise at source, and on the transmission path from source to receiver".*

London Environment Strategy

2.26 The London Environment Strategy was published in May 2018 (GLA, 2018a). The strategy considers ambient noise in Chapter 9 with a primary aim of *"reducing the number of people adversely affected by noise"*. Policy 9.1.1 aims to *"Minimise the adverse impacts of noise from London's road transport network"*, while Policy 9.3.1 aims to improve *"understanding of the sources and impacts of noise to better target policies and action"*. An implementation plan for the strategy has also been published which sets out what the Mayor will do to help achieve the ambitions in the strategy.

Mayor's Transport Strategy

2.27 The Mayor's Transport Strategy (GLA, 2018b) sets out the Mayor's policies and proposals to reshape transport in London over the next two decades. The Strategy focuses on reducing car dependency and increasing active sustainable travel, with the aim of reducing noise and creating healthier streets. It notes that development proposals should *"be designed so that walking and cycling are the most appealing choices for getting around locally"*.

Local Policies

- 2.28 The Core Strategy (Enfield Council, 2010) was adopted in November 2010, and contains one policy which refers to noise. Core Policy 32 refers to pollution and states that Enfield Council:

“...will work with its partners to minimise air, water, noise and light [...]. In particular, new development will be required to [...] ensure that noise and light pollution is minimized.”

Guidance

World Health Organization ‘Environmental Noise Guidelines for the European Region’ (WHO, 2018)

- 2.29 The guidelines presented within the World Health Organization’s (WHO) ‘*Environmental Noise Guidelines for the European Region*’ (WHO, 2018) complement the WHO ‘*Guidelines for Community Noise*’ (WHO, 1999) and the WHO ‘*Night Noise Guidelines for Europe*’ (WHO NNG, 2009).
- 2.30 The guidelines recommend noise exposure-response relationships that are mostly related to the noise exposure indicators L_{den} and L_{night} , with the aim of “*protecting human health from exposure to environmental noise originating from various sources: transportation (road traffic, railway, aircraft) noise, wind turbine noise and leisure noise*”.
- 2.31 The guidelines provide source-specific recommendations on noise exposures. **Table 3** presents the recommendations relating to transportation sources from the guidance.

Table 3: Source Specific Recommendations on Noise Exposures

Source	Average Noise Exposure	Night Noise Exposure
Road traffic noise	Below 53 dB L_{den} strongly recommended	Below 45 dB L_{night} strongly recommended
Railway noise	Below 54 dB L_{den} strongly recommended	Below 44 dB L_{night} strongly recommended
Aircraft noise	Below 45 dB L_{den} strongly recommended	Below 40 dB L_{night} strongly recommended

- 2.32 Notably, the L_{den} parameter is a compound noise rating indicator, and is representative of the average sound pressure level over all days, evenings, and night in a year, subject to an evening penalty of 5 dB and a night penalty of 10 dB. Whilst the WHO guidelines (2018) adopt the L_{den} as an appropriate indicator for adverse health effects, the $L_{Aeq,T}$ parameter, as advocated in Government policy and legislation is deemed to be the appropriate parameter for the determination of likely adverse impacts on health and quality of life.

Design Manual for Roads and Bridges: Sustainability & Environment Appraisal: LA 111 – Noise and vibration (LA 111, 2020)

- 2.33 LA 111 Noise and Vibration Revision 2 (formerly HD 213/11, IAN 185/15) provides guidance on the assessment of noise impacts from road schemes. The Design Manual for Roads and Bridges (DMRB) contains advice and information on undertaking noise and vibration assessments on the impact of road projects. This includes assessing changes in traffic on existing roads, where it outlines the magnitude of impact in the short and long term. It also provides guideline significance criteria for assessing the impact of road traffic noise exposure.
- 2.34 The change in noise level criteria from road traffic for both short- and long-term impacts advocated in LA 111 are summarised in **Table 4**.

Table 4: DMRB Change in Noise Level Categories

Noise Change Category	Road Traffic Noise
Negligible	<1 dB
Low	1 – 2.9 dB
Medium	3 – 4.9 dB
High	5 – 10 dB
Very High	>10 dB

Subjective Effect of Changes in Ambient Sound Level

- 2.35 A change in ambient sound level of +10 dB is perceived by the human ear as being twice as loud (Hellman, 1976; Zwicker & Scharf, 1965). Further categories associated with a subjective change in noise levels are advocated by the World Health Organisation (Hansen, 2001) as summarised in **Table 5**.

Table 5: Subjective Effect of Changes in Ambient Sound Level

Change in Sound Level (dB)	Change in Sound Power		Change in Apparent Loudness
	Decrease	Increase	
3	1 / 2	2	Just perceptible
5	1 / 3	3	Clearly noticeable
10	1 / 10	10	Half or twice as loud
20	1 / 100	100	Much quieter / louder

3 Assessment Approach

Proposed Scheme

- 3.1 Residents in the Bowes Primary & Surrounding Streets Quieter Neighbourhood Area have raised concerns with Enfield Council over traffic issues in the area for many years. In 2019 the Council engaged residents in the Bowes Primary & Surrounding Streets Quieter Neighbourhood Area through a Perception Survey to better understand the issues that they were experiencing. In response, Enfield LBC has implemented a scheme which aims to moderate the speed and volume of traffic and remove through traffic on primary roads within the project area. To that effect, a series of measures have been proposed to divert through traffic from these minor roads onto the 'key distributor roads'.
- 3.2 The scheme will be delivered in phases, as shown on **Figure 1** below.

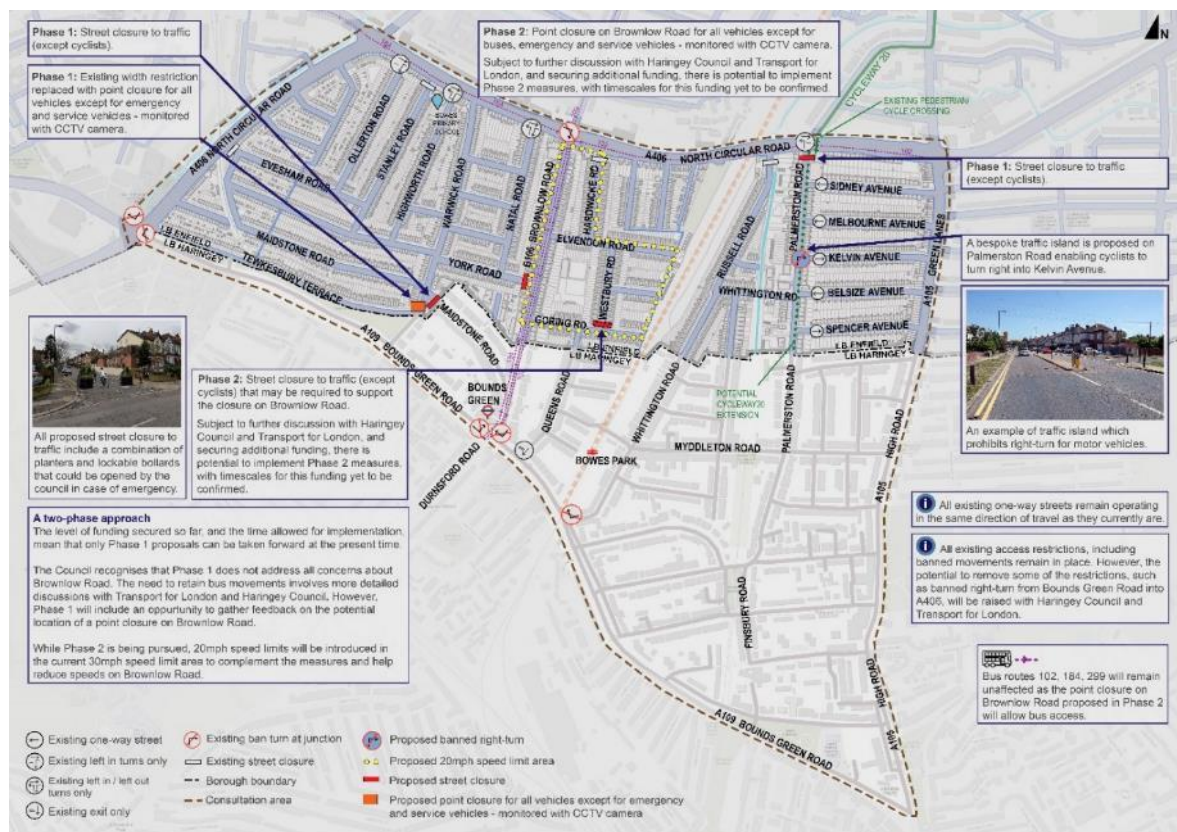


Figure 1: Enfield Quieter Neighbourhood Study Area

- 3.3 Phase 1 of the scheme started in October 2020, with the road closures to motor vehicles at the following locations:
- Maidstone Road at its junction with Warwick Road
 - York Road at its junction with Brownlow Road
 - Palmerston Road northbound at its junction with the A406 Bowes Road / North Circular Road

- Existing width restriction on Warwick Road, near its junction with Maidstone Road, replaced with point closure for all vehicles except for emergency vehicles and service vehicles

3.4 In order to monitor the scheme's impact on vehicle flows, Automatic Traffic Count (ATC) Surveys were commissioned by Enfield LBC for a week's duration in mid-July 2020, prior to the scheme being implemented, and a week in mid-November 2020 week, after implementation of the scheme. The ATC survey locations and consultation area are shown in **Figure 2** below.

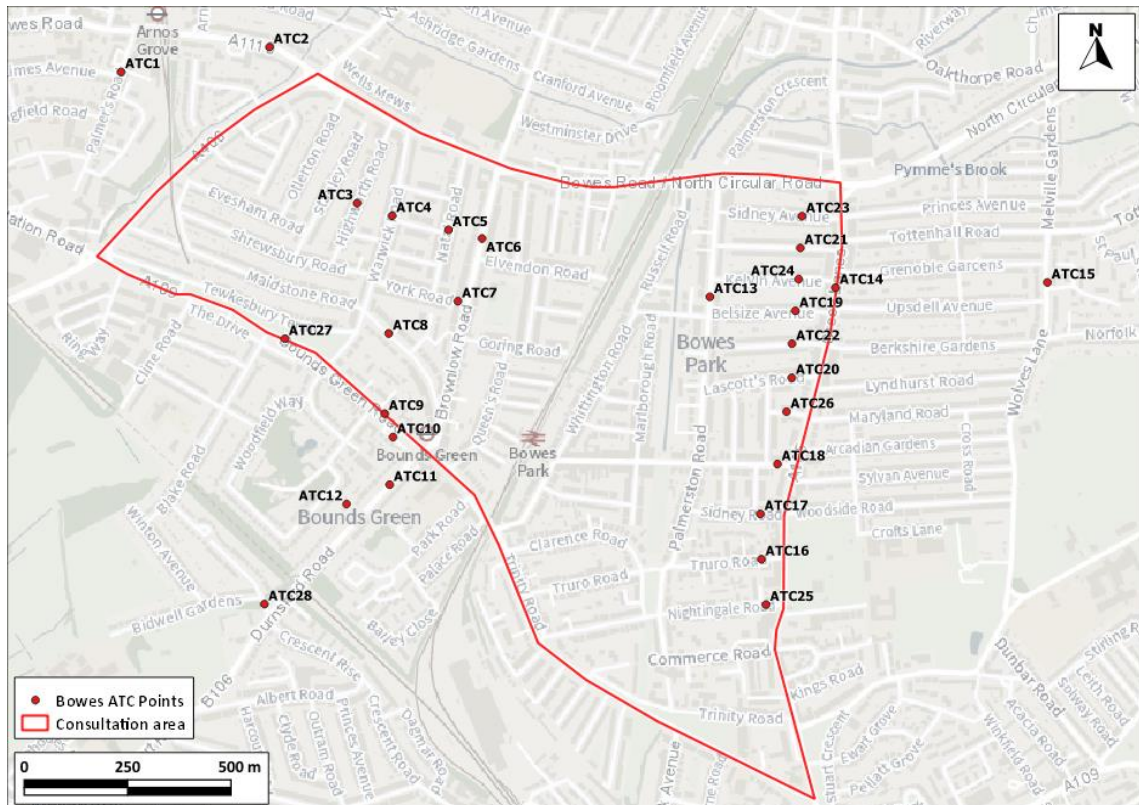


Figure 2: Monitored Roads and Consultation Area

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3.5 In addition, ATCs 34 and 39 located on the A406 North Circular Road, and operated by Transport for London (TfL), were used to supplement Enfield LBC data (ATC34) and in processing the traffic data measured by those ATCs commissioned by Enfield LBC (ATC39). The location of the two TfL ATCs are displayed in **Figure 3**.

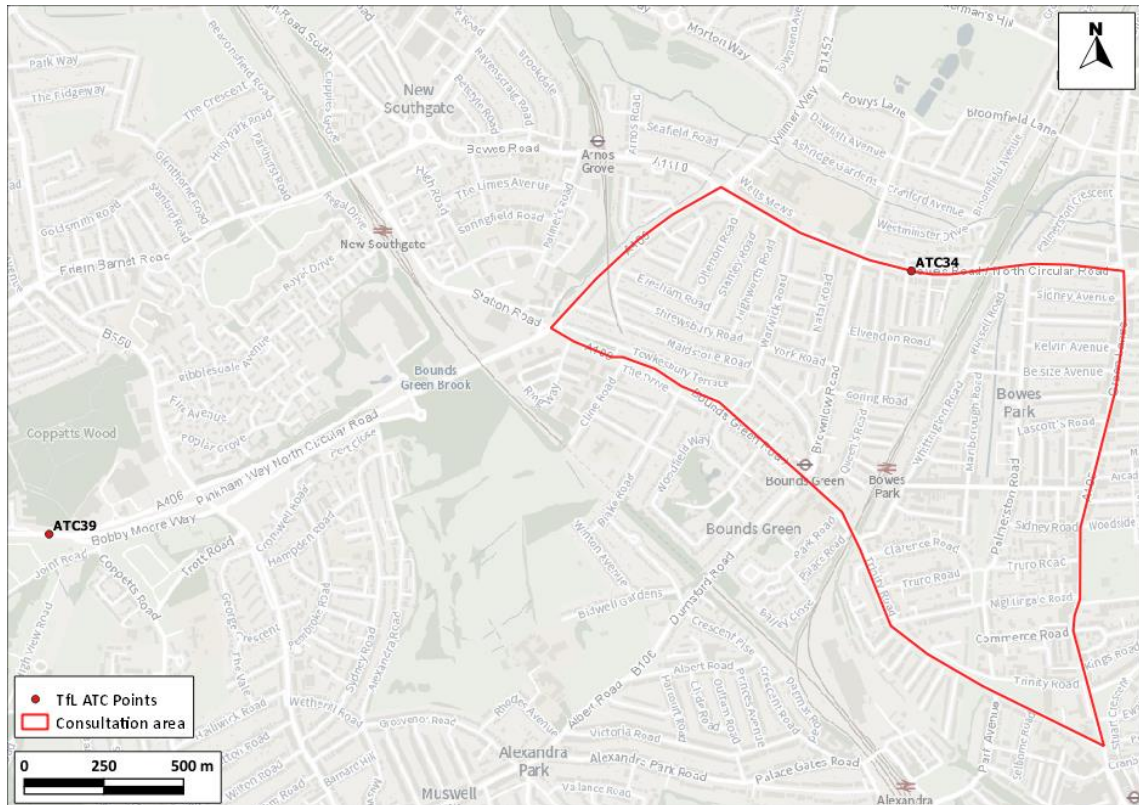


Figure 3: Location of Automatic Traffic Counts 34 and 39

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- 3.6 The re-distribution of traffic on local roads associated with the scheme may affect road traffic noise levels that local residents and users are exposed to. The impacts of the proposed schemes on noise levels have thus been assessed using environmental noise modelling informed by traffic data obtained by the commissioned survey prior to and after the implementation of the scheme. This approach has been adopted as there are no road traffic noise measurements available for conditions prior to the commencement of the scheme.

Assessment Scenarios

- 3.7 Noise exposure grids have been modelled with and without the scheme operating in 2020, each for an average day during both a 7-day week and 5-day working week. For each average day, noise modelling has estimated average noise levels (in dB $L_{Aeq,T}$, where T is the period duration) over a 12-hour day (L_{day} , from 07:00-19:00), 4-hour evening (L_{eve} , from 19:00-23:00), and 8-hour night (L_{night} , from 23:00-07:00), as well as a 16-hour day ($L_{Aeq,16hr}$, 07:00-23:00).
- 3.8 The relative change in road traffic noise levels in each scenario was calculated to provide an estimation of the difference between noise levels before the scheme and with the scheme, and therefore estimate the impact of the scheme on local noise levels.

Modelling Methodology

- 3.9 The model has been developed using the LimA® computational sound modelling software (v2020) and has been configured to calculate levels of noise in accordance with the CNOSSOS-EU:2015 'Common Noise Assessment Methods for Europe' (CNOSSOS-EU). Details of the model inputs, assumptions and the verification are provided in **Appendix A2**. Where assumptions have been made, a realistic worst-case approach has been adopted.
- 3.10 Due to the nature of the scheme, and the associated traffic speeds and bus-only routes, modelling using the UK's current national road traffic noise calculation method, the 'Calculation of Road Traffic Noise' (CRTN, 1988) would lead to major uncertainties. This methodology is not designed to address such circumstances and was originally conceived to identify locations eligible for noise insulation under the Noise Insulation Regulations 1975.
- 3.11 NCL's approach has therefore been to base the study on modelling using the road traffic noise calculation method described within CNOSSOS-EU. This method is to be adopted by Defra for all strategic noise mapping in England from 2021. It has specific provisions the noise produced by different vehicle types, including buses, and is designed to address low traffic speeds and flows, as is the case with the Low Traffic Neighbourhood.
- 3.12 The Design Manual for Roads and Bridges: Sustainability & Environment Appraisal LA 111 Noise and vibration (LA 111) (2020). Provides guidance on undertaking noise and vibration assessments on the impact of road projects. This includes assessing changes in traffic on existing roads, where it outlines the magnitude of impact in the short term and long term.

Traffic Data and Emissions Calculation

- 3.13 Traffic data for the assessment has been informed by the 26 ATCs commissioned by Enfield LBC, supplemented by data collected by TfL at two traffic counts (ATC34 and ATC39, both situated on the A406 North Circular Road, on Telford Road and Bowes Road respectively).
- 3.14 The CNOSSOS-EU noise model requires that traffic data is averaged over a whole year. It has therefore been necessary to process the raw traffic data collected over seven days into Annual Average Daily Traffic (AADT) flows; the format required for input into the noise model. The annualisation process addresses seasonal variations in traffic, and how this could have impacted the traffic flows recorded over the two seven-days traffic counts commissioned by Enfield LBC. In this instance, the traffic flows in July would have been affected by COVID-19 restrictions and school holidays (schools were only open to certain year groups in July and many would have already started school holidays), whilst the counts undertaken in November would have been impacted by the COVID-19 national lockdown. Both sets of data are therefore likely to have recorded lower levels of traffic compared to those normally experienced for these times of the year. If the daily traffic flows had been calculated simply by dividing the total seven day traffic volume by seven, the numbers

obtained would not have been representative of an average day in 2020 and would instead reflect the conditions specific to the periods in July and November. Annualising the measured data to the full year 'evens out' the data and thus addresses any seasonal variation or lockdown impacts between July and November, allowing for direct comparison between the predicted 'without scheme' and 'with scheme' noise levels.

- 3.15 AADT flows were calculated for each of the 26 traffic counts for 'without scheme' and 'with scheme' scenarios by annualising measured data to the reference year¹. Two annualisation factors were calculated using data from TfL's ATC39; one for each scenario considered. ATC39 was selected as it is not located within the study area and traffic flows measured there are not affected by the scheme. It is therefore a 'reference' traffic count, suitable for the annualisation process. For example, in order to annualise the data collected at ATC1 in July 2020 to the reference year, the number of vehicles at ATC39 over the same seven days in July 2020 were compared against the total number of vehicles at ATC39 in the reference year, to obtain an adjustment factor (traffic over 7 days / traffic for the reference year). This factor was then applied to the number of vehicles counted at ATC1 over the seven days in July 2020 to obtain an estimated total number of vehicles for the reference year on that road. The AADT is then obtained by dividing that number by 366 (i.e., the number of days in a leap year, which 2020 was).
- 3.16 The ATCs provided data on all vehicle movements during each hour of the week, including vehicle speeds and vehicle classifications. The raw traffic data was processed and grouped into the relevant periods and categories necessary for CNOSSOS-EU modelling. Further details about model input, traffic data and how flows have been derived for modelling are presented in **Appendix A2**.

Uncertainty in Road Traffic Modelling Predictions

- 3.17 There are many components that contribute to the uncertainty of modelling results. The road traffic noise models used in this assessment is dependent upon the traffic data input, which will have inherent uncertainties. In particular, traffic flows used in the models were derived from counts carried out over seven days and annualised to the reference year, as discussed above. It is recognised that the calculated 2020 traffic flows, both pre-scheme and post-scheme, are lower than that of a typical year, which is reflected by the reduction in traffic that has been observed across London due to the COVID-19 pandemic². This noise assessment, however, is primarily a relative study focused on the changes in noise levels associated with the scheme, which will not be significantly impacted by total traffic volumes. This approach has therefore addressed, as best as possible, the uncertainties

¹ For 2020, flows were 'annualised' to the period 25th November 2020 to 24th November 2020, in the absence of traffic data covering the period 25th November to 31st December 2020.

² Transport for London, 'Travel in London - Report 13', 2020, <https://content.tfl.gov.uk/travel-in-london-report-13.pdf>, (accessed 4 June 2021).

relating to the short duration of the traffic surveys and the irregular traffic flows associated with school holidays and the COVID-19 pandemic.

- 3.18 There are inherent uncertainties within the modelling, including the traffic data as primary input, and as such the results should not be considered exact, but represent the best possible estimates, using the best available data available at the time this report was undertaken.

Assessment Criteria

- 3.19 Due to the comparative nature of this study, assessment criteria which look at absolute noise levels are not relevant. This study will aim to present the results such as to indicate where differences in noise exposure levels are clearly noticeable on a perceptual basis.
- 3.20 The change in road noise level criteria used in this assessed are derived from methodologies advocated in LA 111 (2020) (as summarised in **Table 4**) and are presented in full in **Table 6**. A beneficial change was deemed to occur where there was a reduction in noise level, and an adverse change was deemed to occur where there was an increase.
- 3.21 Due to the aforementioned uncertainties in the modelling inputs and the imperfections of comparing traffic flow at different points in time, it has been deemed that any changes within the range of $L_{Aeq,T} < \pm 3$ dB are likely to be within a margin of error. This is in line with the research presented in **Table 5**. These minor changes may well be due to the scheme but may also be due to uncertainties within the processing and comparisons of the road traffic data.
- 3.22 This assessment has therefore only made firm conclusions regarding the influence of the scheme where modelling has indicated that a road has experienced a change of $L_{Aeq,T} \geq \pm 3$ dB. Such changes are described as a 'moderate' or 'major' change based on the DMRB guidance. Such changes may be considered 'significant'.

Table 6: Change in Noise Level Assessment Criteria Derived from DMRB

Noise Change Category	Road Traffic Noise
Major beneficial	≤ -5 dB $L_{Aeq,T}$
Moderate beneficial	-3 to -4.9 dB $L_{Aeq,T}$
Minor beneficial	-1 to -2.9 dB $L_{Aeq,T}$
Negligible	-1 to 1 dB $L_{Aeq,T}$
Minor improvement	1 to 2.9 dB $L_{Aeq,T}$
Moderate improvement	3 to 4.9 dB $L_{Aeq,T}$
Major improvement	> 5 dB $L_{Aeq,T}$

4 Scheme Impact Assessment

- 4.1 This section presents the changes in annualised daily noise exposure predicted as a result of the scheme. Detailed results of the noise modelling exercise are presented as noise exposure grids in **Appendix A2.15**, and a summary is presented and discussed below.
- 4.2 The calculated percentage changes in traffic flow are shown in **Figure 4**. Decreases in traffic are illustrated by green shaded points, whilst increases are displayed in red shades. The decreases in traffic correlate with road closures, and the increases occur on roads where traffic has been displaced to. Traffic flow changes detailed by period and vehicle category are provided in **Table A2.4** in **Appendix A2**.

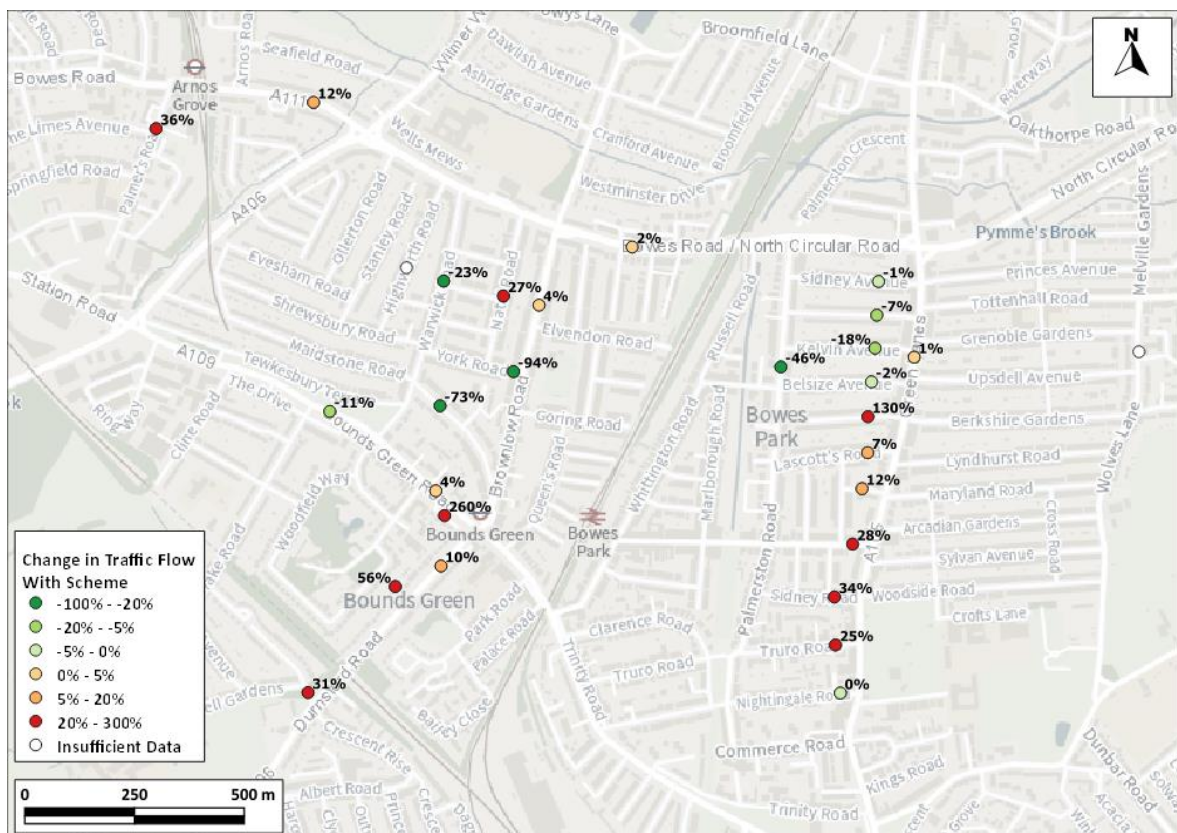


Figure 4: Percentage Change in Total Traffic Flows Resulting from the Scheme

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- 4.3 **Table 7** presents a summary of the roads which experienced a moderate or major change in noise levels during any of the assessed periods. Beneficial changes are represented by '<' and shaded blue whilst adverse changes are represented by '>+' and shaded orange, followed by the criteria threshold in dB. The results are presented for each of the indicators modelled: L_{day} , L_{eve} , L_{night} and $L_{Aeq,16hr}$, each for a 7-day week and a 5-day week.

Table 7: Summary of Significant Changes in Road Noise Exposure (in dB)

	7-day week				5-day week			
	Day	Eve	Night	16-hr	Day	Eve	Night	16-hr
York Road	<-5	<-5	<-5	<-5	<-5	<-5	<-5	<-5
Maidstone Road	<-5	<-5	<-3	<-5	<-5	<-5	<-3	<-5
Palmerston Road			<-3				<-3	
Spencer Avenue	>+3		>+3	>+3	>+3		>+3	>+3
Sidney Road						>+3		
Woodfield Way							>+3	

- 4.4 Significant changes in road noise exposure are highly likely to have occurred as a result of the scheme at 6 of the 27 modelled roads during at least one of the assessed periods.
- 4.5 York Road is highly likely to have experienced a consistently major decrease in noise as a result of the scheme, as is Maidstone Road except at night where the decrease was moderate. Palmerston Road is predicted to have experienced a moderate decrease in noise levels only at night, likely because noise from the A406 Bowes Road / North Circular Road and High Road dominate the noise climate during the day.
- 4.6 Spencer Road appears to have been most adversely affected by the scheme, with moderate increases in noise during all periods except for the evening period. When assessing the 5-day working week, Sidney Road and Woodfield Way demonstrated moderate increases in noise during the evening and night periods respectively.
- 4.7 The noise grids presented in **Appendix A2.15** show that there were minor decreases predicted on Warwick Road and Kelvin Avenue, and minor increases predicted on Truro Road, Wroxham Gardens / Winton Avenue, and Natal Road. However, as stated above, it is uncertain whether these changes may be predominantly attributed to the scheme, if at all, and they are unlikely to be perceived by residents.
- 4.8 With the scheme involving road closures on York Road, Maidstone Road and Palmerston Road, the resulting decrease in road traffic noise levels along these roads is as expected.
- 4.9 In avoiding the road closure between Palmerston Road and the A406 Bowes Road / North Circular Road, motorists making increased use of Spencer Avenue, but also Sidney Road during weekday evenings, have led to moderately increased noise levels at these locations. However, the moderate increase in noise along Woodfield Way during the night of a 5-day week does not seem to be explained by the scheme.

- 4.10 **Table A3.1** in **Appendix A2.15** shows the absolute predicted noise levels, rounded to the nearest dB, at the sites of each ATC which is presented in **Table 7** as experiencing significant changes. **Table A3.2** and **Table A3.3** provide further absolute noise level results for all the roads modelled. Note that the absolute levels shown may be influenced by the noise from traffic on neighbouring roads.
- 4.11 The absolute noise levels at calculated at the location of the York Road ATC (ATC7) would give a difference of less than 3 dB with the scheme. This is due to the ATC being located at the entrance to York Road where the influence of traffic on Brownlow Road is likely significant. However, as can be observed in the figures in **Appendix A2.15**, there is a clearer difference of > 3 dB further west along York Road. The situation is the same for the ATC locations at Woodfield Way and Sidney Road which are influenced by noise from B106 Durnsford Road and High Road respectively.
- 4.12 The noise change grid for an average $L_{Aeq,16hr}$ in a 7-day week is presented **Figure 5**. The grid demonstrates that the overall effect of the scheme on noise with respect to changes of > ± 3 dB appears to be beneficial given the numbers of roads and dwellings seeing such changes. This is evidenced by the areas covered by blue (-3 dB to -5 dB change) and purple (greater than -5 dB change), as opposed to areas of orange (+3 dB to +5 dB change).

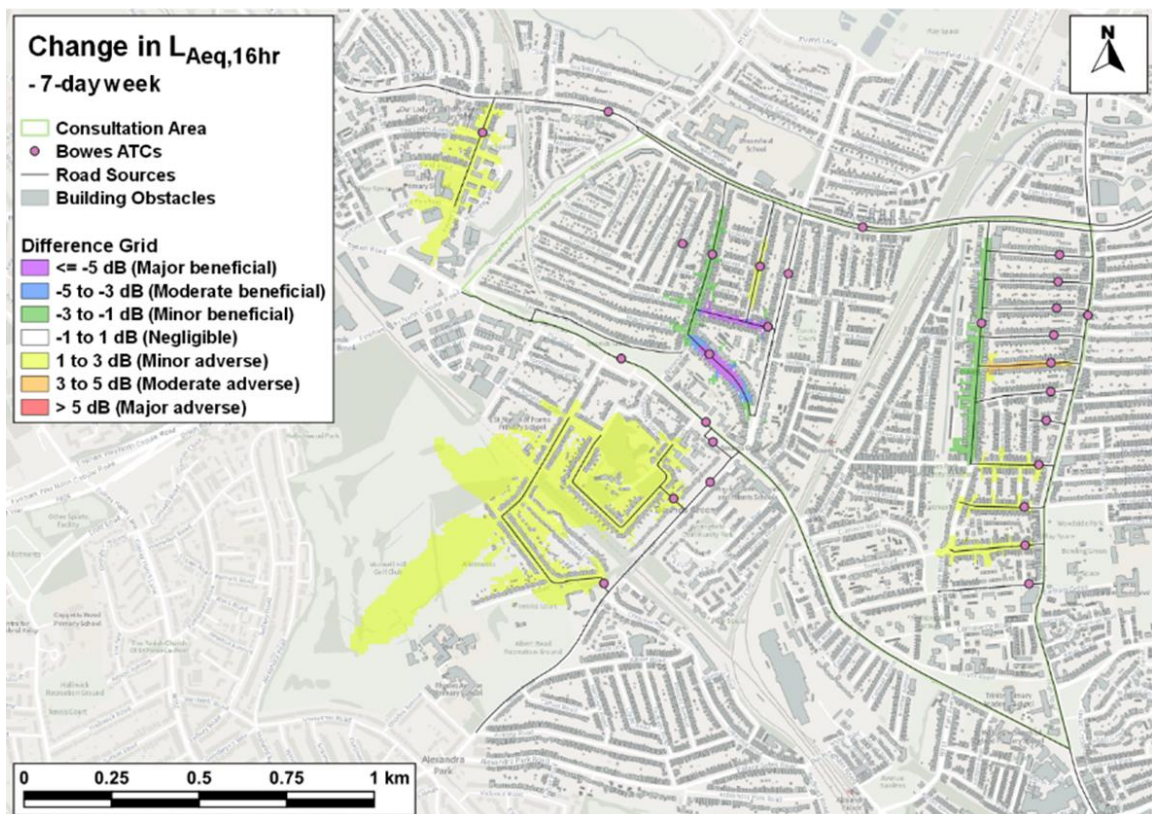


Figure 5: Change in 16-hour Day Noise Levels Due to the Scheme for an Average Day in a 7-day Week.

- 4.13 There appear to be larger areas with adverse changes of $< +3$ dB (yellow) than areas with beneficial changes of < -3 dB (green). These are locations where there is a lack of confidence as to whether changes can be attributed to the scheme or if it due to the uncertainty within the data. However, it is recommended that Enfield review the locations where these changes are shown and identify whether these coincide with any adverse feedback received from communities.
- 4.14 **Figure 6** and **Figure 7** show, as an example, the absolute noise grids for the $L_{Aeq,16hr}$ indicator without and with the scheme respectively for an average day in a 7-day week.

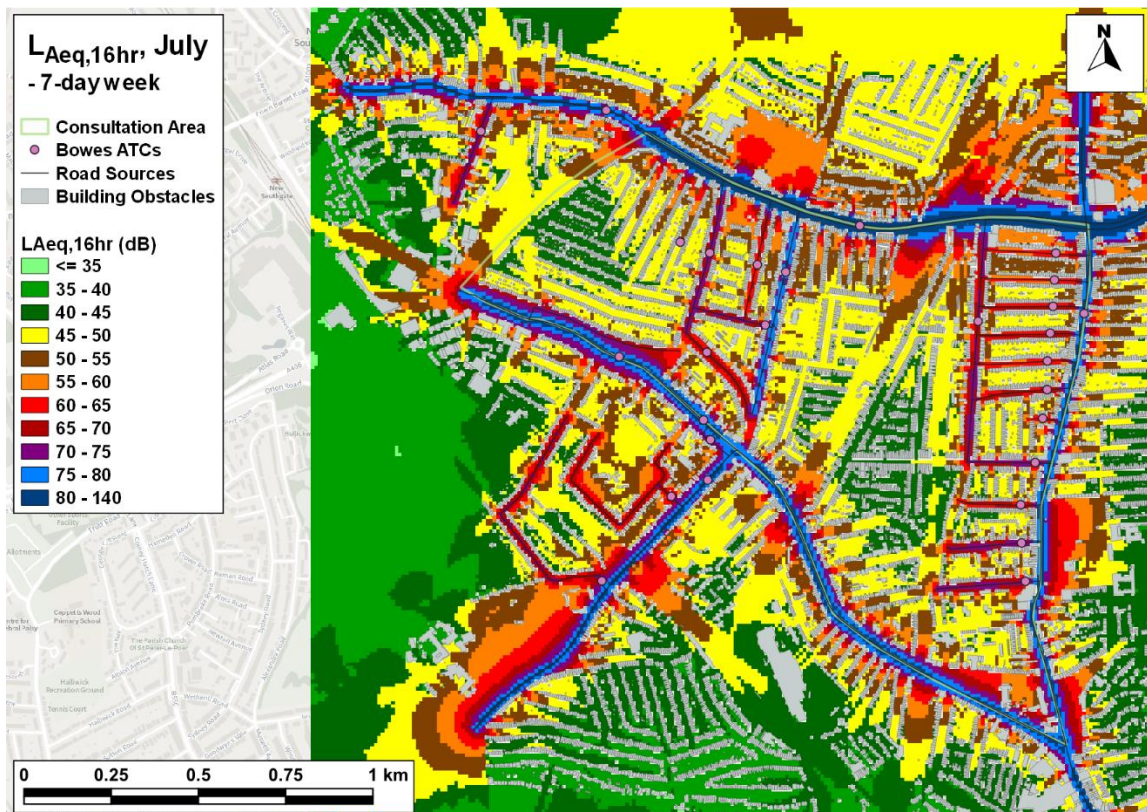


Figure 6: Absolute $L_{Aeq,16hr}$ Noise Grid for July (Without-Scheme Scenario) – 7-day Week

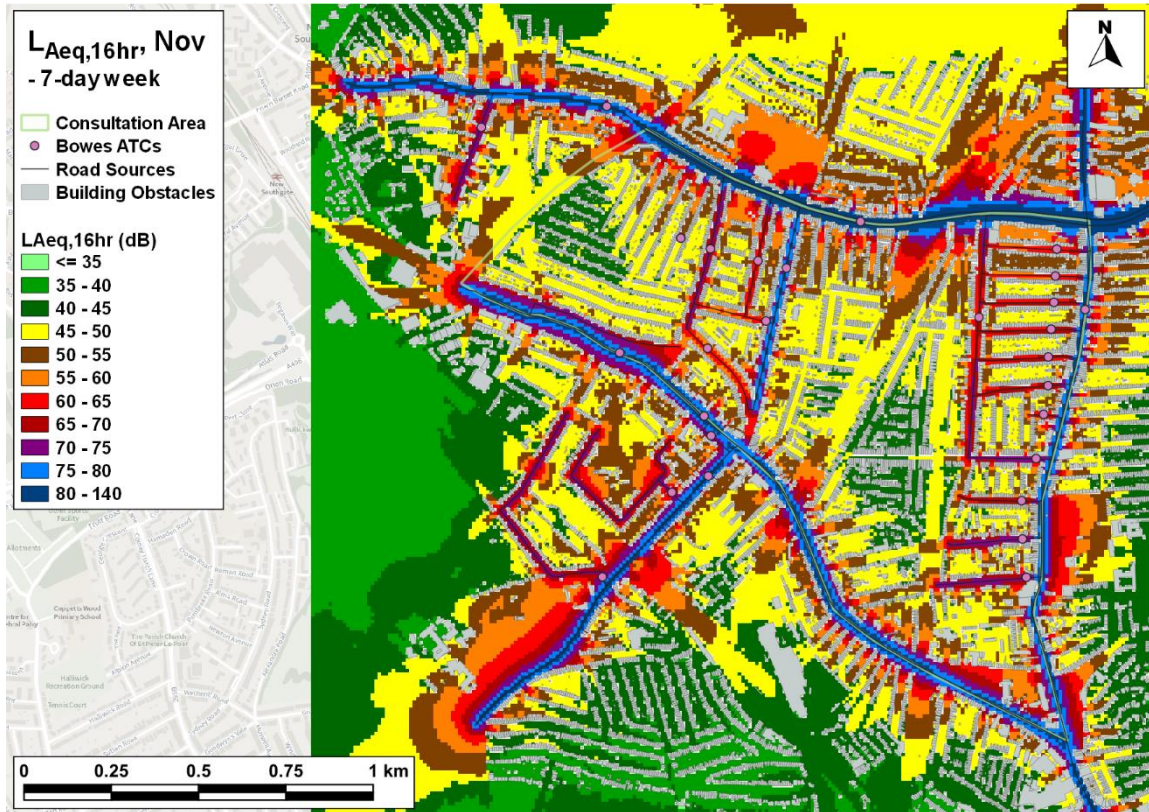


Figure 7: Absolute L_{Aeq,16hr} Noise Grid for November (With-Scheme Scenario) – 7-day Week

5 Summary and Conclusions

- 5.1 The assessment has considered the local noise impacts of the Bowes Quieter Neighbourhood Scheme. Traffic flows were measured over two seven-day periods in July and November 2020 (pre- and post-scheme implementation). These have been used to estimate the changes in traffic attributable to the scheme. CNOSSOS-EU road noise modelling has then been undertaken using LimA® to estimate the effect that these changes in traffic would have had on local noise levels.
- 5.2 Implementation of the Quieter Neighbourhood Scheme is predicted to have led to moderate to major decreases in noise levels along Maidstone Road and York Road, as well as moderate decreases on Palmerston Road during the night period. The scheme is predicted to have increased noise levels moderately along Spencer Avenue and on occasion along Sidney Road and Woodfield Way.
- 5.3 Although the scheme caused small changes to noise levels at other roads, including minor decreases on Warwick Road and Kelvin Avenue, as well as minor increases on Truro Road, Wroxham Gardens / Winton Avenue, and Natal Road, the scale of these are within the margin of error and may not be directly attributable to the scheme.
- 5.4 There are many uncertainties around the predictions presented in this report. In particular, it is challenging to isolate those changes to traffic flows caused by the scheme from those caused by other factors, such as restrictions to control the COVID-19 pandemic.

6 Glossary

AADF	Average Annual Daily Flows
A-weighting	Frequency weighting applied to measured sound in order to account for the relative loudness perceived by the human ear.
CNOSSOS-EU	Common Noise Assessment Methods in Europe
CRTN	Calculation of Road Traffic Noise
dB	Decibel. The logarithmically scaled measurement unit of sound.
Defra	UK Government Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges
L_{Aeq,T}	A-weighted equivalent continuous sound level over a given time period. It is the sound level of a steady sound that has the same energy as a fluctuating sound over the same time period.
L_{day}	A-weighted equivalent continuous sound level over a 12-hour daytime period.
L_{eve}	A-weighted equivalent continuous sound level over a 4-hour evening period.
L_{night}	A-weighted equivalent continuous sound level over an 8-hour night-time period.
NCL	Noise Consultants Limited
TfL	Transport for London

7 Appendices

A1	Professional Experience.....	28
A2	Modelling Methodology	29
A3	Modelled Results.....	35

A1 Professional Experience

██████████ BSc (Hons) MIOA MEnvSc

██████████ is the Managing Director at NCL. He holds a First-Class Bachelor of Science degree in Acoustics from Salford University and is a Full Corporate Member of the Institute of Acoustics and a Member of the Institution of Environmental Sciences. He has over 17 years' experience working exclusively in the field of environmental noise delivering high profile projects in both the public and private sector. His experience includes technical leadership roles, policy and research work, and delivery of strategic noise mapping and action planning projects and major EIA. He has been involved in noise mapping projects since 2003 and contributed to some of the earliest UK feasibility studies for the deliver of Directive 2002/49/EC. He has developed techniques, coding solutions, QA procedures and systems to allow the scalability of noise calculations.

██████████ MEng (Hons) AMIOA

██████████ is a Consultant with NCL, having joined the company in September 2019. Prior to joining, he completed an MEng (Hons) degree in Acoustical Engineering at the University of Southampton, specialising in virtual acoustics. Prior to joining NCL he worked briefly as an intern at Audioscenic, and between his studies he undertook placements at Ion Acoustics and Hoare Lea. He has undertaken numerous noise modelling assessments, including road traffic noise and airport noise, as well as many industrial and residential noise assessments. He is an Associate Member of the Institute of Acoustics.

A2 Modelling Methodology

Model Inputs

- A2.1 The model has been developed using the LimA® computational sound modelling software (v2020). A model employing the CNOSSOS-EU methodology requires the user to provide various input data, including noise source definitions for traffic along each section of road along with the characteristics of the road section. This includes the AADF for each vehicle category, average daily speeds for each vehicle category, direction of traffic, road surface type, road classification (urban, highway or speedway), the width of the road, and the slope of the road in the direction of traffic.
- A2.2 The model also considers terrain and building obstacles. Terrain data was obtained from the UK Environment Agency's LiDAR Composite Digital Terrain Model (DTM) 2019 and LiDAR Composite Digital Surface Model (DSM) 2017 datasets (public sector information licenced under the Open Government Licence v3.0), whilst building shapes were obtained from the Ordnance Survey (OS) MasterMap Topography layer. Building heights were obtained by intersecting the difference between the DSM and DTM with the building heights.
- A2.3 Constant model input parameters are summarised in **Table A2.1** and other dynamic parameters are discussed below.

Table A2.1: Summary of Model Inputs and Assumptions

Model Parameter	Value Used
Terrain Effects Modelled	Yes
Building Obstacles Modelled	Yes
Road Surface Type	Porous asphalt
Road Gradient	0 %
Road Classification	All Urban except sources along the A406 Bowes Road / North Circular Road which is defined as a Highway
Direction of Traffic	Majority of sources defined as bi-directional, except where one-way systems are in operation and the A406 Bowes Road / North Circular road which is divided.
Ground Absorption Coefficient	0.5 (Mixed ground)
Receptor Grid Height	1.5 m
Receptor Grid Resolution	10 m

Traffic Data

- A2.4 Traffic counts have been provided by Enfield LBC, who commissioned the ATC survey for the scheme. The survey involved a week of ATC data measured in mid-July, representing traffic flows without the scheme, a week of ATC data from mid-November with the scheme in place. Each

individual vehicle count provided the vehicle classification, speed, direction, and the time of recording. In order to convert the traffic count data into a format appropriate for road traffic noise modelling according to the CNOSSOS-EU methodology a series of calculations and assumptions had to be made, which are set out in this section.

Normalised Mean Daily Traffic Flow Calculations

A2.5 The noise model requires traffic data to be input in daily flow values. In order to calculate an annual average from the weekly average, a normalisation factor was applied. The factor was calculated using traffic count ATC39, operated by TfL, and situated along the A406 Telford Road / North Circular, 1.7 km away from the consultation area boundary. The count is judged to be far enough away not to be impacted by the scheme to any major degree, but close enough to be representative of typical AADF variation in the study area. The factor was calculated by dividing the annual total ATC39 for the year between 25 November 2019 and 25 November 2020, by the period total, for each respective survey period. This factor was applied to the period total at each of the Enfield LBC ATCs to approximate annual totals. This method therefore provides values which, to some extent, consider the annual variations in 2020 traffic, resulting from factors external to the scheme, such as COVID lockdown impacts and school holidays.

Traffic Speeds

A2.6 Noise modelling is based on average speeds on each section of road. The ATC data provided the speed of each vehicle movement, which can be averaged to a speed appropriate to that point for modelling purposes. This speed is, however, only applicable at a specific point on the road and will not necessarily be representative of speed along the whole road link. Moreover, average speeds pre- and post-scheme were reviewed, and it was not possible to correlate the variation in speeds with that in traffic data; it could have been expected to see average speeds decrease with increased traffic, and vice versa. Measured speeds were therefore not directly used as average speeds for modelling purposes. Instead, average traffic speeds were estimated based on road layout, proximity to junctions and traffic lights, speed limits, and professional judgement.

A2.7 For example, where a section of road leads to a traffic light, vehicles will be stopped and thus idling for some time when the light is red, but under a green light, vehicles will travel at normal speed along that section of road. As such, for modelling purposes, these sections of roads are typically modelled at 20 kph, which correspond to a weighted average speed throughout the day. On sections of road situated away from junctions, average speeds were determined based on the applicable speed limits. Although the measured speeds were not used, as discussed above, they were reviewed against those determined following the procedure described above to ensure there were no major discrepancies between measured and estimated average speeds along the road network considered in this study.

A2.8 Details of the average speeds used in the model are provided in **Figure A2.1**.

Vehicle Classifications

A2.9 The noise emissions calculated within the model are determined by vehicle type, according to the five vehicle categories defined in the CNOSSOS-EU methodology. The ATC data provides a breakdown of movements in terms of the fifteen classifications shown in **Table A2.2**. Prior to modelling, these classifications were converted to the CNOSSOS-EU categories according to the assumptions given in **Table A2.2**. Any bicycle movements were excluded from the model as they do not have any associated noise emissions.

Table A2.2: Conversion of Measured Vehicle Classifications to CNOSSOS Categories

Vehicle Classifications from ATC Survey				Adopted CNOSSOS-EU Categories	
Class	Code	Description		Category	Description
1	SV	Short - car, light van		1	Light vehicles: Passenger cars, delivery vans ≤ 3,5 tons, including trailers and caravans
2	SVT	Short towing – trailer, caravan, boat etc			
3	TB2	Two axle truck or bus		2	Medium heavy vehicles: delivery vans > 3.5 tons, buses, etc. with two axles
4	TB3	Three axle truck or bus		3	Heavy duty vehicles, touring cars, buses, with three or more axles
5	T4	Four axle truck			
6	ART3	Three axle	articulated vehicle or rigid vehicle & trailer		
7	ART4	Four axle			
8	ART5	Five axle			
9	ART6	Six+ axle			
10	BD	B-double or heavy truck and trailer			
11	DRT	Double road train / heavy truck & two trailers			
12	TRT	Triple road train / heavy truck & 3+ trailers			
14	M/C	Motorcycle		4b	Motorcycles, tricycles and quadricycles
15	CYCLE	Cycle		Ignore	

A2.10 Traffic data measured by TfL at ATC34 does not consider vehicle classification. Therefore, proportions of each vehicle category at ATC34 have been informed by data taken from the London Atmospheric Emissions Inventory (LAEI) at a location on A406 Bowes Road / North Circular Road which contained vehicle classification counts.

Missing Data

A2.11 Several ATCs included periods of missing data. This is not unusual and could be due to cars parked on the device's tube for long periods of time. Where possible, assumptions have been made in order

to account for these missing data. Otherwise, these sources of the model have been omitted. A list of missing data and their respective omissions or assumptions made are shown in **Table A2.3**.

Table A2.3: Summary of Missing ATC Data

Count	Missing Data	Action Taken
ATC3	For July period: No traffic count data.	ATC3 and the associated road source was omitted from the model
ATC4	For July period: Sunday, Monday, and Tuesday missing from week's data. This is replaced with data from Friday from the week prior and Saturday and Sunday from the week following.	The average daily flows at the location, for both 7- and 5-day weeks, are assumed to be represented by the remaining data. Change in daily flows accounted for in annualisation factor.
ATC14	For July period: Tuesday missing from week's data and replaced with Sunday data from following week.	The average daily flows at the location, for both 7- and 5-day weeks, are assumed to be represented by the remaining data. Change in daily flows accounted for in annualisation factor.
ATC15	For November period: Missing periods of data from Wednesday, Friday, and Saturday.	ATC15 and the associated road source was omitted from the model.
ATC17	For July period: Tuesday missing from week's data and replaced with Saturday data from following week.	The average daily flows at the location, for both 7- and 5-day weeks, are assumed to be represented by the remaining data. Change in daily flows accounted for in annualisation factor.
ATC18	For July period: Data missing from Sunday night to Monday morning, and from Saturday night to Sunday midday.	The average night-time and day-time flows at the location for the 7-day week are assumed to be represented by the remaining data. Change in daily flows accounted for in annualisation factor.
ATC23	For July period: Missing data from Wednesday afternoon.	The average daytime flows at the location, for both 7- and 5-day weeks, are assumed to be represented by the remaining data. Change in daily flows accounted for in annualisation factor.
ATC25	For July period: Tuesday missing from week's data, and replaced with Saturday data from following week	The average daytime flows at the location, for both 7- and 5-day weeks, are assumed to be represented by the remaining data. Change in daily flows accounted for in annualisation factor.

Road Lines and Widths

A2.12 A network of roads in and around the consultation area were selected according to proximity to the ATC and reasonable representation by the measured traffic flows. For the roads of interest, road widths were obtained from the OS MasterMap Highways Network dataset. The road lines were then converted to acoustic line sources and attributed with the relevant road and traffic data as discussed in the sections above.

Data Summary

A2.13 The percentage change in traffic flows at each ATC, based on the annualised values used in this assessment, are summarised in **Table A2.4** by time of day and vehicle category.

Table A2.4: Percentage Change of Annualised Traffic Flows with Scheme Implemented

Period	Percentage Change in Traffic Flow by Period and CNOSSOS-EU Vehicle Category											
	Day (07:00-19:00)				Evening (19:00-23:00)				Night (23:00-07:00)			
	1	2	3	4B	1	2	3	4B	1	2	3	4B
ATC1	61%	35%	44%	82%	-29%	-1%	-20%	95%	-19%	-6%	-6%	37%
ATC2	30%	-8%	98%	-1%	-11%	-20%	177%	15%	-20%	-26%	65%	-14%
ATC4	-25%	-28%	-4%	47%	-38%	-3%	22%	8%	17%	94%	22%	33%
ATC5	25%	31%	76%	106%	18%	79%	25%	21%	51%	-15%	22%	-20%
ATC6	11%	4%	121%	19%	-22%	-14%	387%	14%	-9%	-26%	579%	-23%
ATC7	-96%	-99%	-52%	-34%	-96%	-84%	0%	-45%	-97%	-86%	-100%	-41%
ATC8	-78%	-85%	0%	1430%	-82%	-76%	-100%	548%	-80%	-79%	-7%	181%
ATC9	8%	19%	9%	14%	-14%	16%	-16%	17%	-9%	21%	-18%	-22%
ATC10	372%	228%	22%	250%	311%	36%	-100%	40%	160%	8%	-100%	22%
ATC11	18%	4%	110%	22%	-22%	-29%	312%	-2%	10%	-35%	483%	-28%
ATC12	61%	-15%	1211%	51%	11%	-29%	489%	19%	76%	34%	179%	50%
ATC13	-45%	-81%	399%	6%	-57%	-81%	139%	-9%	-60%	-76%	19%	-24%
ATC14	6%	44%	-12%	33%	-16%	58%	-5%	32%	-22%	49%	-60%	-20%
ATC16	32%	30%	42%	25%	-15%	3%	100%	4%	30%	43%	89%	-4%
ATC17	38%	47%	-6%	37%	27%	86%	-100%	17%	-6%	74%	-100%	0%
ATC18	32%	99%	-57%	29%	-1%	31%	-53%	18%	22%	44%	-31%	11%
ATC19	-1%	-20%	291%	21%	-9%	-11%	111%	2%	1%	-14%	133%	-18%
ATC20	15%	22%	-22%	-12%	-17%	-13%	22%	-17%	-13%	50%	0%	-41%
ATC21	-4%	3%	322%	49%	-22%	-43%	-100%	0%	-29%	-8%	-28%	-26%
ATC22	139%	152%	160%	73%	121%	168%	22%	12%	128%	278%	31%	-14%
ATC23	9%	35%	-20%	33%	-18%	-21%	22%	-34%	-36%	55%	56%	-51%
ATC24	-12%	-19%	439%	11%	-37%	-40%	364%	-16%	-41%	-5%	333%	-66%
ATC25	1%	22%	57%	15%	-10%	0%	-10%	-2%	-9%	7%	0%	-8%
ATC26	25%	24%	56%	11%	-26%	47%	133%	-53%	-38%	31%	22%	-42%
ATC27	-5%	5%	-22%	-8%	-24%	-25%	-100%	8%	-33%	-38%	-100%	31%
ATC28	38%	70%	433%	-25%	-32%	22%	608%	-39%	-21%	0%	181%	13%
ATC34E	11%	11%	11%	11%	-8%	-8%	-8%	-8%	-7%	-7%	-7%	-7%
ATC34W	8%	8%	8%	8%	-12%	-12%	-12%	-12%	-11%	-11%	-11%	-11%

A2.14 Figure A2.1 shows the road network included within the model, along with the average speed at which each link was modelled. Traffic Directions for one-way road sources are shown as left-sided arrows.

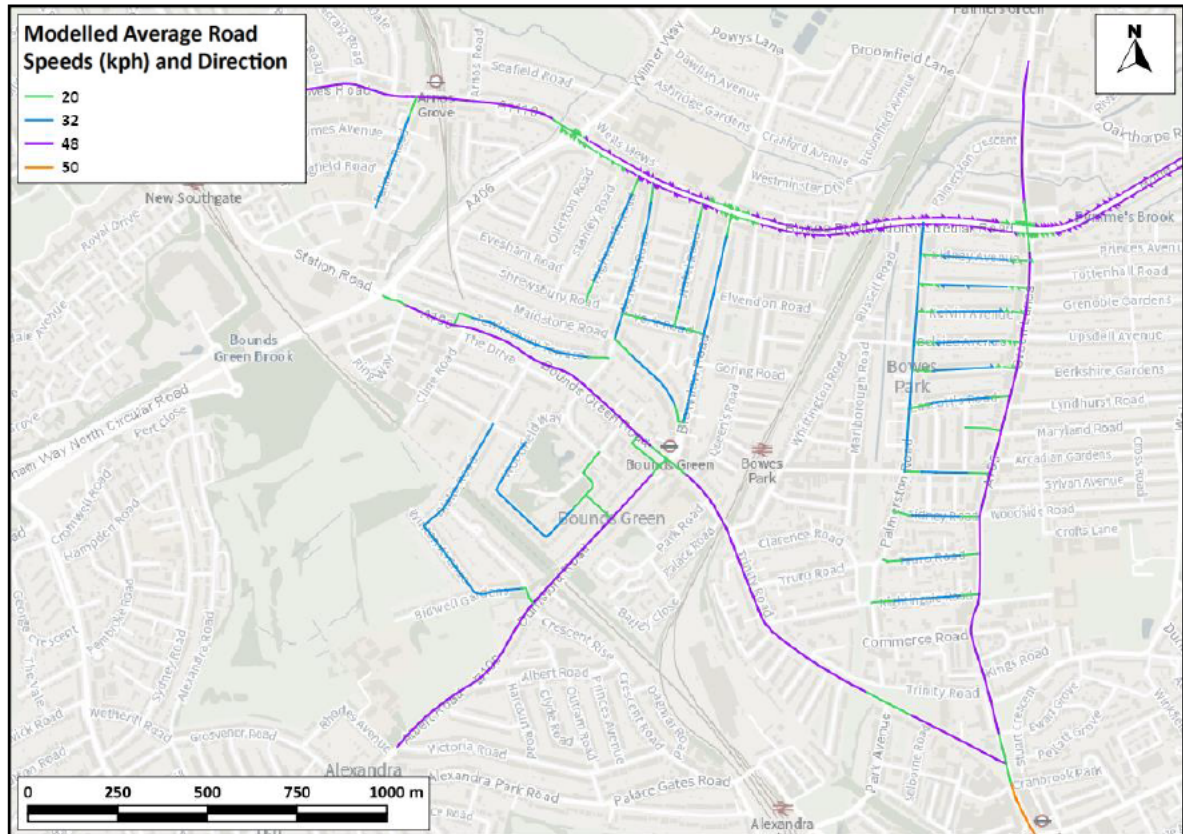


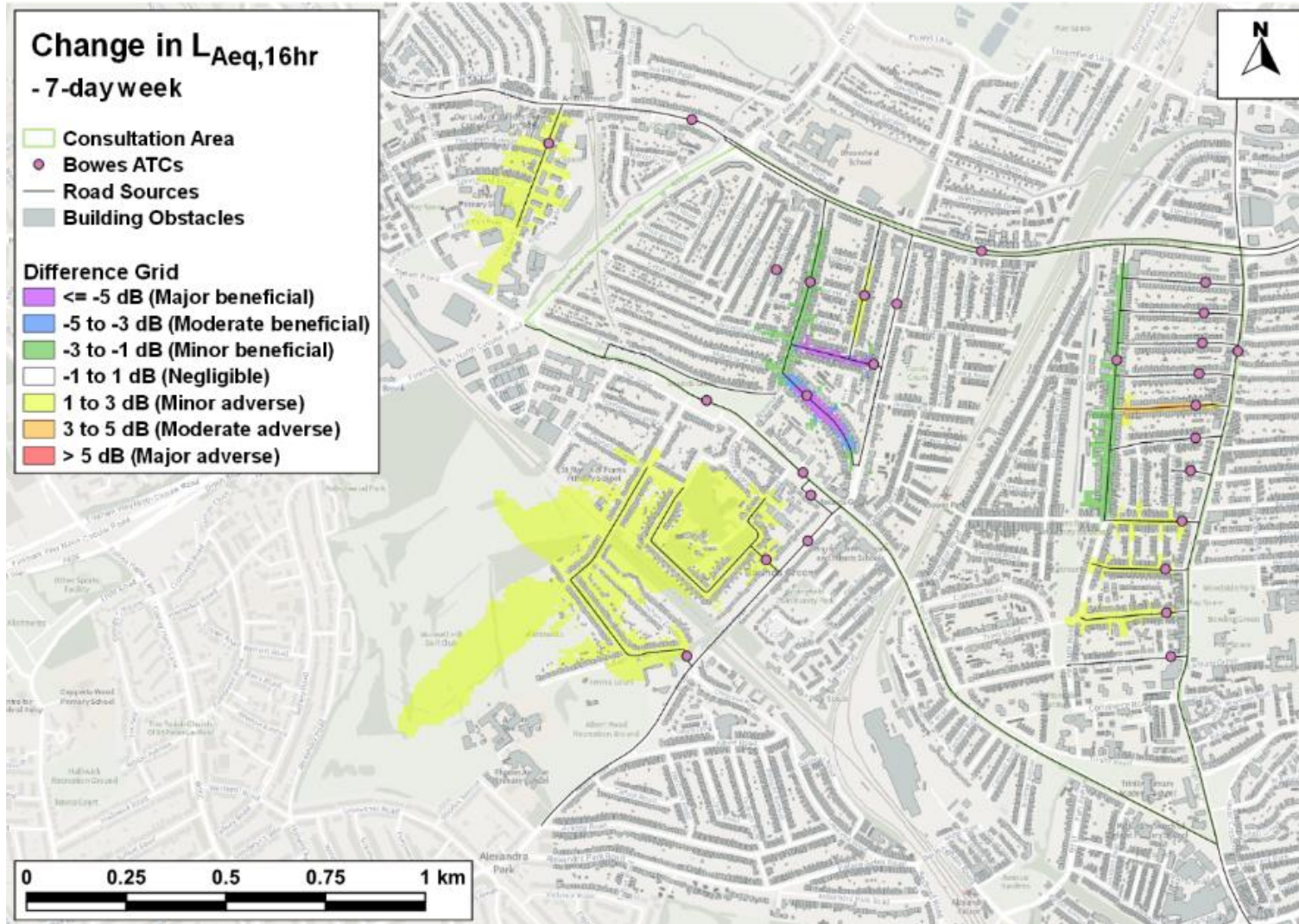
Figure A2.1: Modelled Road Network with Average Vehicle Speeds.

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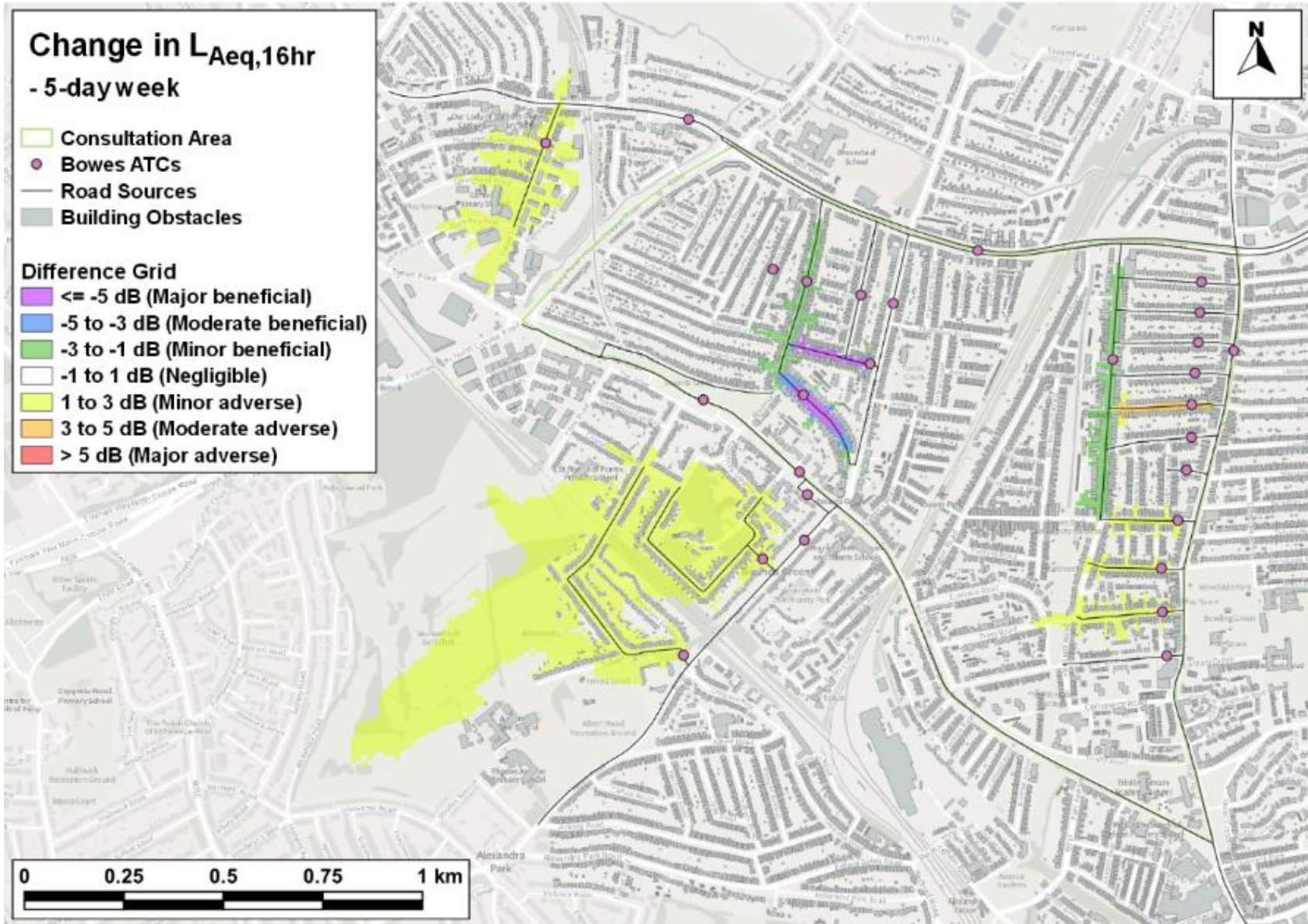
Post-processing

- A2.15 CNOSSOS-EU models were calculated in LimA® for the 'July Base' and 'November with Scheme' scenarios for each of the L_{day} , L_{eve} and L_{night} indicators. The model predicts the $L_{Aeq,T}$ in decibels (dB) at each square within the receptor grid. Once calculated, the L_{day} and L_{eve} results were combined to derive the $L_{Aeq,16hr}$ grids. The absolute differences were then calculated by subtracting the 'July Base' scenarios from the 'November with Scheme' scenarios, the results of which are presented in **Appendix A2.15**.

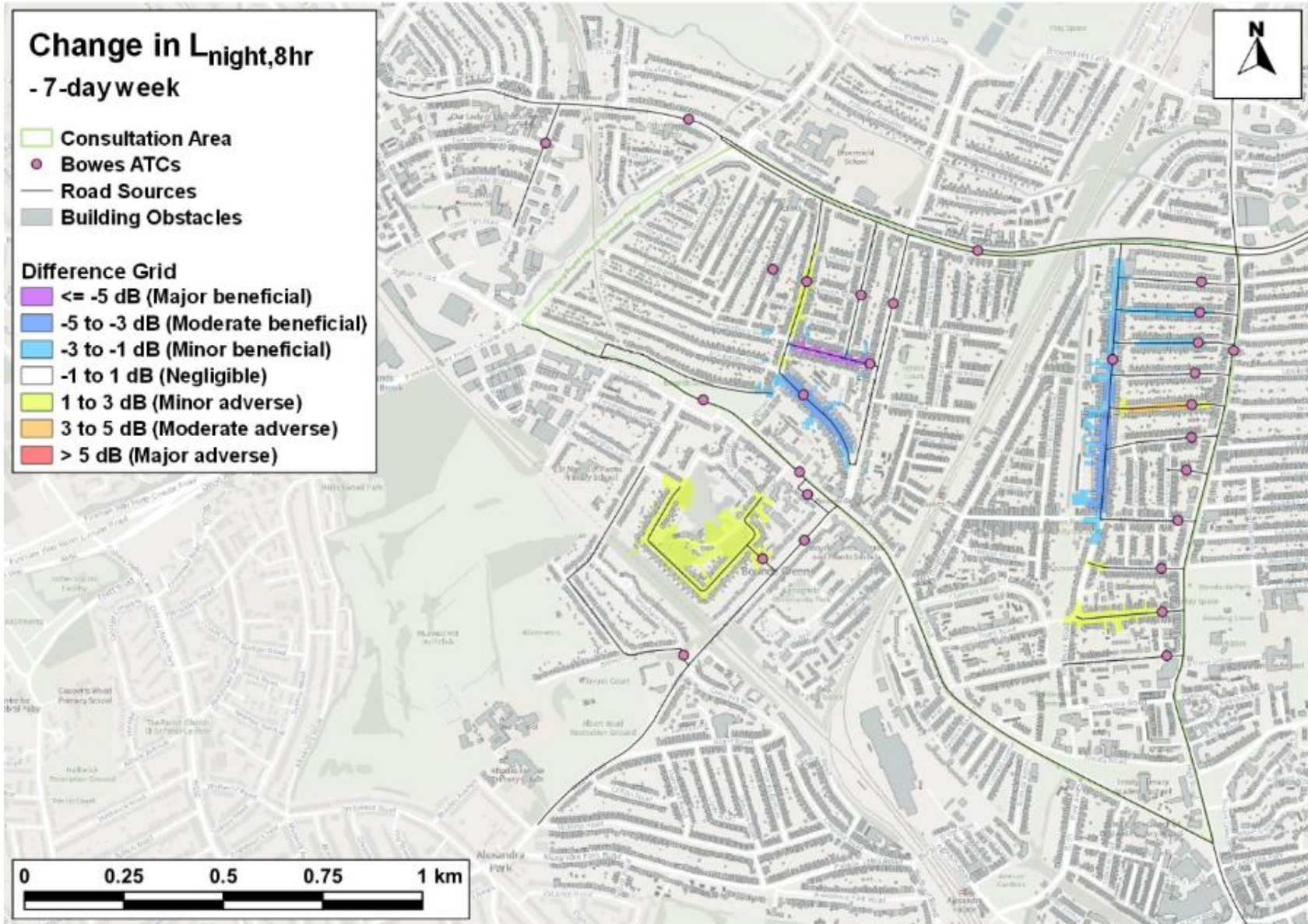
A3 Modelling Results



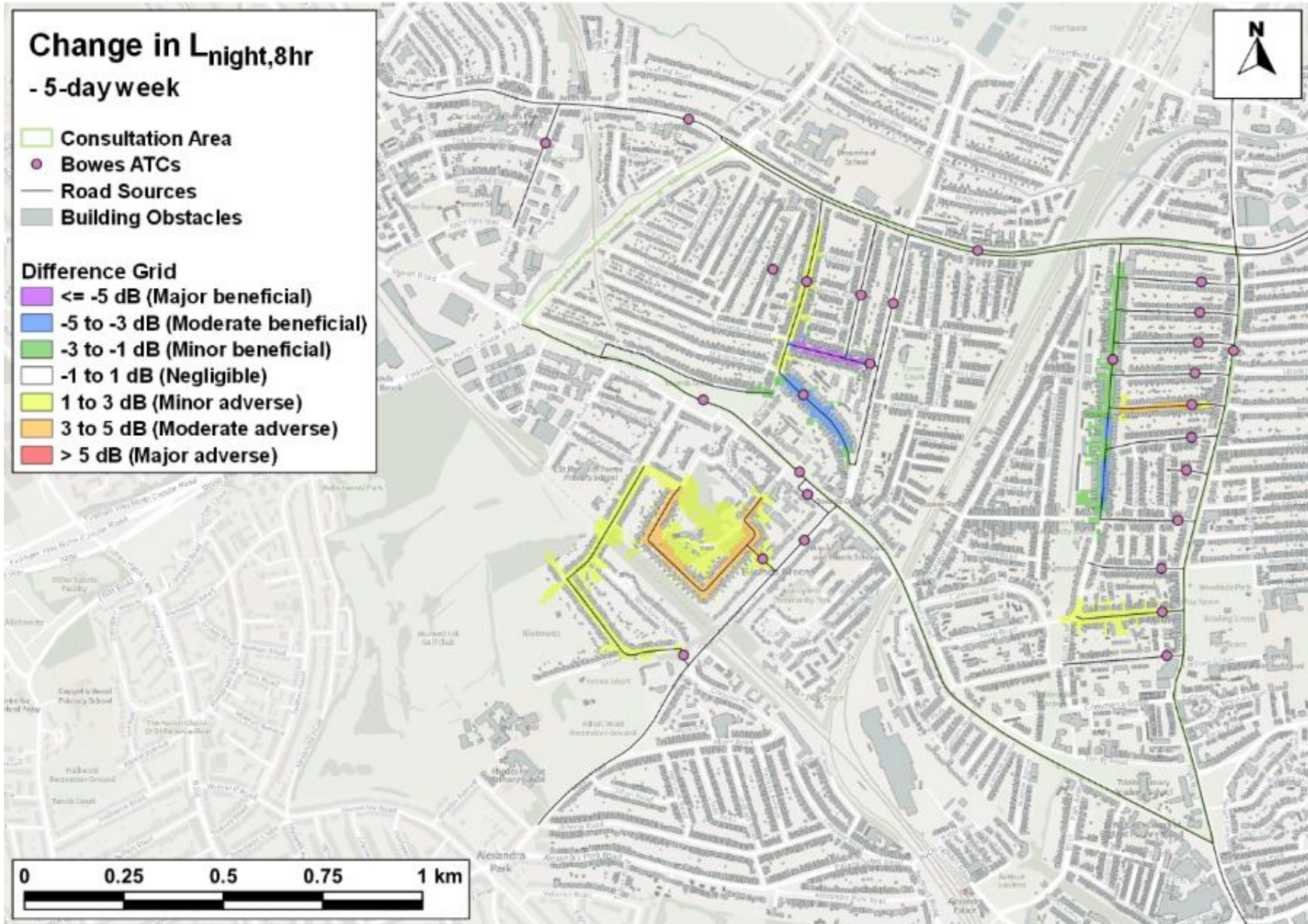
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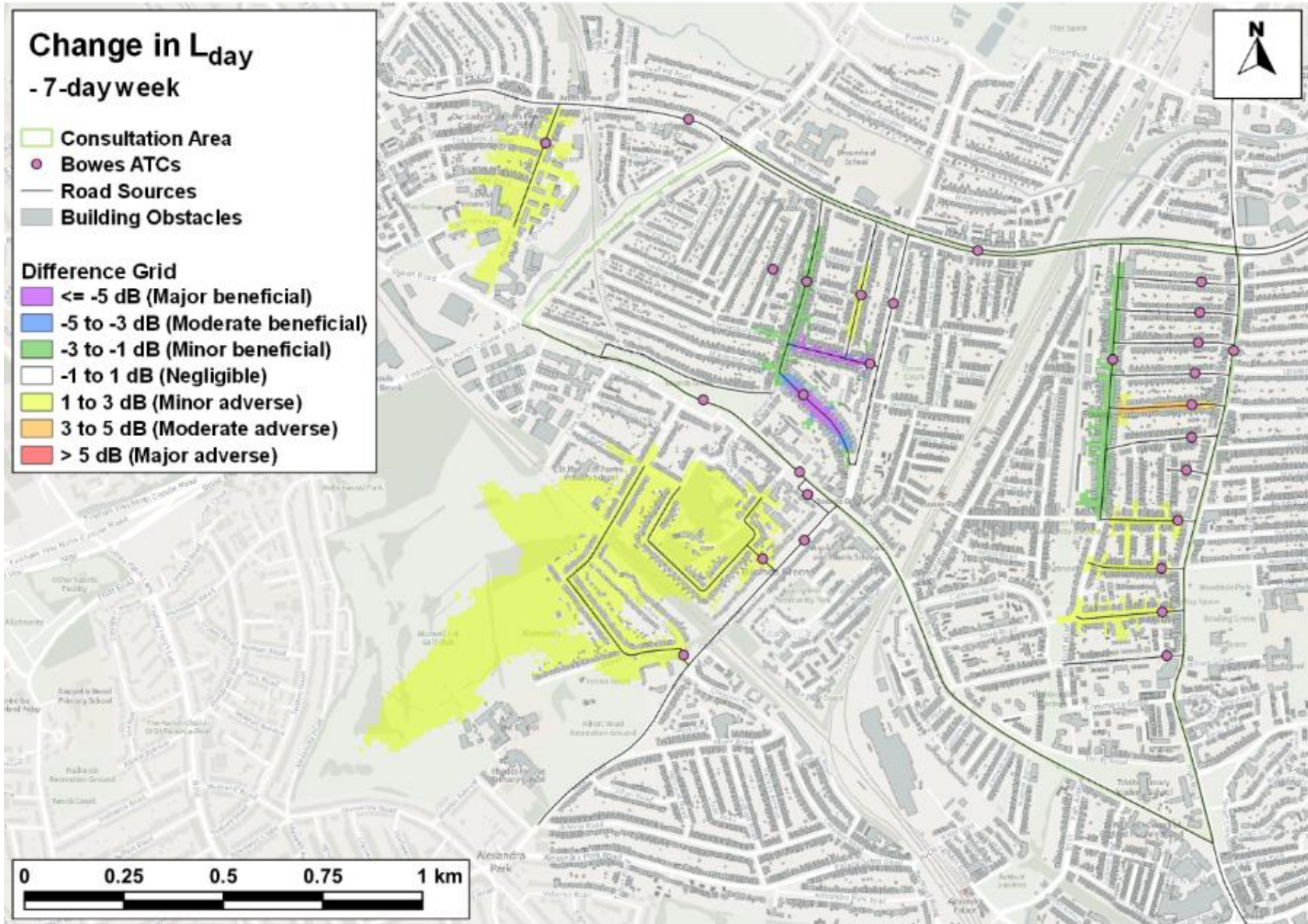
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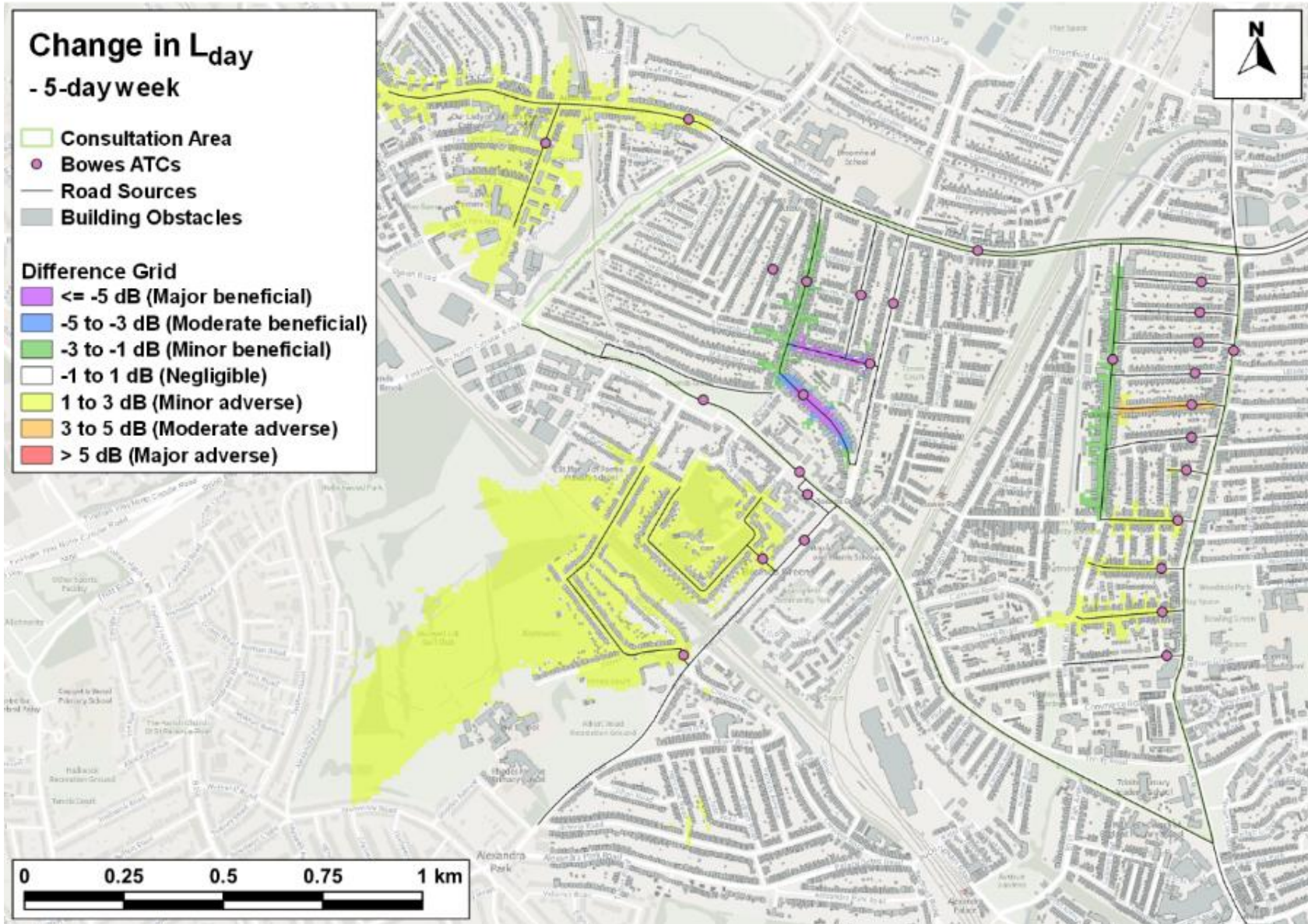
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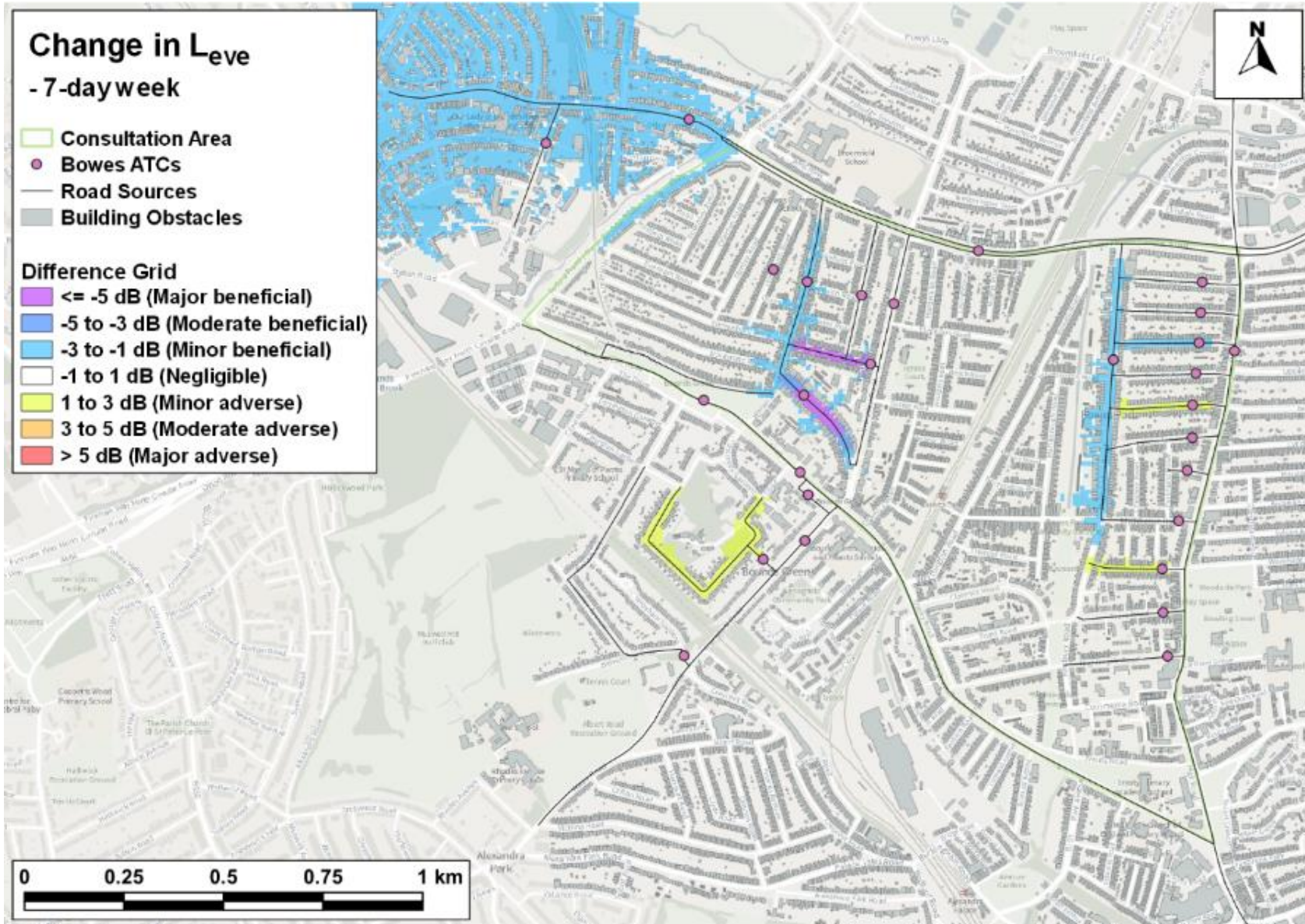
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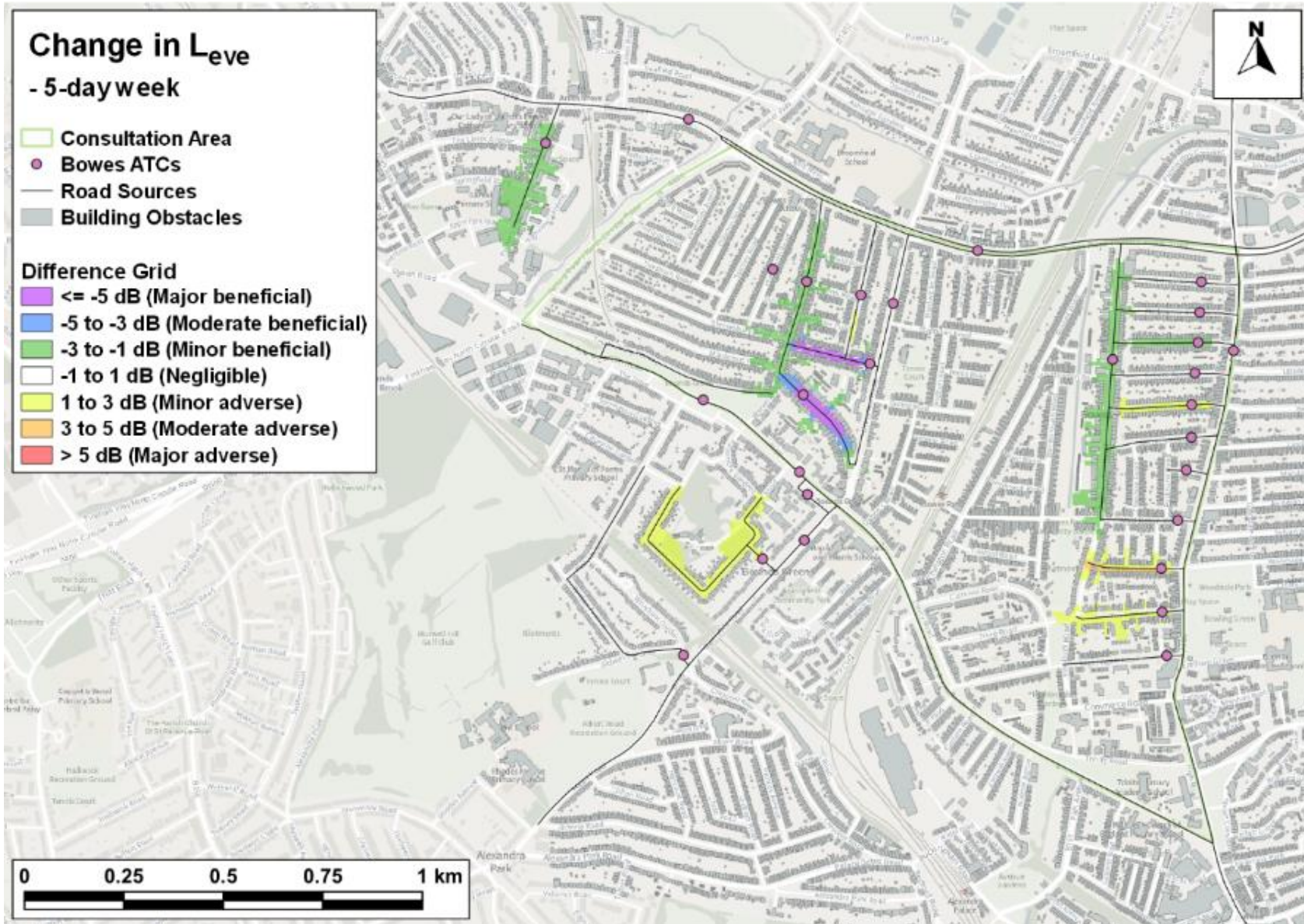
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Table A3.1: Absolute Noise Levels Before (July) and With the Scheme (November) for Road with Largest Predicted Changes, dB $L_{Aeq,T}$

		July				November			
		L_{day}	L_{eve}	L_{night}	$L_{Aeq,16hr}$	L_{day}	L_{eve}	L_{night}	$L_{Aeq,16hr}$
7-day week	York Road	73	67	64	72	71	64	62	70
	Maidstone Road	70	63	61	69	65	58	56	64
	Woodfield Way	70	62	59	69	72	63	61	71
	Palmerston Road	71	64	61	70	69	61	57	68
	Spencer Avenue	64	58	55	63	68	60	58	67
	Sidney Road	66	59	57	65	67	61	58	66
5-day week	York Road	74	67	65	73	72	65	62	71
	Maidstone Road	70	63	61	69	65	58	56	64
	Woodfield Way	71	63	59	70	73	63	62	72
	Palmerston Road	72	64	61	71	70	62	58	69
	Spencer Avenue	64	58	55	63	68	61	58	67
	Sidney Road	66	60	57	65	67	62	58	66

Table A3.2: Absolute Noise Levels for 7-day Week, dB dB L_{Aeq,T}

	July				November			
	L _{day}	L _{eve}	L _{night}	L _{Aeq,16hr}	L _{day}	L _{eve}	L _{night}	L _{Aeq,16hr}
Palmers Road	73.7	66.9	65.9	72.8	75.6	66.0	65.2	74.5
A1110 Bowes Road	81.3	77.9	74.9	80.7	82.2	75.2	74.0	81.3
Warwick Road	74.2	66.8	61.5	73.2	73.0	65.3	62.7	72.0
Natal Road	62.7	56.4	53.6	61.7	63.8	57.2	54.2	62.8
Brownlow Road	79.1	72.9	70.5	78.2	79.7	72.5	70.4	78.7
York Road	73.4	67.0	64.3	72.5	71.3	64.4	62.0	70.3
Maidstone Road	70.0	63.3	60.7	69.1	64.7	58.0	55.9	63.7
Bounds Green Road	83.0	76.9	76.0	82.1	83.4	76.4	75.8	82.5
Rhys Avenue	73.3	67.1	66.3	72.4	73.9	66.8	66.2	72.9
Durnsford Road	81.4	74.8	71.8	80.5	82.2	74.0	72.1	81.1
Woodfield Way	70.1	62.4	59.2	69.1	72.3	63.1	61.1	71.2
Palmerston Road	71.2	64.1	61.0	70.2	69.3	61.4	57.5	68.2
Green Lanes	83.3	78.6	77.9	82.5	83.7	78.3	77.4	82.9
Sidney Avenue	64.1	59.5	57.7	63.4	64.7	58.7	56.8	63.8
Melbourne Avenue	64.8	58.6	56.1	63.9	64.9	57.9	54.9	64.0
Spencer Avenue	64.1	57.6	55.0	63.1	67.6	60.3	58.0	66.6
Myddleton Road	70.0	64.6	61.6	69.2	71.3	64.6	61.9	70.4
Kelvin Avenue	68.9	62.8	59.8	68.0	68.6	61.5	58.8	67.6
Belsize Avenue	65.3	59.0	55.8	64.4	65.3	58.9	55.8	64.4
Lascott's Road	69.0	62.8	59.9	68.1	69.6	62.1	59.5	68.6
Marquis Road	65.8	59.8	57.3	64.9	66.8	59.7	56.7	65.8
Sidney Road	65.7	59.4	57.3	64.7	67.0	60.6	57.8	66.0
Truro Road	72.8	65.9	63.6	71.9	74.0	65.5	64.8	73.0
Nightingale Road	72.0	64.9	63.6	71.1	72.4	64.6	63.3	71.4
Wroxham / Bidwell Gdns	73.7	66.3	63.0	72.7	75.2	66.1	63.6	74.1
Tewkesbury Terrace	83.2	77.1	76.2	82.3	83.6	76.6	76.0	82.7
A406 Bowes Road / North Circular	88.2	84.7	83.2	87.5	88.5	84.3	82.7	87.8

Table A3.3: Absolute Noise Levels for 5-day Week, dB dB L_{Aeq,T}

	July				November			
	L _{day}	L _{eve}	L _{night}	L _{Aeq,16hr}	L _{day}	L _{eve}	L _{night}	L _{Aeq,16hr}
Palmers Road	74.2	67.2	66.2	73.3	76.4	66.0	65.5	75.3
A1110 Bowes Road	81.5	75.6	75.0	80.6	82.5	75.3	74.2	81.6
Warwick Road	74.9	67.2	60.9	73.9	73.3	65.3	62.8	72.3
Natal Road	63.1	56.5	53.5	62.2	64.0	57.4	54.2	63.1
Brownlow Road	79.4	72.9	70.7	78.4	80.0	72.6	70.8	79.0
York Road	73.8	66.9	64.5	72.8	71.5	64.6	62.3	70.5
Maidstone Road	70.4	63.2	60.8	69.4	65.1	57.7	56.1	64.1
Bounds Green Road	83.3	76.8	76.3	82.3	83.7	76.4	76.1	82.7
Rhys Avenue	73.6	67.1	66.7	72.7	74.1	66.8	66.6	73.1
Durnsford Road	81.7	74.8	71.9	80.7	82.5	74.2	72.6	81.5
Woodfield Way	70.7	62.6	59.3	69.6	72.8	63.3	61.6	71.8
Palmerston Road	71.6	64.3	61.0	70.6	69.7	61.8	58.0	68.7
Green Lanes	83.3	78.6	77.9	82.5	83.7	78.3	77.5	82.8
Sidney Avenue	64.0	59.6	57.5	63.3	64.8	58.8	56.8	63.9
Melbourne Avenue	64.9	58.5	55.8	64.0	65.1	57.7	55.0	64.1
Spencer Avenue	64.1	57.8	54.9	63.1	67.8	60.5	58.2	66.8
Myddleton Road	70.3	64.6	61.7	69.5	71.5	64.6	62.1	70.6
Kelvin Avenue	69.2	63.0	59.9	68.3	68.8	61.8	59.1	67.9
Belsize Avenue	65.4	59.2	55.9	64.5	65.4	59.2	56.1	64.5
Lascott's Road	69.1	62.8	59.7	68.2	69.9	62.0	59.5	68.8
Marquis Road	66.1	59.9	57.5	65.2	67.1	59.5	56.7	66.1
Sidney Road	66.2	59.7	57.4	65.3	67.3	62.0	57.7	66.4
Truro Road	73.4	65.3	64.3	72.3	74.7	66.2	65.7	73.7
Nightingale Road	72.9	65.2	64.0	71.9	72.8	64.7	63.6	71.8
Wroxham / Bidwell Gdns	74.1	66.4	63.1	73.1	75.6	66.1	64.0	74.5
Tewkesbury Terrace	83.5	77.0	76.5	82.5	83.9	76.6	76.3	82.9
A406 Bowes Road / North Circular	88.2	84.6	83.1	87.5	88.6	84.2	82.9	87.9



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Air Quality Assessment:
Bowes Primary Area
Quieter Neighbourhood
Scheme, Enfield

August 2021



Experts in air quality
management & assessment

Document Control

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1 Introduction

- 1.1 This report describes the potential air quality impacts associated with the Quieter Neighbourhood Scheme in Enfield. The assessment has been carried out by Air Quality Consultants Ltd on behalf of London Borough of Enfield (LB Enfield). This air quality assessment has been undertaken in conjunction with a noise assessment undertaken by AQC's sister company Noise Consultants Ltd.
- 1.2 The scheme was introduced in 2020 and, in alignment with the Mayor's Transport Strategy 2018 (GLA, 2018a), aims to reduce neighbourhood motor traffic, where "*through motor vehicle traffic is discouraged or removed*".
- 1.3 The assessment has been conducted using traffic data provided by LB Enfield, consisting of raw measured traffic flows over two seven-day periods in July and November 2020 (pre- and post-scheme implementation). This has been used to calculate the changes in traffic attributable to the scheme, and to estimate associated impacts on local air quality. The traffic data were processed into the appropriate format for air quality modelling through adjustments to represent an annual mean. Uncertainties associated with this process, as well as with other parameters that would have influenced measured traffic data (i.e. school holidays, the COVID pandemic), have, to some extent, been taken into account within the assessment and conclusions, as further discussed in this report.
- 1.4 This report describes existing local air quality conditions (base year 2019), and the predicted changes in pollutant concentrations at sensitive receptors with the scheme in place (assessment year 2020). The assessment focuses on nitrogen dioxide, PM₁₀ and PM_{2.5} as the main pollutants of concern.
- 1.5 The predicted annual mean pollutant concentrations at selected receptors, with and without the scheme in place in 2020, and associated impacts, are also described in full in Appendix A5.
- 1.6 This report has been prepared taking into account all relevant local and national guidance and regulations.

¹ Further information about the Quieter Neighbourhoods scheme can be found at:
<https://new.enfield.gov.uk/services/improving-enfield/quieter-neighbourhoods/>

2 Policy Context and Assessment Criteria

- 2.1 All European legislation referred to in this report is written into UK law and will remain in place, although there is uncertainty at this point in time as to who will enforce the requirements of some of this legislation.

Air Quality Strategy

- 2.2 The Air Quality Strategy (Defra, 2007) published by the Department for Environment, Food, and Rural Affairs (Defra) and Devolved Administrations, provides the policy framework for air quality management and assessment in the UK. It provides air quality standards and objectives for key air pollutants, which are designed to protect human health and the environment. It also sets out how the different sectors: industry, transport and local government, can contribute to achieving the air quality objectives. Local authorities are seen to play a particularly important role. The strategy describes the Local Air Quality Management (LAQM) regime that has been established, whereby every authority has to carry out regular reviews and assessments of air quality in its area to identify whether the objectives have been, or will be, achieved at relevant locations, by the applicable date. If this is not the case, the authority must declare an Air Quality Management Area (AQMA), and prepare an action plan which identifies appropriate measures that will be introduced in pursuit of the objectives.

Clean Air Strategy 2019

- 2.3 The Clean Air Strategy (Defra, 2019) sets out a wide range of actions by which the UK Government will seek to reduce pollutant emissions and improve air quality. Actions are targeted at four main sources of emissions: Transport, Domestic, Farming and Industry. At this stage, there is no straightforward way to take account of the expected future benefits to air quality within this assessment.

Reducing Emissions from Road Transport: Road to Zero Strategy

- 2.4 The Office for Low Emission Vehicles (OLEV) and Department for Transport (DfT) published a Policy Paper (DfT, 2018) in July 2018 outlining how the government will support the transition to zero tailpipe emission road transport and reduce tailpipe emissions from conventional vehicles during the transition. This paper affirms the Government's pledge to end the sale of new conventional petrol and diesel cars and vans by 2040, and states that the Government expects the majority of new cars and vans sold to be 100% zero tailpipe emission and all new cars and vans to have significant zero tailpipe emission capability by this year, and that by 2050 almost every car and van should have zero tailpipe emissions. It states that the Government wants to see at least 50%, and as many as 70%, of new car sales, and up to 40% of new van sales, being ultra-low emission by 2030.

- 2.5 The paper sets out a number of measures by which Government will support this transition, but is clear that Government expects this transition to be industry and consumer led. The Government has since announced that the phase-out date for the sale of new petrol and diesel cars and vans will be brought forward to 2030 and that all new cars and vans must be fully zero emission at the tailpipe from 2035. If these ambitions are realised then road traffic-related NOx emissions can be expected to reduce significantly over the coming decades, likely beyond the scale of reductions forecast in the tools utilised in carrying out this air quality assessment.

Planning Policy

National Policies

- 2.6 The National Planning Policy Framework (NPPF) (2021) sets out planning policy for England. It states that the purpose of the planning system is to contribute to the achievement of sustainable development, and that the planning system has three overarching objectives, one of which (Paragraph 8c) is an environmental objective:

“to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy”.

- 2.7 To prevent unacceptable risks from air pollution, Paragraph 174 of the NPPF states that:

“Planning policies and decisions should contribute to and enhance the natural and local environment by...preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air quality”.

- 2.8 Paragraph 185 states:

“Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development”.

- 2.9 More specifically on air quality, Paragraph 186 makes clear that:

“Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic

approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan”.

- 2.10 The NPPF is supported by Planning Practice Guidance (PPG) (Ministry of Housing, Communities & Local Government, 2019), which includes guiding principles on how planning can take account of the impacts of new development on air quality. The PPG states that:

“Defra carries out an annual national assessment of air quality using modelling and monitoring to determine compliance with Limit Values. It is important that the potential impact of new development on air quality is taken into account where the national assessment indicates that relevant limits have been exceeded or are near the limit, or where the need for emissions reductions has been identified”.

- 2.11 Regarding plan-making, the PPG states:

“It is important to take into account air quality management areas, Clean Air Zones and other areas including sensitive habitats or designated sites of importance for biodiversity where there could be specific requirements or limitations on new development because of air quality”.

- 2.12 The role of the local authorities through the LAQM regime is covered, with the PPG stating that a local authority Air Quality Action Plan *“identifies measures that will be introduced in pursuit of the objectives and can have implications for planning”.*

London-Specific Policies

- 2.13 The key London-specific policies are summarised below, with more detail provided, where required, in Appendix A1.

The London Plan

- 2.14 The London Plan (GLA, 2021) sets out an integrated economic, environmental, transport and social framework for the development of London over the next 20-25 years. The key policy relating to air quality is Policy SI1 on *Improving air quality*, Part B1 of which sets out key requirements for developments, including:

*An air quality positive approach is linked to other policies in the London Plan, such as **Healthy Streets**, energy masterplanning and green infrastructure.*

- 2.15 Policy D8 Public Realm recognises that:

The specific balance between the different functions of any one space, such as its place-based activities, its function to facilitate movement and its ability to accommodate different uses of the kerbside, should be at the heart of how the space is designed and managed. The Mayor’s Healthy Streets Approach explains how the design and management of streets can support a wide range of activities in the public realm as well as encourage and facilitate a shift to active travel.

2.16 Healthy Streets also has its own policy, T2, which states that:

A Development proposals and Development Plans should deliver patterns of land use that facilitate residents making shorter, regular trips by walking or cycling.

B Development Plans should: 1) promote and demonstrate the application of the Mayor's Healthy Streets Approach to: improve health and reduce health inequalities; reduce car dominance, ownership and use, road danger, severance, vehicle emissions and noise; increase walking, cycling and public transport use; improve street safety, comfort, convenience and amenity; and support these outcomes through sensitively designed freight facilities. 2) identify opportunities to improve the balance of space given to people to dwell, walk, cycle, and travel on public transport and in essential vehicles, so space is used more efficiently and streets are greener and more pleasant.

London Environment Strategy

2.17 The London Environment Strategy was published in May 2018 (GLA, 2018b). The strategy considers air quality in Chapter 4; the Mayor's main objective is to create a "zero emission London by 2050". Policy 4.2.1 aims to "reduce emissions from London's road transport network by phasing out fossil fuelled vehicles, prioritising action on diesel, and enabling Londoners to switch to more sustainable forms of transport". An implementation plan for the strategy has also been published which sets out what the Mayor will do between 2018 and 2023 to help achieve the ambitions in the strategy.

Mayor's Transport Strategy

2.18 The Mayor's Transport Strategy (GLA, 2018a) sets out the Mayor's policies and proposals to reshape transport in London over the next two decades. The Strategy focuses on reducing car dependency and increasing active sustainable travel, with the aim of improving air quality and creating healthier streets. It notes that development proposals should "be designed so that walking and cycling are the most appealing choices for getting around locally".

Air Quality Focus Areas

2.19 The GLA has identified 183 air quality Focus Areas in London as part of the 2016 update to the London Atmospheric Emissions Inventory (LAEI). These are locations that not only exceed the EU annual mean limit value for nitrogen dioxide, but also have high levels of human exposure. They do not represent an exhaustive list of London's air quality hotspot locations, but locations where the GLA believes the problem to be most acute. They are also areas where the GLA considers there to be the most potential for air quality improvements and are, therefore, where the GLA and Transport for London (TfL) will focus actions to improve air quality. The 'A406 North Circular between Bowes Road and Great Cambridge' and 'Bound Green A109 junction with Durnsford/Brownlow Road B106' Air Quality Focus Areas are situated within the study area, as shown on Figure 5.

Local Transport Plan

2.20 LB Enfield has published their Transport Plan in 2019 (LB Enfield, 2019). It sets out how the Council will improve travel to, from and within the Borough, and forms the basis of the Council's third Local Implementation Plan. Objective O3 of the Plan is to *"monitor air quality and develop and deliver interventions which address local issues"*. Objective O7 is to *"maintain and improve the transport network in Enfield including developing potential interventions."* with a view to *"provide an enhanced transport network and significantly enhanced streetscape environments with associated environmental (air quality and emission) benefits as well as health benefits."* A series of actions have been defined under each of these objectives, including:

- *"Work with TfL to develop plans for appropriate emergency measures to be undertaken to reduce or restrict vehicle use when forecast or actual periods of very high air pollution occur, for example, to tackle non-essential vehicle use or engine idling;*
- *Reliable and resilient charging infrastructure to support uptake of electric vehicles with a focus on rapid and fast charging points in strategic locations;*
- *Reducing traffic volumes by encouraging mode shift from travelling by car to walking, cycling and public transport;*
- *Continue to make the pedestrian environment more accessible to people with buggies, pushchairs and those using wheelchairs; and*
- *Provide a low speed environment"*.

Local Policies

2.21 The Core Strategy (LB Enfield, 2010) was adopted in November 2010, and within this there is one policy which refer to air quality. Core policy 32 refers to pollution and states that LB Enfield:

"...will work with its partners to minimise air, water, noise and light [...]. In particular, new development will be required to improve air quality by reducing pollutant emissions and public exposure to pollution, particularly in areas identified as having poor air quality in the Air Quality Action Plan. Criteria for assessing applications will be set out in the Development Management Document. The area action plans, particularly the North Circular Area Action Plan, will consider how pollution can be reduced or successfully mitigated against at a local level..."

2.22 LB Enfield is currently working on their new Local Plan. A consultation document (LB Enfield, 2021) was published in June 2021. One of the strategic objectives is *"To ensure the delivery of a joined-up, liveable and inclusive public realm network by requiring development to improve its connectivity, legibility, permeability, accessibility and visual appearance. To make walking and cycling the natural choice by embedding the healthy streets approach into new developments."*

2.23 Strategic Policy SC1 states that:

“Proposals will be expected to contribute to healthy and active lifestyles and include measures to reduce health inequalities through the provision of:

a. access to sustainable modes of travel, including safe cycling routes, attractive walking route and easy access to public transport to reduce car dependency; [...]

e. an inclusive development layout and public realm that considers the needs of all, including the older population and disabled people; and

f. active design principles which supports wellbeing and greater physical movement as part of everyday routines.”

2.24 Strategic Policy ENV1 on Local Environmental Protection states that:

“New developments should contribute to the health and wellbeing of existing and future occupiers by mitigating the adverse negative impacts of noise and other pollution generating nuisances on the environment and on the quality of life of residents [...].”

Air Quality Action Plans

National Air Quality Plan

2.25 Defra has produced an Air Quality Plan to tackle roadside nitrogen dioxide concentrations in the UK (Defra, 2017); a supplement to the 2017 Plan (Defra, 2018a) was published in October 2018 and sets out the steps Government is taking in relation to a further 33 local authorities where shorter-term exceedances of the limit value were identified. Alongside a package of national measures, the 2017 Plan and the 2018 Supplement require those identified English Local Authorities (or the GLA in the case of London Authorities) to produce local action plans and/or feasibility studies. These plans and feasibility studies must have regard to measures to achieve the statutory limit values within the shortest possible time, which may include the implementation of a CAZ. There is currently no straightforward way to take account of the effects of the 2017 Plan or 2018 Supplement in the modelling undertaken for this assessment; however, consideration has been given to whether there is currently, or is likely to be in the future, a limit value exceedance in the study area. This assessment has principally been carried out in relation to the air quality objectives, rather than the EU limit values that are the focus of the Air Quality Plan.

Local Air Quality Action Plan

2.26 The LB Enfield Air Quality Action Plan (LB Enfield, n/a) sets out a series of measures by which they will seek to achieve the air quality objectives in their AQMA. A series of measures concern transport, including Action 6 to *“Work with TfL to improve strategic roads, particularly the A406 North Circular”* and Action 15 which targets the development of *“a high-quality network of ‘Greenway’ cycle and*

walking routes using parks, open spaces, quiet traffic routes, and 20mph zones.” The Air Quality Action Plan is currently being reviewed and updated.

Assessment Criteria

- 2.27 The Government has established a set of air quality standards and objectives to protect human health. The ‘standards’ are set as concentrations below which effects are unlikely even in sensitive population groups, or below which risks to public health would be exceedingly small. They are based purely upon the scientific and medical evidence of the effects of an individual pollutant. The ‘objectives’ set out the extent to which the Government expects the standards to be achieved by a certain date. They take account of economic efficiency, practicability, technical feasibility and timescale. The objectives for use by local authorities are prescribed within the Air Quality (England) Regulations (2000) and the Air Quality (England) (Amendment) Regulations (2002).
- 2.28 The UK-wide objectives for nitrogen dioxide and PM₁₀ were to have been achieved by 2005 and 2004 respectively, and continue to apply in all future years thereafter. The PM_{2.5} objective was to be achieved by 2020. Measurements across the UK have shown that the 1-hour nitrogen dioxide objective is unlikely to be exceeded at roadside locations where the annual mean concentration is below 60 µg/m³ (Defra, 2018b). Therefore, 1-hour nitrogen dioxide concentrations will only be considered if the annual mean concentration is above this level.
- 2.29 The objectives apply at locations where members of the public are likely to be regularly present and are likely to be exposed over the averaging period of the objective. Defra explains where these objectives will apply in its Local Air Quality Management Technical Guidance (Defra, 2018b). The annual mean objectives for nitrogen dioxide and PM₁₀ are considered to apply at the façades of residential properties, schools, hospitals etc.; they do not apply at hotels. The 24-hour mean objective for PM₁₀ is considered to apply at the same locations as the annual mean objective, as well as in gardens of residential properties and at hotels. The 1-hour mean objective for nitrogen dioxide applies wherever members of the public might regularly spend 1-hour or more, including outdoor eating locations and pavements of busy shopping streets.
- 2.30 EU Directive 2008/50/EC (The European Parliament and the Council of the European Union, 2008) sets limit values for nitrogen dioxide, PM₁₀ and PM_{2.5}, and is implemented in UK law through the Air Quality Standards Regulations (2010). The limit values for nitrogen dioxide are the same numerical concentrations as the UK objectives, but achievement of these values is a national obligation rather than a local one. In the UK, only monitoring and modelling carried out by UK Central Government meets the specification required to assess compliance with the limit values. Central Government does not normally recognise local authority monitoring or local modelling studies when determining the likelihood of the limit values being exceeded, unless such studies have been audited and approved by Defra and DfT’s Joint Air Quality Unit (JAQU).
- 2.31 The relevant air quality criteria for this assessment are provided in Table 1.

Table 1: Air Quality Criteria for Nitrogen Dioxide, PM₁₀ and PM_{2.5}

Pollutant	Time Period	Objective
Nitrogen Dioxide	1-hour Mean	200 µg/m ³ not to be exceeded more than 18 times a year
	Annual Mean	40 µg/m ³
Fine Particles (PM ₁₀)	24-hour Mean	50 µg/m ³ not to be exceeded more than 35 times a year
	Annual Mean	40 µg/m ³ ^a
Fine Particles (PM _{2.5}) ^b	Annual Mean	25 µg/m ³

^a A proxy value of 32 µg/m³ as an annual mean is used in this assessment to assess the likelihood of the 24-hour mean PM₁₀ objective being exceeded. Measurements have shown that, above this concentration, exceedances of the 24-hour mean PM₁₀ objective are possible (Defra, 2018b).

^b The PM_{2.5} objective, which was to be met by 2020, is not in Regulations and there is no requirement for local authorities to meet it.

Descriptors for Air Quality Impacts and Assessment of Significance

2.32 There is no official guidance in the UK in relation to development control on how to describe air quality impacts, nor how to assess their significance. The approach developed jointly by Environmental Protection UK (EPUK) and the Institute of Air Quality Management (IAQM)² (Moorcroft and Barrowcliffe et al, 2017) has therefore been used. This includes defining descriptors of the impacts at individual receptors, which take account of the percentage change in concentrations relative to the relevant air quality objective, rounded to the nearest whole number, and the absolute concentration relative to the objective. The overall significance of the air quality impacts is determined using professional judgement, taking account of the impact descriptors. Full details of the EPUK/IAQM approach are provided in Appendix A2. The approach includes elements of professional judgement, and the experience of the consultants preparing the report is set out in Appendix A3.

² The IAQM is the professional body for air quality practitioners in the UK.

3 Assessment Approach

Proposed Scheme

- 3.1 Residents in the Bowes Primary & Surrounding Streets Quieter Neighbourhood Area have raised concerns with Enfield Council over traffic issues in the area for many years. In 2019 the Council engaged residents in the Bowes Primary & Surrounding Streets Quieter Neighbourhood Area through a Perception Survey to better understand the issues that they were experiencing. In response, LB Enfield has implemented a scheme which aims to moderate the speed and volume of traffic and remove through traffic on primary roads within the project area. To that effect, a series of measures have been proposed to divert through traffic from these minor roads onto 'key distributor roads'.
- 3.2 The scheme will be delivered in phases, as shown on Figure 1 below.

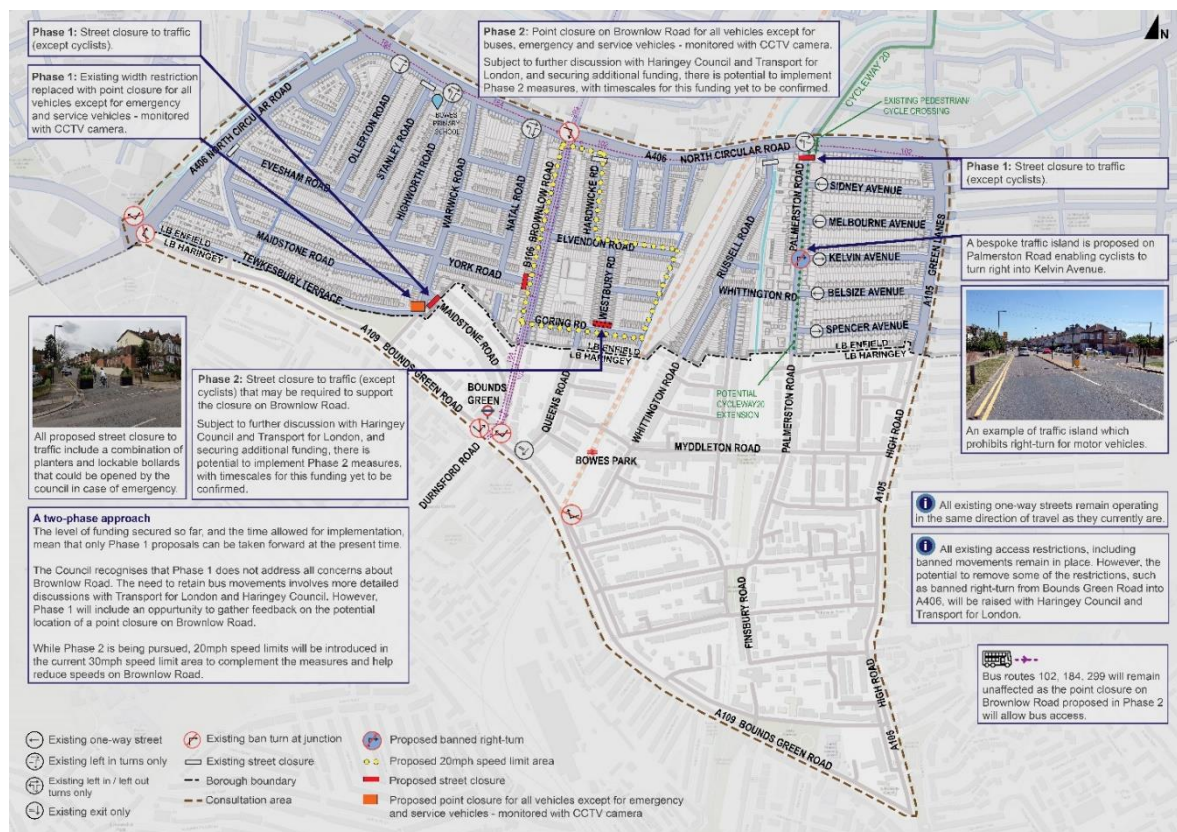


Figure 1: Enfield Quieter Neighbourhood Study Area

- 3.3 Phase 1 of the scheme started in 2020, with the road closures to motor vehicles at the following locations:

- Maidstone Road at its junction with Warwick Road
- York Road at its junction with Brownlow Road

- Palmerston Road northbound at its junction with the A406 North Circular Road
- Existing width restriction on Warwick Road, near its junction with Maidstone Road, replaced with point closure for all vehicles except for emergency vehicles and service vehicles

3.4 In order to monitor the scheme's impact on vehicle flows, traffic counts were commissioned by LB Enfield for one week prior to the scheme being implemented (in July 2020), and one week after implementation of the scheme (in November 2020). The monitored roads and consultation area are shown in Figure 2 below. In addition, Automatic Traffic Counts (ATCs) 34 and 39 located on the North Circular Road, and operated by Transport for London (TfL), were also used to supplement LB Enfield data (ATC34) and in processing the traffic data measured by the ATCs commissioned by LB Enfield (ATC39). The location of these two ATCs is displayed in Figure 3.

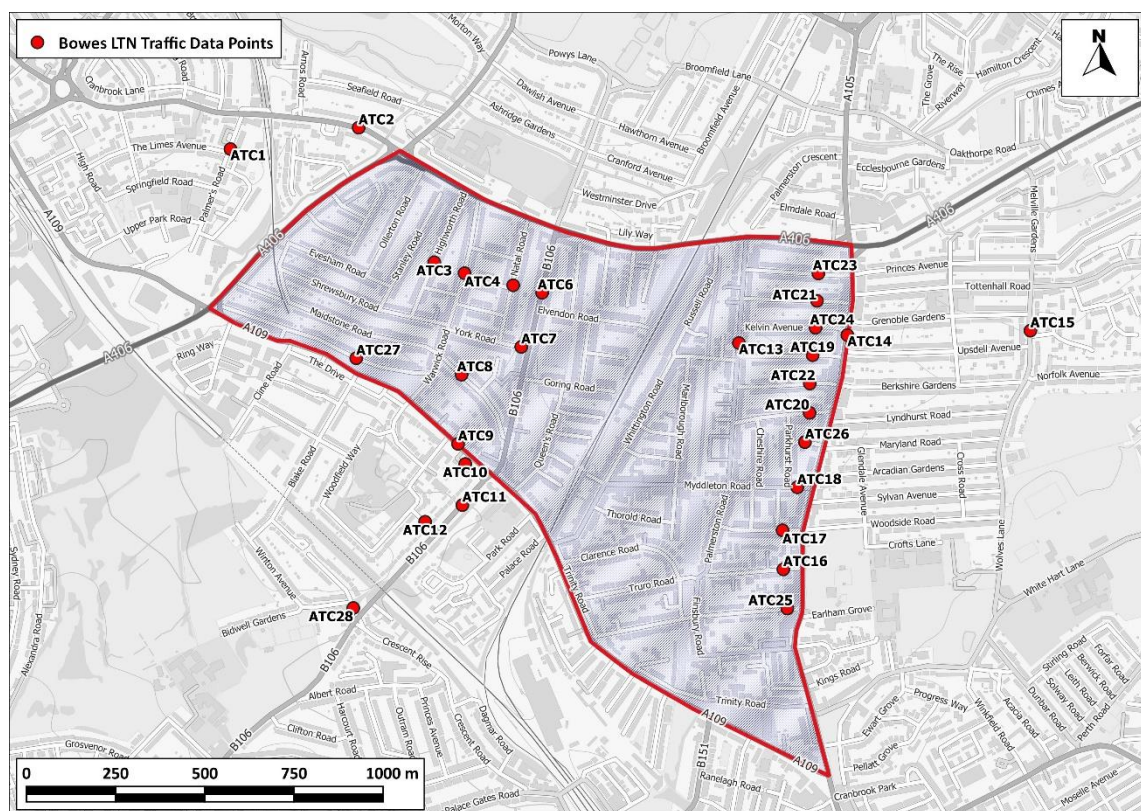


Figure 2: Monitored Roads and Extent of Study Area

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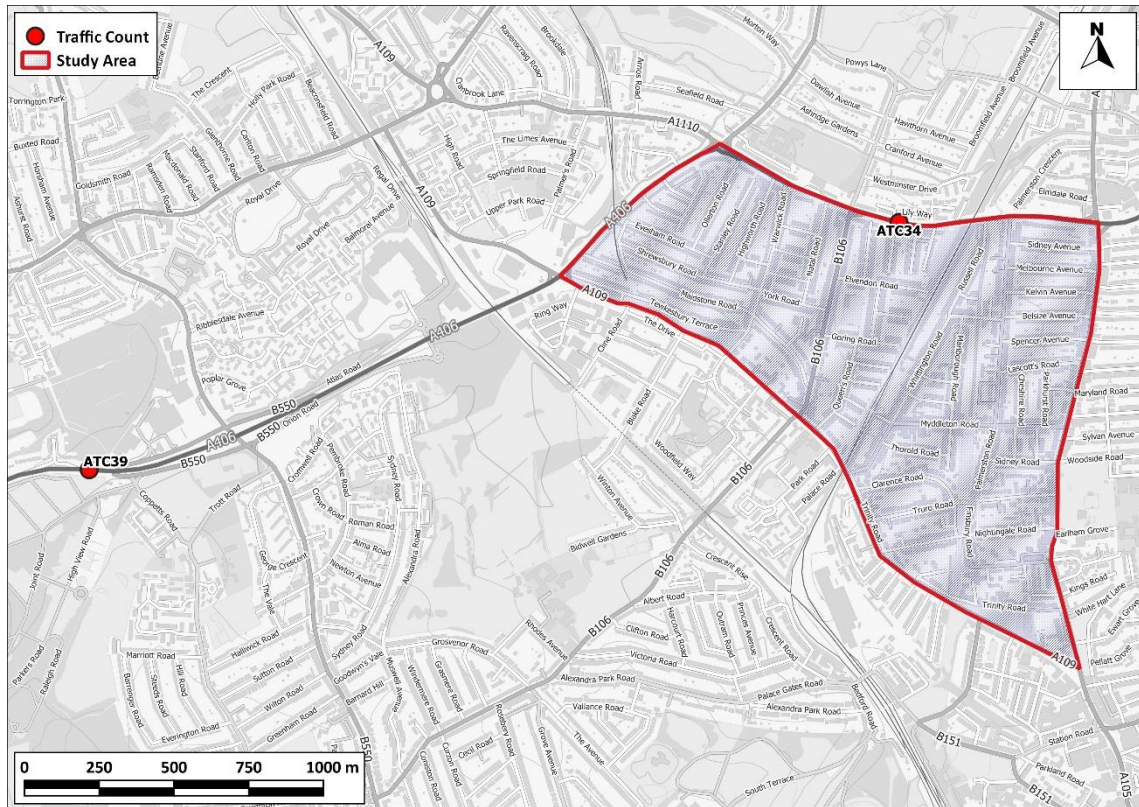


Figure 3: Locations of Automatic Traffic Counts 34 and 39

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- 3.5 The re-distribution of traffic on local roads associated with the scheme may affect air pollutant concentrations that local residents and users are exposed to. The impacts of the proposed schemes on air quality have thus been assessed using detailed dispersion modelling and traffic data obtained by the commissioned survey prior to and after the implementation of the scheme.

Assessment Scenarios

- 3.6 Nitrogen dioxide, PM₁₀ and PM_{2.5} concentrations have been predicted for a base year (2019) and with and without the scheme operating in 2020.

Modelling Methodology

- 3.7 Concentrations have been predicted using the ADMS-Roads dispersion model. Details of the model inputs, assumptions and the verification are provided in Appendix A4. Where assumptions have been made, a realistic worst-case approach has been adopted.

Traffic Data and Emissions Calculation

- 3.8 Traffic data for the assessment have been informed by 26 traffic counts provided by LB Enfield³, and supplemented by data collected by TfL at two traffic counts (ATC 34 and ATC39, both situated on the North Circular Road). The dispersion model used to predict annual mean pollutant concentrations throughout the study area uses traffic and meteorological data that are defined for a given calendar year, in order that the outputs can be compared to the air quality objectives, which in the case of this study are expressed as annual means. It has therefore been necessary to process the raw traffic data collected over 7 days into Annual Average Daily Traffic (AADT) flows; the format required for input into the dispersion model. The annualisation process addresses the seasonal variations in traffic, and how this could have impacted the recorded number of vehicles over the two seven-days traffic counts undertaken by LB Enfield. In this instance, the traffic flows in July would have been affected by Covid restrictions and school holidays (schools were only open to certain year groups in July and many would have already started school holidays), whilst the counts undertaken in November would have been impacted by Covid restrictions (the second lockdown), thus both sets of data have recorded lower levels of traffic compared to those normally experienced for these times of the year. If the daily traffic flows had been calculated simply by dividing the traffic recorded over seven days by seven, the numbers obtained would not have been representative of an average over 2020 and would have instead reflected the conditions during the seven days in July and November. Annualising the 7-days of data for July and November to the year 2020 has 'evened out' the data and thus addressed any seasonal variation or impact of lockdown between the two sets of data, allowing for the comparison between the predicted 'without scheme' and 'with scheme' pollutant concentrations.
- 3.9 AADT flows were calculated for each of the 26 traffic counts for the 2019 baseline, 2020 without scheme and 2020 with scheme scenarios by annualising measured data to the year of interest⁴. For the 2019 baseline and 2020 without scheme scenarios, the raw data collected in July 2020 was used, whilst data collected in November 2020 was used for the 2020 with scheme scenario. Three annualisation factors were calculated using data from ATC 39 operated by TfL; one for each scenario considered. ATC 39 was selected as it is not located within the study area and traffic flows measured at that location are not affected by the scheme. It is therefore a 'reference' traffic count, suitable for the annualisation process. To provide an example, in order to annualise the 7 days of data collected at LB Enfield's ATC1 in July 2020 to the year 2019 (to obtain the 2019 baseline AADT data), the number of vehicles counted at ATC 39 over the same seven days in July were compared against the total number of vehicles counted at ATC39 in 2019, to obtain an adjustment factor (traffic over 7

³ Two additional traffic counts were deployed for the traffic monitoring survey, but were omitted from the assessment due to low data capture (ATC 3 and ATC15).

⁴ For 2020, flows were 'annualised' to the period 1st January 2020 to 24th November 2020, in the absence of traffic data covering the period 25th November to 31st December 2020.

days / traffic for the calendar year). This factor was then applied to the number of vehicles counted at ATC1 over the seven days in July 2020 to obtain an estimated total number of vehicles for the year 2019 on that road. The AADT is then obtained by dividing that number by 365 (i.e. the number of days in a year). This process is referred to as 'annualisation' of the traffic data and allows estimating an average daily number of vehicles over a calendar year, from a smaller set of data. This process was repeated for each of the 26 ATCs forming part of the study, and for the three scenarios considered (2019 baseline, 2020 without scheme and 2020 with scheme).

- 3.10 Because of the absence of any baseline traffic data representative of a 'typical' year for the minor roads within the study area, the traffic data were annualised using ATC39, as described above, which is situated on a road with higher traffic flows. For the 2019 baseline flows, this adjustment used 2019 flows at ATC39, hence, as far as possible, providing baseline traffic data for a 'typical' year. When comparing the impacts of the scheme, which was undertaken using 2020 emissions, in order not to overestimate the impacts of the scheme, a factor to adjust the 'before' and 'after' traffic data was derived based on 2020 flows. However, as can be seen in Table A2.1 in Appendix A2, the impact descriptors are determined based on the predicted change in pollutant concentration (columns) in the context of the total pollutant concentration at that location (rows). For example, a predicted change in concentration corresponding to 1% of the objective value would be described as a '*negligible*' impact if the total concentration was below 95% of the objective value, but would be described as '*slight*' or '*moderate*' with a total concentration corresponding to 95% or more of the objective value. In order to avoid underestimating the impacts associated with the scheme by using a baseline which is unusually low, a sensitivity test was undertaken whereby the predicted changes in concentrations as a result of the scheme were considered against 2019 total pollutant concentrations. These two approaches, ie the annualisation of traffic data, and the sensitivity test, have, as far as possible, addressed the impact of COVID restrictions within this study.
- 3.11 The ATCs provided data on totals at each hour of the week, with vehicle speeds and fleet composition. The measured distribution of traffic throughout the day ('profiles') were used within the dispersion model.
- 3.12 Vehicle emissions have been derived using Defra's Emission Factor Toolkit (EFT) (v10.1) (Defra, 2021). Further details about model input, traffic data and how AADT flows have been derived are presented in Appendix A4.

Sensitive Locations

- 3.13 Concentrations of nitrogen dioxide, PM₁₀ and PM_{2.5} have been predicted at a number of receptors (i.e. residential properties) within and in close proximity to the study area. Receptors have been identified to represent a range of exposure, including the worst-case locations (these being at the façades of the residential properties closest to affected road links). When selecting receptors, particular attention has been paid to assessing impacts close to junctions, where traffic may become

congested and where there is a combined effect of several road links, and alongside those roads where changes in traffic volumes are most significant.

- 3.14 A number of existing residential properties have been identified as receptors for the assessment. These locations are shown in Figure 4. In addition, concentrations have been modelled at the ENF5 automatic monitoring site in order to verify the model outputs (see Appendix A4 for verification method).
- 3.15 It is important to note that receptors situated alongside the North Circular Road were selected to provide information on the baseline conditions in the study area. However, there were no traffic counts undertaken pre- and post-scheme alongside the various sections of this road, with the only available data provided by TfL's ATC 34. The scheme would have impacted each section of the North Circular differently, thus using data from ATC 34 and applying it to the whole road would not have been appropriate to assess the impacts of the scheme. It has therefore not been possible to calculate accurate changes in traffic flows, and associated air quality impacts, alongside the North Circular Road, other than for the section in which ATC34 is situated (i.e. between the B106 and Palmerston Road). Even for receptors located alongside that section, and as discussed in further details in paragraphs 5.6 and A4.9, the predicted impacts are a by-product of the use of emission profiles calculated based on ATC data rather than associated with traffic changes attributable to the scheme. Receptors situated alongside the North Circular have thus not been included in Figures 8 to 10 and were not considered in the assessment of the scheme's impacts on air quality. Results for receptors located on the same section of the North Circular Road as ATC34 are presented for information in Appendix A5, although as discussed above, the presented impacts are likely to be associated with the effect of profile change rather than traffic changes associated with the scheme.



Figure 4: Receptor Locations

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Uncertainty in Road Traffic Modelling Predictions

- 3.16 There are many components that contribute to the uncertainty of modelling predictions. The road traffic emissions dispersion model used in this assessment is dependent upon the traffic data that have been input, which will have inherent uncertainties associated with them, as discussed in paragraphs 3.8 to 3.10. The annualisation process to 2019 is based on traffic flows recorded prior to the COVID pandemic, and 2019 AADT flows can be expected to be representative of 'typical' flows on modelled roads. It is however recognised that the calculated 2020 AADT flows, both pre-scheme and post-scheme, are lower than that of a typical year, which is reflected by the reduction in traffic that has been observed in London due to the COVID pandemic (TfL, 2020). In addition, the annualisation process for the 2020 traffic data was not based on a full calendar year, with available data covering the period between the 1st January and the 24th November.
- 3.17 The assessment has however mainly focused on the predicted changes in pollutant concentrations associated with the scheme, which will not be significantly affected by total AADT. In addition, a sensitivity test has been undertaken combining the modelled impacts with 2019 concentrations (see paragraphs 3.10 and 5.5). The discussion on air quality conditions in the study area has also been based on the 2019 modelled concentrations, which are representative of a 'typical' year, rather than the 2020 concentrations. This approach has therefore addressed, as far as possible, the uncertainties relating to the irregular traffic flows associated with the COVID pandemic.
- 3.18 There are then additional uncertainties, as models, by their nature simulate real-world conditions through a series of algorithms.
- 3.19 An important stage in the process is model verification, which involves comparing the model output with measured concentrations. The level of confidence in the verification process is necessarily enhanced when data from an automatic analyser have been used, as has been the case for this assessment (see Appendix A4). Because the model has been verified and adjusted, there can be reasonable confidence in the prediction of base year (2019) concentrations.
- 3.20 Predicting pollutant concentrations in a future year⁵ will always be subject to greater uncertainty. For obvious reasons, the model cannot be verified in the future, and it is necessary to rely on a series of projections provided by DfT and Defra as to what will happen to traffic volumes, background pollutant concentrations and vehicle emissions. Historic versions of Defra's EFT tended to over-state emissions reductions into the future. However, analyses of the most recent versions of Defra's EFT carried out by AQC (2020a) (2020b) suggest that, on balance, these versions are unlikely to over-state the rate at which NO_x emissions decline in the future at an 'average' site in the UK. In practice,

⁵ For the purposes of this assessment, the phrase 'future year' is used to describe a scenario in which air quality monitoring data is not yet available. There were no 2020 monitoring data at the time of publication, hence, 2020 is described as a 'future year'.

the balance of evidence suggests that NO_x concentrations are most likely to decline more quickly in the future, on average, than predicted by the current EFT, especially against a base year of 2016 or later. Using EFT v10.1 for future-year forecasts in this report thus provides a robust assessment, given that the model has been verified against measurements made in 2019.

- 3.21 There are inherent uncertainties within the modelling, including the traffic data as primary input, and as such the results should not be considered exact, but represent the best possible estimates, using the best available data available at the time this report was undertaken.

4 Baseline Conditions

Existing Conditions

- 4.1 Information on existing air quality has been obtained by collating the results of air quality monitoring carried out by the local authority within the study area. Background concentrations have been defined using the national pollution maps published by Defra (Defra, 2021). These cover the whole country on a 1x1 km grid.

Air Quality Management Area and Focus Areas

- 4.2 LB Enfield declared a borough-wide Air Quality Management Area (AQMA) in 2001 for exceedances of the annual mean nitrogen dioxide and 24-hour PM₁₀ objectives. Half of the Bowes Quieter Neighbourhood Scheme lies within this AQMA. LB Haringey also declared a borough wide AQMA in 2001 for exceedances of the annual mean nitrogen dioxide and 24-hour PM₁₀ objectives. The remaining portion of the scheme is within this AQMA.
- 4.3 There are also two air quality Focus Areas situated within the study area ('A406 North Circular between Bowes Road and Great Cambridge' and 'Bound Green A109 junction with Durnsford/Brownlow Road B106'). As explained in Paragraph 2.19, these were last defined in 2016, and correspond to areas where the EU annual mean limit value for nitrogen dioxide is exceeded, and where there are high levels of human exposure.
- 4.4 All receptors selected for the assessment are located within either the Enfield or Haringey AQMAs, whilst 35 receptors were selected within the two air quality Focus Areas.

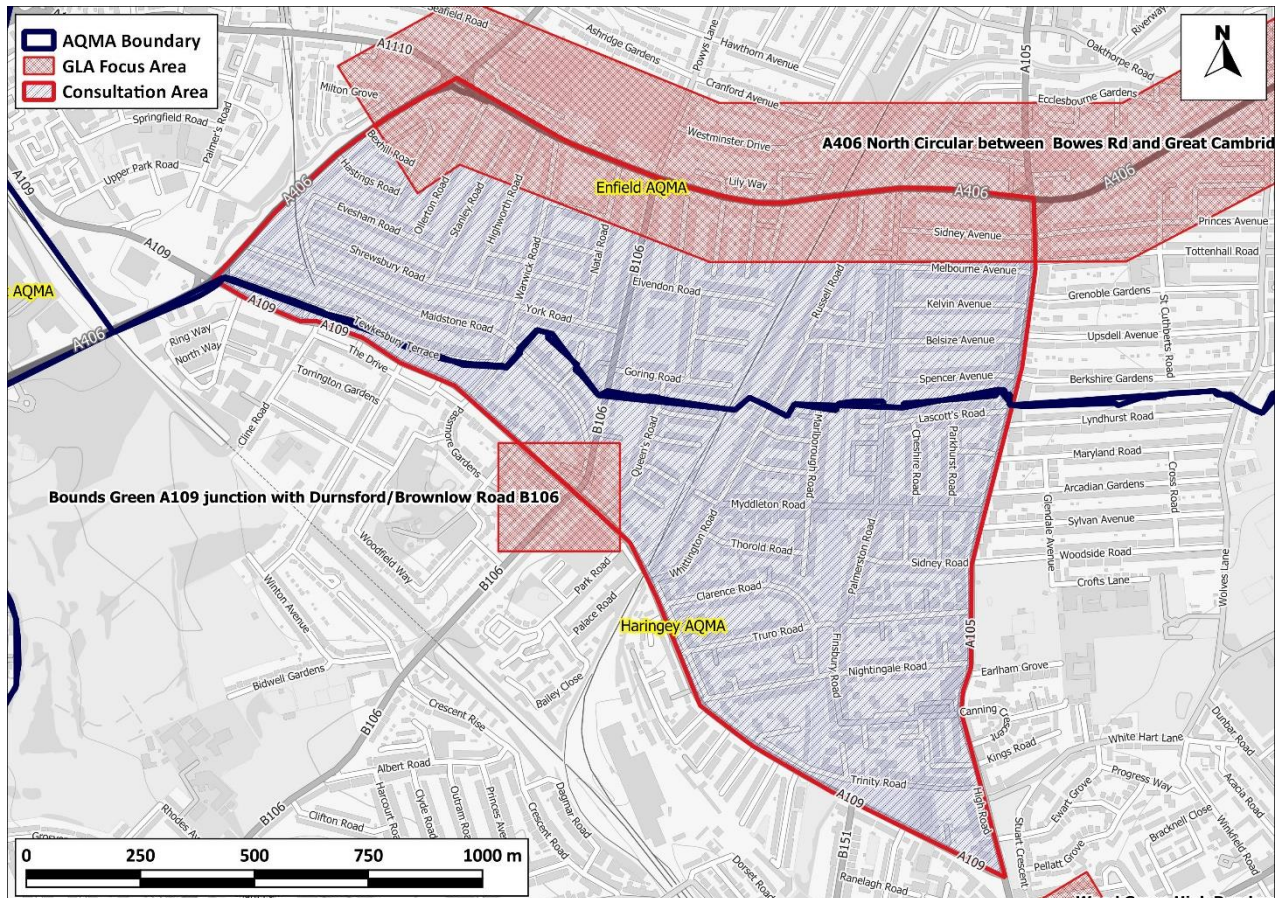


Figure 5: Consultation Area, AQMA and Air Quality Focus Areas

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Local Air Quality Monitoring

- 4.5 LB Enfield operates one roadside automatic monitoring station within the study area, situated adjacent to the North Circular on the north side of the consultation area. The council also operates two diffusion tubes within the consultation area; one situated on Warwick Road and one situated on Brownlow Road, which commenced monitoring in 2018. The Council's diffusion tubes are prepared and analysed by Socotec (using the 50% TEA in acetone method). LB Haringey also operates one nearby diffusion tube, which measures background pollutant concentrations at Bounds Green Primary School, 30 m from the Bounds Green Road kerbside, at the south of the consultation area.
- 4.6 Annual mean results for the years 2014 to 2019 are summarised in Table 2, while results relating to the 1-hour mean objective are summarised in Table 3. Exceedances of the objectives are shown in bold. The monitoring locations are shown in Figure 6. The monitoring data have been taken from

the respective LB Enfield and LB Haringey Annual Status Reports (ASRs) (LB Enfield, 2020) (LB Haringey, 2020).

Table 2: Summary of Annual Mean NO₂ Monitoring (2014-2019) (µg/m³)^a

Site No.	Site Type	Location	2014	2015	2016	2017	2018	2019
ENF5	Automatic, Roadside	Bowes Road	42	46	47	41	41	41
Enfield 9	Diffusion Tube, Urban Background	Warwick Road	55	43	39	51	27	24
Enfield 10	Diffusion Tube, Urban Background	134 Brownlow Road	-	-	-	-	37	37
HR28	Diffusion Tube, Urban Background	Bounds Green Primary School	30	35	33	34	-	31
Objective			40					

^a Exceedances of the objectives are shown in bold.

^b Site types as listed within the monitoring sites' respective ASRs.

Table 3: Number of Hours With NO₂ Concentrations Above 200 µg/m³

Site No.	Site Type	Location	2014	2015	2016	2017	2018	2019
ENF5	Automatic, Roadside	Bowes Road	0	1	6	3	0	0
Objective			18					

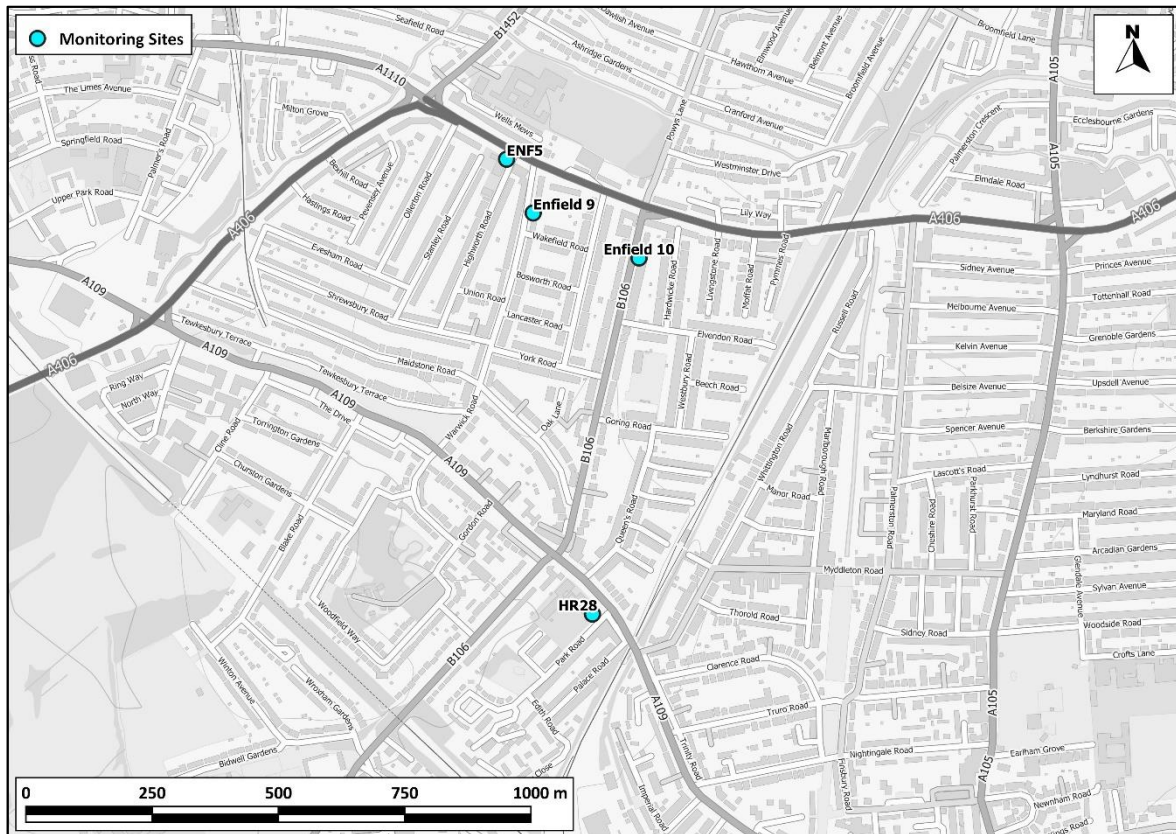


Figure 6: Monitoring Locations

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- 4.7 Monitoring indicates that annual mean NO₂ concentrations were below the objectives at all but one of the monitors in 2019. Site ENF5 has been above the annual mean objective since 2014, and Enfield 9 had exceeded the objective in 2014, 2015 and 2017. Both of the above are situated adjacent to roads, with the former 3 m from the North Circular kerbside, a road with high traffic volume and congestion. Enfield 10 commenced monitoring in 2018 and was below the objective in both 2018 and 2019. There is no clear trend in annual mean background or roadside concentrations over time, other than a decrease in annual mean concentrations in 2019, which was consistent between the long term diffusion tube monitors. Hourly-mean concentrations of nitrogen dioxide monitored at ENF5 have remained below the objective since 2014.
- 4.8 Monitoring site ENF5 also measures PM₁₀ concentrations. Annual mean results for the years 2014 to 2019 are presented in Table 4, while 24-hour mean concentrations are summarised in Table 5. PM_{2.5} concentrations are not monitored within the study area.

- 4.9 Monitoring indicates that PM₁₀ concentrations have been well below the annual mean and daily mean objectives since 2014. There is no clear trend in concentrations over time.

Table 4: Summary of Annual Mean PM₁₀ Monitoring (2014-2019) (µg/m³)

Site No.	Site Type	Location	2014	2015	2016	2017	2018	2019
ENF5	Automatic, Roadside	Bowes Road	21	19	22	24	18	19
Objective			40					

Table 5: Number of Days With PM₁₀ Concentrations Above 50 µg/m³

Site No.	Site Type	Location	2014	2015	2016	2017	2018	2019
ENF5	Automatic, Roadside	Bowes Road	11	1	10	9	2	No data ^a
Objective			35					

^a Data unavailable in 2019 due to an error in the 2020 ASR.

Background Concentrations

- 4.10 Estimated background concentrations in the study area have been determined for 2019 and 2020 using Defra's background maps (Defra, 2021). The background concentrations are set out in Table 6 and have been derived as described in Appendix A4. The background concentrations are all well below the objectives.

Table 6: Estimated Annual Mean Background Pollutant Concentrations in 2019 and 2020 (µg/m³)^a

Year	NO ₂	PM ₁₀	PM _{2.5}
2019	22.9 - 21.9	18.5 - 17.8	12.2 - 11.9
2020	21.5 - 20.6	18.1 - 17.4	12.0 - 11.6
Objectives	40	40	25^b

^a The range of values is for the different 1x1 km grid squares covering the study area.

^b The PM_{2.5} objective, which was to be met by 2020, is not in Regulations and there is no requirement for local authorities to meet it.

Baseline Dispersion Model Results

- 4.11 Baseline concentrations of nitrogen dioxide have been modelled at each of the selected receptor locations (see Figure 4 for receptor locations). The nitrogen dioxide results cover existing (2019) baseline conditions and are illustrated in Figure 7. The modelled road components of nitrogen oxides

have been increased from those predicted by the model based on a comparison with local measurements (see Appendix A4 for the verification methodology).

- 4.12 The predicted annual mean concentrations of nitrogen dioxide are above the objective at a number of receptors in 2019. These exceedances are exclusively at receptors adjacent to the North Circular. Concentrations alongside the North Circular range between 41 and 62 $\mu\text{g}/\text{m}^3$, with concentrations at their highest adjacent to junctions and/or traffic lights, such as at the Powys Lane junction and the Green Lanes junction. Concentrations throughout the remainder of the study area are all below the objectives, ranging between 23 and 37 $\mu\text{g}/\text{m}^3$. Those at the high end are either situated adjacent to main roads, such as High Road, Green Lanes and Bounds Green Road, adjacent to junctions, where there would be increased pollutant emissions due to congestion, or both. Remaining receptors, along quieter residential roads, are all well below the annual mean air quality objective.
- 4.13 Concentrations exceed 60 $\mu\text{g}/\text{m}^3$ at one modelled receptor, meaning the 1-hour nitrogen dioxide objective may be exceeded at this location; a residential property adjacent to the North Circular to Powys Lane junction. There are no other locations throughout the study area where the 1-hour nitrogen dioxide objective is likely to be exceeded, meaning that there are no other locations in the study area which are likely to exceed the 1-hour nitrogen dioxide objective.
- 4.14 Although not included within a figure, annual mean PM_{10} and $\text{PM}_{2.5}$ concentrations were also modelled for the year 2019 and shown to be well below the objectives throughout the study area.

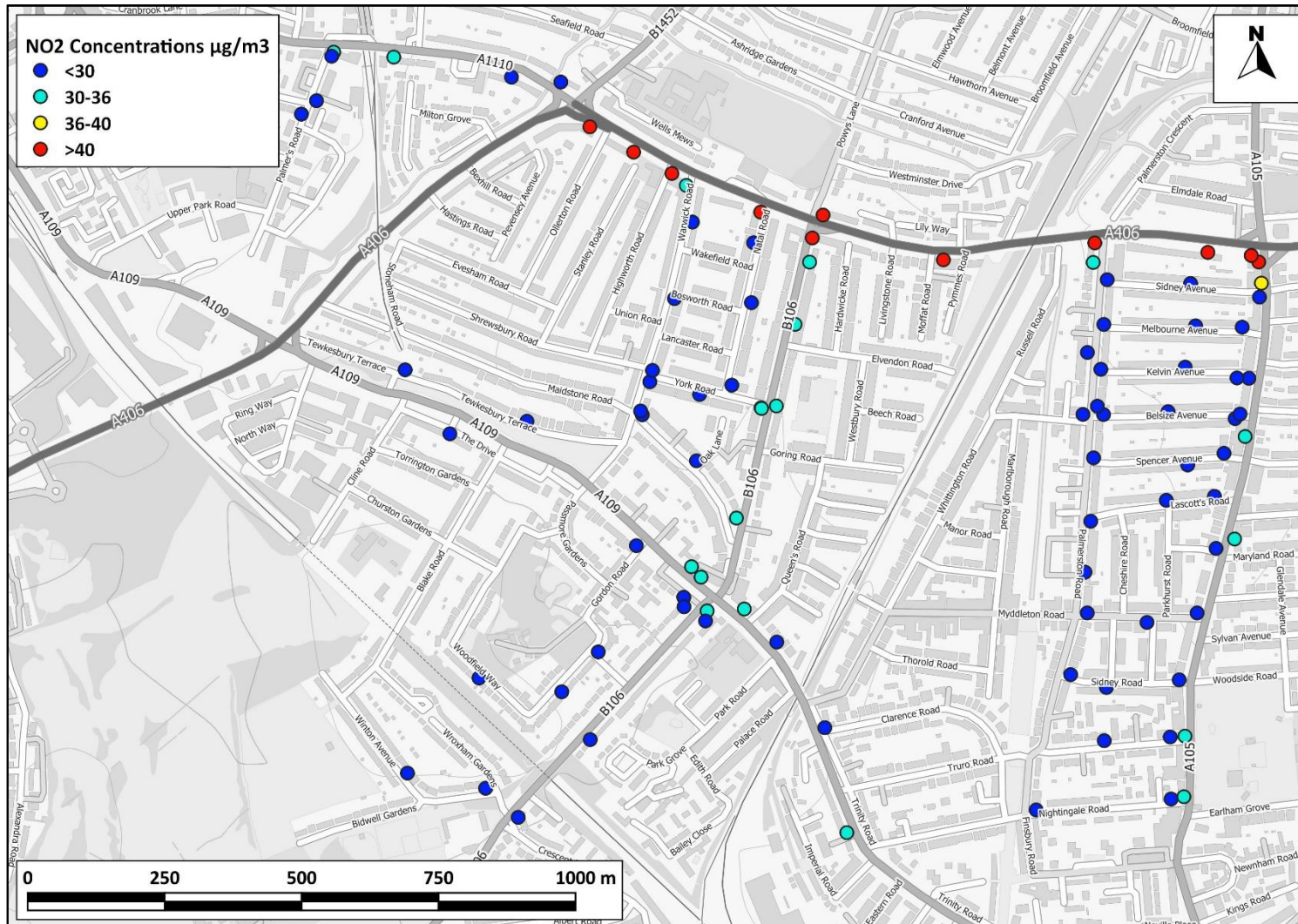


Figure 7: Predicted Annual Mean NO₂ Concentrations in the Study Area in the 2019 Baseline Scenario (µg/m³)

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5 Scheme Impact Assessment

- 5.1 This section presents the changes in annual mean pollutant concentrations predicted as a result of the scheme for the year 2020. The full set of results, including total concentrations, percentage changes and associated impact descriptors, are presented in Appendix A5.
- 5.2 The calculated percentage changes in traffic flow are shown in Figure 8, where decreases in traffic are illustrated by green shaded points, whilst increases are displayed in red shades. The decreases in traffic correlate with road closures, with increases occurring on alternative routes. The predicted changes in annual mean nitrogen dioxide, PM₁₀ and PM_{2.5} concentrations at receptors are presented in Figure 9, Figure 10 and Figure 11, with decreases in concentrations marked by blue shaded points, and increases displayed in yellow/red shades. White points indicate receptors where no changes are predicted.
- 5.3 The modelled data show that the implementation of the Quieter Neighbourhood Scheme led to slight decreases or increases in annual mean NO₂ concentrations, ranging between -0.1 and -1.4 µg/m³ and between +0.1 and +0.9 µg/m³, as shown on Figure 9. Such changes correspond to -3 % and +2% of the objective value, at most. The results correlate with the changes in traffic displayed on Figure 8.
- 5.4 While NO₂ concentrations are heavily influenced by vehicle emissions, PM concentrations are influenced by a wider range of sources, and thus are less influenced by vehicular emissions. Therefore, changes in PM₁₀ and PM_{2.5} concentrations follow a similar pattern to that of NO₂, but the changes are smaller, with either no predicted changes in concentrations, or increases and decreases in concentrations comprised between ±0.1 and 0.2 µg/m³ for PM₁₀, and reaching ±0.1 µg/m³ at most for PM_{2.5}. Such changes correspond to ±1% of the annual mean PM₁₀ objective value at most, and 0% of the PM_{2.5} objective value.
- 5.5 Using industry standard guidance (Moorcroft and Barrowcliffe et al, 2017), absolute changes in pollutant concentrations are considered, in conjunction with the associated predicted long-term concentrations, to determine the air quality impacts and effects at receptors (see paragraph 2.32). The full results are presented in Appendix A5, and show that in 2020, the predicted changes in annual mean PM₁₀ and PM_{2.5} pollutant concentrations are associated with 'negligible' impacts at all receptors within the study area. With regards to annual mean nitrogen dioxide concentrations, impacts are described as '*negligible*' at most receptors, with the exception of one receptor (33) where a *slight adverse* impact is predicted, and one receptor (106) where a *moderate adverse* impact is predicted. Receptor 33 represents a residential property above a shop at the junction between Truro Road and the High Road. Receptor 32, located 25 m to the west of that property, is predicted to experience a *negligible* impact as a result of the scheme. The predicted slight adverse impact thus

concerns one property. Receptor 106 represents a residential property situated at the junction of High Road and the North Circular, where, as discussed in Paragraphs A4.8 and A4.9, there is significant uncertainty with regards to the modelled change in traffic and effect of profile on modelled concentrations. It is therefore not possible to ascertain whether or not this impact is a result of the model's uncertainties. However, if accurate, it would only concern a small number of properties, with a receptor (2) situated 40 m to the south predicted to see increases in annual mean nitrogen dioxide concentration of $0.4 \mu\text{g}/\text{m}^3$, corresponding to a *negligible* impact. As such, overall, although the scheme leads to changes in pollutant concentrations, the scale of these changes in relation to total predicted concentrations are not great enough to lead to significant impacts, whether beneficial or adverse.

Impacts on the North Circular

- 5.6 Although, for reasons explained in paragraph 3.15, receptors directly adjacent to the North Circular are not included in the overall assessment of the scheme. Receptors located on the same section ATC34, for which there is more confidence in the traffic data relating to the impact of the scheme, have been included in the results table presented Appendix A5. These results show that annual mean nitrogen dioxide concentrations are predicted to decrease slightly at two locations, with a small increase predicted at the third location. Predicted changes range between zero and -1% and correspond to *negligible* impacts (with a *slight beneficial* impact predicted in the sensitivity test). Zero per cent changes and *negligible* impacts are predicted with regards to annual mean PM_{10} and $\text{PM}_{2.5}$ concentrations.
- 5.7 As noted, because counts were available by the hour for each ATC, hourly variations in traffic flow specific to each modelled road were input into the model. This allowed for the potential capture of the scheme's impact on daily flow variation to be taken account of, as profiles specific to the pre- and post- scheme conditions were used. However, as explained in paragraph A4.8, the road specific profiles used in the model show a lower proportion of trips occurring at night-time with the scheme in place, compared to pre-scheme conditions. It is unclear whether this, or other changes to the diurnal profiles, can be attributed to implementation of the scheme, to seasonal effects (for example longer days in the summer), or to the lockdown that was in place in November. On high traffic roads, with large associated rates of emission, relatively small shifts in hourly flows can have large impacts on annual mean concentrations. In this case, there is a shift towards lower traffic flow at night in the 'with Scheme' scenario. Due to changes in atmospheric composition at night, nocturnal emissions are less able to disperse, resulting in higher pollutant concentrations (Xuexi Tie et al., 2008), meaning night-time emissions result in higher pollutant concentrations than at other times of day. Therefore, this shift in hourly emission rates can significantly impact on annual mean values. As this shift in annual mean concentrations is judged to be the result of external factors, particularly in the

case of the North Circular Road, it is judged that the presentation of modelled results along the North Circular do not represent the outcomes of the scheme, but rather the effect of the profile change.

Sensitivity Test

- 5.8 As stated in Paragraph 3.16, baseline pollutant concentrations were lower than usual in 2020, which may have affected impact descriptors at receptors. As can be seen in Table A2.1 in Appendix A2, and described in paragraph 3.10, the impact descriptors are determined based on the predicted change in pollutant concentration (columns) in the context of the total pollutant concentration at that location (rows). In order to avoid underestimating the impacts associated with the scheme, and as discussed in paragraph 3.10, a sensitivity test was undertaken whereby the predicted changes in concentrations as a result of the scheme were considered against 2019 total pollutant concentrations. Taken in that context, the predicted increases in pollutant concentrations would still correspond to negligible impacts at all receptors for PM₁₀ and PM_{2.5} concentrations. This would also be the case at most receptors for nitrogen dioxide concentrations, with the exception of receptor 106 located on High Road, near the junction with the North Circular, where a substantial adverse impact is predicted (instead of a moderate adverse impact in the context of 2020 concentrations), a receptor on York Road (43), where a slight beneficial impact is predicted, and receptor 33 on the Truro Road to High Road junction, where a slight adverse impact is predicted (as was also the case in the context of 2020 concentrations). Results from this sensitivity test are presented alongside 2020 results in Appendix A5.

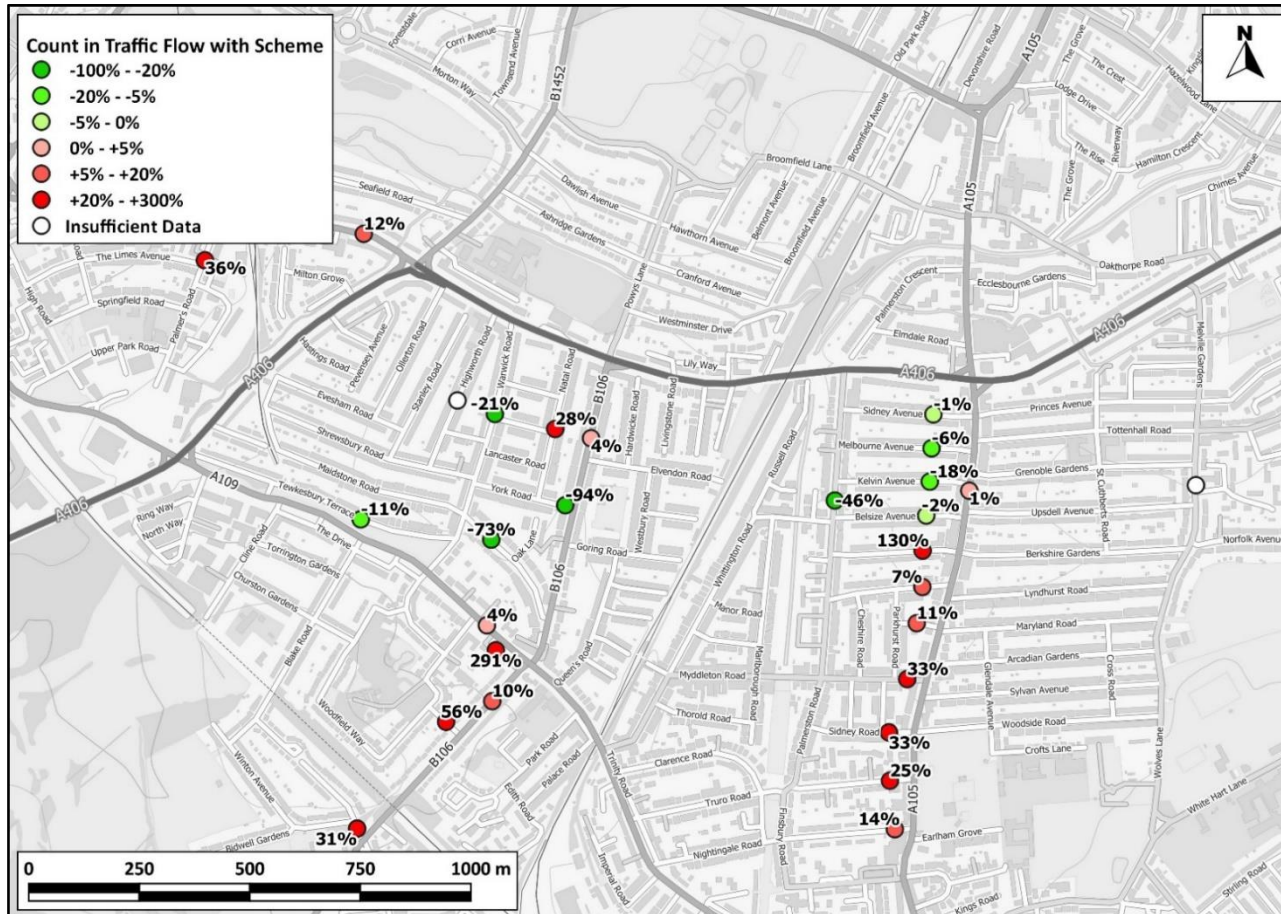


Figure 8: Percentage Change in Annualised Total Traffic Flows Resulting from the Scheme⁶

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⁶ ATC 3 and ATC 15 are marked by a white dot due to gaps in the data which have prevented determining the %change in traffic associated with the scheme.

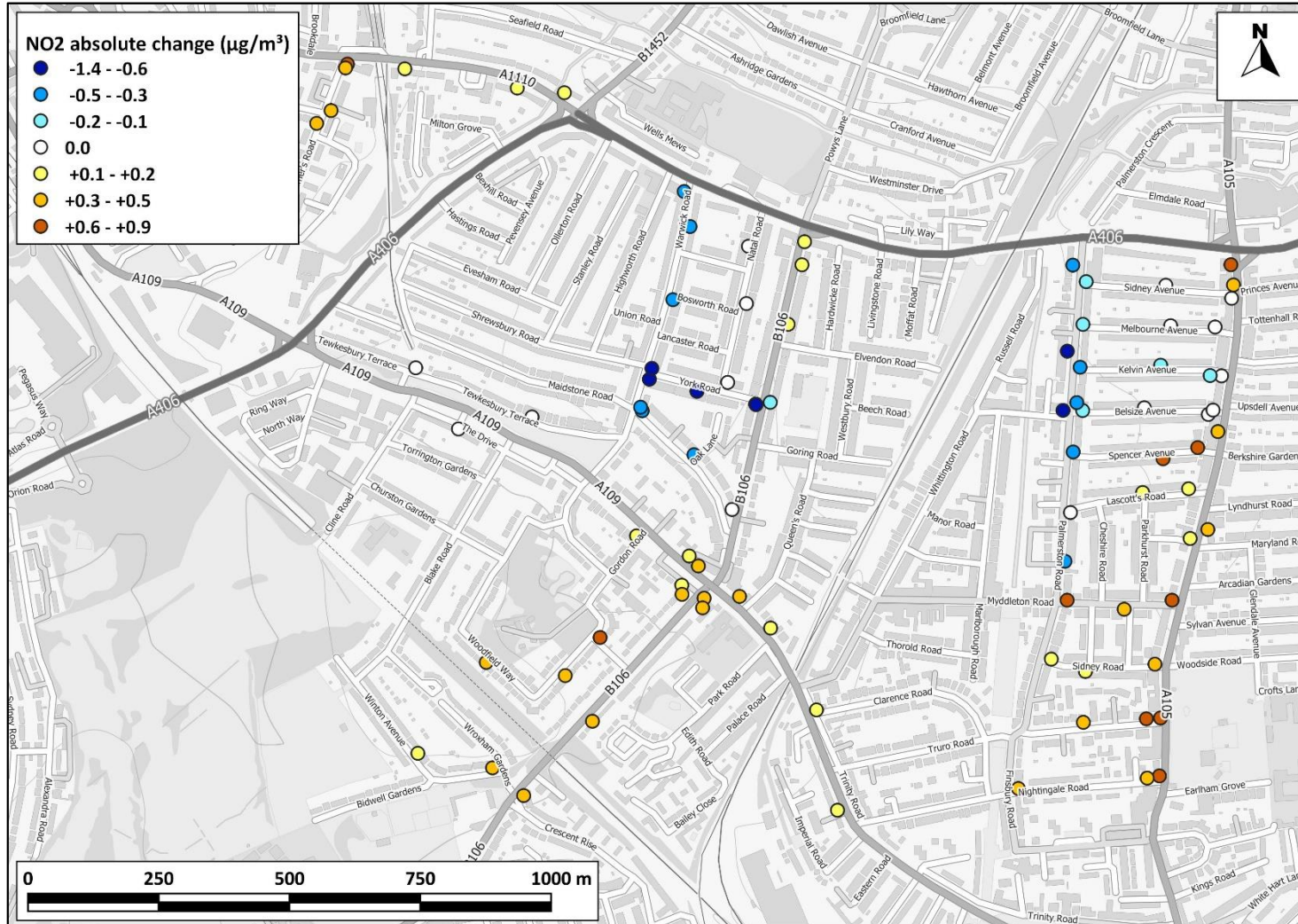


Figure 9: Predicted Changes in Annual Mean NO₂ Concentrations with Quieter Neighbourhood Scheme in 2020 (µg/m³)

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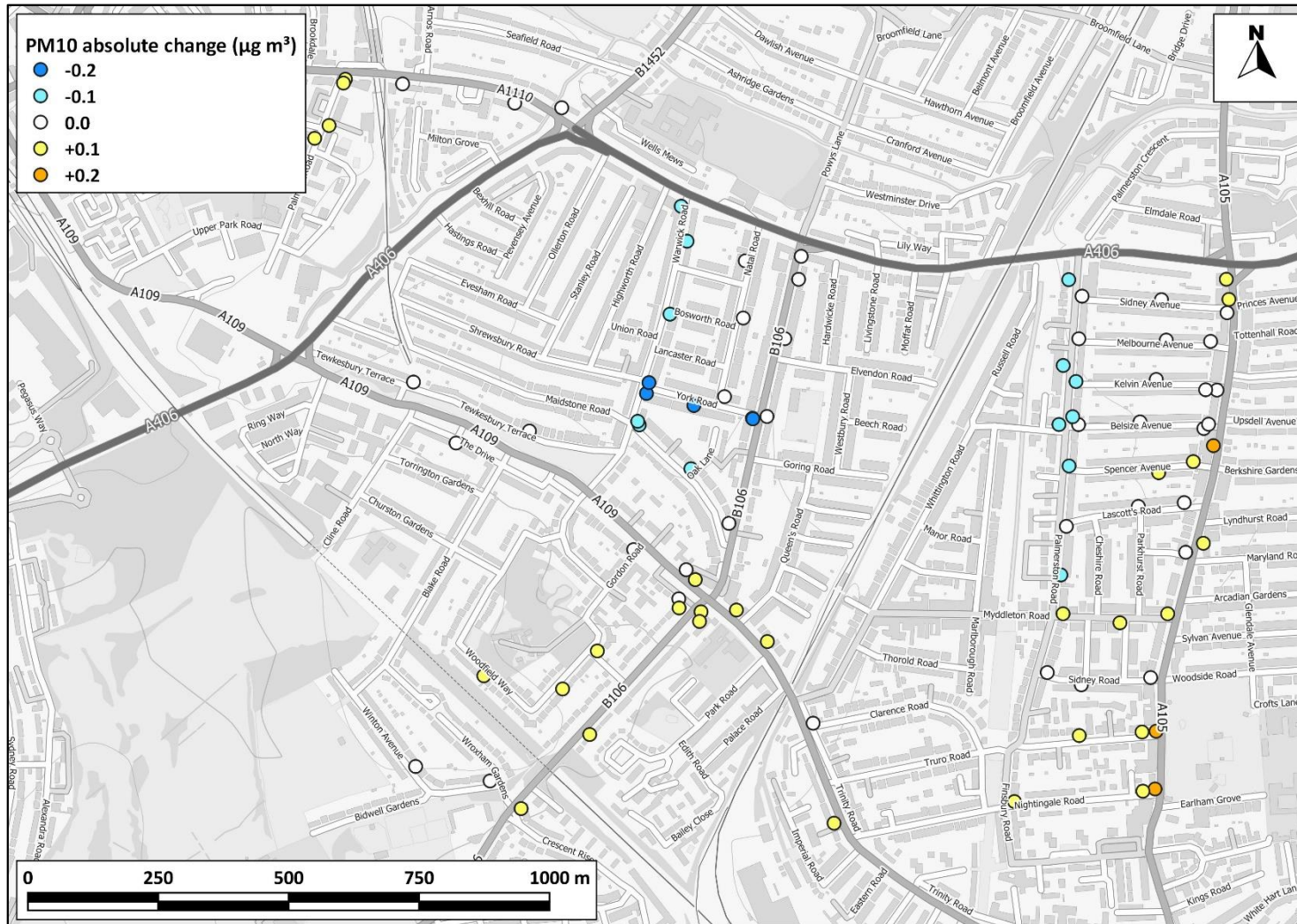


Figure 10: Predicted Changes in Annual Mean PM₁₀ Concentrations with Quieter Neighbourhood Scheme in 2020(µg/m³)

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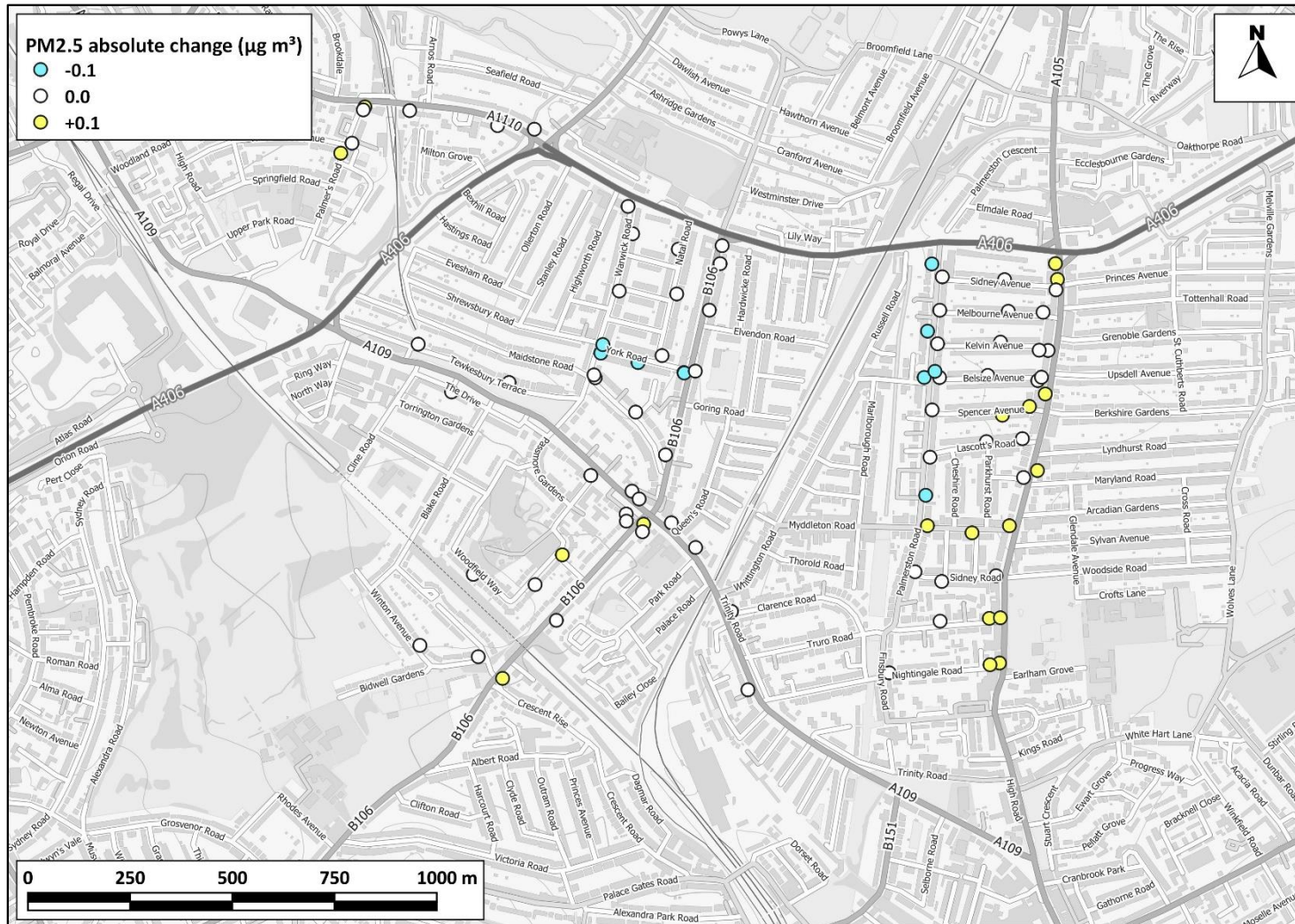


Figure 11: Predicted Changes in Annual Mean PM_{2.5} Concentrations with Quieter Neighbourhood Scheme in 2020(µg/m³)

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6 Summary and Conclusions

- 6.1 The assessment has considered the local air quality impacts of the Bowes Quieter Neighbourhood Scheme. Traffic flows were measured over two seven-day periods in July and November 2020 (pre- and post-scheme implementation). These have been used to estimate the changes in traffic attributable to the scheme. Dispersion modelling has then been used to predict the effect that these changes in traffic will have had on local air quality.
- 6.2 Annual mean concentrations of nitrogen dioxide in 2019 at several receptors adjacent to the North Circular are predicted to have been above the objective set by the UK Government. Concentrations at other receptors, which are along quieter residential roads, were all well below this objective. Annual mean PM₁₀ and PM_{2.5} concentrations were well below the current UK objectives throughout the study area.
- 6.3 Implementation of the Quieter Neighbourhood Scheme is predicted to have led to slight decreases and increases in nitrogen dioxide concentrations, in correlation with the changes in traffic observed with the scheme in operation. Changes to PM₁₀ and PM_{2.5} concentrations follow a similar pattern to those of NO₂, but the changes are smaller.
- 6.4 Although the scheme caused small changes to pollutant concentrations, the scales of these are described by industry standard guidance as *negligible* at all receptors for PM₁₀ and PM_{2.5} concentrations, and most receptors for nitrogen dioxide concentrations, with the exception of a location at the junction between Truro Road and the High Road where a *slight adverse* impact is predicted, and a location at the High Road to North Circular junction, where a *moderate adverse* impact is predicted. However, as discussed in Section 5, it is possible this *moderate adverse* impact is a result of uncertainties in the model's inputs.
- 6.5 There are many uncertainties around the predictions presented in this report. In particular, it is challenging to isolate those changes to traffic flows caused by the scheme from those caused by other factors, such as restrictions to control the COVID-19 pandemic. In order to account for this as best as possible, a sensitivity test has been undertaken which uses the impacts of the scheme in 2020 aligned with concentrations predicted for 2019 (which are higher than those in 2020). This showed that one receptor would be classed as experiencing a *substantial adverse* impact; however, as discussed in Section 5 and above, there is uncertainty with regards to this result. Elsewhere in the study area, one *slight adverse* and one *slight beneficial* impact are predicted at two further receptors, with *negligible* impacts predicted at all other receptors. Overall, taking into consideration the increases and decreases in concentrations, the results of this assessment are not considered to represent a significant effect on local air quality.

7 References

- AQC. (2020a). *Performance of Defra's Emission Factor Toolkit 2013-2019*. Retrieved from <https://www.aqconsultants.co.uk/CMSPages/GetFile.aspx?guid=7fba769d-f1df-49c4-a2e7-f3dd6f316ec1>
- AQC. (2020b). *Comparison of EFT v10 with EFT v9*. Retrieved from <https://www.aqconsultants.co.uk/CMSPages/GetFile.aspx?guid=9d6b50e1-3897-46cf-90f1-3669c6814f1d>
- Defra. (2007). *The Air Quality Strategy for England, Scotland, Wales and Northern Ireland*. Defra.
- Defra. (2017). *Air quality plan for nitrogen dioxide (NO₂) in the UK*. Retrieved from <https://www.gov.uk/government/publications/air-quality-plan-for-nitrogen-dioxide-no2-in-uk-2017>
- Defra. (2018a). *Supplement to the UK plan for tackling roadside nitrogen dioxide concentrations*. Retrieved from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/746100/air-quality-no2-plan-supplement.pdf
- Defra. (2018b). *Review & Assessment: Technical Guidance LAQM.TG16 February 2018 Version*. Defra. Retrieved from <https://laqm.defra.gov.uk/documents/LAQM-TG16-February-18-v1.pdf>
- Defra. (2019). *Clean Air Strategy 2019*. Retrieved from <https://www.gov.uk/government/publications/clean-air-strategy-2019>
- Defra. (2021). *Local Air Quality Management (LAQM) Support Website*. Retrieved from <http://laqm.defra.gov.uk/>
- DfT. (2018). *The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy*.
- GLA. (2018a). *Mayor's Transport Strategy*. Retrieved from <https://www.london.gov.uk/sites/default/files/mayors-transport-strategy-2018.pdf>
- GLA. (2018b). *London Environment Strategy*. Retrieved from <https://www.london.gov.uk/what-we-do/environment/london-environment-strategy>
- GLA. (2021). *The London Plan: The Spatial Development Strategy for London*. Retrieved from https://www.london.gov.uk/sites/default/files/the_london_plan_2021.pdf
- LB Enfield. (2019). *The London Borough of Enfield Transport Plan 2019*.
- LB Enfield. (2010). *Core Strategy 2010-2025*.
- LB Enfield. (2020). *London Borough of Enfield Air Quality Annual Status Report for 2019*.
- LB Enfield. (2021). *Enfield Local Plan - Main issues and preferred approaches*.
- LB Enfield. (n/a). *Air Quality Action Plan*.
- LB Haringey. (2020). *London Borough of Haringey Air Quality Annual Status Report for 2019*.

- Ministry of Housing, Communities & Local Government. (2019). *Planning Practice Guidance*. Retrieved from <https://www.gov.uk/government/collections/planning-practice-guidance>
- Ministry of Housing, Communities & Local Government. (2021). *National Planning Policy Framework*. Retrieved from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf
- Moorcroft and Barrowcliffe et al. (2017, November). *Land-Use Planning & Development Control: Planning For Air Quality v1.2*. IAQM, London. Retrieved from <http://iaqm.co.uk/guidance/>
- TfL. (2020). *Travel in London - Report 13*.
- The Air Quality (England) (Amendment) Regulations 2002, Statutory Instrument 3043*. (2002). HMSO. Retrieved from <https://www.legislation.gov.uk/ukSI/2002/3043/contents/made>
- The Air Quality (England) Regulations 2000 Statutory Instrument 928*. (2000). HMSO. Retrieved from <http://www.legislation.gov.uk/ukSI/2000/928/contents/made>
- The Air Quality Standards Regulations 2010 Statutory Instrument 1001*. (2010). HMSO. Retrieved from http://www.legislation.gov.uk/ukSI/2010/1001/pdfs/ukSI_20101001_en.pdf
- The European Parliament and the Council of the European Union. (2008). *Directive 2008/50/EC of the European Parliament and of the Council*. Retrieved from <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32008L0050>
- Xuexi Tie et al. (2008). *Impact of nocturnal planetary boundary layer on urban air pollutants: Measurements from a 250-m tower over Tianjin, China*.

8 Glossary

AADT	Annual Average Daily Traffic
ADMS-Roads	Atmospheric Dispersion Modelling System model for Roads
AQC	Air Quality Consultants
AQAL	Air Quality Assessment Level
AQMA	Air Quality Management Area
Defra	Department for Environment, Food and Rural Affairs
DfT	Department for Transport
EFT	Emission Factor Toolkit
EPUK	Environmental Protection UK
Exceedance	A period of time when the concentration of a pollutant is greater than the appropriate air quality objective. This applies to specified locations with relevant exposure
HDV	Heavy Duty Vehicles (> 3.5 tonnes)
HMSO	Her Majesty's Stationery Office
IAQM	Institute of Air Quality Management
kph	Kilometres Per hour
LAQM	Local Air Quality Management
LDV	Light Duty Vehicles (<3.5 tonnes)
µg/m³	Microgrammes per cubic metre
NO	Nitric oxide
NO₂	Nitrogen dioxide
NO_x	Nitrogen oxides (taken to be NO ₂ + NO)
Objectives	A nationally defined set of health-based concentrations for nine pollutants, seven of which are incorporated in Regulations, setting out the extent to which the standards should be achieved by a defined date. There are also vegetation-based objectives for sulphur dioxide and nitrogen oxides
PM₁₀	Small airborne particles, more specifically particulate matter less than 10 micrometres in aerodynamic diameter
PM_{2.5}	Small airborne particles less than 2.5 micrometres in aerodynamic diameter

PPG	Planning Practice Guidance
Receptors	Receptors correspond to OS grid coordinates in the dispersion model, to allow for pollutant concentrations to be predicted at a specific point within the study area. They are representative of 'physical' locations of relevant exposure to the air quality objectives, such as residential properties, school, hospitals etc. in the study area.
Standards	A nationally defined set of concentrations for nine pollutants below which health effects do not occur or are minimal
TEA	Triethanolamine – used to absorb nitrogen dioxide

9 Appendices

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A1 London-Specific Policies and Measures

London Environment Strategy

A1.1 The air quality chapter of the London Environment Strategy sets out three main objectives, each of which is supported by sub-policies and proposals. The Objectives and their sub-policies are set out below:

“Objective 4.1: Support and empower London and its communities, particularly the most disadvantaged and those in priority locations, to reduce their exposure to poor air quality.

- *Policy 4.1.1 Make sure that London and its communities, particularly the most disadvantaged and those in priority locations, are empowered to reduce their exposure to poor air quality*
- *Policy 4.1.2 Improve the understanding of air quality health impacts to better target policies and action*

Objective 4.2: Achieve legal compliance with UK and EU limits as soon as possible, including by mobilising action from London Boroughs, government and other partners

- *Policy 4.2.1 Reduce emissions from London’s road transport network by phasing out fossil fuelled vehicles, prioritising action on diesel, and enabling Londoners to switch to more sustainable forms of transport [...]*
- *Policy 4.2.4 The Mayor will work with the government, the London boroughs and other partners to accelerate the achievement of legal limits in Greater London and improve air quality*
- *Policy 4.2.5 The Mayor will work with other cities (here and internationally), global city and industry networks to share best practice, lead action and support evidence based steps to improve air quality*

Objective 4.3: Establish and achieve new, tighter air quality targets for a cleaner London by transitioning to a zero emission London by 2050, meeting world health organization health-based guidelines for air quality

- *Policy 4.3.1 The Mayor will establish new targets for PM_{2.5} and other pollutants where needed. The Mayor will seek to meet these targets as soon as possible, working with government and other partners*
- *Policy 4.3.2 The Mayor will encourage the take up of ultra low and zero emission technologies to make sure London’s entire transport system is zero emission by 2050 to further reduce levels of pollution and achieve WHO air quality guidelines*

- *Policy 4.3.3 Phase out the use of fossil fuels to heat, cool and maintain London's buildings, homes and urban spaces, and reduce the impact of building emissions on air quality*
- *Policy 4.3.4 Work to reduce exposure to indoor air pollutants in the home, schools, workplace and other enclosed spaces"*

A1.2 While the policies targeting transport sources are significant, there are less obvious ones that will also require significant change. In particular, the aim to phase out fossil-fuels from building heating and cooling and from NRMM will demand a dramatic transition.

Low Emission Zone (LEZ)

A1.3 The LEZ was implemented as a key measure to improve air quality in Greater London. It entails charges for vehicles entering Greater London not meeting certain emissions criteria, and affects diesel-engined lorries, buses, coaches, large vans, minibuses and other specialist vehicles derived from lorries and vans. Since 1 March 2021, a standard of Euro VI has applied for HGVs, buses and coaches, while a standard of Euro 3 has applied for large vans, minibuses and other specialist diesel vehicles since 2012.

Ultra Low Emission Zone (ULEZ)

A1.4 London's ULEZ was introduced on 8 April 2019. The ULEZ currently operates 24 hours a day, 7 days a week in the same area as the current Congestion Charging zone. All cars, motorcycles, vans, minibuses and Heavy Goods Vehicles will need to meet exhaust emission standards (ULEZ standards) or pay an additional daily charge to travel within the zone. The ULEZ standards are Euro 3 for motorcycles; Euro 4 for petrol cars, vans and minibuses; Euro 6 for diesel cars, vans and minibuses; and Euro VI for HGVs, buses and coaches.

A1.5 From 25 October 2021, the ULEZ will cover the entire area within the North and South Circular roads, applying the emissions standards set out in Paragraph A1.4 for light vehicles. The ULEZ will not include any requirements relating to heavy vehicle emissions beyond 1 March 2021, as these will be addressed by the amendments to the LEZ described in Paragraph A1.3.

Other Measures

A1.6 Since 2018, all taxis presented for licencing for the first time had to be zero emission capable (ZEC). This means they must be able to travel a certain distance in a mode which produces no air pollutants, and all private hire vehicles (PHVs) presented for licencing for the first time had to meet Euro 6 emissions standards. Since January 2020, all newly manufactured PHVs presented for licencing for the first time had to be ZEC (with a minimum zero emission range of 10 miles). The Mayor's aim is that the entire taxi and PHV fleet will be made up of ZEC vehicles by 2033.

A1.7 The Mayor has also proposed to make sure that TfL leads by example by cleaning up its bus fleet, implementing the following measures:

- TfL will procure only hybrid or zero emission double-decker buses from 2018;
- a commitment to providing 3,100 double decker hybrid buses by 2019 and 300 zero emission single-deck buses in central London by 2020;
- introducing 12 Low Emission Bus Zones by 2020;
- investing £50m in Bus Priority Schemes across London to reduce engine idling; and
- retrofitting older buses to reduce emissions (selective catalytic reduction (SCR) technology has already been fitted to 1,800 buses, cutting their NOx emissions by around 88%).

A2 EPUK & IAQM Planning for Air Quality Guidance

A2.1 The guidance issued by EPUK and IAQM (Moorcroft and Barrowcliffe et al, 2017) is comprehensive in its explanation of the place of air quality in the planning regime and contains impact descriptors for the assessment of significance.

A2.2 There is no official guidance in the UK in relation to development control on how to describe the nature of air quality impacts, nor how to assess their significance. The approach within the EPUK/IAQM guidance has, therefore, been used in this assessment. This approach involves a two stage process:

- a qualitative or quantitative description of the impacts on local air quality arising from the development; and
- a judgement on the overall significance of the effects of any impacts.

Impact Descriptors

A2.3 Impact description involves expressing the magnitude of incremental change as a proportion of a relevant assessment level and then examining this change in the context of the new total concentration and its relationship with the assessment criterion. Table A2.1 sets out the method for determining the impact descriptor for annual mean concentrations at individual receptors, having been adapted from the table presented in the guidance document. For the assessment criterion the term Air Quality Assessment Level or AQAL has been adopted, as it covers all pollutants, i.e. those with and without formal standards. Typically, as is the case for this assessment, the AQAL will be the air quality objective value. Note that impacts may be adverse or beneficial, depending on whether the change in concentration is positive or negative.

Table A2.1: Air Quality Impact Descriptors for Individual Receptors for All Pollutants ^a

Long-Term Average Concentration At Receptor In Assessment Year ^b	Change in concentration relative to AQAL ^c				
	0%	1%	2-5%	6-10%	>10%
75% or less of AQAL	Negligible	Negligible	Negligible	Slight	Moderate
76-94% of AQAL	Negligible	Negligible	Slight	Moderate	Moderate
95-102% of AQAL	Negligible	Slight	Moderate	Moderate	Substantial
103-109% of AQAL	Negligible	Moderate	Moderate	Substantial	Substantial
110% or more of AQAL	Negligible	Moderate	Substantial	Substantial	Substantial

^a Values are rounded to the nearest whole number.

^b This is the "Without Scheme" concentration where there is a decrease in pollutant concentration and the "With Scheme" concentration where there is an increase.

^c AQAL = Air Quality Assessment Level, which may be an air quality objective, EU limit or target value, or an Environment Agency 'Environmental Assessment Level (EAL)'.

Assessment of Significance

A2.4 The guidance recommends that the assessment of significance should be based on professional judgement, with the overall air quality impact of the development described as either 'significant' or 'not significant'. In drawing this conclusion, the following factors should be taken into account:

- the existing and future air quality in the absence of the development;
- the extent of current and future population exposure to the impacts;
- the influence and validity of any assumptions adopted when undertaking the prediction of impacts;
- the potential for cumulative impacts and, in such circumstances, several impacts that are described as '*slight*' individually could, taken together, be regarded as having a significant effect for the purposes of air quality management in an area, especially where it is proving difficult to reduce concentrations of a pollutant. Conversely, a '*moderate*' or '*substantial*' impact may not have a significant effect if it is confined to a very small area and where it is not obviously the cause of harm to human health; and
- the judgement on significance relates to the consequences of the impacts; will they have an effect on human health that could be considered as significant? In the majority of cases, the impacts from an individual development will be insufficiently large to result in measurable changes in health outcomes that could be regarded as significant by health care professionals.

A2.5 The guidance is clear that other factors may be relevant in individual cases. It also states that the effect on the residents of any new development where the air quality is such that an air quality objective is not met will be judged as significant. For people working at new developments in this situation, the same will not be true as occupational exposure standards are different, although any assessment may wish to draw attention to the undesirability of the exposure.

A2.6 A judgement of the significance should be made by a competent professional who is suitably qualified. A summary of the professional experience of the staff contributing to this assessment is provided in Appendix A4.

A3 Professional Experience

██████████ BSc (Hons) MSc PhD CSci MEnvSc MIAQM

██████████ is an Associate Director with AQC, with more than 20 years' relevant experience. She has been involved in air quality management and assessment, and policy formulation in both an academic and consultancy environment. She has prepared air quality review and assessment reports, strategies and action plans for local authorities and has developed guidance documents on air quality management on behalf of central government, local government and NGOs. She has led on the air quality inputs into Clean Air Zone feasibility studies and has provided support to local authorities on the integration of air quality considerations into Local Transport Plans and planning policy processes. ██████████ has appraised local authority air quality assessments on behalf of the UK governments, and provided support to the Review and Assessment helpdesk. She has carried out numerous assessments for new residential and commercial developments, including the negotiation of mitigation measures where relevant. She has also acted as an expert witness for both residential and commercial developments. She has carried out BREEAM assessments covering air quality for new developments. ██████████ has also managed contracts on behalf of Defra in relation to allocating funding for the implementation of air quality improvement measures. She is a Member of the Institute of Air Quality Management, Institution of Environmental Sciences and is a Chartered Scientist.

██████████ MSc MEnvSc MIAQM

██████████ is a Principal Consultant with AQC with over ten years' relevant experience. Prior to joining AQC she worked as an air quality consultant at AECOM. She has also worked as an air quality controller at Bureau Veritas in France, undertaking a wide range of ambient and indoor air quality measurements for audit purposes. She now works in the field of air quality assessment, undertaking air quality impact assessments for a wide range of development projects in the UK and abroad, including for residential and commercial developments, transport schemes (rail, road and airport), waste facilities and industrial sites. ██████████ has also undertaken a number of odour surveys and assessments in the context of planning applications. She has experience in monitoring construction dust, as well as indoor pollutant levels for BREEAM purposes. She is a Member of the Institute of Air Quality Management.

██████████ MSci (Hons) AMEnvSc AMIAQM

██████████ is an Assistant Consultant with AQC, having joined the company in December 2019. Prior to joining, he completed an MSci degree in Chemistry at the University of Bristol, specialising in the regional modelling of trace gases. He has undertaken numerous air quality assessments, including road traffic and plant emissions modelling, as well as odour and construction dust risk assessments.

He is an Associate Member of both the Institute of Air Quality Management and Institution of Environmental Sciences.

A4 Modelling Methodology

Model Inputs

A4.1 Predictions have been carried out using the ADMS-Roads dispersion model (v5). The model requires the user to provide various input data, including emissions from each section of road and the road characteristics (including road width, street canyon width, street canyon height and porosity, where applicable). Vehicle emissions have been calculated based on vehicle flow, composition and speed data using the EFT (Version 10.1) published by Defra (2021). Model input parameters are summarised in Table A4.1 and, where considered necessary, discussed further below.

Table A4.1: Summary of Model Inputs

Model Parameter	Value Used
Terrain Effects Modelled?	No
Variable Surface Roughness File Used?	No
Urban Canopy Flow Used?	No
Advanced Street Canyons Modelled?	Yes
Noise Barriers Modelled?	No
Meteorological Monitoring Site	London City
Meteorological Data Years	2019
Dispersion Site Surface Roughness Length (m)	1.0
Dispersion Site Minimum MO Length (m)	75
Met Site Surface Roughness Length (m)	0.2
Met Site Minimum MO Length (m)	75
Gradients?	No

Traffic Data

A4.2 Traffic counts have been provided by LB Enfield, who have undertaken the transport survey for the scheme. The survey involved two weeks' worth of traffic count data, taken in July, representing traffic flows without the scheme, and in November, representing traffic data with the scheme in place. Each individual vehicle count provided the vehicle type and the time of recording. In order to convert the traffic count data into a format appropriate for air quality roads modelling, a series of calculations and assumptions had to be made, which are set out in this section.

AADT Calculations

A4.3 The air quality model requires traffic data to be input in Average Annual Daily Traffic values (AADT). In order to calculate an annual average from the weekly average, a factor was applied. The factor was calculated using traffic count ATC39, operated by TfL, and situated along the North Circular, 1.7 km away from the consultation area boundary. The count is judged to be far enough away not to

be impacted by the scheme to any major degree, but close enough to be representative of typical annual traffic flow variation in the study area. The factor was calculated by dividing the annual total⁷, in either 2019 or 2020 (the former used for model verification purposes), by the period total, for each respective survey period. This factor was applied to the period total at each count to approximate annual totals at each of the LB Enfield ATCs. As discussed in Section 3, this method therefore provides values which, to some extent, take into account the annual variations in 2020 traffic, resulting from factors external to the scheme, such as COVID lockdown impacts and school holidays.

Traffic Speeds

A4.4 Dispersion modelling is based on average speeds on each section of road. The ATC data provided the speed of each individual vehicle, as well as an average measured speed for the week. This speed is, however, only applicable at a specific point on the road and will not necessarily be representative of speed alongside the whole road link. Moreover, average speeds pre- and post-scheme were reviewed, and it was not possible to correlate the variation in speeds with that in traffic data; it could have been expected to see average speeds decrease with increased traffic, and vice versa. Measured speeds were therefore not directly used as average speeds for modelling purposes. Instead, average traffic speeds were estimated based on road layout, proximity to junctions and traffic lights, speed limits and professional judgement. For example, where a section of road leads to a traffic light, vehicles will be stopped and thus idling for some time when the light is red, but under a green light, vehicles will travel at normal speed alongside that section of road. As such, for modelling purposes, such sections of roads are typically modelled at 20 kph, which correspond to a weighted average speed throughout the day. On sections of road situated away from junctions, average speeds were determined based on the applicable speed limits. Although the measured speeds were not used, as discussed above, they were reviewed against those determined following the procedure described above, to ensure there were no major discrepancies between measured and estimated average speeds alongside the road network considered in this study.

Fleet Composition

A4.5 The emissions calculated within the model are calculated by vehicle type, split by heavy duty vehicle (HDV) and light duty vehicle (LDV). These are split by being over/under 3.5 tonnes. Therefore, data are required on the proportions of each vehicle type from the traffic counts. The traffic count data provided a breakdown of vehicle counts by the following categories:

1. Short - car, light van.
2. Short towing – trailer, caravan, boat etc.
3. Two axle truck or bus

⁷ For 2020, this covers the period 1st January to 24th November, in the absence of data for the rest of the year.

4. Three axle truck or bus
5. Four axle truck
6. Three axle articulated vehicle or rigid vehicle and trailer
7. Four axle articulated vehicle or rigid vehicle and trailer
8. Five axle articulated vehicle or rigid vehicle and trailer
9. Six (or more) axle articulated vehicle or rigid vehicle and trailer
10. B-double or heavy truck and trailer
11. Double road train or heavy truck and two trailers
12. Triple road train or heavy truck and three (or more) trailers
14. Motorcycle
15. Cycle

A4.6 Categories 1, 2 and 14 are grouped into LDVs, while categories 4, 5, 6, 7, 8, 9, 10, 11 and 12 represent HDVs. Cycles do not have any associated emissions so were not included in the model. Category 3 does not fall into either category, as two axle trucks and buses may fall either side of the 3.5 tonnes boundary. In order to provide a worst-case assessment, it was assumed that all category 3 vehicles fell into the HDV category, and were modelled as such.

Time Varying Emissions

A4.7 As counts were available by the hour for each ATC, hourly variations in traffic flow specific to each modelled road were input into the model. This allowed for the potential capture of the scheme's impact on daily flow variation to be taken account of, as profiles specific to the pre- and post- scheme conditions were used. Examples of these time varying emission factors are provided in Figure A4.1.

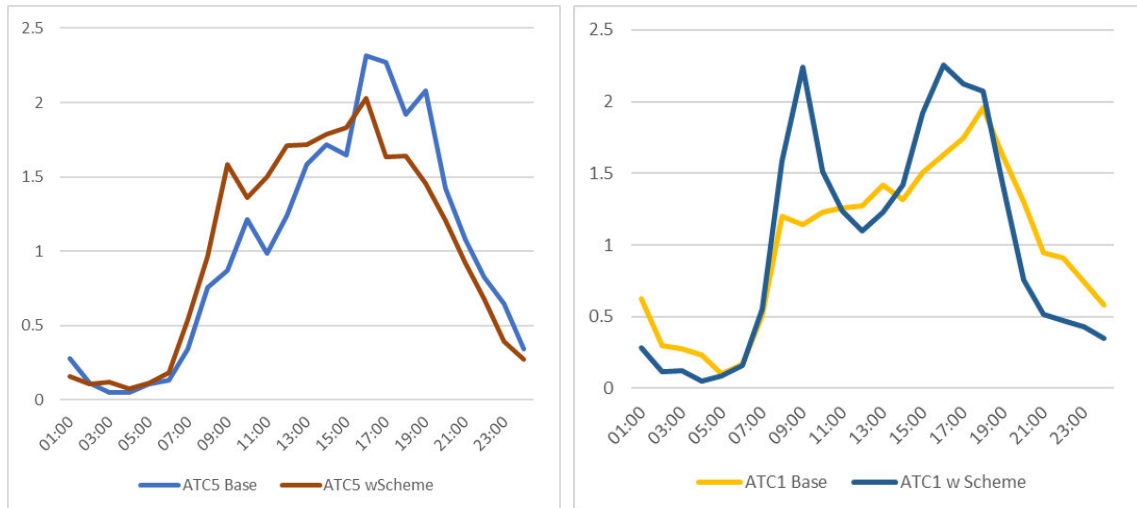


Figure A4.1: Average Time Varying Emission Factors⁸ for ATC1 (Palmer's Road) and ATC5 (Natal Road), with and without the Quieter Neighbourhood Scheme.

A4.8 While the effect of the scheme on daily total traffic volumes has, as far as possible, been isolated from other concurrent drivers of change, it has not been possible to separate the effect of external factors from those of the scheme on the distribution of traffic flows throughout the day. For example, the profiles displayed in Figure A4.1 show a lower proportion of trips occurring at night time with the scheme in place, compared to pre-scheme conditions. It is unclear whether this, or other changes to the diurnal profiles, can be attributed to implementation of the scheme, to seasonal effects (for example longer days in the summer), or to the lockdown that was in place in November. On roads with larger baseline traffic flows, it is unlikely that the scheme would significantly impact on the total hourly flows. On the North Circular Road for example, the total daily change in traffic flow resultant from the scheme, according to the AADT flow calculations discussed in paragraph A4.3, is 1,300 additional vehicles, of a total of roughly 67,000. In Figure A4.2 however, there is a substantial shift in hourly flows between the 'base' and 'with scheme' scenarios, which cannot be attributable to such a small relative increase in traffic.

⁸ The y-axis represents the average traffic flow across the 7 days of traffic data capture, at each hour, standardised to 1.

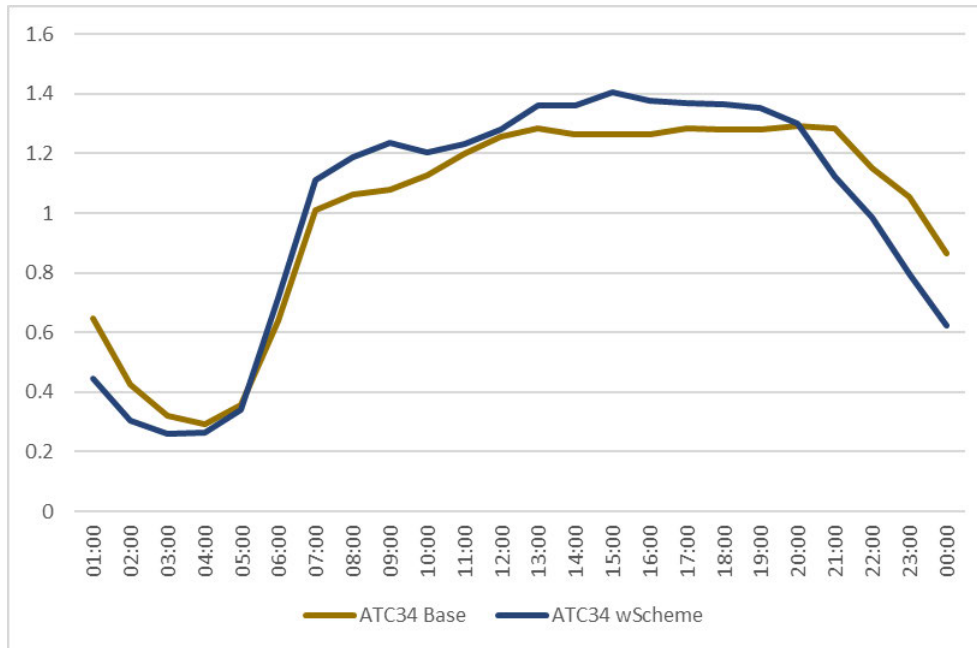


Figure A4.2: Average Time Varying Emission Factors⁹ for ATC34 (North Circular), with and without the Quieter Neighbourhood Scheme

A4.9 On high traffic roads, with large associated rates of emission, relatively small shifts in hourly flows can have large impacts on annual mean concentrations. In this case, there is a shift towards lower traffic flow at night in the 'with Scheme' scenario. Due to changes in atmospheric composition at night, nocturnal emissions are less able to disperse, resulting in higher pollutant concentrations (Xuexi Tie et al., 2008), meaning nighttime emissions result in higher pollutant concentrations than at other times of day. Therefore, this shift in hourly emission rates can significantly impact on annual mean values. As this shift in annual mean concentrations is the result of external factors, particularly in the case of the North Circular Road, it is judged that the presentation of modelled results along the North Circular would not represent the outcomes of the scheme, but rather the effect of the profile change.

Missing Data

A4.10 There were a number of ATCs which had periods of data missing. This is not unusual and could be due to cars parked on the device's tube for long periods of time. Where possible, assumptions have been made in order to account for these missing data. Otherwise, these sections of the model have been omitted. A list of missing data and their respective omissions or assumptions made are shown in Table A4.2.

⁹ The y-axis represents the average traffic flow across the 7 days of traffic data capture, at each hour, standardised to 1.

Table A4.2: Summary of Missing Data in Traffic Counts

Count	Missing Data	Action Taken
ATC3	Missing data from Tuesday, Wednesday, Thursday and Friday of the July period.	Modelling data replaced with ATC5 for the 2019 base model, which is expected to experience similar levels of traffic. Baseline data could not be omitted due to proximity to verification site, but impacts alongside that road were not assessed due to gaps in the data.
ATC4	Sunday, Monday and Tuesday missing from week's data, and replaced with Friday from the previous week and Saturday and Sunday data from following week, for the July period.	Time varying emission factors replaced with ATC5 factors, which is situated on a nearby road and is anticipated to have similar weekly traffic flow variations. Change in daily flows accounted for in annualisation factor.
ATC14	Tuesday missing from week's data, and replaced with Sunday data from following week, for July period.	Time varying emission factors replaced with ATC2 factors, which is the most similar road in the study area in terms of daily flows and is anticipated to have similar weekly traffic flow variations. Change in daily flows accounted for in annualisation factor.
ATC15	Missing data from Wednesday, Friday and Saturday of November period.	Road omitted from model due to lack of data.
ATC17	Tuesday missing from week's data, and replaced with Saturday data from following week, for July period.	Time varying emission factors replaced with ATC16 factors, which is the most similar road in the study area in terms of location, daily flows and local changes due to the scheme. Change in daily flows accounted for in annualisation factor.
ATC18	Missing data from Monday morning and Saturday night to Sunday midday, for July period.	Time varying emission factors replaced with ATC13 factors, which is situated on a nearby road and is anticipated to have similar weekly traffic flow variations.
ATC23	Missing data from Wednesday afternoon, for July period.	Time varying emission factors replaced with ATC21 factors, which is situated on a nearby road and is anticipated to have similar weekly traffic flow variations.
ATC25	Tuesday missing from week's data, and replaced with Saturday data from following week, for July period.	Time varying emission factors replaced with ATC16 factors, which is the most similar road in the study area in terms of daily flows and is anticipated to have similar impacts from the scheme. Change in daily flows accounted for in annualisation factor.

Data Summary

A4.11 The traffic data used in this assessment are summarised in Table A4.3.

Table A4.3: Summary of Annualised Traffic Data used in the Assessment (AADT Flows) ^a

Road Name	Count	2019		2020 Base		2020 with Scheme	
		AADT	%HDV	AADT	%HDV	AADT	%HDV
Palmers Road	ATC1	2,437	12.7	2,134	12.7	2,900	11.9
Bowes Road	ATC2	12,895	14.9	11,291	14.9	12,602	12.8
Highworth Road ^b	ATC3	406	9.4	-	-	-	-
Warwick Road	ATC4	2,398	8.5	2,100	8.5	1,650	8.7
Natal Road	ATC5	406	9.4	355	9.4	455	10.1
Brownlow Road	ATC6	13,128	10.8	11,496	10.8	12,011	11.5
York Road	ATC7	1,888	8.2	1,653	8.2	103	5.0
Maidstone Road	ATC8	1,094	9.5	958	9.5	258	6.7
Bounds Green Road	ATC9	21,514	9.7	18,839	9.7	19,506	10.9
Rhys Avenue	ATC10	39	16.2	34	16.2	135	11.2
Durnsford Road	ATC11	12,398	11.8	10,857	11.8	11,981	11.4
Woodfield Way	ATC12	1,078	6.0	944	6.0	1,476	6.8
Palmerston Road	ATC13	2,809	7.6	2,460	7.6	1,317	7.3
High Road	ATC14	16,467	9.7	14,420	9.7	14,612	13.0
Wolves Lane	ATC15	8,775	9.0	7,683	9.0	8,299	7.8
Truro Road	ATC16	2,965	9.6	2,597	9.6	3,257	9.9
Sidney Road	ATC17	622	8.9	545	8.9	725	10.1
Myddleton Road	ATC18	1,857	8.1	1,626	8.1	2,169	10.1
Belsize Avenue	ATC19	1,292	9.3	1,132	9.3	1,105	8.5
Lascotts Road	ATC20	994	8.4	871	8.4	930	9.1
Melbourne Avenue	ATC21	569	10.0	498	10.0	466	11.3
Spencer Avenue	ATC22	653	10.0	572	10.0	1,319	11.2
Sidney Avenue	ATC23	543	7.9	475	7.9	469	9.7
Kelvin Avenue	ATC24	1,591	9.5	1,394	9.5	1,145	10.7
Nightingale Road	ATC25	2,999	9.3	2,626	9.3	2,981	11.2
Marquis Road	ATC26	422	8.5	369	8.5	411	9.8
Tewkesbury Terrace	ATC27	328	10.6	288	10.6	255	10.9
Wroxham Gardens	ATC28	1,405	7.0	1,230	7.0	1,613	11.2
North Circular (A406)	ATC34	74,295	8.2	66,229	8.2	67,560	8.2

^a All these numbers correspond to annualised data, following the procedure described in Section 3. HGV proportions have been assumed to be identical in both 2019 and 2020.

- b As the ENF5 verification site is situated adjacent to Highworth Road, due to gaps in baseline traffic data here, baseline flows along Natal Road (ATC5) have been used in its place for the purposes of verification. The verification site is also adjacent to the North Circular, which has a much greater traffic flow, meaning air quality will be more dependent on traffic flows along this road, so minor inaccuracies in Highworth Road baseline traffic flow will not make a significant difference to the verification factor.

A4.12 Figure A4.3 shows the road network included within the model, along with the average speed at which each link was modelled, and shows which sections of road have been modelled as canyons (marked with either a 'Y' or 'No').

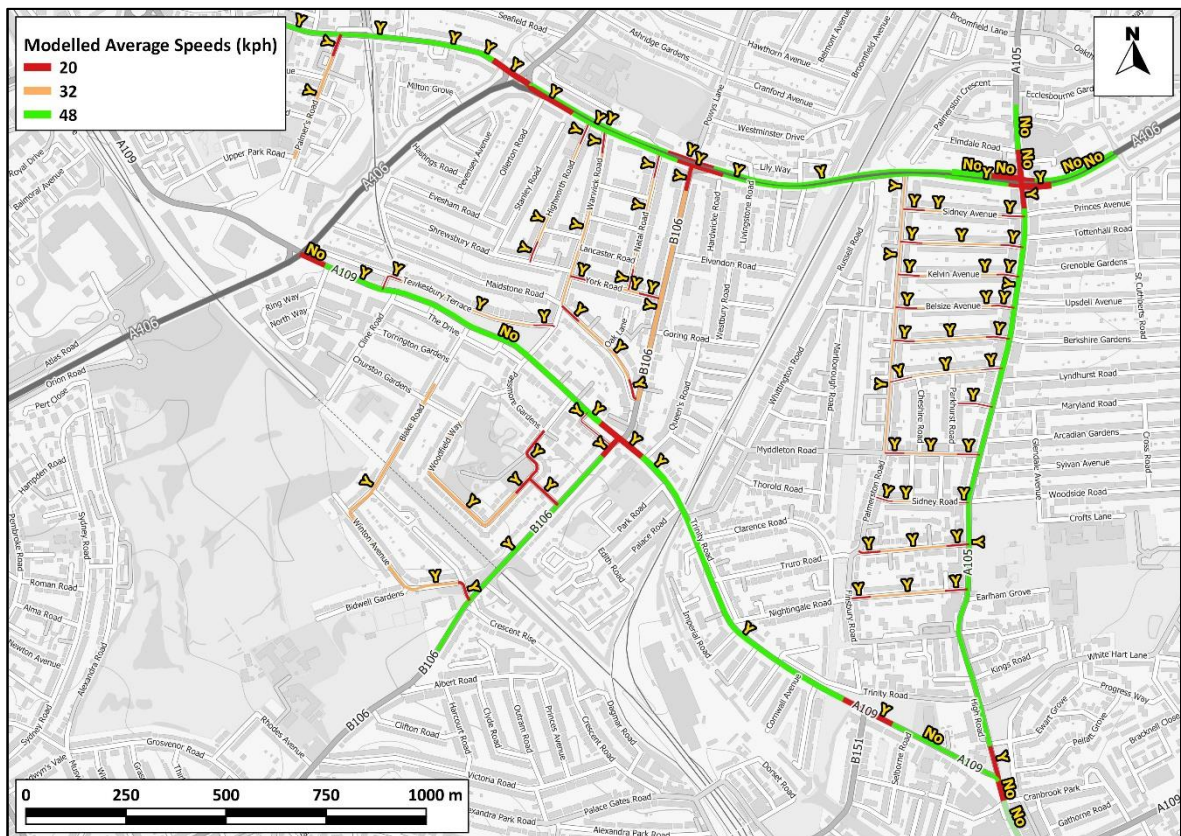


Figure A4.3: Modelled Road Network & Average Speed

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Street Canyons

- A4.13 For the purposes of modelling, it has been assumed that most of the roads within the study area are within street canyons formed by the building facades on each side of the roads. These have a number of canyon-like features, which reduce dispersion of traffic emissions, and can lead to concentrations of pollutants being higher here than they would be in areas with greater dispersion. These roads have, therefore, been modelled as street canyons using ADMS-Roads' advanced canyon module, with appropriate input parameters determined from plans and local mapping. As

shown in Figure A4.3, roads have been marked with either a 'Y' (indicating that a road has been modelled as a street canyon) or 'No'.

Model Verification

- A4.14 In order to ensure that ADMS-Roads accurately predicts local concentrations, it is necessary to verify the model against local measurements. The model has been run to predict the annual mean concentrations during 2019 at the ENF5 automatic monitoring site, for nitrogen dioxide and PM₁₀, and the Enfield 10 diffusion tube for nitrogen dioxide. Monitoring sites Enfield 9 and HGY28 have been excluded from the nitrogen dioxide model verification due to being background sites.
- A4.15 Most nitrogen dioxide (NO₂) is produced in the atmosphere by reaction of nitric oxide (NO) with ozone. It is therefore most appropriate to verify the model in terms of primary pollutant emissions of nitrogen oxides (NO_x = NO + NO₂). The model output of road-NO_x (i.e. the component of total NO_x coming from road traffic) has been compared with the 'measured' road-NO_x. Measured road-NO_x has been calculated from the measured NO₂ concentration and the predicted background NO₂ concentration using the NO_x from NO₂ calculator (Version 8.1) available on the Defra LAQM Support website (Defra, 2021).
- A4.16 The unadjusted model has under predicted the road-NO_x contribution; this is a common experience with this and most other road traffic emissions dispersion models. An adjustment factor has been determined as the slope of the best-fit line between the 'measured' road contribution and the model derived road contribution, forced through zero (Figure A4.4). The calculated adjustment factor of 1.5557 has been applied to the modelled road-NO_x concentration for each receptor to provide adjusted modelled road-NO_x concentrations.
- A4.17 The total nitrogen dioxide concentrations have then been determined by combining the adjusted modelled road-NO_x concentrations with the predicted background NO₂ concentration within the NO_x to NO₂ calculator. Figure A4.5 compares final adjusted modelled total NO₂ at each of the monitoring sites to measured total NO₂, and shows a close agreement.

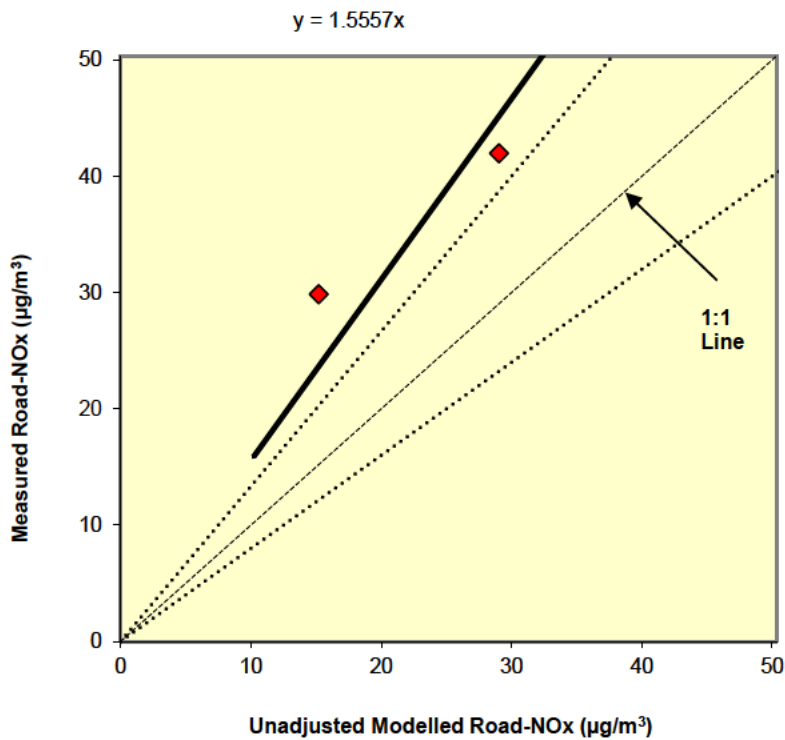


Figure A4.4: Comparison of Measured Road NOx to Unadjusted Modelled Road NOx Concentrations. The dashed lines show $\pm 25\%$.

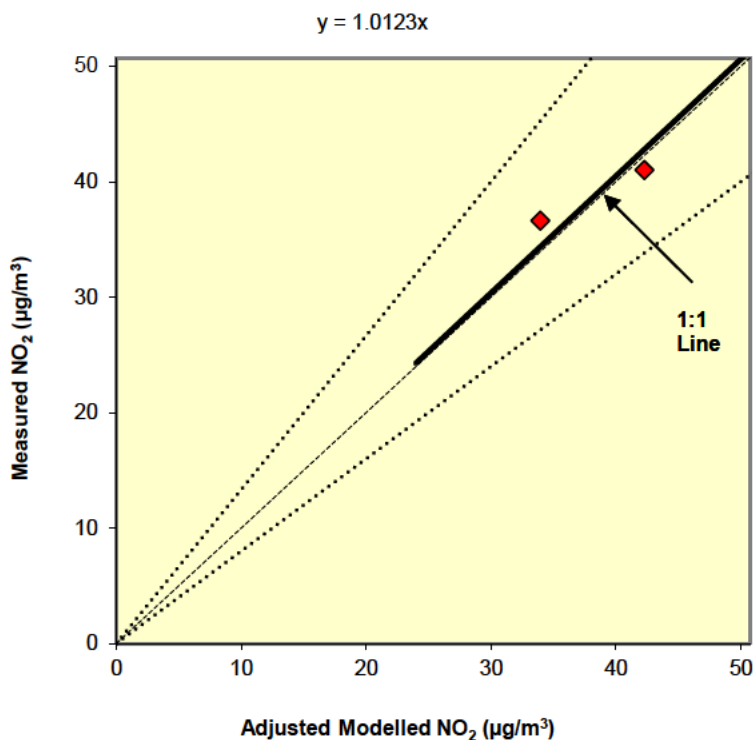


Figure A4.5: Comparison of Measured Total NO₂ to Final Adjusted Modelled Total NO₂ Concentrations. The dashed lines show $\pm 25\%$.

A4.18 The adjustment factor calculated for PM₁₀ concentrations returned a number lower than one. As such, in order to be conservative, the model outputs of road-PM₁₀ and road-PM_{2.5} were adjusted by applying the adjustment factor calculated for road NO_x. This would have led to an overestimation of PM concentrations and impacts, providing for a conservative assessment.

Post-processing

A4.19 The model predicts road-NO_x concentrations at each receptor location. These concentrations have been adjusted using the adjustment factor set out above, which, along with the background NO₂, has been processed through the NO_x to NO₂ calculator available on the Defra LAQM Support website (Defra, 2021). The traffic mix within the calculator has been set to “All London traffic”, which is considered suitable for the study area. The calculator predicts the component of NO₂ based on the adjusted road-NO_x and the background NO₂.

A5 Modelling Results

A5.1 This section sets out the full 2020 results for nitrogen dioxide, PM₁₀ and PM_{2.5}, using the impact descriptors set out in Table A2.1. Receptor locations and ID are set out in Figure A5.1 to Figure A5.3.

Table A5.1: Predicted Impacts on Annual Mean Nitrogen Dioxide Concentrations ^a

Receptor ID	2019	2020		Impact				
	2019 Baseline Concentration (µg/m ³)	Without Scheme Concentration (µg/m ³)	With Scheme Concentration (µg/m ³)	Absolute Change in Concentration (µg/m ³)	Change (% of AQAL)	Increase/ Decrease	Impact Descriptor	Sensitivity Test Impact Descriptor ^c
2	37.1	32.3	32.7	0.4	1	+	Negligible	Negligible
3	27.9	25.4	25.3	0.0	0	-	Negligible	Negligible
4	27.9	25.4	25.3	-0.1	0	-	Negligible	Negligible
5	26.9	24.3	24.3	0.0	0	+	Negligible	Negligible
6	30.2	27.2	26.7	-0.4	-1	-	Negligible	Negligible
7	25.3	23.1	23.0	-0.1	0	-	Negligible	Negligible
8	25.3	23.1	23.1	0.0	0	+	Negligible	Negligible
9	25.5	23.2	22.7	-0.6	-1	-	Negligible	Negligible
10	25.2	23.0	23.0	0.0	0	-	Negligible	Negligible
11	25.0	22.9	22.8	-0.1	0	-	Negligible	Negligible
12	25.7	23.4	23.1	-0.3	-1	-	Negligible	Negligible
13	25.7	23.4	23.4	0.0	0		No Change	No Change
14	25.8	23.4	23.4	0.0	0		No Change	No Change
15	24.5	22.5	22.5	0.0	0	-	Negligible	Negligible
16	25.1	23.0	22.8	-0.1	0	-	Negligible	Negligible
17	24.4	22.4	22.0	-0.4	-1	-	Negligible	Negligible
18	24.5	22.5	23.4	0.9	2	+	Negligible	Negligible
19	23.9	22.1	22.7	0.6	2	+	Negligible	Negligible
20	24.2	22.3	22.3	0.1	0	+	Negligible	Negligible
21	24.5	22.5	22.5	0.0	0	-	Negligible	Negligible
22	24.2	22.3	22.4	0.1	0	+	Negligible	Negligible
23	25.4	23.1	23.8	0.6	2	+	Negligible	Negligible
24	24.6	22.6	23.1	0.5	1	+	Negligible	Negligible
25	25.0	22.8	23.4	0.6	2	+	Negligible	Negligible

Receptor ID	2019	2020		Impact				
	2019 Baseline Concentration ($\mu\text{g}/\text{m}^3$)	Without Scheme Concentration ($\mu\text{g}/\text{m}^3$)	With Scheme Concentration ($\mu\text{g}/\text{m}^3$)	Absolute Change in Concentration ($\mu\text{g}/\text{m}^3$)	Change (% of AQAL)	Increase/ Decrease	Impact Descriptor	Sensitivity Test Impact Descriptor ^c
26	24.1	22.2	21.8	-0.4	-1	-	Negligible	Negligible
27	25.1	22.9	22.4	-0.6	-1	-	Negligible	Negligible
28	24.8	22.7	22.2	-0.5	-1	-	Negligible	Negligible
29	24.1	22.2	22.5	0.3	1	+	Negligible	Negligible
30	23.5	21.8	22.0	0.2	1	+	Negligible	Negligible
31	23.4	21.7	21.9	0.2	1	+	Negligible	Negligible
32	26.1	23.7	24.2	0.6	1	+	Negligible	Negligible
33	34.7	30.2	31.1	0.9	2	+	Slight Adverse	Slight Adverse
34	24.4	22.4	22.8	0.3	1	+	Negligible	Negligible
35	33.0	29.0	29.5	0.6	1	+	Negligible	Negligible
36	26.7	24.1	24.6	0.5	1	+	Negligible	Negligible
37	25.6	23.2	23.6	0.4	1	+	Negligible	Negligible
38	32.7	28.7	29.2	0.5	1	+	Negligible	Negligible
39	30.0	26.7	27.0	0.4	1	+	Negligible	Negligible
40	43.8	37.5	37.6	0.2	0	+	Negligible	Negligible
41	34.9	30.5	30.6	0.1	0	+	Negligible	Negligible
42	26.4	23.9	22.5	-1.4	-3	-	Negligible	Negligible
43	33.6	29.2	28.2	-1.0	-3	-	Negligible	Slight Beneficial
44	31.5	27.6	27.6	-0.1	0	-	Negligible	Negligible
45	25.7	23.4	22.3	-1.1	-3	-	Negligible	Negligible
47	28.3	25.6	25.6	0.0	0		No Change	No Change
48	24.3	22.3	22.3	0.0	0	-	Negligible	Negligible
49	33.6	29.7	29.3	-0.4	-1	-	Negligible	Negligible
50	27.8	25.2	24.9	-0.3	-1	-	Negligible	Negligible
51	26.7	24.2	23.1	-1.2	-3	-	Negligible	Negligible
55	24.7	22.7	22.3	-0.4	-1	-	Negligible	Negligible
56	25.5	23.3	23.0	-0.3	-1	-	Negligible	Negligible
57	31.8	27.9	27.8	0.0	0	-	Negligible	Negligible
59	25.4	23.2	23.2	0.0	0	+	Negligible	Negligible
60	30.4	27.0	27.2	0.2	1	+	Negligible	Negligible

Receptor ID	2019	2020		Impact				
	2019 Baseline Concentration ($\mu\text{g}/\text{m}^3$)	Without Scheme Concentration ($\mu\text{g}/\text{m}^3$)	With Scheme Concentration ($\mu\text{g}/\text{m}^3$)	Absolute Change in Concentration ($\mu\text{g}/\text{m}^3$)	Change (% of AQAL)	Increase/ Decrease	Impact Descriptor	Sensitivity Test Impact Descriptor ^c
61	31.5	27.7	28.1	0.3	1	+	Negligible	Negligible
62	27.5	24.7	24.9	0.2	1	+	Negligible	Negligible
63	31.5	27.6	28.0	0.4	1	+	Negligible	Negligible
64	29.2	26.0	26.3	0.3	1	+	Negligible	Negligible
65	34.4	29.8	30.3	0.5	1	+	Negligible	Negligible
66	28.9	25.8	26.2	0.4	1	+	Negligible	Negligible
67	24.0	22.2	22.4	0.3	1	+	Negligible	Negligible
68	24.9	22.9	23.5	0.6	1	+	Negligible	Negligible
72	26.1	23.8	24.2	0.4	1	+	Negligible	Negligible
73	24.9	22.9	23.3	0.4	1	+	Negligible	Negligible
74	29.8	26.4	26.5	0.1	0	+	Negligible	Negligible
75	31.8	28.0	28.5	0.6	1	+	Negligible	Negligible
76	29.9	26.5	26.8	0.2	1	+	Negligible	Negligible
86	25.9	23.6	23.3	-0.3	-1	-	Negligible	Negligible
87	24.9	22.8	22.8	0.0	0		No Change	No Change
88	31.0	27.3	27.4	0.1	0	+	Negligible	Negligible
89	25.5	23.3	22.3	-1.0	-3	-	Negligible	Negligible
90	24.7	22.7	22.4	-0.3	-1	-	Negligible	Negligible
91	26.7	24.2	24.3	0.1	0	+	Negligible	Negligible
92	25.1	23.0	23.0	0.0	0	+	Negligible	Negligible
93	25.5	23.3	23.3	0.0	0	+	Negligible	Negligible
94	24.1	22.3	22.5	0.3	1	+	Negligible	Negligible
95	23.7	21.9	22.2	0.3	1	+	Negligible	Negligible
96	29.2	26.0	26.3	0.3	1	+	Negligible	Negligible
97	23.5	21.8	22.0	0.2	1	+	Negligible	Negligible
98	28.9	25.8	26.0	0.2	0	+	Negligible	Negligible
99	29.9	26.5	26.8	0.3	1	+	Negligible	Negligible
100	30.1	26.7	27.0	0.2	1	+	Negligible	Negligible
101	25.3	23.2	23.6	0.5	1	+	Negligible	Negligible
102	30.0	26.6	26.8	0.2	1	+	Negligible	Negligible

Receptor ID	2019	2020		Impact				
	2019 Baseline Concentration ($\mu\text{g}/\text{m}^3$)	Without Scheme Concentration ($\mu\text{g}/\text{m}^3$)	With Scheme Concentration ($\mu\text{g}/\text{m}^3$)	Absolute Change in Concentration ($\mu\text{g}/\text{m}^3$)	Change (% of AQAL)	Increase/ Decrease	Impact Descriptor	Sensitivity Test Impact Descriptor ^c
103	23.8	22.0	22.1	0.1	0	+	Negligible	Negligible
104	25.0	22.9	22.7	-0.1	0	-	Negligible	Negligible
105	25.1	23.0	22.9	0.0	0	-	Negligible	Negligible
106	47.9	40.7	41.7	0.9	2	+	Moderate Adverse	Substantial Adverse
107	28.2	25.3	25.4	0.2	0	+	Negligible	Negligible
Receptors Adjacent to the North Circular								
80	43.9	38.1	37.9	-0.2	0	-	Negligible	Negligible
81	62.1	52.6	52.7	0.1	0	+	Negligible	Negligible
82	44.0	38.2	37.7	-0.5	-1	-	Slight Beneficial	Moderate Beneficial
Objective	40			-	-	-	-	-

^a Exceedances of the objective are shown in bold.

^b % changes are relative to the objective and have been rounded to the nearest whole number.

^c The sensitivity test has been conducted by applying the IAQM guidance impact descriptor criteria (see Table A2.1) to the modelled change in concentration, treating the 2019 baseline concentration as the "Long-term average concentration".

Table A5.2: Predicted Impacts on Annual Mean PM₁₀ Concentrations

Receptor ID	2019	2020		Impact				
	2019 Baseline Concentration ($\mu\text{g}/\text{m}^3$)	Without Scheme Concentration ($\mu\text{g}/\text{m}^3$)	With Scheme Concentration ($\mu\text{g}/\text{m}^3$)	Absolute Change in Concentration ($\mu\text{g}/\text{m}^3$)	Change (% of AQAL)	Increase/ Decrease	Impact Descriptor	Sensitivity Test Impact Descriptor ^b
2	21.5	20.7	20.8	0.1	0	+	Negligible	Negligible
3	19.5	18.9	18.9	0.0	0	-	Negligible	Negligible
4	19.5	19.0	18.9	0.0	0	-	Negligible	Negligible
5	19.0	18.4	18.4	0.0	0	+	Negligible	Negligible
6	20.1	19.4	19.3	-0.1	0	-	Negligible	Negligible

Receptor ID	2019	2020		Impact				
	2019 Baseline Concentration ($\mu\text{g}/\text{m}^3$)	Without Scheme Concentration ($\mu\text{g}/\text{m}^3$)	With Scheme Concentration ($\mu\text{g}/\text{m}^3$)	Absolute Change in Concentration ($\mu\text{g}/\text{m}^3$)	Change (% of AQAL)	Increase/ Decrease	Impact Descriptor	Sensitivity Test Impact Descriptor ^b
7	18.7	18.1	18.1	0.0	0	-	Negligible	Negligible
8	18.7	18.2	18.2	0.0	0	+	Negligible	Negligible
9	18.7	18.2	18.1	-0.1	0	-	Negligible	Negligible
10	18.7	18.1	18.1	0.0	0	-	Negligible	Negligible
11	18.6	18.1	18.1	0.0	0	-	Negligible	Negligible
12	18.7	18.2	18.1	-0.1	0	-	Negligible	Negligible
13	18.7	18.2	18.2	0.0	0		Negligible	Negligible
14	18.7	18.2	18.2	0.0	0		Negligible	Negligible
15	18.6	18.0	18.0	0.0	0	-	Negligible	Negligible
16	18.6	18.1	18.0	0.0	0	-	Negligible	Negligible
17	18.5	18.0	17.9	-0.1	0	-	Negligible	Negligible
18	18.5	18.0	18.2	0.1	0	+	Negligible	Negligible
19	18.5	17.9	18.1	0.1	0	+	Negligible	Negligible
20	18.5	18.0	18.0	0.0	0	+	Negligible	Negligible
21	18.5	18.0	18.0	0.0	0	-	Negligible	Negligible
22	18.5	18.0	18.0	0.0	0	+	Negligible	Negligible
23	18.7	18.1	18.2	0.1	0	+	Negligible	Negligible
24	18.6	18.0	18.1	0.1	0	+	Negligible	Negligible
25	18.6	18.0	18.1	0.1	0	+	Negligible	Negligible
26	18.5	18.0	17.9	-0.1	0	-	Negligible	Negligible
27	18.6	18.1	18.0	-0.1	0	-	Negligible	Negligible
28	18.6	18.1	18.0	-0.1	0	-	Negligible	Negligible
29	18.5	18.0	18.0	0.0	0	+	Negligible	Negligible
30	18.4	17.9	17.9	0.0	0	+	Negligible	Negligible
31	18.3	17.8	17.9	0.0	0	+	Negligible	Negligible
32	18.7	18.2	18.3	0.1	0	+	Negligible	Negligible
33	20.7	19.9	20.1	0.2	1	+	Negligible	Negligible
34	18.5	18.0	18.1	0.1	0	+	Negligible	Negligible
35	20.5	19.7	19.9	0.2	1	+	Negligible	Negligible
36	18.8	18.3	18.3	0.1	0	+	Negligible	Negligible
37	18.6	18.1	18.2	0.1	0	+	Negligible	Negligible

Receptor ID	2019	2020		Impact				
	2019 Baseline Concentration ($\mu\text{g}/\text{m}^3$)	Without Scheme Concentration ($\mu\text{g}/\text{m}^3$)	With Scheme Concentration ($\mu\text{g}/\text{m}^3$)	Absolute Change in Concentration ($\mu\text{g}/\text{m}^3$)	Change (% of AQAL)	Increase/ Decrease	Impact Descriptor	Sensitivity Test Impact Descriptor ^b
38	20.4	19.6	19.8	0.2	0	+	Negligible	Negligible
39	19.8	19.1	19.2	0.1	0	+	Negligible	Negligible
40	22.0	21.1	21.1	0.0	0	+	Negligible	Negligible
41	20.7	20.0	20.0	0.0	0	+	Negligible	Negligible
42	18.8	18.2	18.0	-0.2	-1	-	Negligible	Negligible
43	20.1	19.4	19.2	-0.2	-1	-	Negligible	Negligible
44	19.8	19.1	19.1	0.0	0	-	Negligible	Negligible
45	18.4	17.9	17.7	-0.2	-1	-	Negligible	Negligible
47	19.5	19.0	19.0	0.0	0	-	Negligible	Negligible
48	18.5	18.0	18.0	0.0	0	-	Negligible	Negligible
49	20.5	19.7	19.7	-0.1	0	-	Negligible	Negligible
50	19.2	18.6	18.6	-0.1	0	-	Negligible	Negligible
51	18.6	18.0	17.8	-0.2	-1	-	Negligible	Negligible
55	18.2	17.7	17.7	-0.1	0	-	Negligible	Negligible
56	18.4	17.9	17.8	-0.1	0	-	Negligible	Negligible
57	19.8	19.1	19.1	0.0	0	-	Negligible	Negligible
59	18.4	17.9	17.9	0.0	0	+	Negligible	Negligible
60	19.3	18.7	18.7	0.0	0	+	Negligible	Negligible
61	19.2	18.6	18.6	0.1	0	+	Negligible	Negligible
62	18.6	18.1	18.1	0.0	0	+	Negligible	Negligible
63	19.5	18.8	18.9	0.1	0	+	Negligible	Negligible
64	18.9	18.3	18.3	0.1	0	+	Negligible	Negligible
65	19.6	18.9	19.0	0.1	0	+	Negligible	Negligible
66	19.2	18.6	18.7	0.1	0	+	Negligible	Negligible
67	18.1	17.6	17.7	0.0	0	+	Negligible	Negligible
68	18.3	17.8	17.9	0.1	0	+	Negligible	Negligible
72	18.8	18.3	18.3	0.1	0	+	Negligible	Negligible
73	18.6	18.1	18.2	0.1	0	+	Negligible	Negligible
74	19.3	18.7	18.7	0.0	0	+	Negligible	Negligible
75	20.1	19.4	19.5	0.1	0	+	Negligible	Negligible
76	19.7	19.1	19.1	0.0	0	+	Negligible	Negligible

Receptor ID	2019	2020		Impact				
	2019 Baseline Concentration ($\mu\text{g}/\text{m}^3$)	Without Scheme Concentration ($\mu\text{g}/\text{m}^3$)	With Scheme Concentration ($\mu\text{g}/\text{m}^3$)	Absolute Change in Concentration ($\mu\text{g}/\text{m}^3$)	Change (% of AQAL)	Increase/ Decrease	Impact Descriptor	Sensitivity Test Impact Descriptor ^b
86	18.5	17.9	17.9	-0.1	0	-	Negligible	Negligible
87	18.6	18.1	18.1	0.0	0		Negligible	Negligible
88	19.7	19.0	19.0	0.0	0	+	Negligible	Negligible
89	18.4	17.9	17.7	-0.2	-1	-	Negligible	Negligible
90	18.3	17.8	17.7	-0.1	0	-	Negligible	Negligible
91	18.7	18.1	18.2	0.0	0	+	Negligible	Negligible
92	18.4	17.9	17.9	0.0	0	+	Negligible	Negligible
93	18.5	17.9	17.9	0.0	0	+	Negligible	Negligible
94	18.2	17.7	17.7	0.1	0	+	Negligible	Negligible
95	18.1	17.6	17.7	0.1	0	+	Negligible	Negligible
96	19.3	18.6	18.7	0.1	0	+	Negligible	Negligible
97	18.0	17.6	17.6	0.0	0	+	Negligible	Negligible
98	19.5	18.9	18.9	0.1	0	+	Negligible	Negligible
99	19.0	18.4	18.4	0.1	0	+	Negligible	Negligible
100	19.8	19.1	19.2	0.1	0	+	Negligible	Negligible
101	18.7	18.2	18.3	0.1	0	+	Negligible	Negligible
102	19.8	19.1	19.2	0.0	0	+	Negligible	Negligible
103	18.4	17.9	17.9	0.0	0	+	Negligible	Negligible
104	18.6	18.1	18.1	0.0	0	-	Negligible	Negligible
105	18.7	18.1	18.1	0.0	0	-	Negligible	Negligible
106	22.8	21.7	21.9	0.1	0	+	Negligible	Negligible
107	19.4	18.8	18.8	0.0	0	+	Negligible	Negligible
Receptors Adjacent to the North Circular								
80	23.5	22.4	22.4	0.0	0	-	Negligible	Negligible
81	25.7	24.3	24.3	0.0	0	+	Negligible	Negligible
82	23.5	22.4	22.3	-0.1	0	-	Negligible	Negligible
Objective	40			-	-	-	-	-

^a % changes are relative to the objective and have been rounded to the nearest whole number.

^b The sensitivity test has been conducted by applying the IAQM guidance impact descriptor criteria (see Table A2.1) to the modelled change in concentration, treating the 2019 baseline concentration as the "Long-term average concentration".

Table A5.3: Predicted Impacts on Annual Mean PM_{2.5} Concentrations

Receptor ID	2019	2020		Impact				
	2019 Baseline Concentration (µg/m ³)	Without Scheme Concentration (µg/m ³)	With Scheme Concentration (µg/m ³)	Absolute Change in Concentration (µg/m ³)	Change (% of AQAL)	Increase/ Decrease	Impact Descriptor	Sensitivity Test Impact Descriptor ^b
2	14.0	13.4	13.5	0.1	0	+	Negligible	Negligible
3	12.8	12.4	12.4	0.0	0	-	Negligible	Negligible
4	12.8	12.5	12.4	0.0	0	-	Negligible	Negligible
5	12.6	12.2	12.2	0.0	0	+	Negligible	Negligible
6	13.1	12.7	12.7	-0.1	0	-	Negligible	Negligible
7	12.4	12.1	12.0	0.0	0	-	Negligible	Negligible
8	12.4	12.1	12.1	0.0	0	+	Negligible	Negligible
9	12.4	12.1	12.0	-0.1	0	-	Negligible	Negligible
10	12.4	12.0	12.0	0.0	0	-	Negligible	Negligible
11	12.3	12.0	12.0	0.0	0	-	Negligible	Negligible
12	12.4	12.1	12.0	0.0	0	-	Negligible	Negligible
13	12.4	12.1	12.1	0.0	0		Negligible	Negligible
14	12.4	12.1	12.1	0.0	0		Negligible	Negligible
15	12.3	12.0	12.0	0.0	0	-	Negligible	Negligible
16	12.3	12.0	12.0	0.0	0	-	Negligible	Negligible
17	12.3	12.0	11.9	0.0	0	-	Negligible	Negligible
18	12.3	12.0	12.1	0.1	0	+	Negligible	Negligible
19	12.2	11.9	12.0	0.1	0	+	Negligible	Negligible
20	12.3	11.9	12.0	0.0	0	+	Negligible	Negligible
21	12.3	12.0	12.0	0.0	0	-	Negligible	Negligible
22	12.3	12.0	12.0	0.0	0	+	Negligible	Negligible
23	12.4	12.0	12.1	0.1	0	+	Negligible	Negligible
24	12.3	12.0	12.0	0.1	0	+	Negligible	Negligible
25	12.3	12.0	12.0	0.1	0	+	Negligible	Negligible
26	12.2	11.9	11.9	-0.1	0	-	Negligible	Negligible
27	12.4	12.0	12.0	-0.1	0	-	Negligible	Negligible
28	12.3	12.0	11.9	-0.1	0	-	Negligible	Negligible
29	12.3	11.9	12.0	0.0	0	+	Negligible	Negligible
30	12.2	11.9	11.9	0.0	0	+	Negligible	Negligible

Receptor ID	2019	2020		Impact				
	2019 Baseline Concentration ($\mu\text{g}/\text{m}^3$)	Without Scheme Concentration ($\mu\text{g}/\text{m}^3$)	With Scheme Concentration ($\mu\text{g}/\text{m}^3$)	Absolute Change in Concentration ($\mu\text{g}/\text{m}^3$)	Change (% of AQAL)	Increase/ Decrease	Impact Descriptor	Sensitivity Test Impact Descriptor ^b
31	12.2	11.9	11.9	0.0	0	+	Negligible	Negligible
32	12.4	12.1	12.1	0.1	0	+	Negligible	Negligible
33	13.6	13.1	13.2	0.1	1	+	Negligible	Negligible
34	12.3	12.0	12.0	0.0	0	+	Negligible	Negligible
35	13.4	12.9	13.0	0.1	0	+	Negligible	Negligible
36	12.5	12.1	12.2	0.1	0	+	Negligible	Negligible
37	12.3	12.0	12.1	0.0	0	+	Negligible	Negligible
38	13.4	12.9	13.0	0.1	0	+	Negligible	Negligible
39	13.0	12.6	12.7	0.1	0	+	Negligible	Negligible
40	14.3	13.7	13.7	0.0	0	+	Negligible	Negligible
41	13.5	13.1	13.1	0.0	0	+	Negligible	Negligible
42	12.5	12.1	12.0	-0.1	-1	-	Negligible	Negligible
43	13.2	12.8	12.7	-0.1	0	-	Negligible	Negligible
44	13.0	12.6	12.6	0.0	0	-	Negligible	Negligible
45	12.2	11.9	11.8	-0.1	0	-	Negligible	Negligible
47	12.8	12.5	12.5	0.0	0		Negligible	Negligible
48	12.3	12.0	11.9	0.0	0	-	Negligible	Negligible
49	13.4	13.0	12.9	0.0	0	-	Negligible	Negligible
50	12.7	12.3	12.3	0.0	0	-	Negligible	Negligible
51	12.3	12.0	11.8	-0.1	0	-	Negligible	Negligible
55	12.1	11.8	11.8	0.0	0	-	Negligible	Negligible
56	12.2	11.9	11.8	0.0	0	-	Negligible	Negligible
57	13.1	12.6	12.6	0.0	0	-	Negligible	Negligible
59	12.2	11.9	11.9	0.0	0	+	Negligible	Negligible
60	12.8	12.3	12.4	0.0	0	+	Negligible	Negligible
61	12.7	12.3	12.3	0.0	0	+	Negligible	Negligible
62	12.4	12.0	12.0	0.0	0	+	Negligible	Negligible
63	12.9	12.5	12.5	0.0	0	+	Negligible	Negligible
64	12.5	12.1	12.2	0.0	0	+	Negligible	Negligible
65	13.0	12.5	12.6	0.1	0	+	Negligible	Negligible

Receptor ID	2019	2020		Impact				
	2019 Baseline Concentration ($\mu\text{g}/\text{m}^3$)	Without Scheme Concentration ($\mu\text{g}/\text{m}^3$)	With Scheme Concentration ($\mu\text{g}/\text{m}^3$)	Absolute Change in Concentration ($\mu\text{g}/\text{m}^3$)	Change (% of AQAL)	Increase/ Decrease	Impact Descriptor	Sensitivity Test Impact Descriptor ^b
66	12.7	12.3	12.3	0.1	0	+	Negligible	Negligible
67	12.0	11.7	11.8	0.0	0	+	Negligible	Negligible
68	12.1	11.8	11.9	0.1	0	+	Negligible	Negligible
72	12.4	12.1	12.2	0.0	0	+	Negligible	Negligible
73	12.3	12.0	12.1	0.0	0	+	Negligible	Negligible
74	12.7	12.4	12.4	0.0	0	+	Negligible	Negligible
75	13.2	12.7	12.8	0.1	0	+	Negligible	Negligible
76	13.0	12.6	12.6	0.0	0	+	Negligible	Negligible
86	12.2	11.9	11.9	0.0	0	-	Negligible	Negligible
87	12.3	12.0	12.0	0.0	0		Negligible	Negligible
88	13.0	12.6	12.6	0.0	0	+	Negligible	Negligible
89	12.2	11.9	11.8	-0.1	0	-	Negligible	Negligible
90	12.1	11.8	11.8	0.0	0	-	Negligible	Negligible
91	12.4	12.0	12.0	0.0	0	+	Negligible	Negligible
92	12.2	11.9	11.9	0.0	0	+	Negligible	Negligible
93	12.2	11.9	11.9	0.0	0	+	Negligible	Negligible
94	12.0	11.7	11.8	0.0	0	+	Negligible	Negligible
95	12.0	11.7	11.7	0.0	0	+	Negligible	Negligible
96	12.7	12.3	12.4	0.0	0	+	Negligible	Negligible
97	12.0	11.7	11.7	0.0	0	+	Negligible	Negligible
98	12.9	12.5	12.5	0.0	0	+	Negligible	Negligible
99	12.6	12.2	12.2	0.0	0	+	Negligible	Negligible
100	13.1	12.6	12.7	0.0	0	+	Negligible	Negligible
101	12.4	12.1	12.1	0.1	0	+	Negligible	Negligible
102	13.0	12.6	12.6	0.0	0	+	Negligible	Negligible
103	12.2	11.9	11.9	0.0	0	+	Negligible	Negligible
104	12.3	12.0	12.0	0.0	0	-	Negligible	Negligible
105	12.4	12.0	12.0	0.0	0	-	Negligible	Negligible

Receptor ID	2019	2020		Impact				
	2019 Baseline Concentration ($\mu\text{g}/\text{m}^3$)	Without Scheme Concentration ($\mu\text{g}/\text{m}^3$)	With Scheme Concentration ($\mu\text{g}/\text{m}^3$)	Absolute Change in Concentration ($\mu\text{g}/\text{m}^3$)	Change (% of AQAL)	Increase/ Decrease	Impact Descriptor	Sensitivity Test Impact Descriptor ^b
106	14.8	14.1	14.2	0.1	0	+	Negligible	Negligible
107	12.8	12.4	12.4	0.0	0	+	Negligible	Negligible
Receptors Adjacent to the North Circular								
80	15.1	14.5	14.4	0.0	0	-	Negligible	Negligible
81	16.6	15.7	15.7	0.0	0	+	Negligible	Negligible
82	15.2	14.5	14.4	-0.1	0	-	Negligible	Negligible
Objective	25			-	-	-	-	-

^a % changes are relative to the objective and have been rounded to the nearest whole number.

^b The sensitivity test has been conducted by applying the IAQM guidance impact descriptor criteria (see Table A2.1) to the modelled change in concentration, treating the 2019 baseline concentration as the "Long-term average concentration".

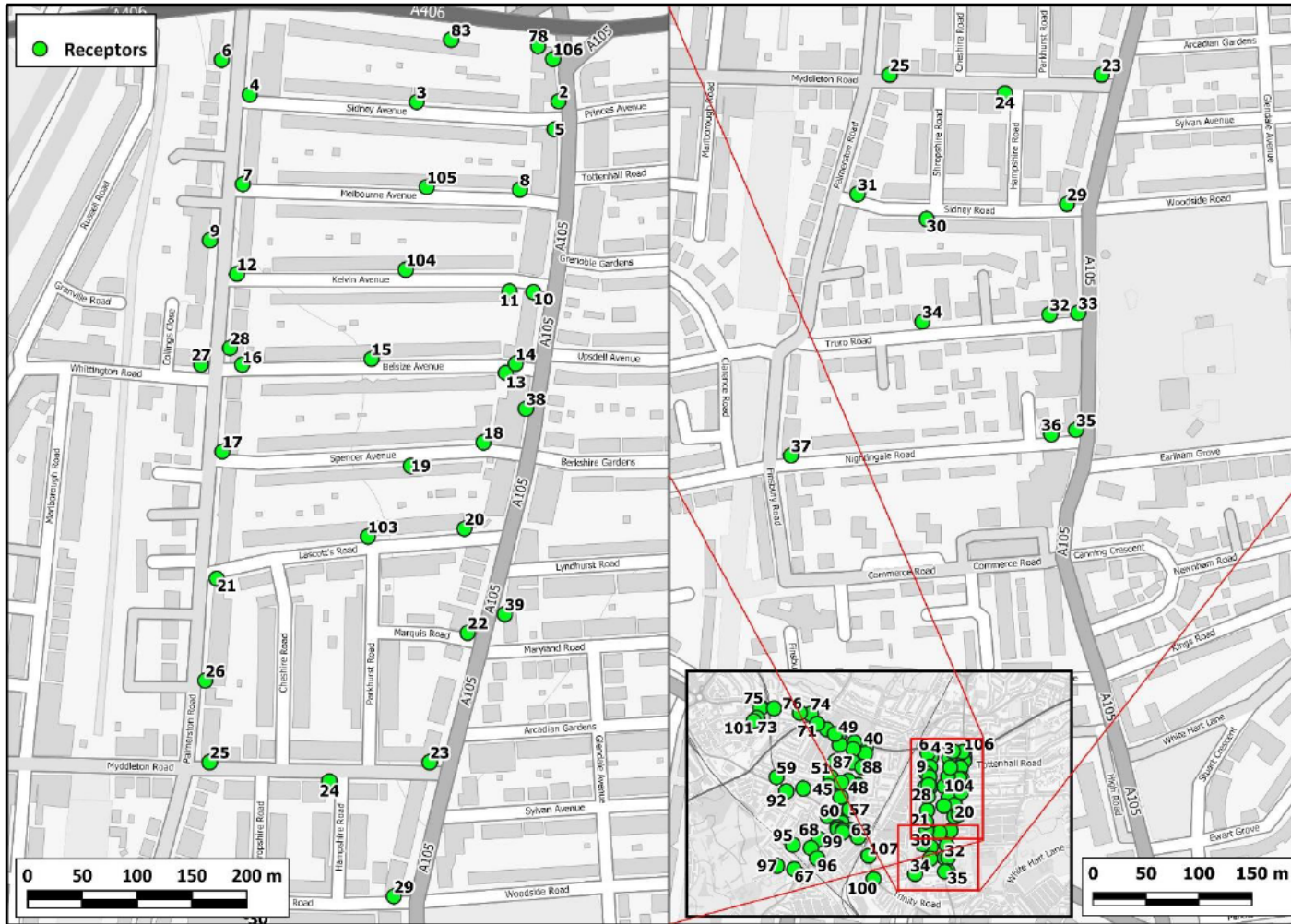


Figure A5.1: Modelled Receptors with Labels - East

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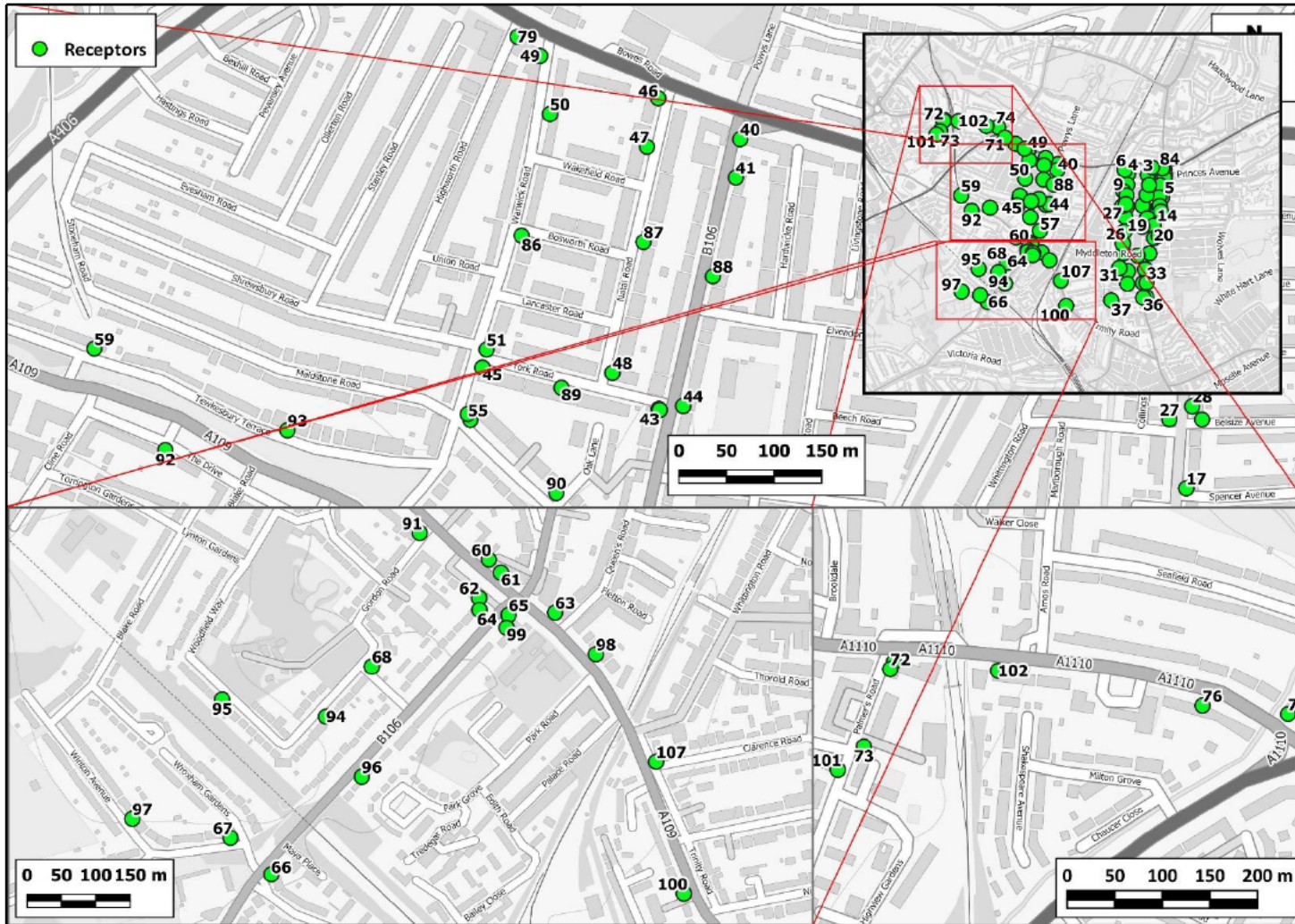


Figure A5.2: Modelled Receptors with Labels - West

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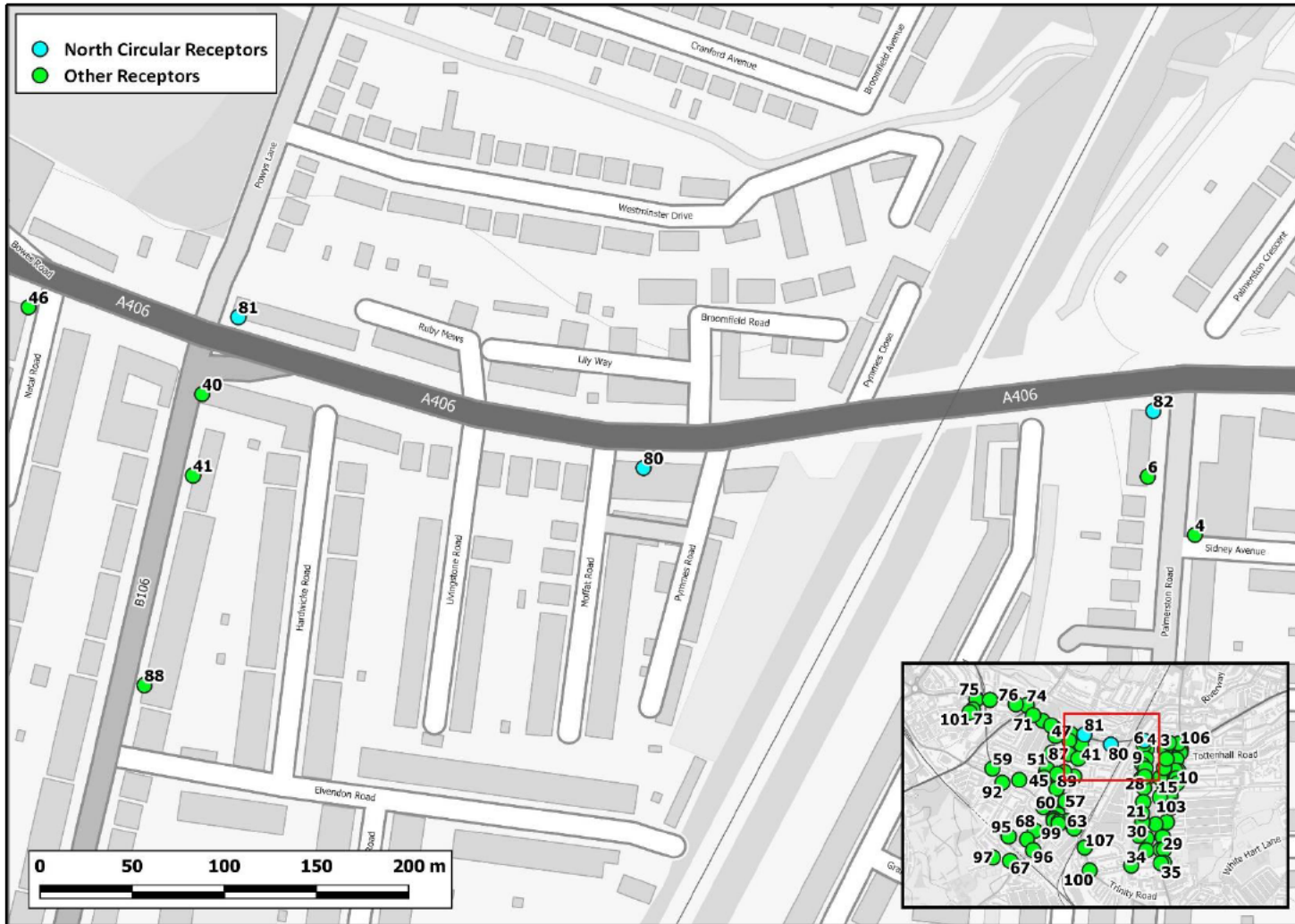


Figure A5.3: Modelled Receptors with Labels – North Circular

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ACCIDENT SEVERITY UPTO 2020

	2017	2018	2019	2020	Total
Fatal	0	0	2	0	2
Serious	5	3	4	5	17
Slight	9	31	37	23	100
Damage	0	0	0	0	0
Total	14	34	43	28	119

ACCIDENTS BY MONTH AND YEAR UPTO 2020

	2017	2018	2019	2020	Total
January	0	2	3	6	11
February	0	4	6	2	12
March	0	1	4	1	6
April	0	2	0	0	2
May	0	2	3	6	11
June	0	3	4	3	10
July	0	1	7	5	13
August	1	1	2	5	9
September	2	6	4	0	12
October	4	2	2	0	8
November	4	5	5	0	14
December	3	5	3	0	11
Total	14	34	43	28	119
%	12%	29%	36%	24%	100%

ACCIDENTS BY DAY AND TIME

	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
Midnight - 00:59	1	1	1	0	1	1	0	5
01:00 - 01:59	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	1	0	0	0	1
04:00 - 04:59	0	2	0	0	0	0	0	2
05:00 - 05:59	0	0	1	0	1	0	0	2
06:00 - 06:59	0	0	1	0	1	1	0	3
07:00 - 07:59	1	1	0	1	1	1	0	5
08:00 - 08:59	0	1	1	3	1	1	1	8
09:00 - 09:59	0	0	0	1	2	0	0	3
10:00 - 10:59	1	0	0	2	0	0	1	4
11:00 - 11:59	2	2	0	0	0	0	2	6
12:00 - 12:59	1	1	0	2	2	1	0	7
13:00 - 13:59	0	0	0	1	1	1	2	5
14:00 - 14:59	1	2	1	2	1	2	0	9
15:00 - 15:59	1	1	1	5	0	0	0	8
16:00 - 16:59	0	1	1	1	1	2	2	8
17:00 - 17:59	1	1	1	2	0	0	0	5
18:00 - 18:59	2	2	1	2	1	0	3	11
19:00 - 19:59	1	2	1	0	2	2	1	9
20:00 - 20:59	0	0	1	1	0	0	0	2
21:00 - 21:59	0	0	0	0	1	2	1	4
22:00 - 22:59	0	0	1	0	1	1	1	4
23:00 - 23:59	2	0	1	0	0	4	1	8
Total	14	17	13	24	17	19	15	119
%	12%	14%	11%	20%	14%	16%	13%	100%

JUNCTION DETAIL		Number	%
SLIP ROAD		1	1
MULTIPLE JUNCTION		7	6
OTHER JUNCTION		11	9
UNKNOWN		13	11
CROSS ROADS		32	27
NOT AT JUNCTION		22	18
PRIVATE DRIVE		1	1
T OR STAGGERED		32	27
TOTAL		119	

JUNCTION CONTROLS		Number	%
UNKNOWN		15	13
AUTOMATIC TRAFFIC SIG		50	42
GIVE WAY SIGN		32	27
NOT AT JUNCTION		22	18
TOTAL		119	

SPEED LIMIT		Number	%
20 MPH		5	4
30 MPH		64	54
40 MPH		46	39
50 MPH		3	3
60 MPH		1	1
TOTAL		119	

ROAD CLASS		Number	%
A		99	83
B		8	7
C		2	2
Unclassified		10	8
TOTAL		119	

NUMBER OF ACCIDENTS INVOLVING PEDESTRIANS		Number	%
		16	13

NUMBER OF ACCIDENTS INVOLVING SKIDDING		Number	%
		8	7

WEATHER		Number	%
FINE		90	76
RAIN		15	13
FINE WIND		1	1
OTHER		8	7
UNKNOWN		5	4
TOTAL		119	

ROAD SURFACE		Number	%
DRY		90	76
WET		21	18
		8	7
TOTAL		119	

LIGHT CONDITIONS		Number	%
Light		70	59
Dark		49	41
TOTAL		119	

CASUALTY SEVERITY UPTO 2020

	2017	2018	2019	2020	Total
Fatal	0	0	2	0	2
Serious	5	3	4	6	18
Slight	11	45	44	32	132
Total	16	48	50	38	152
%	11%	32%	33%	25%	100%

CASUALTIES BY MONTH AND YEAR UPTO 2020

	2017	2018	2019	2020	Total
January	0	4	3	9	16
February	0	5	7	2	14
March	0	1	5	1	7
April	0	2	0	0	2
May	0	2	3	7	12
June	0	5	4	4	13
July	0	1	8	7	16
August	1	1	3	8	13
September	2	11	7	0	20
October	6	4	2	0	12
November	4	5	5	0	14
December	3	7	3	0	13
Total	16	48	50	38	152
%	11%	32%	33%	25%	100%

CASUALTIES BY DAY AND TIME

	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
Midnight - 00:59	2	2	1	0	1	1	0	7
01:00 - 01:59	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	1	0	0	0	1
04:00 - 04:59	0	2	0	0	0	0	0	2
05:00 - 05:59	0	0	1	0	1	0	0	2
06:00 - 06:59	0	0	2	0	1	1	0	4
07:00 - 07:59	1	2	0	1	2	1	0	7
08:00 - 08:59	0	1	1	3	1	1	1	8
09:00 - 09:59	0	0	0	1	2	0	0	3
10:00 - 10:59	1	0	0	3	0	0	1	5
11:00 - 11:59	5	3	0	0	0	0	2	10
12:00 - 12:59	1	1	0	3	2	1	0	8
13:00 - 13:59	0	0	0	2	3	1	4	10
14:00 - 14:59	1	2	1	3	1	2	0	10
15:00 - 15:59	1	1	1	5	0	0	0	8
16:00 - 16:59	0	2	1	1	1	2	3	10
17:00 - 17:59	1	1	1	2	0	0	0	5
18:00 - 18:59	3	3	1	2	1	0	3	13
19:00 - 19:59	3	2	1	0	2	2	3	13
20:00 - 20:59	0	0	2	1	0	0	0	3
21:00 - 21:59	0	0	0	0	1	2	1	4
22:00 - 22:59	0	0	2	0	3	1	1	7
23:00 - 23:59	3	0	1	0	0	7	1	12
Total	22	22	16	28	22	22	20	152
%	14%	14%	11%	18%	14%	14%	13%	100%

CASUALTIES BY TYPE AND AGE GROUPING

	Unknown Age	0 to 4	5 to 15	16 to 19	20 to 29	30 to 59	60 Plus	Total	%
Pedestrian	0	0	2	1	4	9	2	18	12
Pedal Cyclist	0	0	0	1	1	1	0	3	2
PTW Rider	0	0	0	4	3	14	0	21	14
Car Driver	0	0	0	1	22	43	5	71	47
Car Passenger	10	0	0	0	9	7	0	26	17
Goods Driver	0	0	0	0	1	3	0	4	3
Goods Passenger	0	1	0	0	2	1	1	5	3
PSV Passenger	0	0	0	0	0	1	3	4	3
TOTAL	10	1	2	7	42	79	11	152	
%	7	1	1	5	28	52	7		

Number of Casualties with unknown age: 10

VEHICLES INVOLVED BY TYPE AND AGE OF DRIVER

	1 to 15	16 to 19	20 to 29	30 to 59	60 Plus	Unknown	Total	%
Pedal Cycle	0	1	1	1	0	0	3	1
PTW	0	4	3	15	0	0	22	9
Car	0	3	37	70	7	49	166	72
Minibus	0	0	0	1	0	0	1	0
PSV	0	1	1	1	1	0	4	2
Goods < 3.5T	0	0	4	9	0	6	19	8
Goods > 3.5T	0	1	0	1	0	1	3	1
Hackney/Private	0	0	0	4	0	1	5	2
Other/Unknown	0	0	0	7	0	2	9	4
TOTAL	0	10	46	109	8	59	232	
%	0	4	20	47	3	25		

VEHICLE MANOEUVRES

	Number	%
CHANGING LANE TO LEFT	4	2
CHANGING LANE TO RIGHT	1	0
GOING AHEAD LEFT HAND BEND	1	0
GOING AHEAD OTHER	80	34
GOING AHEAD RIGHT HAND BEND	1	0
STARTING	6	3
OVERTAKING MOVING VEHICLE ON ITS OFFSIDE	2	1
OVERTAKING ON NEARSIDE	4	2
PARKED	15	6
STOPPING	16	7
TURNING LEFT	3	1
TURNING RIGHT	19	8
U TURN	1	0
	65	28
WAITING TO GO AHEAD BUT HELD UP	10	4
WAITING TO TURN RIGHT	4	2
TOTAL	232	

BREATH TEST

	Number	%
NOT APPLICABLE	2	1
POSITIVE	1	0
NEGATIVE	46	20
NOT REQUESTED	74	32
REFUSED TO PROVIDE	1	0
DRIVER NOT CONTACTED	97	42
MEDICAL REASONS	11	5
TOTAL	232	

ACCIDENT SEVERITY UPTO 2021

	2020	2021	Total
Fatal	0	0	0
Serious	2	2	4
Slight	17	19	36
Damage	0	0	0
Total	19	21	40

ACCIDENTS BY MONTH AND YEAR UPTO 2021

	2020	2021	Total
January	0	5	5
February	0	4	4
March	0	1	1
April	0	1	1
May	0	5	5
June	0	5	5
July	0	0	0
August	0	0	0
September	4	0	4
October	3	0	3
November	4	0	4
December	8	0	8
Total	19	21	40
%	48%	53%	100%

ACCIDENTS BY DAY AND TIME

	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
Midnight - 00:59	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	1	0	1	0	0	2
02:00 - 02:59	1	0	1	0	0	0	0	2
03:00 - 03:59	0	0	0	1	0	0	0	1
04:00 - 04:59	0	0	0	0	0	0	0	0
05:00 - 05:59	1	0	0	1	0	0	0	2
06:00 - 06:59	0	0	0	0	0	0	0	0
07:00 - 07:59	0	1	0	1	1	0	0	3
08:00 - 08:59	0	1	0	0	0	1	0	2
09:00 - 09:59	0	0	0	0	0	0	0	0
10:00 - 10:59	0	1	0	0	1	0	0	2
11:00 - 11:59	0	0	3	0	0	1	1	5
12:00 - 12:59	0	0	0	0	0	0	0	0
13:00 - 13:59	0	0	0	1	0	0	0	1
14:00 - 14:59	1	3	0	0	2	0	0	6
15:00 - 15:59	0	0	0	0	0	0	0	0
16:00 - 16:59	0	0	0	1	0	2	0	3
17:00 - 17:59	0	0	0	1	0	0	0	1
18:00 - 18:59	1	1	0	0	0	1	0	3
19:00 - 19:59	0	0	1	0	0	0	0	1
20:00 - 20:59	0	0	1	0	0	0	0	1
21:00 - 21:59	0	0	0	0	0	3	0	3
22:00 - 22:59	0	0	0	1	0	1	0	2
23:00 - 23:59	0	0	0	0	0	0	0	0
Total	4	7	7	7	5	9	1	40
%	10%	18%	18%	18%	13%	23%	3%	100%

JUNCTION DETAIL		Number	%
SLIP ROAD		2	5
MULTIPLE JUNCTION		4	10
OTHER JUNCTION		3	8
UNKNOWN		7	18
CROSS ROADS		13	33
NOT AT JUNCTION		4	10
ROUNDBABOUT AND MINI		1	3
T OR STAGGERED		6	15
TOTAL		40	

JUNCTION CONTROLS		Number	%
UNKNOWN		7	18
AUTOMATIC TRAFFIC SIG		22	55
GIVE WAY SIGN		7	18
NOT AT JUNCTION		4	10
TOTAL		40	

SPEED LIMIT		Number	%
20 MPH		6	15
30 MPH		18	45
40 MPH		15	38
50 MPH		1	3
TOTAL		40	

ROAD CLASS		Number	%
A		36	90
B		3	8
Unclassified		1	3
TOTAL		40	

NUMBER OF ACCIDENTS INVOLVING PEDESTRIANS		Number	%
		3	8

NUMBER OF ACCIDENTS INVOLVING SKIDDING		Number	%
		4	10

WEATHER		Number	%
FINE		29	73
RAIN		8	20
OTHER		1	3
UNKNOWN		2	5
TOTAL		40	

ROAD SURFACE		Number	%
DRY		25	63
WET		11	28
		4	10
TOTAL		40	

LIGHT CONDITIONS		Number	%
Light		20	50
Dark		20	50
TOTAL		40	

CASUALTY SEVERITY UPTO 2021

	2020	2021	Total
Fatal	0	0	0
Serious	2	2	4
Slight	19	22	41
Total	21	24	45
%	47%	53%	100%

CASUALTIES BY MONTH AND YEAR UPTO 2021

	2020	2021	Total
January	0	5	5
February	0	5	5
March	0	1	1
April	0	1	1
May	0	7	7
June	0	5	5
July	0	0	0
August	0	0	0
September	4	0	4
October	3	0	3
November	5	0	5
December	9	0	9
Total	21	24	45
%	47%	53%	100%

CASUALTIES BY DAY AND TIME

	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
Midnight - 00:59	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	1	0	2	0	0	3
02:00 - 02:59	1	0	1	0	0	0	0	2
03:00 - 03:59	0	0	0	1	0	0	0	1
04:00 - 04:59	0	0	0	0	0	0	0	0
05:00 - 05:59	1	0	0	1	0	0	0	2
06:00 - 06:59	0	0	0	0	0	0	0	0
07:00 - 07:59	0	1	0	1	1	0	0	3
08:00 - 08:59	0	2	0	0	0	1	0	3
09:00 - 09:59	0	0	0	0	0	0	0	0
10:00 - 10:59	0	1	0	0	1	0	0	2
11:00 - 11:59	0	0	4	0	0	1	1	6
12:00 - 12:59	0	0	0	0	0	0	0	0
13:00 - 13:59	0	0	0	1	0	0	0	1
14:00 - 14:59	1	3	0	0	2	0	0	6
15:00 - 15:59	0	0	0	0	0	0	0	0
16:00 - 16:59	0	0	0	1	0	2	0	3
17:00 - 17:59	0	0	0	1	0	0	0	1
18:00 - 18:59	1	1	0	0	0	1	0	3
19:00 - 19:59	0	0	1	0	0	0	0	1
20:00 - 20:59	0	0	1	0	0	0	0	1
21:00 - 21:59	0	0	0	0	0	4	0	4
22:00 - 22:59	0	0	0	1	0	2	0	3
23:00 - 23:59	0	0	0	0	0	0	0	0
Total	4	8	8	7	6	11	1	45
%	9%	18%	18%	16%	13%	24%	2%	100%

CASUALTIES BY TYPE AND AGE GROUPING

	Unknown Age	0 to 4	5 to 15	16 to 19	20 to 29	30 to 59	60 Plus	Total	%
Pedestrian	0	0	0	2	0	0	1	3	7
Pedal Cyclist	0	0	1	0	0	5	0	6	13
PTW Rider	0	0	0	0	5	5	0	10	22
Car Driver	0	0	0	0	7	9	1	17	38
Car Passenger	2	0	0	0	3	1	0	6	13
Goods Driver	0	0	0	0	0	1	0	1	2
Hack/PRI Driver	0	0	0	0	0	2	0	2	4
TOTAL	2	0	1	2	15	23	2	45	
%	4	0	2	4	33	51	4		

Number of Casualties with unknown age: 2

VEHICLES INVOLVED BY TYPE AND AGE OF DRIVER

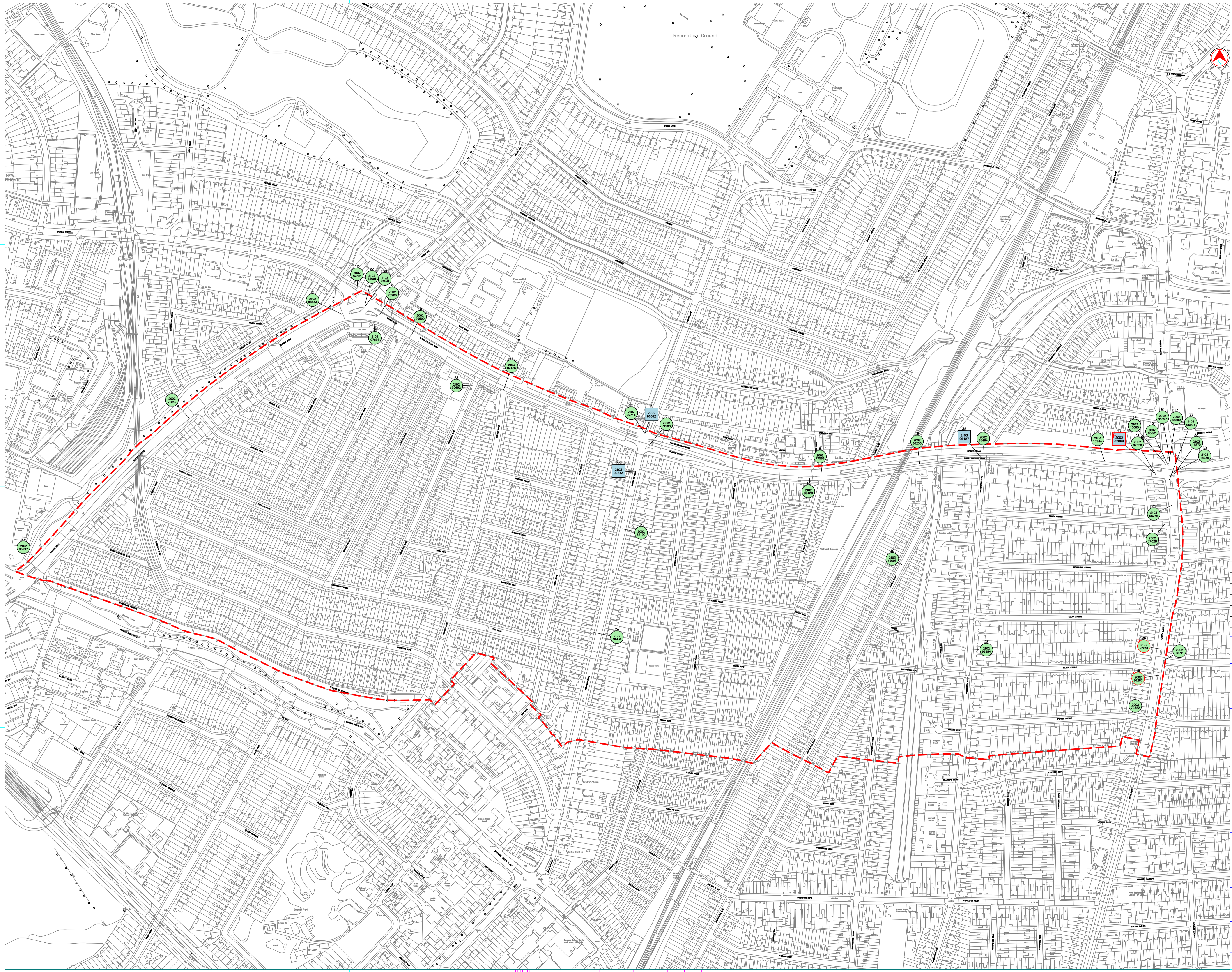
	1 to 15	16 to 19	20 to 29	30 to 59	60 Plus	Unknown	Total	%
Pedal Cycle	0	0	0	5	0	0	5	6
PTW	0	0	5	5	0	0	10	13
Car	0	0	12	22	2	12	48	62
Goods < 3.5T	0	0	0	5	0	2	7	9
Goods > 3.5T	0	0	0	2	0	1	3	4
Hackney/Private	0	0	0	2	0	0	2	3
Other/Unknown	0	0	0	2	0	1	3	4
TOTAL	0	0	17	43	2	16	78	
%	0	0	22	55	3	21		

VEHICLE MANOEUVRES

	Number	%
CHANGING LANE TO LEFT	1	1
GOING AHEAD LEFT HAND BEND	3	4
GOING AHEAD OTHER	25	32
STOPPING	4	5
TURNING RIGHT	4	5
U TURN	1	1
	40	51
TOTAL	78	

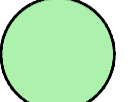


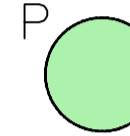
BREATH TEST

	Number	%
NOT APPLICABLE	5	6
NEGATIVE	14	18
NOT REQUESTED	16	21
DRIVER NOT CONTACTED	42	54
MEDICAL REASONS	1	1
TOTAL	78	



NOTES

1. DO NOT SCALE FROM THIS DRAWING.
2. ANY ERRORS OR OMISSIONS TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY FOUND.
3. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SHOWN.
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 SLIGHT COLLISION
 SERIOUS COLLISION
 FATAL COLLISION
 COLLISION INVOLVING A PEDESTRIAN

Rev Revision details
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DRAWING TITLE
9 MONTHS COLLISIONS POST IMPLEMENTATION 04/09/2020 - 30/06/2021

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HIGHWAYS AND TRANSPORTATION
Road Safety

DESIGNED- CG	DRAWN- AR	DATE- 11/2021
SCALE- NTS	PLOT SCALE- 1:1	CHECKED-
DRAWING NO. BOWES\LTN\9MONTHS		

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Bowes Quieter Neighbourhood Healthy Street Review Summary

December 2021

Page 297

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Introduction

TfL have developed a spreadsheet tool to support designers to ensure that a proposed scheme delivers improvements. The spreadsheet tool is called the 'Healthy Streets check for designers'. The tool is based on TfL's Healthy Streets Approach, which was the framework used to develop the Mayor's Transport Strategy.

The Healthy Street Approach is based on 10 Healthy Streets Indicators which focus on the experience of people using streets, with an overarching aim to improve air quality, reduce congestion and help make London's diverse communities greener, healthier and more attractive places to live, work, play and do business.

The Check holds no formal status in guidance and decision making but advises designers and decision makers on the alignment of a project with the Healthy Streets Approach.

The Bowes Quieter Neighbourhood has been assessed against the tool, for both internal and external roads, with a summary provided on the following slides. The roads that have been assessed as follows:

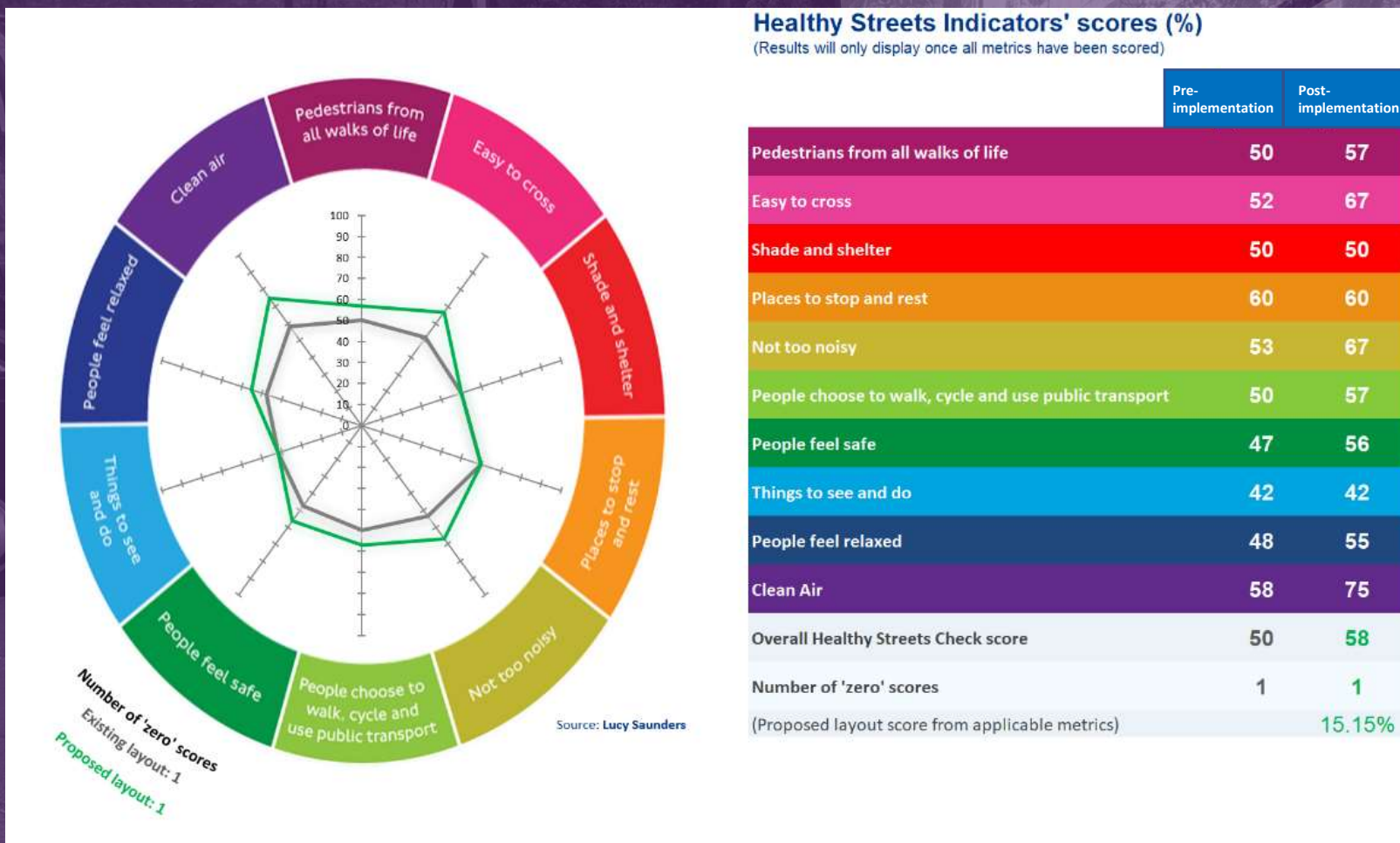
- Warwick Road – internal road west of Brownlow Rd
- Palmerston Road – internal road west of Green Lanes
- Brownlow Road – Local distributor road through the Quieter Neighborhood
- Bounds Green Road – Boundary road south of the Quieter Neighborhood
- Green Lanes – Boundary road east of the Quieter Neighbourhood

Warwick Road and Palmerston Road have been assessed as they were two of the busiest roads within the extent of the mitigation measures, prior to the implementation of the scheme. Green Lanes, Bounds Green Road and Brownlow Road have been assessed as they are the boundary roads of the Quieter Neighbourhood area (along with the A406).

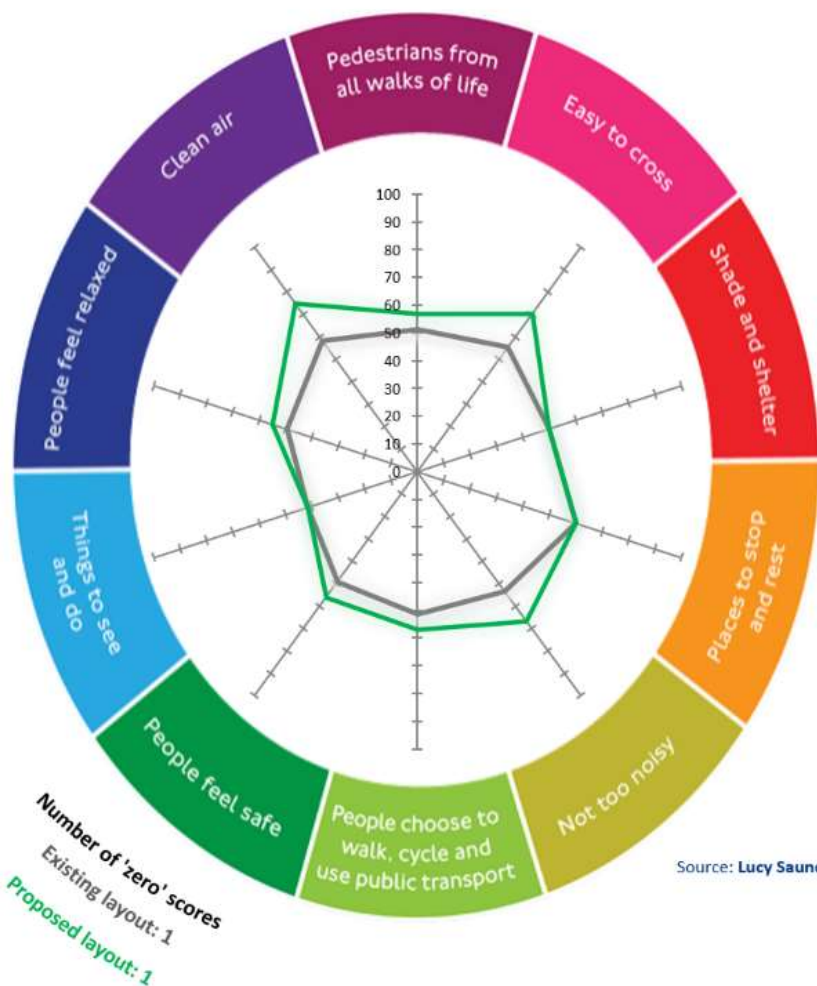
Traffic surveys, before and after the scheme was implemented, recording traffic volumes and speeds, have been used to assess the scheme, along with a qualitative and quantitative assessment of the characteristics of the roads, such as cycle and pedestrian provision and the amount of greening and seating.

Warwick Road – Healthy Streets Score

The graphic below shows the scores for Warwick Road before the scheme went in (Pre-implementation) against the layout following implementation (Post-implementation).



Palmerston Road – Healthy Streets Score



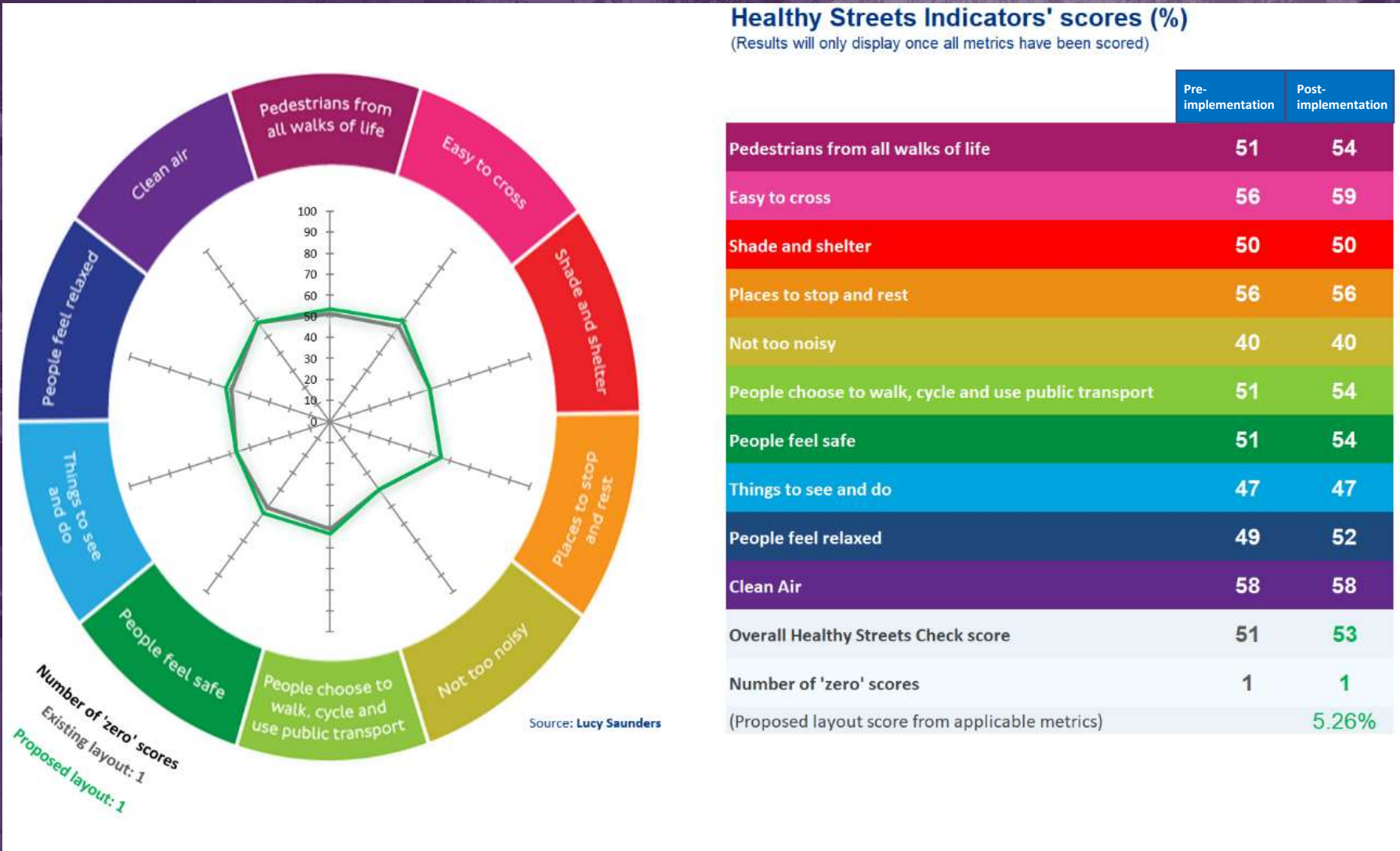
Source: Lucy Saunders

Healthy Streets Indicators' scores (%)

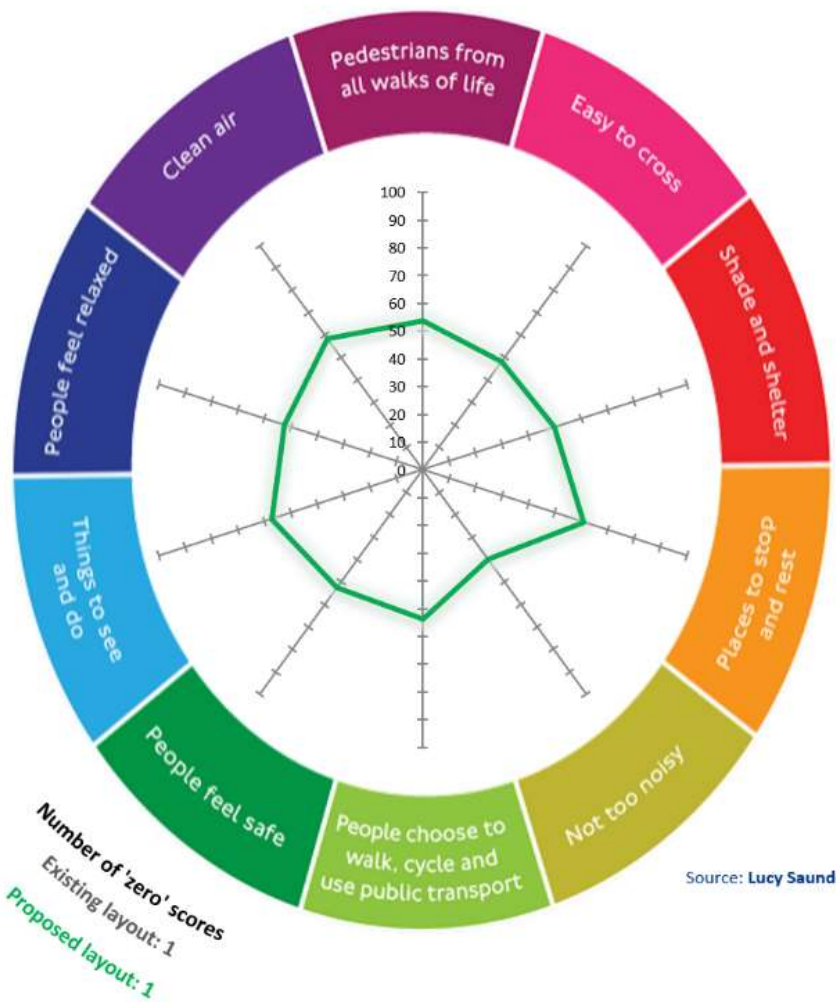
(Results will only display once all metrics have been scored)

	Pre-implementation	Post-implementation
Pedestrians from all walks of life	51	57
Easy to cross	56	70
Shade and shelter	50	50
Places to stop and rest	60	60
Not too noisy	53	67
People choose to walk, cycle and use public transport	51	57
People feel safe	49	56
Things to see and do	42	42
People feel relaxed	49	55
Clean Air	58	75
Overall Healthy Streets Check score	51	58
Number of 'zero' scores	1	1
(Proposed layout score from applicable metrics)		12.50%

Brownlow Road – Healthy Streets Score



Bounds Green Road – Healthy Streets Score

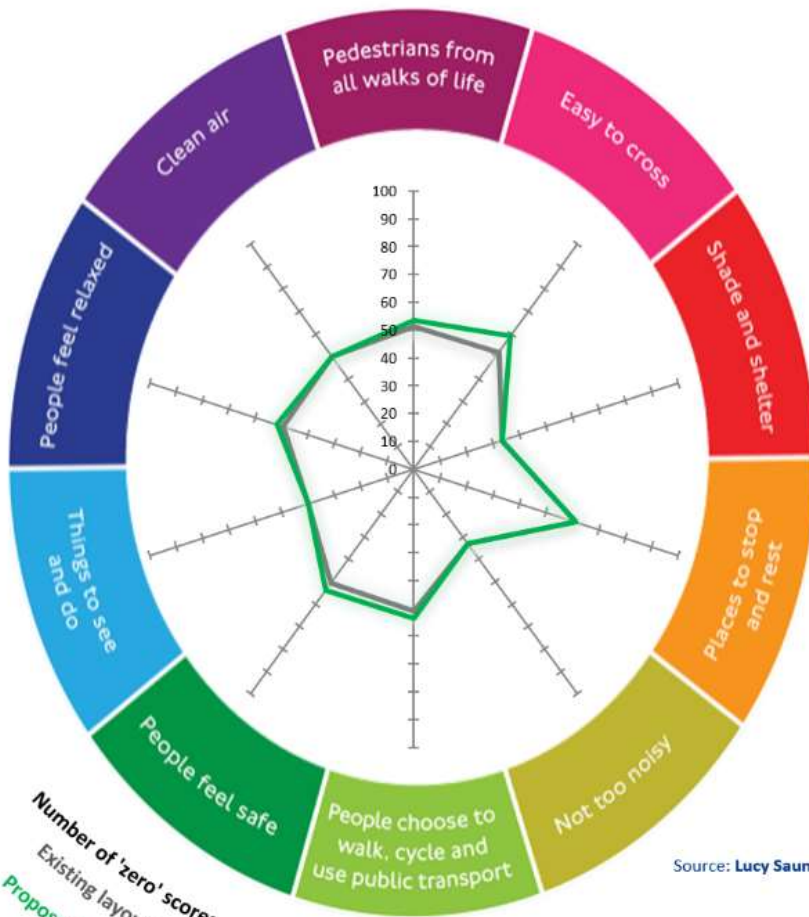


Healthy Streets Indicators' scores (%)

(Results will only display once all metrics have been scored)

	Pre-implementation	Post-implementation
Pedestrians from all walks of life	54	54
Easy to cross	48	48
Shade and shelter	50	50
Places to stop and rest	61	61
Not too noisy	40	40
People choose to walk, cycle and use public transport	54	54
People feel safe	52	52
Things to see and do	57	57
People feel relaxed	52	52
Clean Air	58	58
Overall Healthy Streets Check score	53	53
Number of 'zero' scores	1	1
(Proposed layout score from applicable metrics)		0.00%

Green Lanes– Healthy Streets Score



Number of 'zero' scores
Existing layout: 1
Proposed layout: 1

Source: Lucy Saunders

Healthy Streets Indicators' scores (%)
(Results will only display once all metrics have been scored)

	Pre-implementation	Post-implementation
Pedestrians from all walks of life	51	54
Easy to cross	52	59
Shade and shelter	33	33
Places to stop and rest	61	61
Not too noisy	33	33
People choose to walk, cycle and use public transport	51	54
People feel safe	51	54
Things to see and do	40	40
People feel relaxed	49	52
Clean Air	50	50
Overall Healthy Streets Check score	50	52
Number of 'zero' scores	1	1
(Proposed layout score from applicable metrics)		5.26%

Overall Healthy Streets Check Summary

Location	Pre-implementation Score	Post-Implementation Score	% change
Warwick Rd	50	58	15.20%
Palmerston Rd	51	58	12.50%
Brownlow Rd	51	53	5.30%
Bounds Green Rd	53	53	0%
Green Lanes	50	52	5.30%

The results of the Healthy Streets Check show that the internal roads see an estimated improvement of 12.5-15% based on the Healthy Streets scoring tool.

The assessment also shows that the changes in traffic flows on the boundary roads do not show a negative impact from the scheme and indeed Brownlow Road and Green Lanes show improvements based on reduced traffic flows and/or speeds following the implementation of the scheme, although an element of that could be related to impacts COVID has had on travel patterns.

The improvement in Green Lanes is related to a reduction in traffic volume and decreasing in average vehicle speeds.



Bowes Primary
Quieter Neighbourhood
Consultation Analysis

Final Report

December 2021



Bowes Primary Quieter Neighbourhood
Consultation Analysis
Final Report

Version 3-0

December 2021

Produced by:



For:

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Project Information Sheet

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Project Manager	[REDACTED]
Quality Manager	[REDACTED]
Additional Team Members	[REDACTED]
Start Date	October 2020
File Location	F:\3390 Bowes Primary Quieter Neighbourhoods Consultation Analysis

Document Control Sheet

Ver.	Project Folder	Description	Prep.	Rev.	App.	Date
V3-0	F:\3300-3399\3390 Bowes Primary Quieter Neighbourhoods Consultation Analysis\Project Files\Final Report	Final	■	■	■	07/12/21
V2-0	F:\3300-3399\3390 Bowes Primary Quieter Neighbourhoods Consultation Analysis\Project Files\Final Report	Final	■	■	■	27/10/21
V1-0	F:\3300-3399\3390 Bowes Primary Quieter Neighbourhoods Consultation Analysis\Project Files\Final Report	Interim	■	■	■	17/05/21

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Appendices

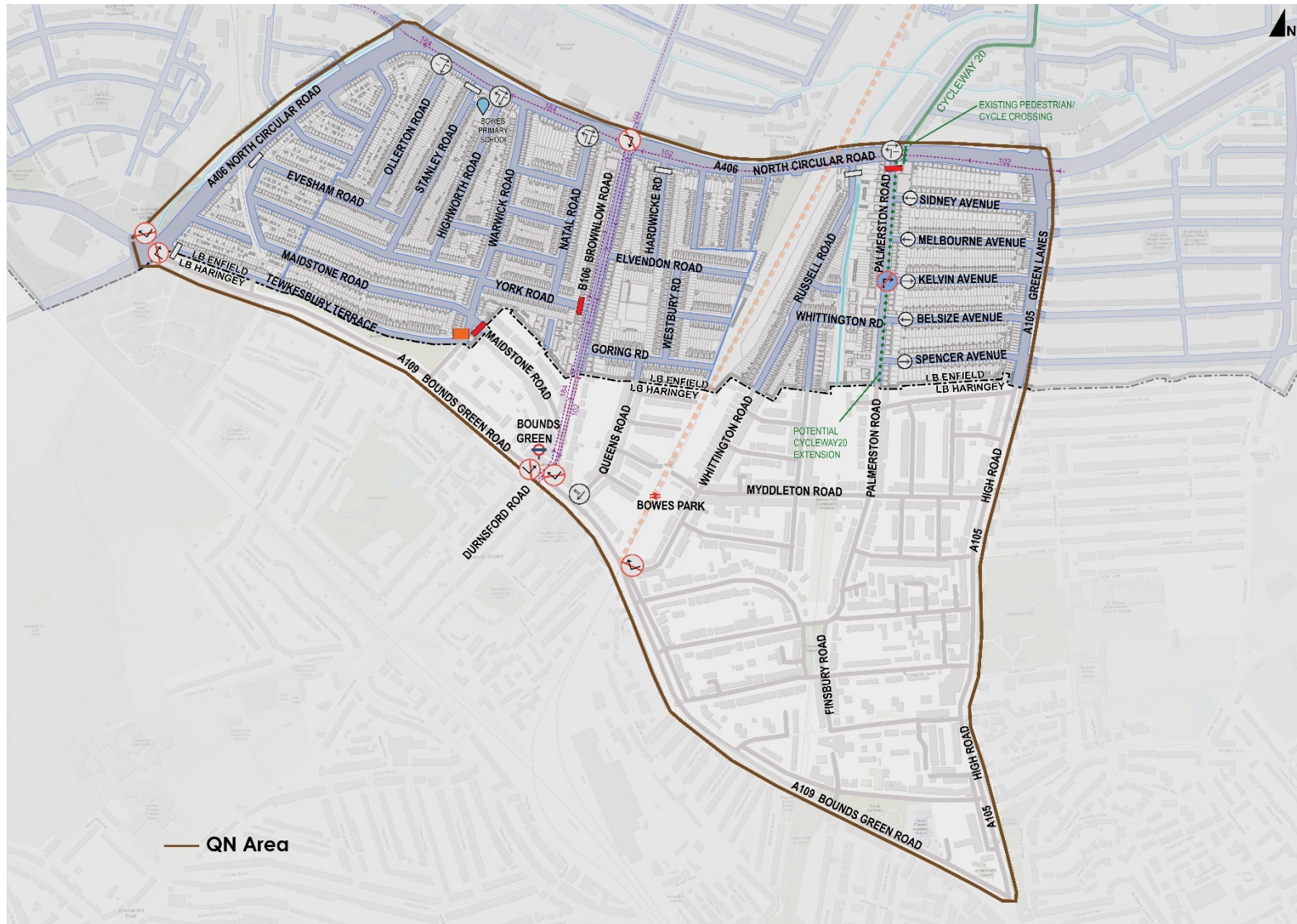
Appendix A Consultation survey form

Appendix B Longlist of themes identified in the online consultation survey in fewer than 2% of responses

1. Introduction

- 1.1 In 2019, the London Borough of Enfield engaged with residents in the Bowes Primary & Surrounding Streets Quieter Neighbourhood area through a Perception Survey to better understand the issues that they were experiencing. The most common responses to this survey were problems relating to traffic volumes and speeds, and non-residential traffic cutting through the area.
- 1.2 Informed by this and following the outbreak of the COVID-19 pandemic, Enfield Council used Experimental Traffic Orders (ETO) to implement a range of measures in the area using funding from TfL's Streetspace programme – creating a Quieter Neighbourhood (QN). It should be noted that the QN covers the boundary between Enfield and Haringey, with Haringey planning to implement their own measures in the QN to complement Enfield's measures. However, Haringey's measures had not been implemented at the time of writing of this report.
- 1.3 The creation of the QN has involved installation of road closures to motor vehicles at the following locations:
 - Maidstone Road at its junction with Warwick Road
 - York Road at its junction with Brownlow Road
 - Palmerston Road northbound at its junction with the A406 North Circular Road
 - Existing width restriction on Warwick Road, near its junction with Maidstone Road, replaced with point closure for all vehicles except for emergency vehicles and service vehicles
- 1.4 The QN also involved the introduction of a traffic island on Palmerston Road at Kelvin Avenue, restricting vehicles from turning right into Kelvin Avenue from Palmerston Road.
- 1.5 The full scope of the QN is shown in Figure 1-1.

Figure 1-1: Map of the Bowes Primary and Surrounding Streets Quieter Neighbourhood



- 1.6 The ETO allows members of the public to provide feedback on the QN via an online survey, which received 1,756 responses from 1,301 respondents, and a paper survey, which received 24 responses. In addition, members of the public were able to submit email feedback regarding the QN, which was in the process of being reviewed by Enfield Council at the time of writing of this report. This report combines the responses to the online and paper surveys, as they were identical in nature, as well as providing an overview of the 924 emails sent from 604 unique email addresses.
- 1.7 Responses to the online survey, as well as emails providing feedback on the QN, could be made by any members of the public, whether they were inside or outside of the QN, shown in Figure 1-1.

About ITP

- 1.8 ITP is an award-winning UK transport planning and research consultancy. We have provided consultation analysis support for various UK and London local authorities, as well as for TfL on multiple projects. In this context, we analyse consultation responses in an independent, unbiased way to ensure that all residents' views are heard and represented. We work with the Council to provide feedback that can inform alterations to each QN in line with the views of the local community, as well as providing reporting that can re-assure local residents that their voices are considered. This report presents the findings of our analysis without comment or recommendation in order for the Council to make an independently informed decision going forward.

Structure of this report

- 1.9 This report covers the analysis of all information submitted on the QN regarding both closed and open questions of the consultation survey. The structure of the report is as follows:
- **Section 2: Methodology** – covers the approach we took to quantitative analysis of closed questions and thematic analysis of open questions.
 - **Section 3: Sample characteristics** – covers an overview of the sample of people who submitted responses to the survey.
 - **Section 4: Equalities Impact Assessment** – covers responses to the closed question regarding the impacts of the QN from an equalities perspective, and the first open question regarding whether respondents had further considerations to add to the Council's Equalities Impact Assessment (EqIA).

- **Section 5: Importance of access, time, and aspirations for the area** – covers responses to the closed question regarding the importance of access to various areas of the QN, travel times and aspirations for the area.
- **Section 6: Effectiveness of measures** – covers responses to the closed question regarding the effectiveness of the measures so far.
- **Section 7: Suggestions** – covers responses to the second open question regarding specific suggestions for the QN.
- **Section 8: Phase 2 & parking permit QN** – covers responses to the third open question regarding implementation of the second phase of the QN, and responses to the closed question regarding the implementation of a parking permit QN in the future.
- **Section 9: Communications** – covers responses to the closed question regarding the usefulness of communications relating to the QN, and the fourth open question regarding other comments on communication on the QN.
- **Section 10: Emails** – covers an overview of the comments provided by emails sent to the Council in relation to the QN.
- **Section 11: Conclusion** – covers a summary of the report and next steps.

2. Methodology

- 2.1 By including a combination of closed and open questions the Council have gathered a mixture of quantitative data and qualitative data which allows respondents to express their thoughts in more detail.
- 2.2 These two types of data need to be analysed appropriately, and in completely different ways. It should be noted that our analysis has been conducted on a monthly rolling basis. Our methodology for each type of response – closed and open questions via the online and paper surveys – is set out below.

Analysing responses

Closed questions

- 2.3 The consultation survey asked a range of closed questions. The first 'group' of these questions covered sample characteristics, including various personal and protected characteristics, home location, and car ownership. The other 'group' of closed questions related to respondent's perceptions of the QN, including the importance they assigned to various access points in the QN, and the effectiveness of the trial measures. The consultation survey form is included in Appendix A.
- 2.4 Responses to closed questions were analysed in MS Excel, allowing frequency counts and percentages of each response to be calculated. Responses to the second 'group' of questions was cross tabulated with the sample characteristics responses, to give an insight into 'who' said 'what'.

Protected characteristics

- 2.5 Under the Equality Act 2010, it is against the law to discriminate against someone because of the following protected characteristics:
 - Age
 - Disability
 - Gender reassignment
 - Marriage and civil partnership
 - Pregnancy and maternity
 - Race
 - Religion or belief

- Sex
- Sexual orientation

2.6 The closed and open questions that investigated these protected characteristics in relation to the Bowes Primary and Surrounding Streets QN are reported and analysed in the following two sections, although an in-depth analysis of each was not possible, given the small sample sizes of responses regarding some of the protected characteristics. Throughout the report, where a breakdown of a question means that there are no more than five respondents in one group, that group is not reported on in this analysis, in order to not risk making a respondent's answers identifiable.

Census data

2.7 Where there was relevant data available, 2011 Census data for the QN at the output area level (the finest level of detailed offered by Census data) was obtained for comparison with the closed question responses. Whilst the Census data is the most reliable demographic dataset available (as it records every person's demographics rather than a sample), there are some limitations which mean comparisons must be approached with caution. These include:

- The most recent Census data is a decade old now;
- The boundaries of the output areas do not exactly match the boundary of the QN; and,
- Even where similar Census data has been collected, it is not always directly comparable with the data collected by this survey (e.g., car ownership data is collected at the household level in the Census, but at the individual level in this survey).

Open questions

2.8 The consultation also asked four open questions, which allowed respondents to further elaborate on their responses to closed questions or allowed free-form responses more generally. These four questions are shown in Appendix A. Not every person who responded to the survey provided answers to the open questions. The first response given by a respondent to each open question has been read and coded by an experienced analyst.

2.9 The responses to these questions were subject to *thematic analysis*. Thematic analysis involves creating a list of common themes from a small sample of responses, and then using this list to 'code' responses. The list of common responses is referred to as a

'coding frame'. The sample used in this case was 10% of the first month's responses. This approach allowed us to categorise and group responses that mention the same or similar themes, giving overall proportions of people who agree with that sentiment. Any codes referenced by less than 2% of the overall sample have not been included in the main body of this report to ensure a focus on key themes, although a list of all remaining themes can be found in Appendix B. Not all respondents answered the open questions directly; regardless, responses not referring directly to the questions have been considered and coded. This means that some themes have occurred across multiple questions, despite the questions having separate focusses.

- 2.10 Codes were arranged in three categories – Support, Oppose and Suggest. 'Support' codes relate to responses which make positive or supportive comments about aspects of the QN. 'Oppose' codes related to responses which raised concerns or opposed the QN for a variety of reasons. 'Suggest' codes related to responses which gave specific suggestions for how to improve the QN. Responses were not always wholly supportive or opposing – all individual elements of the responses were coded separately. Over 50 codes were used for each open question, providing a huge amount of extremely detailed data.
- 2.11 There is an amount of subjectivity with response-coding, as an analyst is reading and coding each response. However, to minimise the impact of this, the majority of the response coding was performed by one analyst, with assistance from three other analysts. The coding undertaken by the other three analysts was quality-controlled by the main analyst, who also developed all the coding frames and carried out the analysis presented in this report. This prevented variation in how responses were coded across the questions and over the duration of the survey.

Emails

- 2.12 The emails sent to the Council in relation to the QN were thematically analysed, using combination of the coding frames developed for the open questions as a basis for its coding frame, although this was adjusted to reflect themes unique to the emails. Again, only two analysts coded the emails to minimise differences between interpretations, with both analysts' work being quality controlled by the main analyst. Therefore, the approaches taken to coding the open questions and emails were largely similar.
- 2.13 However, as emails could cover such a broad range of issues, due to a lack of scope that would ordinarily be provided by a question, the Council requested for the numbers of emails mentioning each comment not to be included, as it was deemed to be unrepresentative. As a result, there was no minimum cut-off for the email reporting,

so every theme that was identified is included in Section 10, meaning there are no themes relating to emails in Appendix B.

Stakeholder responses

2.14 There were a small number of responses from people representing community groups with their response. In response to the survey:

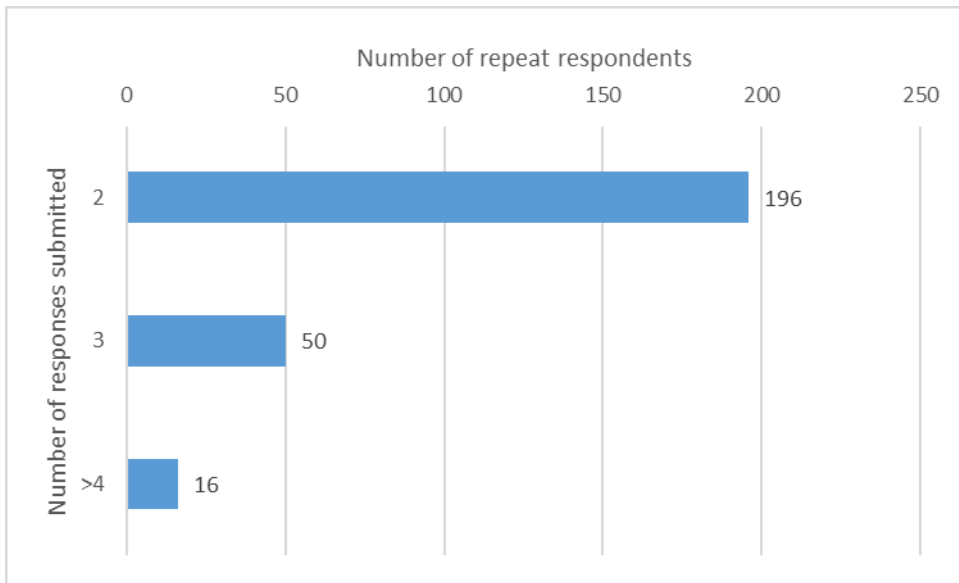
- One respondent was associated with Broomfield Homeowners & Residents' Association (BHORA)
- Two respondents were associated with Bounds and Bowes Voice
- Two respondents were associated with Friends of Brownlow Road
- One respondent was associated with Enfield Learning Trust (specifically from Bowes Primary School)

Repeat responses

2.15 Respondents were able to send multiple responses to the consultation survey if they wished, to allow respondents to register changes in views over time or provide additional information to their first response. It should be noted, however, that only the respondents' first survey responses have been read and coded by ITP in this analysis, to avoid the analysis being skewed by respondents repeating the same views on multiple occasions. Enfield Council have read and considered all repeat responses separately.

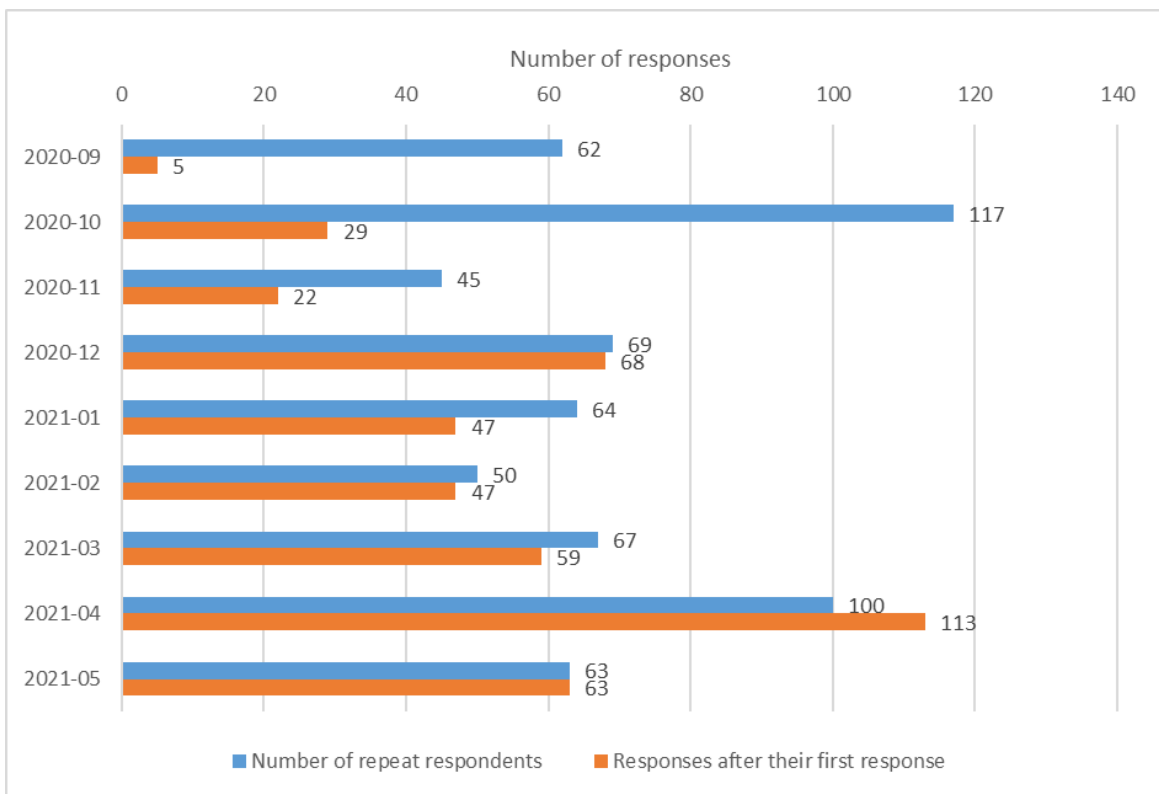
2.16 The total number of respondents who responded more than once to the survey was 281, and the number of times each of these people responded is shown in Figure 2-1. This amounted to 453 repeat responses.

Figure 2-1: Number of survey responses from repeat respondents



2.17 There were a higher number of repeat respondents towards the start (October) and end (April) of the consultation period, as shown in Figure 2-2. This figure also shows that the greatest number of repeat responses received per month were submitted in April 2021.

Figure 2-2: Number of responses from people who responded more than once



Repeat emails

- 2.18 As with repeat responses to the online survey, emails sent from those who had already sent an email in relation to the scheme were not included in ITP's analysis. However, all emails have been read by the Council.

3. Sample characteristics

- 3.1 This section provides an analysis of the demographics of respondents to the survey. This is important because it allows the Council to assess how representative the sample of respondents to the consultation was in comparison to the people who live in the Quieter Neighbourhood area. Many people did not respond to some or all of the demographic questions. Where equivalent Census data did not allow respondents to leave the question blank, the proportions of respondents who answered the question is also provided alongside the proportions of all respondents.

Location

- 3.2 Using street names provided by respondents, more than half of all respondents (940 – 71%) were from within the QN. A further 353 respondents (27%) were from outside of the QN, and 38 respondents (3%) did not provide their street name. When excluding those who had not provided their address, 73% lived within the QN and 27% lived outside the QN. Figure 3-1 shows the spatial distribution of respondents on a map of the broader area around the QN, whilst Figure 3-2 shows the spatial distribution of respondents of the QN itself. The darker-coloured points represent postcodes where more responses came from. Figure 3-2 shows that there was a slight concentration of respondents towards the north-west of the QN, particularly around Warwick Road. This is supported by the data in Table 3-1.
- 3.3 The 2011 Census recorded 25,256 residents within the QN, suggesting that this consultation received responses from approximately 4% of the population living within the QN.

Figure 3-1: A map of respondents based on their home postcodes, showing the neighbouring areas of the QN

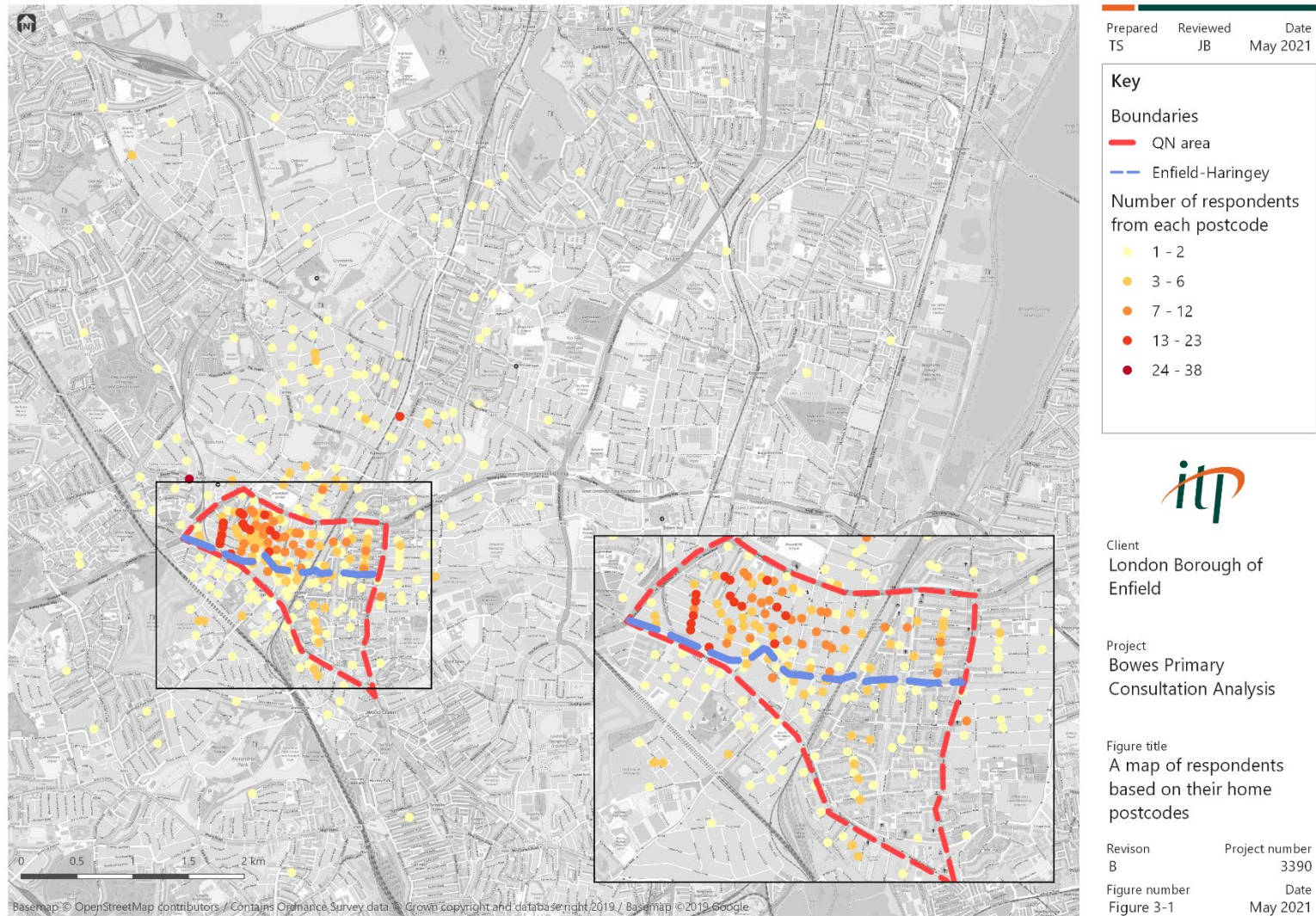
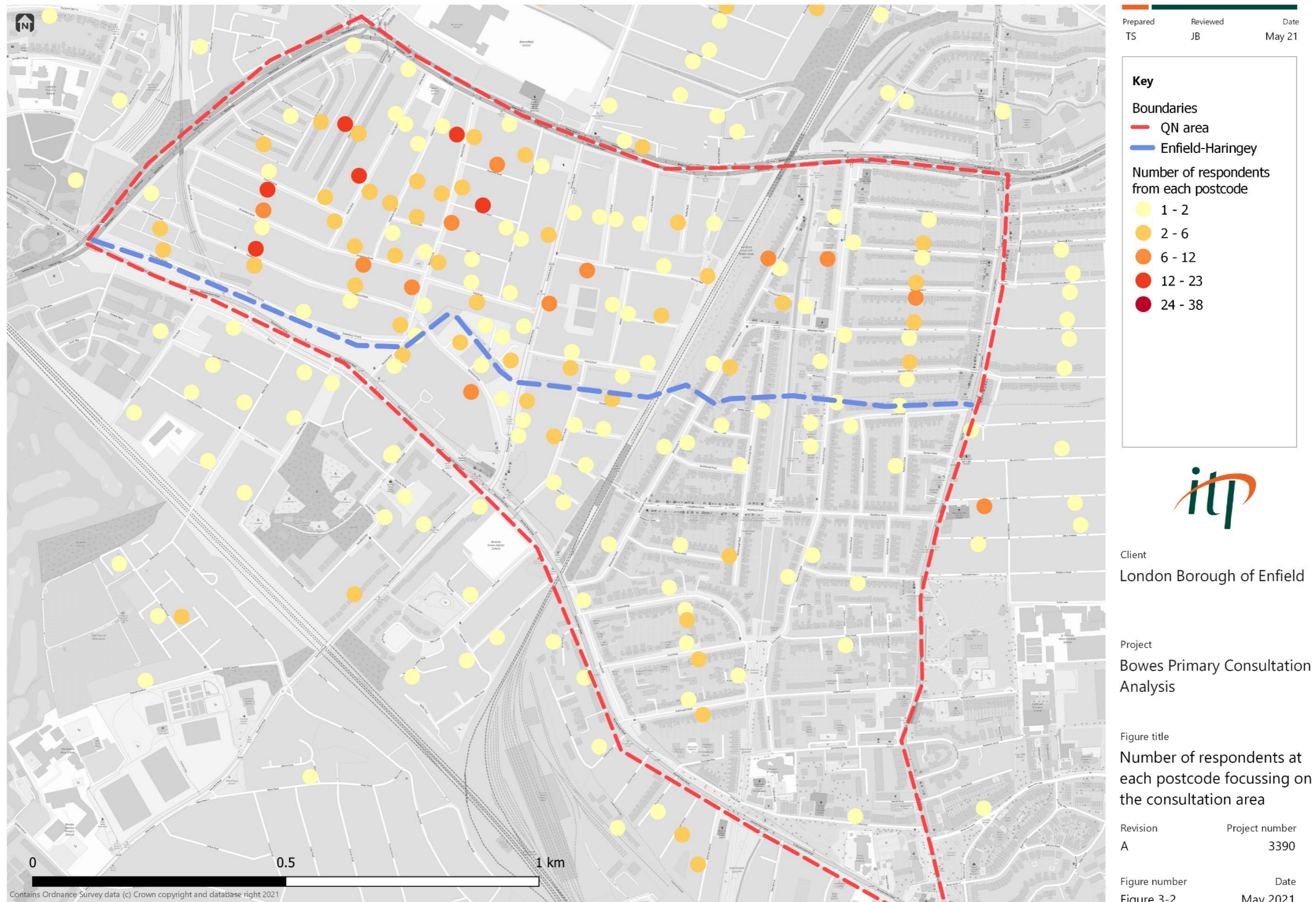


Figure 3-2: A map of respondents based on their home postcodes, focussing on the QN



- 3.4 Table 3-1 provides a breakdown of the number of respondents to the survey by street (for streets within the QN where at least 2% of all respondents lived). Whilst the distribution of respondents was quite even across the streets included in Table 3-1, Warwick Road was the home address with the most respondents in one street, with 21 more respondents than any other street and 7% of all respondents to the survey. Stanley Road was the next most popular street with 73 respondents (6% of all respondents to the survey), closely followed by Maidstone Road, with 70 respondents (5% of all respondents). There were 15 streets in total which were home to at least 2% of survey respondents living within the QN.

Table 3-1: Numbers and proportions of respondents within the QN by their street name

Street name	Number of respondents	% of all respondents (n=940)
Warwick Road	94	7%
Stanley Road	73	6%
Maidstone Road	70	5%
Shrewsbury Road	66	5%
Highworth Road	52	4%
Evesham Road	46	3%
Ollerton Road	44	3%
Brownlow Road	43	3%
Natal Road	36	3%
York Road	33	2%
Palmerston Road	31	2%
Tewkesbury Terrace	25	2%
Westbury Road	24	2%
Elvendon Road	22	2%
Goring Road	20	2%

Car ownership

- 3.5 The survey collected information on whether respondents owned a car, and, if so, how many cars they owned. Overall, 1,123 respondents (84%) reported owning a car, 184 respondents (14%) reported that they did not own a car, and 24 respondents (2%) did not answer the question. When excluding those who did not answer the question, 86% of respondents reported that they were car owners and 14% reported that they did not own a car.
- 3.6 The proportion of households within the QN reporting that they owned at least one car in the 2011 Census was 52%, whilst the proportion of households reporting ownership of a car across Enfield was 68%. As noted in the Methodology, the Census only collects car ownership data at the household level, which is not directly comparable to the respondent level, as multiple respondents could be from the same household. Census data is also a decade old now, so should be considered with caution.

Table 3-2: Car ownership comparison between survey and Census data

Car ownership	Number of respondents	% of respondents who reported their car ownership (n=1,307)	% of households owning a car in the QN (2011 Census)	% of households owning a car in Enfield (2011 Census)
Car owner	1,123	86%	52%	68%
No car	184	14%	48%	32%

Disability

- 3.7 The survey asked whether respondents considered themselves to have a disability. 100 respondents (8%) reported that they did have a disability, 803 respondents (60%) said they did not, 44 (3%) said they preferred not to say, and 384 (29%) did not answer the question. When considering only those who responded with a "yes" or a "no" to the question, 11% of respondents considered themselves to have a disability and 89% did not. The 2011 Census data shows that around 14% of residents in the area have a disability, meaning the sample of responses shows a slightly lower proportion of people considering themselves to have a disability than might be expected.

- 3.8 Of the 100 respondents who considered themselves to have a disability, 94 specified the type of disability they have. These are shown in Table 3-3. Please note that the number of respondents in Table 3-3 adds up to more than 94, and the percentages total more than 100%, due to respondents being able to select more than one type of disability each.

Table 3-3: Types of disability described by survey respondents

Disability type	Number of respondents	% of respondents who specified their disability (n=94)
Physical/mobility impairment, such as a difficulty using your arms or mobility issues which require you to use a wheelchair or crutches	45	48%
Visual impairment, such as being blind or having a serious visual impairment	7	7%
Hearing impairment, such as being deaf or having a serious hearing impairment	11	12%
Mental health condition, such as depression or schizophrenia	8	9%
Learning disability/difficulty, such as Down's syndrome or dyslexia or a cognitive impairment such as autistic spectrum disorder	32	34%
Long-standing illness or health condition, such as cancer, HIV, diabetes, chronic heart disease or epilepsy	18	19%

Marriage

- 3.9 The survey asked respondents if they were married or in a civil partnership. Overall, 576 respondents (43%) indicated that they were, and 317 respondents (24%) indicated that they were not. 56 respondents (4%) preferred not to say, and 379 respondents (28%) did not answer the question. The 2011 Census data shows that around 29% of people

in the area are married or in a civil partnership, with 54% being recorded as single¹ and 17% who did not report their marital status.

Table 3-4: Marital status of survey respondents compared to 2011 Census data

Marital status	Number of respondents	% of all respondents (n=1,331)	% of the QN (2011 Census)
Married or in a civil partnership	576	43%	29%
Single ¹	317	24%	54%
Preferred not to say/did not answer	438	33%	17%

Sexual orientation

3.10 The survey asked about the respondents' sexual orientation. 795 (60%) respondents reported that they were heterosexual. There were 23 (2%) responses from gay men, 12 (1%) responses from gay women/lesbians and 13 (1%) responses from people who said they were bisexual. There were 376 (28%) respondents who left this question blank and 107 (8%) respondents who said they preferred not to say. There is no comparable data at this level from the 2011 Census for the relevant geography.

Gender and gender reassignment

3.11 The survey asked about respondents' genders. For the online surveys, there were two opportunities for respondents to select their gender – one during the sign-up phase of using the website, and one while responding to the survey. These two sources have been combined to give a gender for as many respondents as possible. The options available were:

- Male
- Female
- Transgender

¹ Married includes Married, In a registered same-sex civil partnership; Single includes Single, Separated (but still legally married or still legally in a same-sex civil partnership), Divorced or formerly in a same-sex civil partnership which is now legally dissolved, Widowed or surviving partner from a same-sex civil partnership

- Non-binary
- Prefer not to say
- Other.

3.12 There were slightly more female respondents (576 – 43%) than male respondents (473 – 36%), although a further 253 respondents (19%) left the question blank in both instances, and 27 (3%) preferred not to say.² The 2011 Census recorded only male and female categories, which represented 50% each of the local population.

Maternity and young children

3.13 Respondents were asked if they were or had recently been pregnant or had young children. For all responses, 379 answered yes (23%) and 614 answered no (44%), with 37 preferring not to answer the question (3%) and 379 leaving the question blank (28%). For responses from female respondents, 171 answered yes (30%) and 338 answered no (59%), with 13 preferring not to answer the question (2%) and 54 leaving the question blank (9%). There is no comparable data at this level from the 2011 Census for the relevant geography.

Religion

3.14 Respondents were asked about their religion. The largest segment of the sample was from respondents who said they had no religion (511 – 38%), followed by respondents who left the question blank (396 – 30%). The largest religious group was Christian with 295 respondents (22%). A small number of respondents belonged to other religious groups, including Buddhist (8 respondents), Hindu (12 respondents), Jewish (23 respondents), Muslim (23 respondents) and Sikh (9 respondents). A further 54 respondents were from people who preferred not to answer the question. Table 3-5 below displays this in comparison to the data from the 2011 Census below. This shows that the proportion of people without a religion, and the proportion of those not answering the question, is much higher in the survey responses than in the Census. The proportion of responses from Christians, Hindus and Muslims are all lower than would be expected when compared with the 2011 Census data for the QN.

² "Other" and "Transgender" have not been reported upon due to their low sample sizes.

Table 3-5: Comparison of prevalence of religions in survey data and 2011 Census data from the QN

Religion	Number of respondents	% of all respondents (n=1,331)	2011 Census
Blank	396	30%	1%
No religion	511	38%	22%
Christian (including Church of England, Catholic, Protestant and all other Christian denominations)	295	22%	49%
Buddhist	8	1%	1%
Hindu	12	1%	6%
Jewish	23	2%	1%
Muslim	23	2%	13%
Sikh	9	1%	0%
Prefer not to say	54	4%	7%

Ethnicity

- 3.15 There were 35 potential options provided for ethnicity. For the online surveys, there were two opportunities for respondents to select their ethnicity – one during the sign-up phase of using the website, and one while responding to the survey. These two sources have been combined to give an ethnic group for as many respondents as possible.
- 3.16 Given the small sample sizes in many of the 35 options, they have been categorised into five main groups, shown in Table 3-6. When compared to the figures for the 2011 Census, the proportions of respondents who were White was comparable, while the proportions of respondents from Mixed, Asian, and Black backgrounds were lower than might be expected from the Census, with the most under-represented ethnic group being Black respondents.

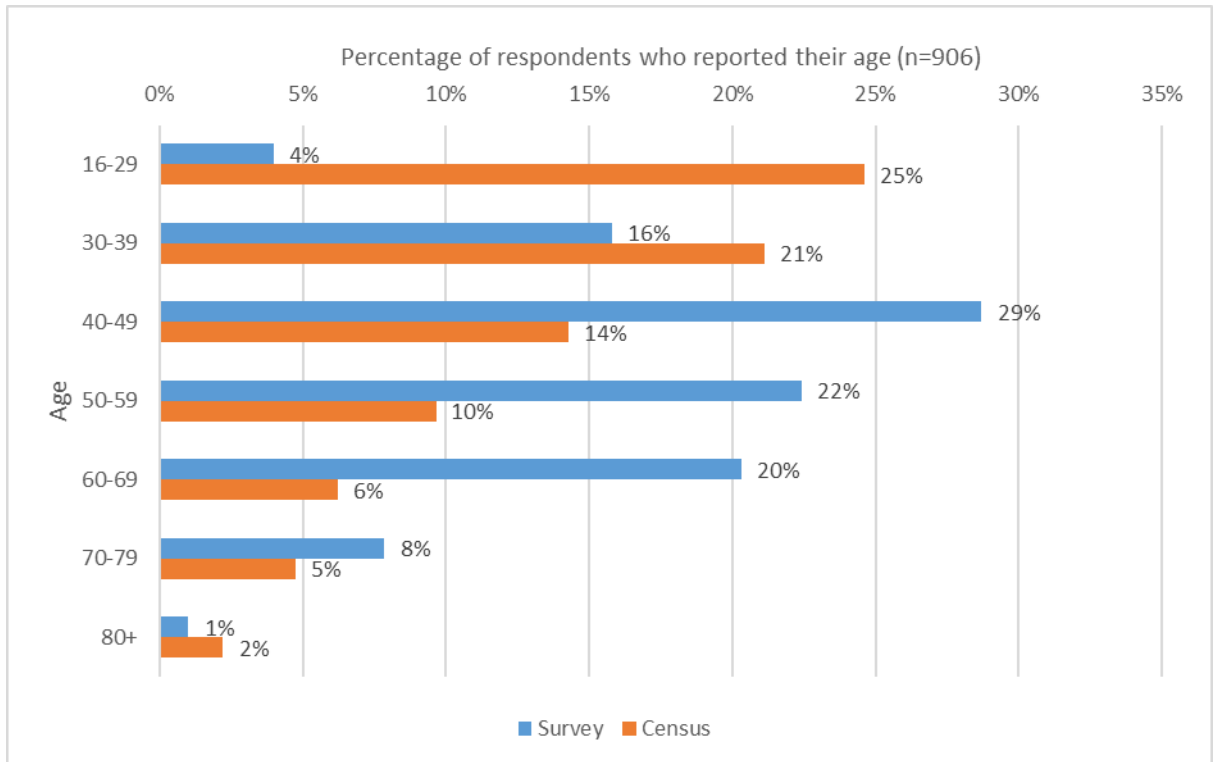
Table 3-6: Comparison of ethnic groups in survey sample (n=1,331) and 2011 Census data for the QN

Ethnicity group	Survey responses (n=1,331)		2011 Census
White	847	64%	62%
Mixed	46	3%	6%
Asian	69	5%	14%
Black	17	1%	14%
Arab	12	1%	No data
Prefer not to say	18	1%	No data
Blank	322	24%	4%

Age

- 3.17 For the online surveys, there were two opportunities for respondents to give their year of birth – one during the sign-up phase of using the website, and one while responding to the survey. These two sources have been combined to give an age for as many respondents as possible. However, 304 respondents still had no age attributed to them (23%). The age distribution of respondents who did give their age is shown in.
- 3.18 Figure 3-3 below.
- 3.19 This is shown in comparison to the proportions of each age group in the area according to 2011 Census data, which didn't include any blank responses, hence why these have been removed from the survey data in Figure 3-3. In general, the age profile of the survey sample was considerably older than the average age structure for the area.

Figure 3-3: Proportion of respondents in each age category (of those who provided their age)

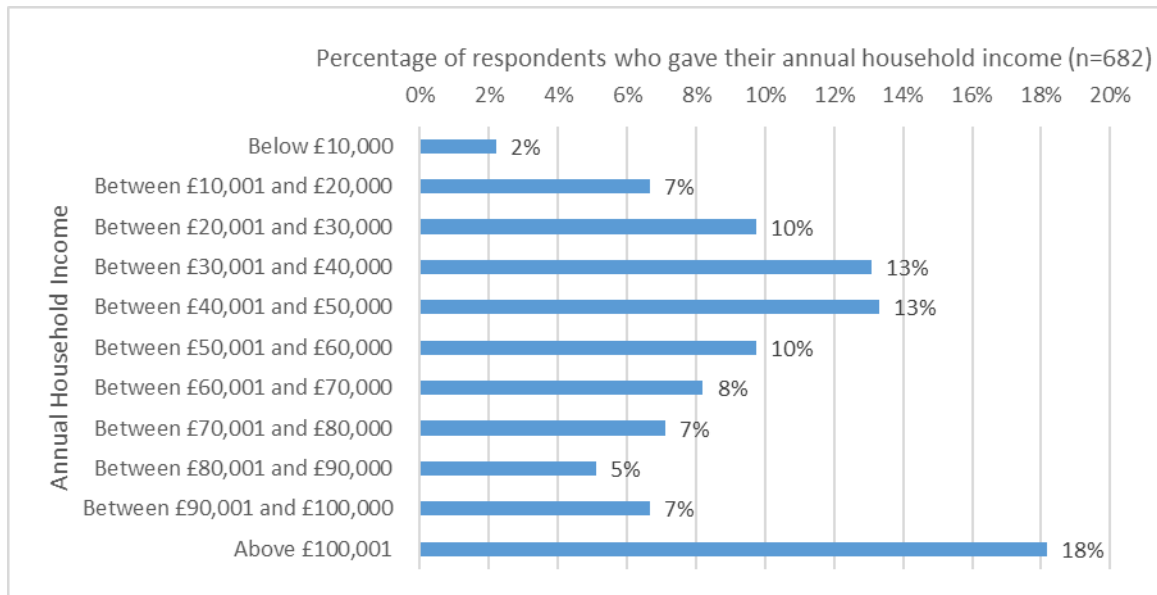


- 3.20 Of those who gave their age, the highest proportion of respondents were in the 40-49 years category with 260 respondents (29%), followed by the 50-59 years category with 203 respondents (22%) and the 60-69 years category with 184 respondents (20%). The next most represented were aged 30-39 with 143 respondents (4%), 70-79 with 71 respondents (8%) and 16-29 with 36 responses (4%). Only 9 respondents were aged over 80 (1%).

Household income

- 3.21 Although socio-economic status is not a protected characteristic, it is important to consider in the context of making changes to the transport network, so that lower income households are not disproportionately impacted.
- 3.22 Just under half (649 - 49%) of respondents did not provide an answer to the question on combined household income, with 377 leaving the response blank (28%) and 203 selecting 'prefer not to say' (20%). For those that gave an answer, the distribution of responses from each income bracket is shown in Figure 3-4 below. There is no comparable data at this level from the 2011 Census for the relevant geography.

Figure 3-4: Distribution of income brackets by number of responses



Care recipients and carers

- 3.23 Of all respondents, 23 (2%) said that they received care assistance in their home, and 117 (9%) said that they were a carer for someone else (either an elderly or disabled person). There is no comparable data at this level from the 2011 Census for the relevant geography.

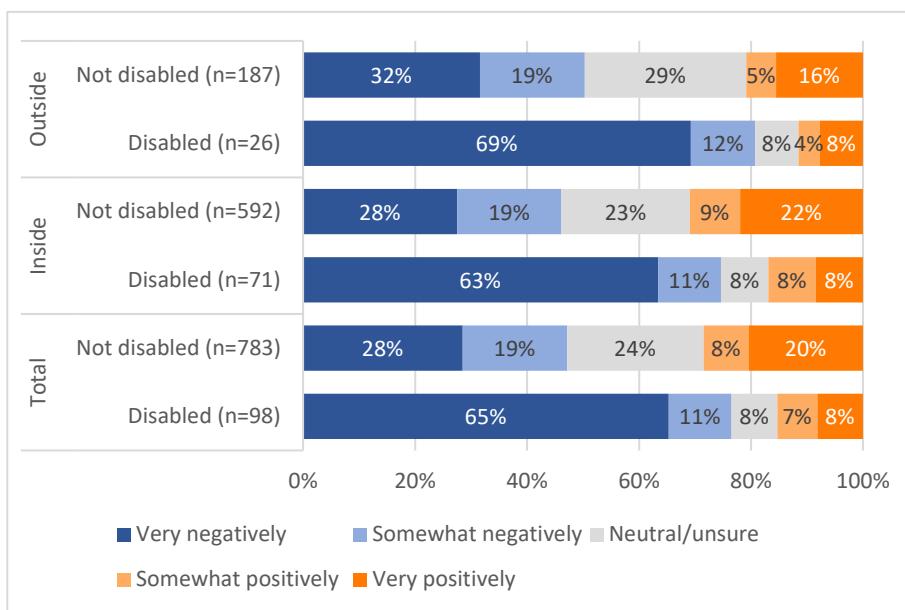
4. Equalities Impact Assessment

- 4.1 The Council have a duty under the Equality Act 2010 to:
- Eliminate unlawful discrimination, harassment, victimisation, and any other conduct prohibited by the Act;
 - Advance equality of opportunity between people who share a protected characteristic and people who do not share it; and
 - Foster good relations between people who share a protected characteristic and people who do not share it.
- 4.2 The Equality Act refers to several protected characteristics. Survey respondents were asked to complete demographic questions on each of the protected characteristics to help the Council understand the ways that the changes as part of the QN may have impacted certain people. Other characteristics beyond the Equality Act protected characteristics were collected as they have particular relevance in this context, including car ownership and income.
- 4.3 Respondents were asked whether they felt, from an equalities' perspective, that the QN had impacted them:
- Very positively;
 - Somewhat positively;
 - Neutral/unsure;
 - Somewhat negatively; or
 - Very negatively.
- 4.4 Overall, 491 (52%) respondents felt that the QN had impacted them 'very negatively' or 'somewhat negatively', while 246 (26%) felt that the QN had impacted them 'very positively' or 'somewhat positively'. This information is given for each characteristic in the figures below. While this analysis shows some interesting patterns, it should be remembered that there is not necessarily a causal link between the characteristic and the rating of the QN's perceived impacts, particularly as most people are part of more than one group (for example both male and disabled, or both bisexual and Black).
- 4.5 All of the proportions quoted in this section are of the total respondents that answered the question on the perceived impact on them from an equalities' perspective (i.e., excluding blanks).

Disability

- 4.6 Of the respondents who said they had a disability, 75 respondents (77%³) perceived that the trial had had a 'very negative' or 'somewhat negative' impact on them, whilst 15 respondents (15%) perceived that they had experienced a 'very positive' or 'somewhat positive' impact. On the whole, respondents with disabilities appear to perceive the QN more negatively than the other survey respondents, although both respondents with and without disabilities inside the QN perceive its impacts more positively than their counterparts outside the QN.

Figure 4-1: Perceived impacts of the QN by disability⁴



Marriage/civil partnership

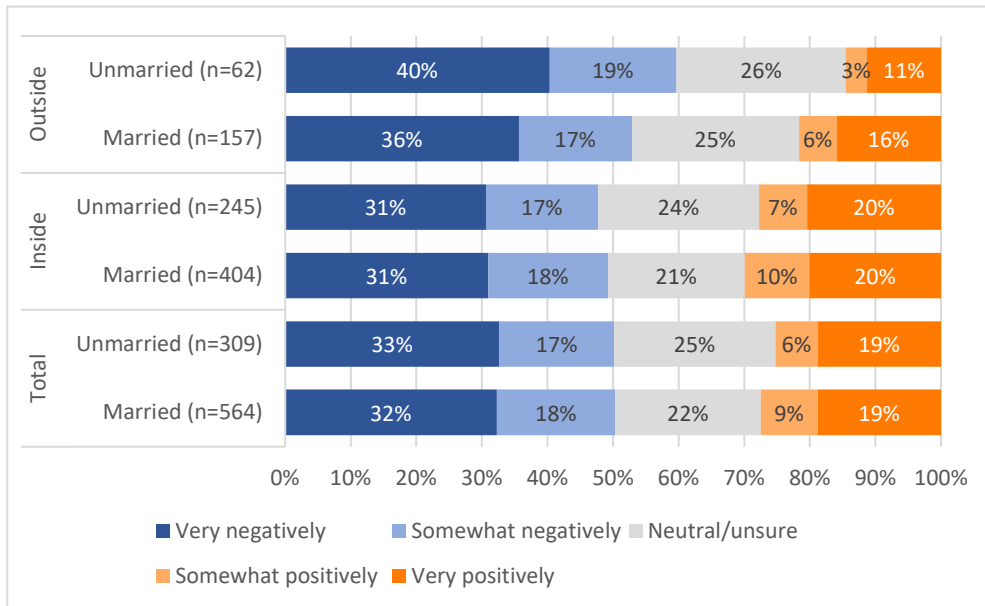
- 4.7 The ratings of the trial in terms of positive/negative impacts were very similar between married and unmarried respondents, with 50% of both married and unmarried (284 and 155) respondents perceiving they had experienced negative impacts from the QN. For positive impacts, these figures were 27% and 25% (155 and 78 respondents) respectively.
- 4.8 Both married and unmarried respondents inside the QN perceived the QN slightly more positively than their counterparts outside the QN, with a majority of unmarried

³ Percentages in text where categories have been summed together may not be the equivalent of summing the corresponding percentage labels in figures due to rounding.

⁴ Percentages in figures where blanks have been removed and no categories are missing may not sum to 100% due to rounding.

and married respondents outside the QN perceiving the QN to have had a negative impact, at 60% and 53% (37 and 83 respondents) respectively.

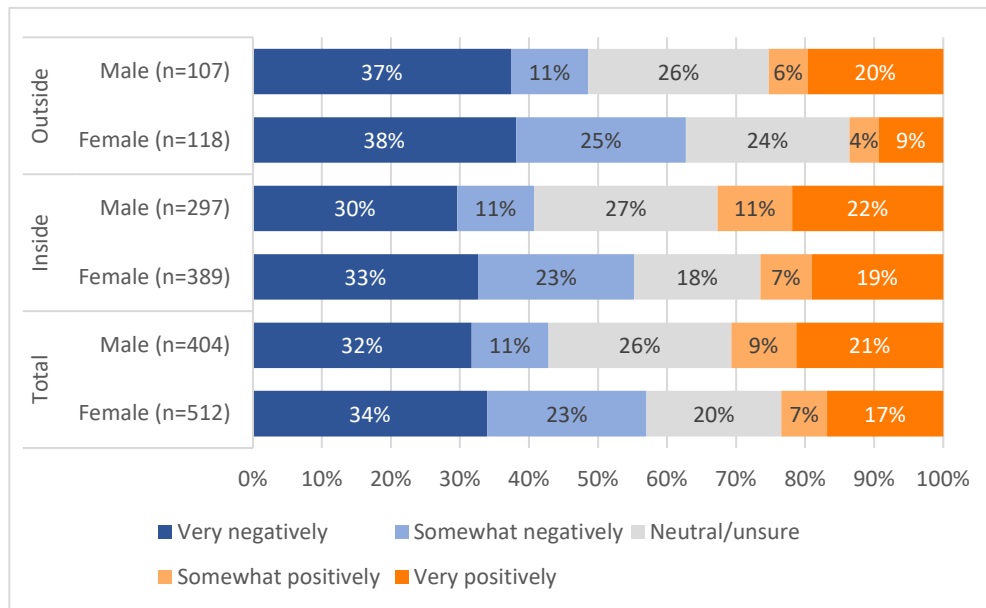
Figure 4-2: Perceived impacts of the QN by marital status



Gender

- 4.9 A greater proportion of females perceived the trial to have had either a 'very negative' or 'somewhat negative' impact (292 respondents – 57%) on them than responses from male respondents (173 responses – 43%). In terms of 'somewhat positive' or 'very positive' impacts, 120 females (23%) perceived this to have been their experience, compared to 124 males (31%).
- 4.10 Again, responses for both males and females were more positive for respondents living inside than outside the QN. The group with the most positive perception of the QN were males inside the QN, with 33% (97 respondents) reporting that the QN had had a positive impact, whilst the group with the most negative perception of the QN were females outside the QN, with 63% (74) reporting a negative impact.

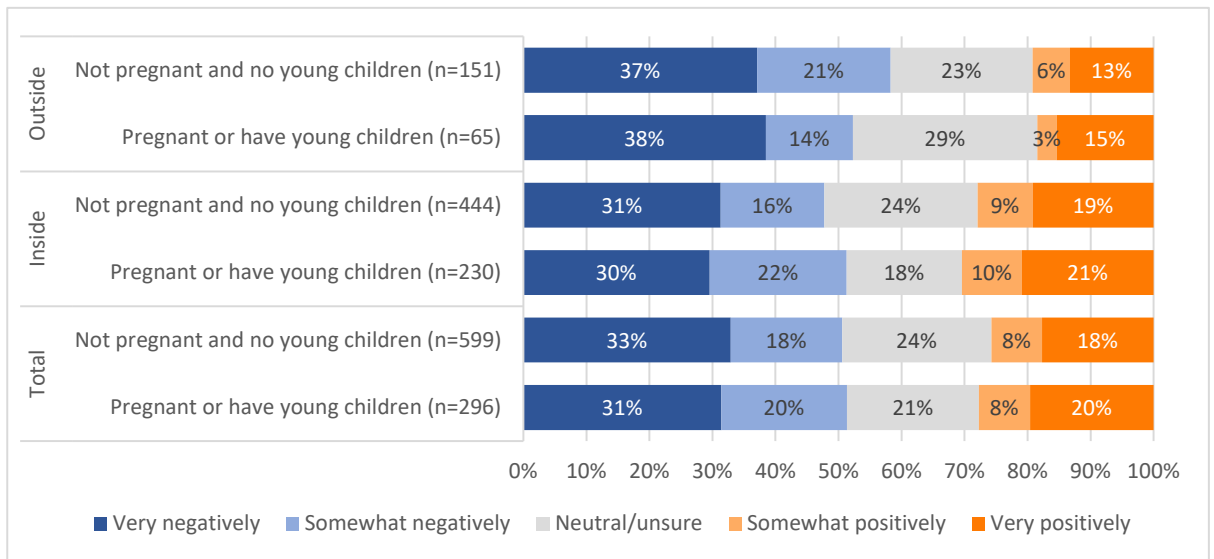
Figure 4-3: Perceived impacts of the QN by gender



Pregnancy and maternity

- 4.11 Across all genders, the proportions of responses from people who were pregnant or had young children perceiving they had experienced a 'somewhat negative' or 'very negative' impact were very similar to those who were not pregnant or did not have young children. Of the respondents who were pregnant or had young children, 152 (51%) stated they had experienced a 'somewhat negative' or 'very negative' impact, while 82 (28%) said they had experienced a 'somewhat positive' or 'very positive' impact. For responses from people who were not pregnant and/or did not have young children, these figures were 303 (51%) and 154 (26%) respectively.
- 4.12 Whilst perceptions were more negative than positive for both groups both inside and outside the QN, there was a slight difference in the relative proportions between those who were pregnant or had young children and those who were not pregnant or had young children when comparing between inside and outside the QN. For respondents inside the QN, those who were pregnant or had young children appeared to have stronger views (either positively or negatively) towards the QN than those who were not pregnant or had young children, with 18% (42 respondents) reporting they were neutral towards the QN compared to 24% (108 respondents), respectively. The opposite was true of those outside the QN, with 29% (19 respondents) of those who were pregnant or had young children and 23% (34 respondents) of those who weren't pregnant or had young children reporting they were neutral towards the QN.

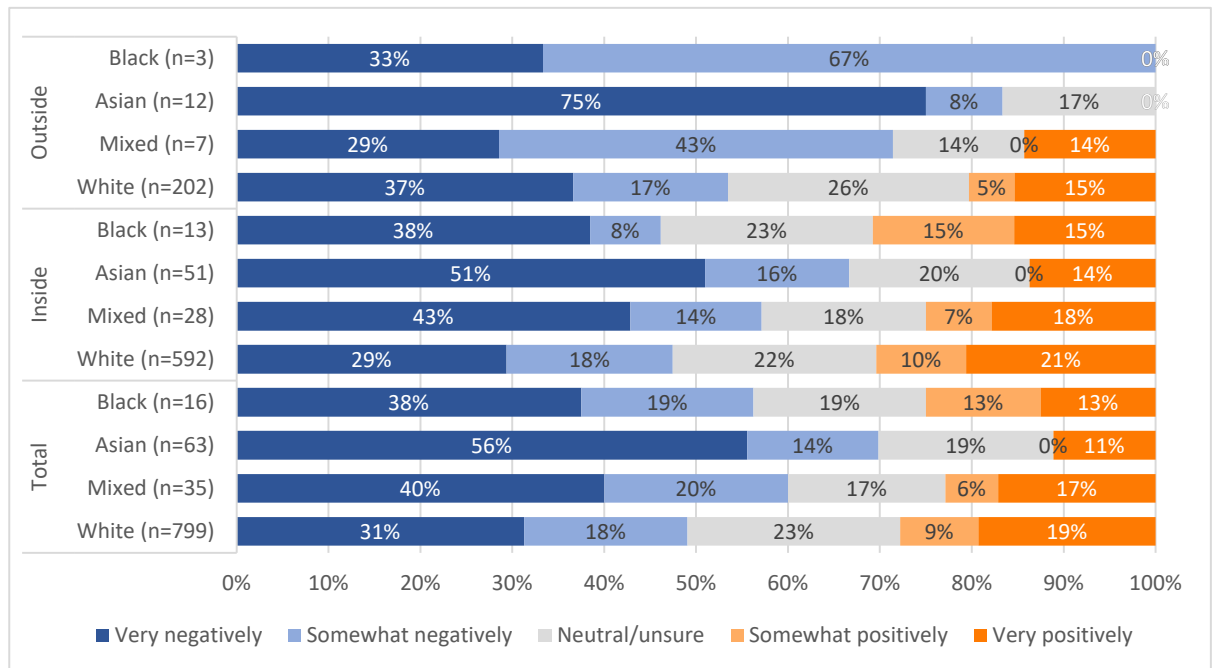
Figure 4-4: Perceived impacts of the QN by pregnancy and maternity



Ethnicity

- 4.13 There were some differences in how responses from people of different ethnic backgrounds thought the QN had impacted them. For example, a higher proportion of responses from people from Asian backgrounds felt that the QN had 'very negatively' or 'somewhat negatively' impacted them (44 responses - 70%) than average (52%). This compares to 7 responses (11%) from people from Asian backgrounds who felt that said the QN had impacted them 'very positively' or 'somewhat positively', compared to 26% as an average across the whole dataset.
- 4.14 The White ethnic group showed the highest level of positive impacts, with 222 respondents (28%) perceiving that the QN had impacted them 'very positively' or 'somewhat positively', and 392 responses (49%) from people who felt that the QN had impacted them 'very negatively' or 'somewhat negatively'.
- 4.15 The small sample sizes of the Black, Asian, and Mixed ethnic groups both inside and outside the QN mean comparisons between these individual ethnicity groups should be treated with caution. However, when comparing White respondents from inside and outside the QN, the proportions perceiving the QN to be positive or negative were similar, although those inside the QN had a slightly more positive perception of the QN.

Figure 4-5: Perceived impacts of the QN by ethnicity⁵



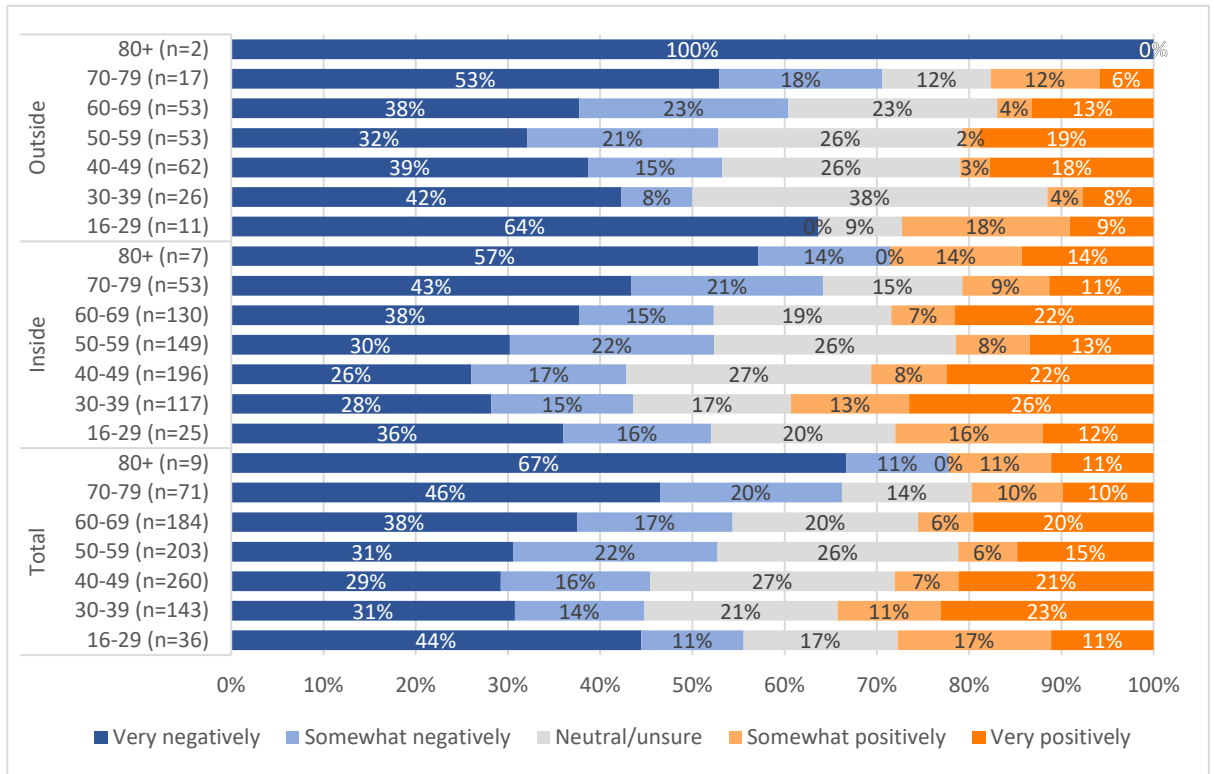
Age

4.16 The proportions of respondents in each age group reporting either perceived positive or negative impacts of the QN were generally very similar across the bandings (with around 50% of respondents reporting perceived negative impacts), except for the 80 years and over age group, which consisted of 7 negative responses (78%). However, this outlier must be treated with caution, given this group’s very low sample size of nine. The lower age groups (20 up to 49 years of age) showed higher proportions of responses from respondents that reported perceived positive impacts from the QN.

4.17 As Figure 4-6 shows, these variations between age groups were small for both respondents inside and outside the QN, although perceptions were slightly more positive for those inside the QN across all of the age groups. The relative proportions of positive and negative perceptions for each age group were broadly similar across those inside and outside the QN, although the small sample sizes for the age groups outside the QN mean comparisons must be treated with caution.

⁵ Respondents from an Arabic background have been excluded from the analysis of this question as the number of people in this ethnic group that gave a response to this question did not meet the minimum threshold of 5 respondents.

Figure 4-6: Perceived impacts of the QN by age group



Non-equalities characteristics

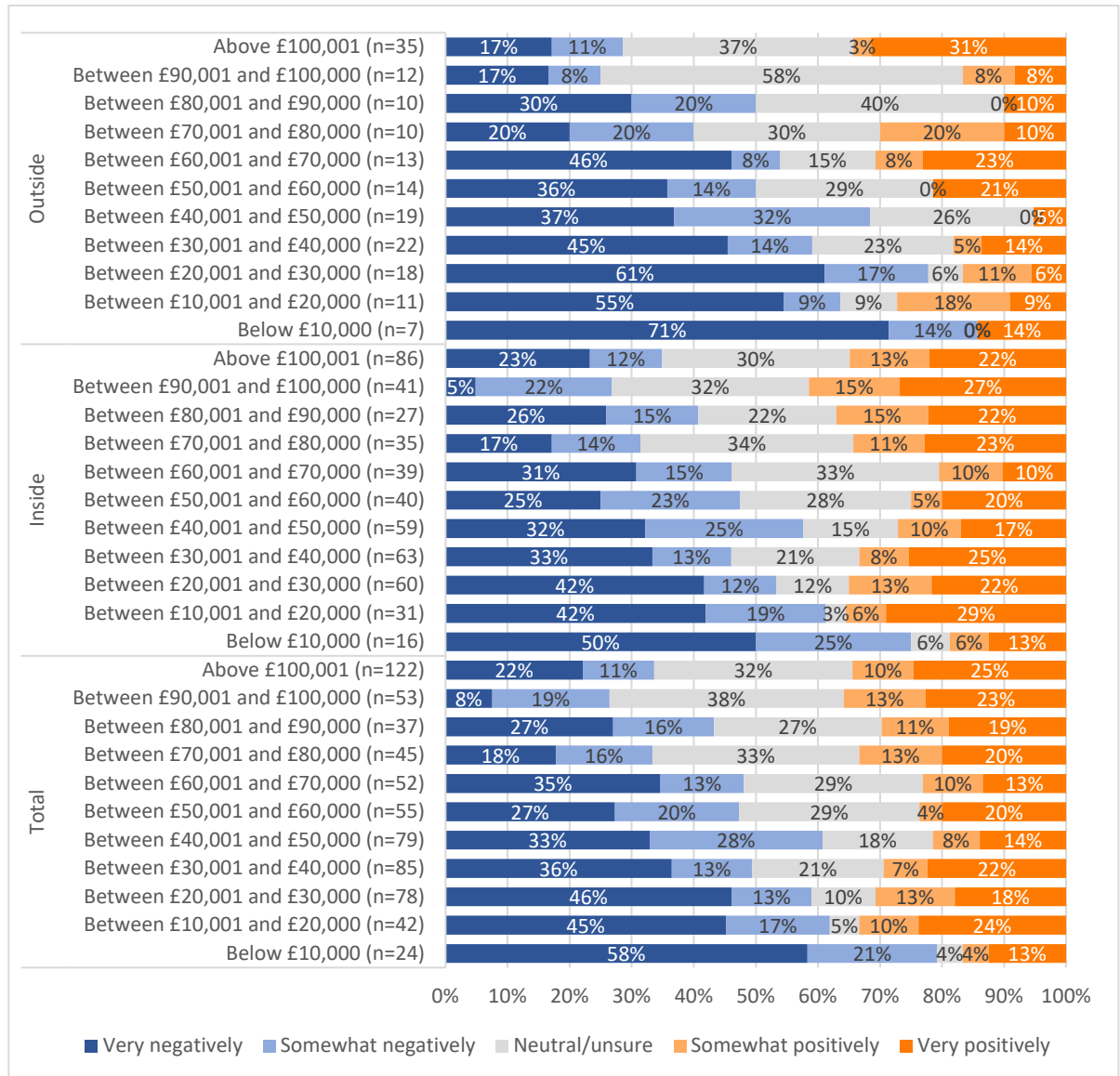
4.18 There are some demographic characteristics that were collected that are not classed as protected characteristics under the Equality Act (2010) but are important to consider in the context of this consultation.

Income

4.19 In general, there was no particularly strong pattern of positive/negative perceived impacts of the QN, although lower income groups showed slightly higher proportions of negative perceptions, and the groups at the lower and higher ends of the income scale showed the highest proportions of respondents reporting positive perceived impacts.

4.20 As shown in Figure 4-7, this was true of both respondents inside and outside the QN, with slightly more positive perceptions being reported by those inside the QN. Again, these comparisons must be treated with caution due to the low sample sizes in each age group.

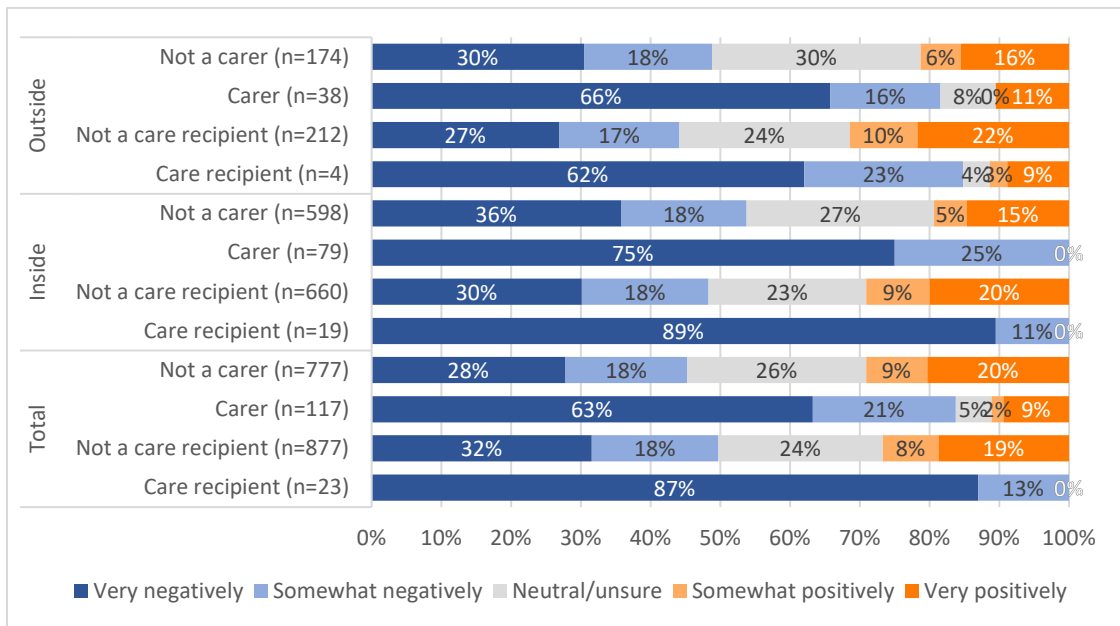
Figure 4-7: Perceived impacts of the QN by income bracket



Care recipients and carers

- 4.21 Of respondents who received care assistance in their home, all 23 (100%) perceived that the QN had impacted them ‘very negatively’ or ‘somewhat negatively’. Of respondents who were carers themselves, this figure was 98 responses (84%).
- 4.22 The proportions of positive and negative perceptions reported by each group were very similar when comparing between inside and outside the QN, although caution must be taken when comparing carers and care recipients, due to their low sample sizes.

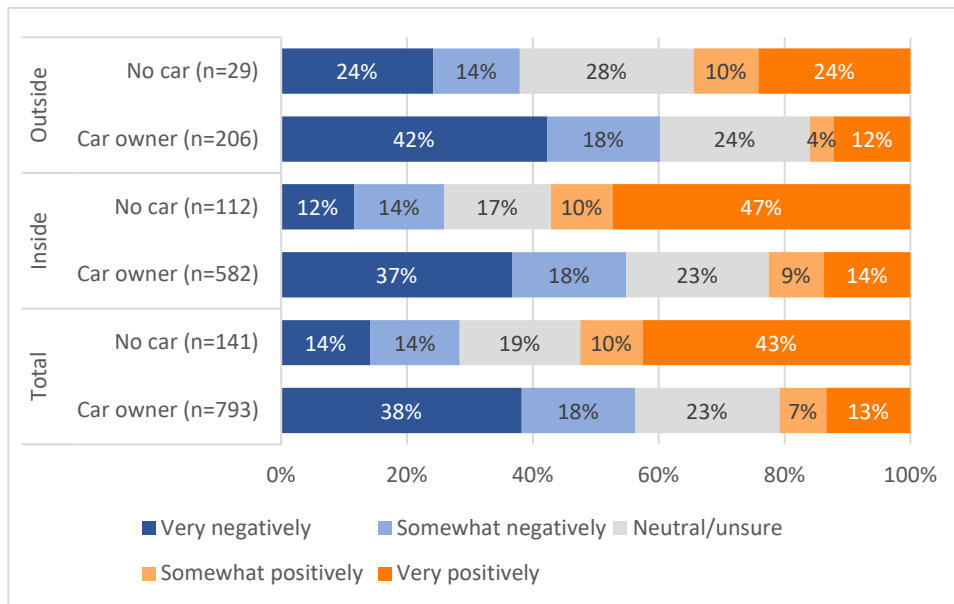
Figure 4-8: Perceived impacts of the QN by those receiving care and by carers



Car owners

- 4.23 Of respondents who did not own a car, 60 (43%) perceived that the trial had had a 'very positive' impact on them from an equalities' perspective, with a further 14 (10%) perceiving it had had a 'somewhat positive' impact on them. Of this same group, 40 (28%) felt that the trial had had a 'very negative' or 'somewhat negative' impact on them.
- 4.24 Of respondents who owned at least one car, 446 responses (56%) perceived that the trial had had a 'very negative' or 'somewhat negative' impact on them, while 165 responses (21%) felt they had experienced a 'somewhat positive' or 'very positive' impact.
- 4.25 Respondents who lived inside the QN and did not own a car reported a much greater proportion of positive perceptions of the QN than those without a car outside the QN, with 57% (64 respondents) perceiving the QN either somewhat positively or very positively inside the QN compared with 34% (10 respondents) outside the QN.

Figure 4-9: Perceived impacts of the QN by car ownership



Open question

- 4.26 Respondents were asked to ‘provide any more information that can help inform our Equalities Impact Assessment’ as an open response answer. There were 447 responses to this question, and the average word count was 82 words. The 2% cut-off minimum for this question was nine responses (i.e., only codes with nine responses or more are included in this section, but codes mentioned less frequently can be found in Appendix B). It should be noted that not all respondents answered this question directly; regardless, responses not referring directly to equalities issues have been considered and coded within this section.
- 4.27 Please note, the sum of the numbers given in this section is not equivalent to the total responses to this question, as responses may have more than one code allocated to them. For responses that refer to a specific demographic or protected characteristic, the proportion of responses from people in that group has been provided (where available). This is important to distinguish between people raising concerns on behalf of others, compared to concerns regarding their own experience.

Protected characteristics mentioned

- 4.28 If a response mentioned any of the protected characteristics in direct relation to the respondent or someone the respondent cares for, this was recorded (shown in Figure 4-10). Indeed, responses were only coded for this particular question if they did mention a protected characteristic in direct relation to themselves or a dependant. This

approach was taken to ensure answers were informed by experiences of respondents themselves rather than theoretical impacts on protected characteristic groups.

4.29 The table below shows that age and disability were the most common characteristics mentioned in response to this question.

Figure 4-10: Number of responses mentioning each protected characteristic

Protected characteristic	Number of responses	% of relevant responses (n=224)
Age	149	67%
Disability	93	42%
Gender reassignment	0	0%
Marriage and civil partnership	3	1%
Pregnancy and maternity	40	18%
Race	3	1%
Religion or belief	1	0%
Sex	29	13%
Sexual orientation	0	0%

Support

4.30 There were six supportive themes that were mentioned in at least 2% of all responses to this question:

- 27 respondents referred to streets feeling **safer or easier for pedestrian/cycle movement**; 100% of these comments came from respondents inside the QN
- 15 respondents referred to a perceived **reduction in noise pollution**, 75% of these comments came from respondents inside the QN
- 14 respondents referred to a perceived **reduction in air pollution**; 100% of these comments came from respondents inside the QN

- 10 respondents referred to a perceived **improvement in traffic in the QN**; 100% of these comments came from respondents inside the QN
- 9 respondents referred to the QN having **encouraged a mode-shift** in their travel patterns; 100% of these comments came from respondents inside the QN
- 9 respondents **offered general comments** of support (such as simply stating that they were in favour of the QN); 100% of these comments came from respondents inside the QN

Oppose

4.31 Some of the opposition to the QN related to the impacts of the QN on mobility and alternatives to private car use:

- 44 respondents referred to a perception that public transport or active travel are not **suitable alternatives due to disability or age** (of these, 30% were disabled people, 36% were aged over 60 and 50% were inside the QN)
- 32 respondents referred to a perceived **reduction in mobility for disabled people** (of these, 50% were disabled people themselves and 84% were inside the QN)
- 20 respondents referred to a perception that public transport or active travel are not **suitable alternatives due to COVID-19**; 85% of these comments came from respondents inside the QN
- 12 respondents referred to a perceived **reduction in mobility for older people** (of these, 92% were aged over 60 and 50% were inside the QN)
- 12 respondents referred to a perception that public transport or active travel are not **suitable alternatives** in general (with comments such as, "there is no easy public transport route"); 73% of these comments came from respondents inside the QN
- 11 respondents referred to a perception that public transport or active travel are not **suitable alternatives due to family commitments** (such as doing a big weekly shop whilst looking after small children); 75% of these comments came from respondents inside the QN
- 9 respondents referred to a perceived **reduction in mobility for the general population**; 67% of these comments came from respondents inside the QN

4.32 Further opposition to the QN related to access to the area:

- 34 respondents referred to it being **harder to access childcare/school** and associated time pressures for working parents due to a perceived increase in journey times as a result of the QN; 50% of these comments came from respondents inside the QN
- 27 respondents mentioned **feeling unable or finding it much harder to visit friends/family** or to welcome visitors; 73% of these comments came from respondents inside the QN
- 15 respondents mentioned **feeling 'trapped' or isolated**, or not being able to leave the local area; 69% of these comments came from respondents inside the QN
- 15 respondents perceived the QN to be having a **negative impact on work** (such as not being able to work as many hours due to a perceived increase in journey times caused by the QN); 76% of these comments came from respondents inside the QN
- 12 respondents referred to a perception that **tradesmen/deliveries/taxis are now struggling to get to properties** as a result of the QN; 92% of these comments came from respondents inside the QN

4.33 The most common oppositions to the QN related to the travel impacts of the QN:

- 96 respondents referred to a perceived **increase in journey times**; 48% of these comments came from respondents inside the QN
- 64 respondents referred to a perceived **increase in traffic**; 81% of these comments came from respondents inside the QN
- 49 respondents referred to a perceived **increase in air pollution in the area**; 100% of these comments came from respondents inside the QN
- 41 respondents referred to **unwillingness to use the A406** (perceptions of it being dangerous and polluted); 90% of these comments came from respondents inside the QN
- 22 respondents perceived **traffic to be being displaced** (within Bounds Green or to Haringey); 100% of these comments came from respondents inside the QN
- 13 respondents perceived there to be **not enough local amenities to sustain a QN**; 73% of these comments came from respondents inside the QN

4.34 Other opposition related to health and/or safety:

- 53 respondents felt it was **harder to access healthcare, or for carers to gain access to patients** (of these, 11% received care in their home, 60% were carers themselves and 67% were inside the QN)
- 43 respondents referred to perceptions that the QN was **damaging their own or other's mental health** (of these, 26% were disabled, 28% were aged over 60, 70% were female and 73% were inside the QN)
- 25 respondents referred to a perceived **lack of safety** for women, the elderly or otherwise vulnerable **due to crime** (of these, 12% were disabled, 28% were aged over 60, and 100% were female and inside the QN)
- 25 respondents referred to a perceived **reduction in health for children** (100% of these comments came from respondents inside the QN); and a further 11 referred to a **lack of safety for children due to traffic** (81% of these comments came from respondents inside the QN)
- 21 respondents referred to a perceived **lack of safety** for the general population **due to traffic or cyclists** (e.g., cycling on pavements); 60% of these comments came from respondents inside the QN
- 15 respondents felt the QN was **damaging their own or other's physical health** (of these, 20% were disabled, 47% were aged over 60, 67% were female and 68% were inside the QN), such as by aggravating breathing conditions due to a perceived increase in pollution
- 12 responses suggested that **emergency vehicle access** had been or might be hampered; 100% of these comments came from respondents inside the QN

4.35 Finally, some respondents questioned how the QN had been administered:

- 9 respondents suggested that the **Council's Equalities Duty had not been fully considered** (of these, 22% were disabled people, 44% were aged over 60 and 72% were inside the QN)

Suggest

4.36 There were 19 **general suggestions** provided for this question (74% of these comments came from respondents inside the QN), including providing residents-only access to the area and moving the access restrictions from the south of the area to the north. These have all been reviewed by Enfield Council.

5. Importance of access, time, and aspirations for the area

5.1 Respondents were asked about how important they regarded different aspects of the QN to be. In total there were ten questions to this part of the survey, with the first four referring to specific access within the area, two referring to journey times and the latter four referring to more general aspirations for the neighbourhood. Percentages in the table and figure below are given as a proportion of those who responded to each question, although the response rate to these questions was high, with no more than 2% of respondents leaving these questions blank.

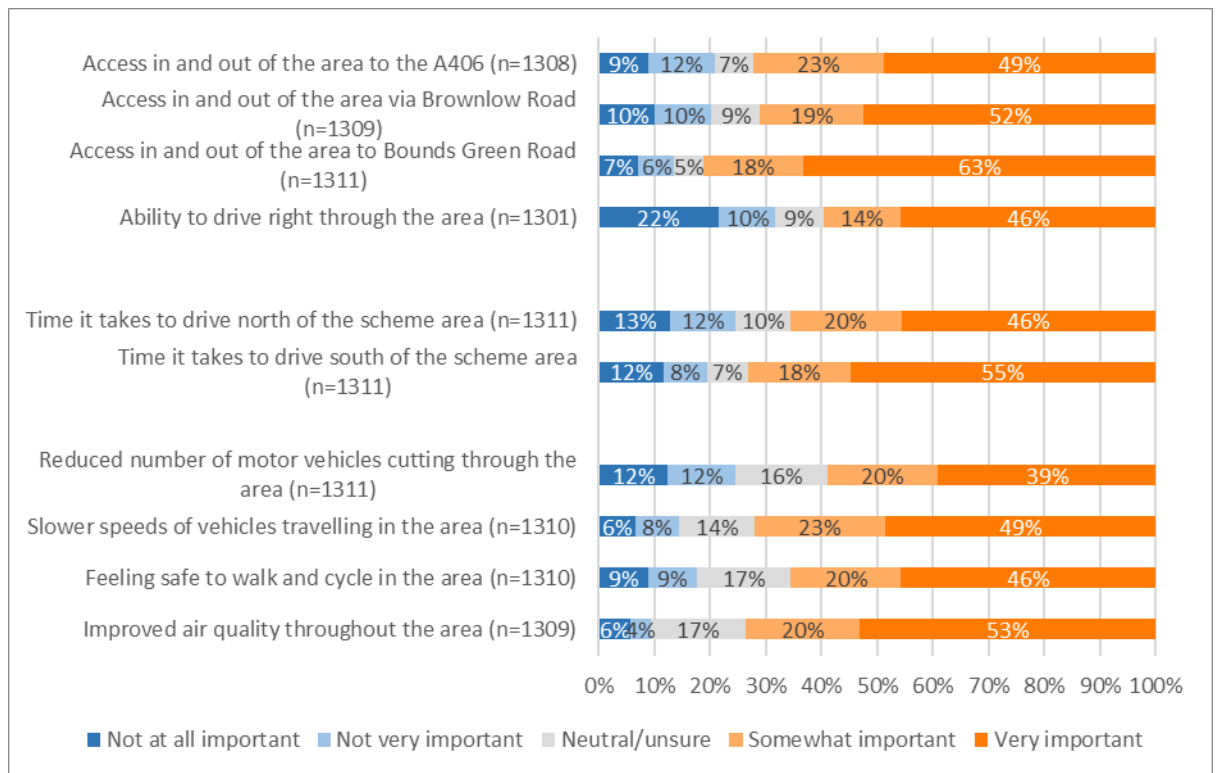
Table 5-1: Summary of responses to questions on importance of access, time, and aspirations

How important are the following to you?	Not at all important	Not very important	Neutral/ unsure	Somewhat important	Very important	Total
Access						
Access in and out of the area to the A406	115	156	93	305	639	1308
	9%	12%	7%	23%	49%	
Access in and out of the area via Brownlow Road	132	133	113	245	686	1309
	10%	10%	9%	19%	52%	
Access in and out of the area to Bounds Green Road	93	85	68	234	831	1311
	7%	6%	5%	18%	63%	
	280	133	111	182	595	1301

How important are the following to you?	Not at all important	Not very important	Neutral/ unsure	Somewhat important	Very important	Total
Ability to drive right through the area	22%	10%	9%	14%	46%	
Time						
Time it takes to drive north of the QN	168	153	129	262	599	1311
	13%	12%	10%	20%	46%	
Time it takes to drive south of the QN	151	103	97	241	719	1311
	12%	8%	7%	18%	55%	
Aspirations						
Reduced number of motor vehicles cutting through the QN	162	160	215	262	512	1311
	12%	12%	16%	20%	39%	
Slower speeds of vehicles travelling in the QN	85	102	180	306	637	1310
	6%	8%	14%	23%	49%	
Feeling safe to walk and cycle in the QN	116	115	221	259	599	1310
	9%	9%	17%	20%	46%	
	73	50	222	268	696	1309

How important are the following to you?	Not at all important	Not very important	Neutral/ unsure	Somewhat important	Very important	Total
Improved air quality throughout the QN	6%	4%	17%	20%	53%	

Figure 5-1: Responses to importance of access, time, and aspirations questions



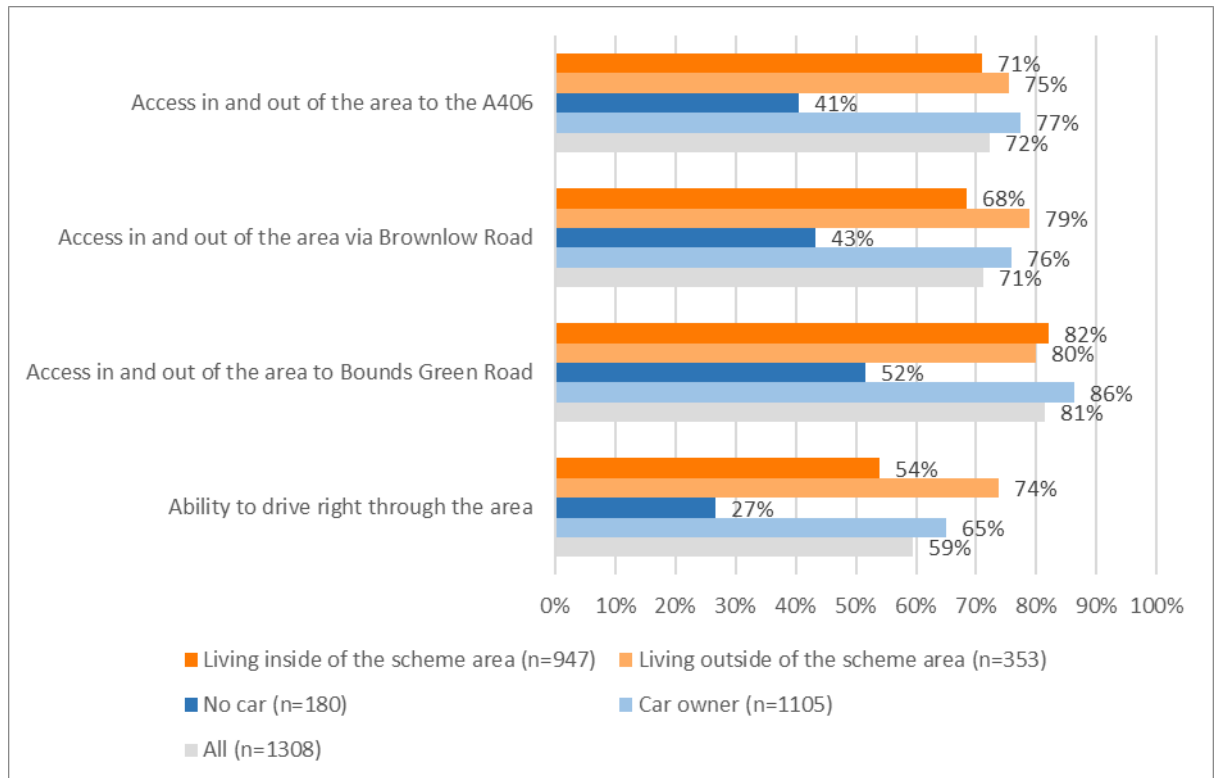
5.2 This shows that for access, Bounds Green Road was considered the most important by the highest proportion of respondents, with 831 responses (63%) feeling that access to it was 'very important', compared to 686 (52%) and 639 (49%) for Brownlow Road and the A406 respectively. It also shows that generally, journey times to the south of the QN were considered more important than those to the north, with 719 respondents (55%) stating that journey times to the south were 'very important' compared to 599 (46%) for the north.

5.3 Although it is possible to cross-tabulate these results with the demographic characteristics covered in Section 3, this provides too much detail to present in this

context. There are, however, some noticeable relationships between respondents' home location (i.e., within or outside the QN), and car ownership within this set of questions.

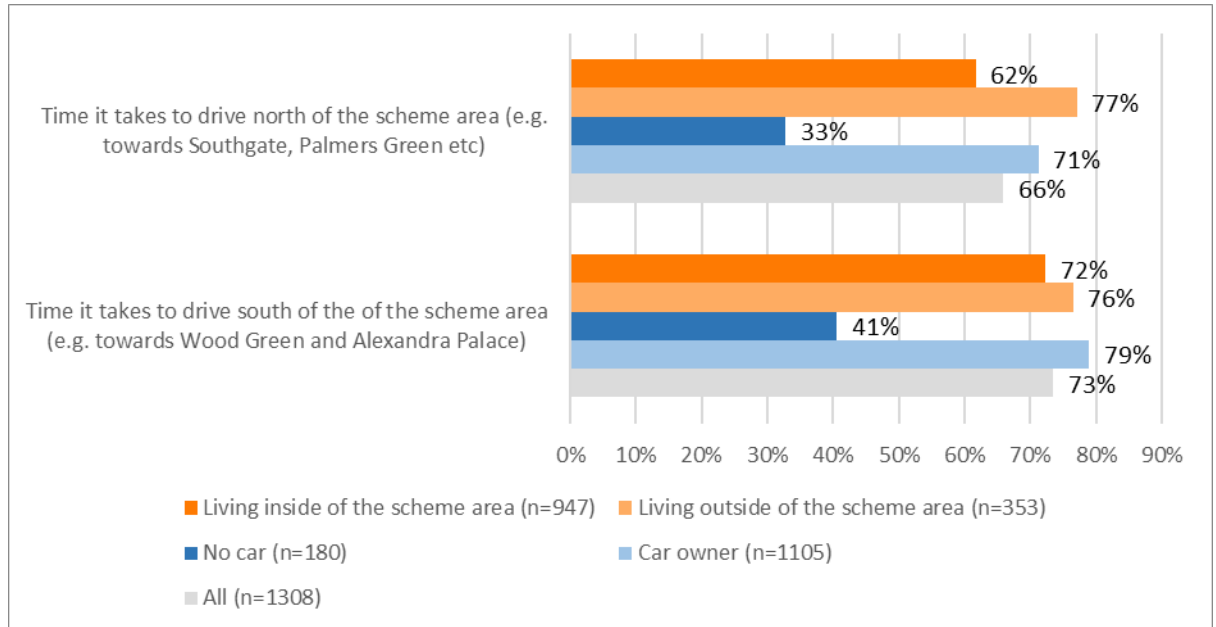
- 5.4 The proportion of respondents who considered the 'access' questions to be important was generally higher for those who live outside the QN than those who live within the QN. For example, 68% (647 respondents) living within the QN considered access in and out of the area via Brownlow Road to be 'somewhat' or 'very important', but this figure rose to 79% (278 respondents) for people living outside the QN.
- 5.5 For these same questions, a greater proportion of respondents who own one or more cars stated that access to these roads was 'somewhat important' or 'very important'. For access to the A406, 77% (854) of respondents who own at least one car, compared to 41% (73) of those who do not own a car said this was 'somewhat important' or 'very important'. For access to Brownlow Road these figures were 76% (839) of those who own a car, compared to 43% (78) of those who do not own a car. These figures are 86% (954 respondents) and 52% (93 respondents) respectively for access to Bounds Green Road.
- 5.6 A breakdown of the proportion of respondents that considered access options 'somewhat important' or 'very important' by car ownership and area of residence (inside/outside the QN) is shown in Figure 5-2. This shows that the smallest proportions of respondents who thought these aspects of access to the area were 'somewhat important' or 'very important' were those who do not own a car.

Figure 5-2: Percentage of respondents who considered access options 'somewhat important' or 'very important' by car ownership and residence inside/outside the QN



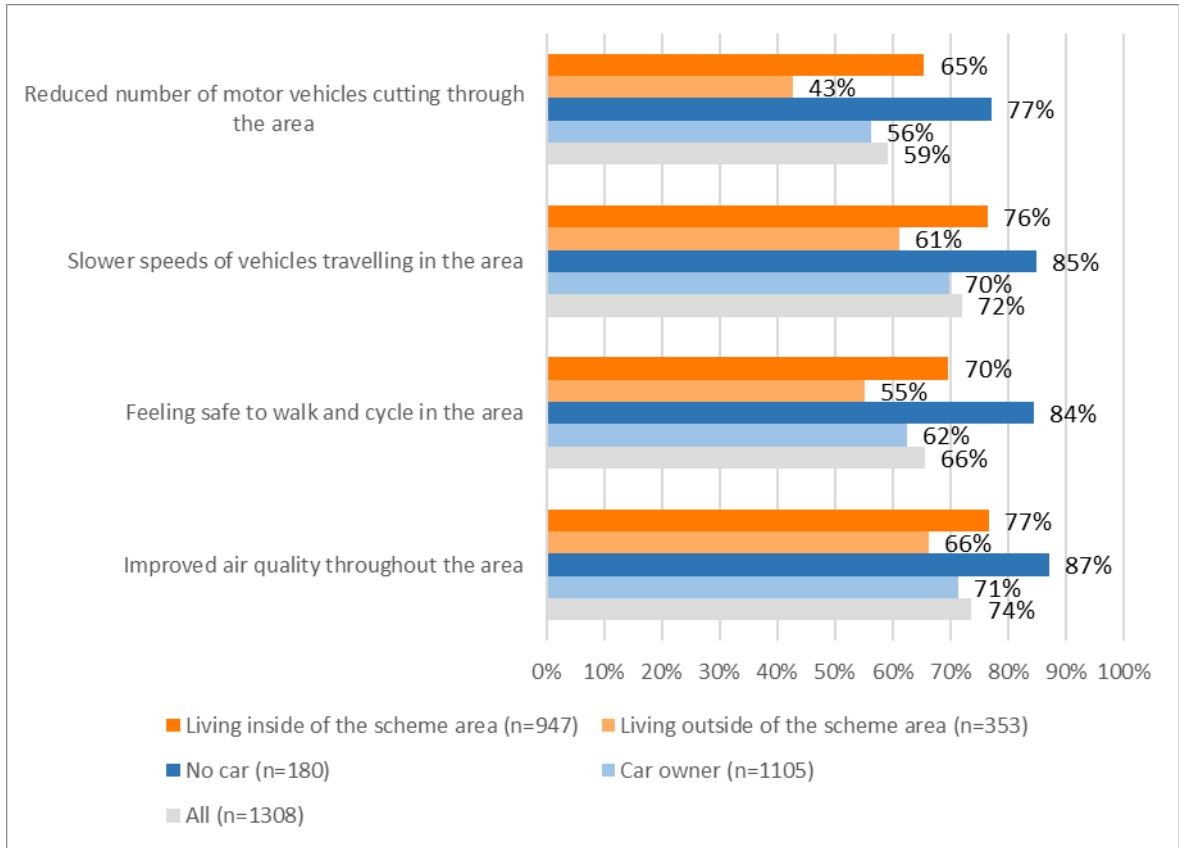
- 5.7 A similar pattern was shown in relation to the questions on journey time. For 'time it takes to drive north from the QN', 77% of respondents (272 respondents) from outside the QN considered this to be 'somewhat' or 'very important' compared to 62% (584 respondents) of respondents residing within the QN. For access to the south, however, these proportions were more evenly matched, at 76% (270 respondents from outside the QN) and 72% (685 respondents from within the QN) respectively.
- 5.8 The difference in the views of car owners and non-car owners was more significant for both drive-times to the north and south of the QN, with 71% of respondents who own one or more cars (787 respondents) saying that journey times to the north were 'somewhat important' or 'very important', compared to 33% (23 respondents) of those without cars. Similarly, 79% of respondents (872 people) with at least one car considered journey times to the south to be 'somewhat important' or 'very important', compared to 41% of respondents (73 people) without a car. This is shown in Figure 5-3.

Figure 5-3: Percentage of respondents who considered journey times to the north and south of the area 'somewhat important' or 'very important' by car ownership and residence inside/outside the QN



- 5.9 For the questions relating to aspirations for the area relating to traffic volumes, speeds, comfort of walking and cycling, and air quality, these patterns were reversed. A higher proportion of respondents who live within the QN rated all four aspirations for the area as 'somewhat' or 'very important' than those who lived outside the area. Of respondents living within the QN, 65% (620 respondents) stated that reducing the number of vehicles cutting through the area was 'somewhat' or 'very important', 76% (724 respondents) stated that slower speeds were 'somewhat' or 'very important', 70% (660 respondents) stated that feeling safe to walk and cycle was 'somewhat' or 'very important', and 77% (727 respondents) stated that improving air quality was 'somewhat' or 'very important'. This compares to 43% (151 respondents), 61% (216 respondents), 55% (195 respondents) and 66% (234 respondents) respectively for residents outside the QN.
- 5.10 People who do not own a car rated each of these aspects as being of higher importance overall, with 77% (139 respondents), 85% (153 respondents), 84% (152 respondents) and 87% (157 respondents) of respondents without a car stating these four aspects of the neighbourhood were 'somewhat' or 'very important', respectively. For respondents who owned at least one car, these figures were 56% (621 responses), 70% (771 responses), 62% (690 responses) and 71% (789 responses).

Figure 5-4: Percentage of responses that considered aspirations for the area 'somewhat' or 'very important' by car ownership and residence inside/outside the QN



6. Effectiveness of measures

- 6.1 The next part of the consultation survey asked respondents about how effective they felt the QN had been in a variety of different ways. Responses to these questions are summarised in Table 6-1.

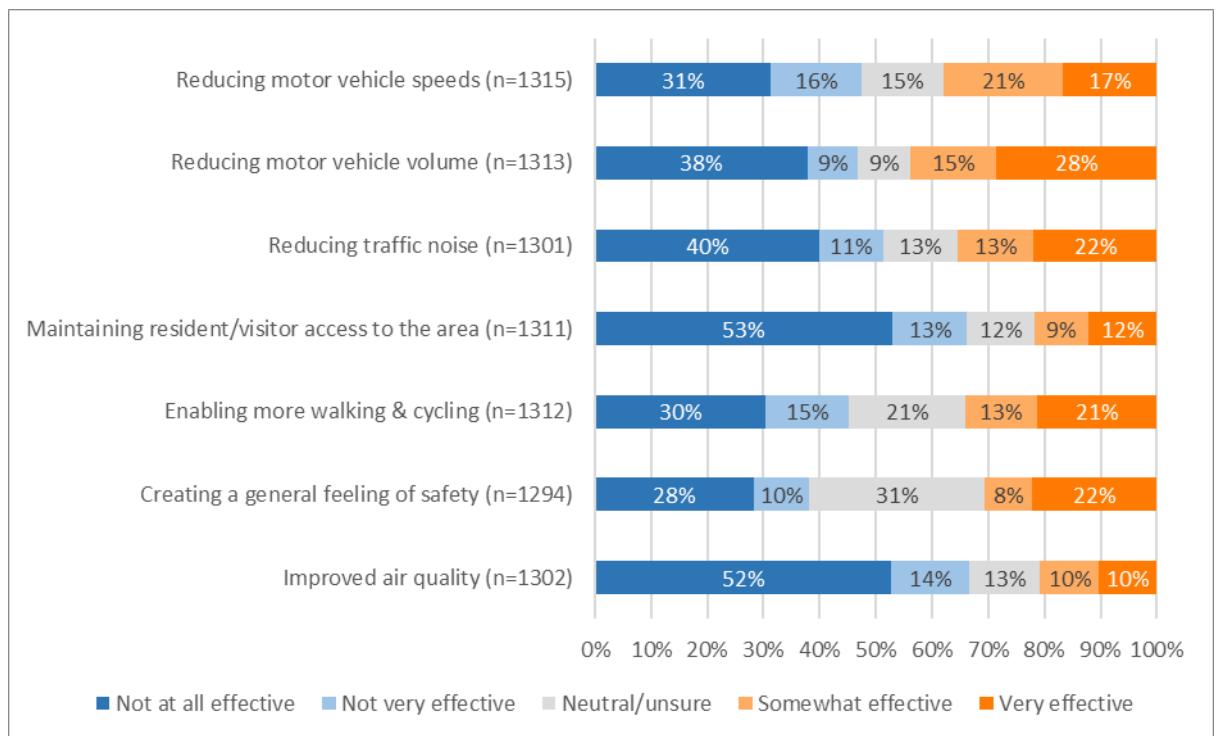
Table 6-1: Summary of responses regarding effectiveness of the measures

How effective do you think the QN has been on the following?	Not at all effective	Not very effective	Neutral/ unsure	Somewhat effective	Very effective	Total
Reducing motor vehicle speeds	412	213	191	278	221	1315
	31%	16%	15%	21%	17%	
Reducing motor vehicle volumes	498	116	124	201	374	1313
	38%	9%	9%	15%	28%	
Reducing traffic noise	520	147	172	177	285	1301
	40%	11%	13%	13%	22%	
Maintaining resident/visitor access to the area	695	173	159	123	161	1311
	53%	13%	12%	9%	12%	
Enabling more walking & cycling	399	193	273	167	280	1312
	30%	15%	21%	13%	21%	
Creating a general feeling of safety	367	127	403	111	286	1294
	28%	10%	31%	8%	22%	
Improved air quality	686	180	166	136	134	1302
	52%	14%	13%	10%	10%	

- 6.2 This shows that for every aspect in the table above, with the exception of 'creating a general feeling of safety', the largest proportion of respondents felt that the QN had been 'not at all effective'. However, it should be noted that in contrast, for some of these aspects, the second largest respondent group rated the QN as 'very effective' as in the case of 'reducing motor vehicle volumes' and 'reducing traffic noise'.

- 6.3 The aspect of the QN with the greatest consensus response was 'maintaining resident/visitor access to the area', for which 53% (695 responses) of all respondents felt the QN had been 'not at all effective'. This was followed by 'improved air quality', for which 52% (686 respondents) of those who responded to the question were people who felt the QN had been 'not at all effective'. The aspect of the QN deemed to be most effective was 'reducing motor vehicle volumes', for which 28% (374 respondents) of all respondents felt the QN had been 'very effective'. This is shown in Figure 6-1.

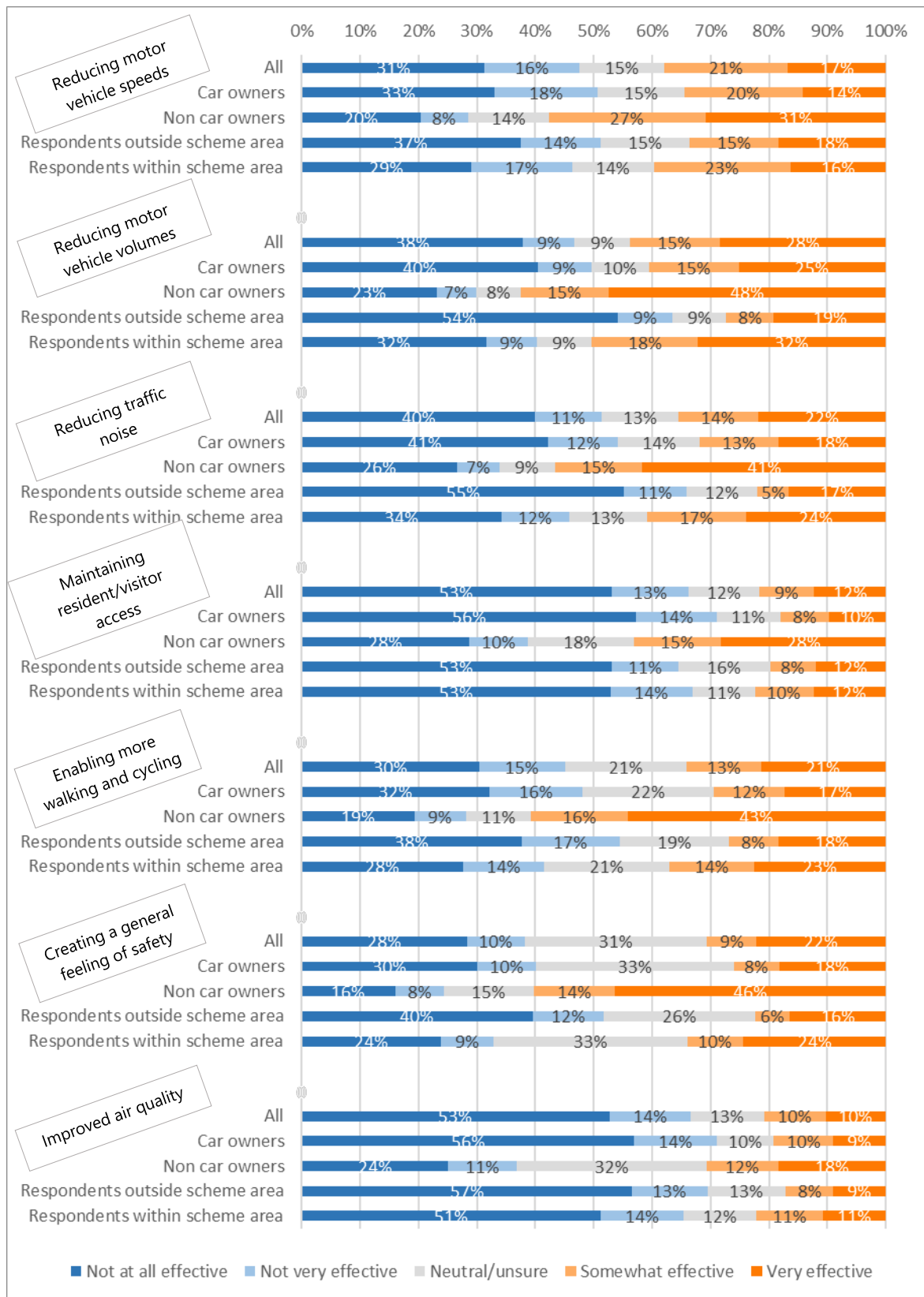
Figure 6-1: Responses to effectiveness of measures questions



- 6.4 Generally, more people that live within the QN thought that the QN had been effective for each aspect (i.e., lower proportions of 'not at all effective' and higher proportions of 'very effective') than those who lived outside the area. For example, 32% of respondents (304 people) living within the QN felt the QN had been 'very effective' at reducing motor vehicle volumes, compared to 19% of respondents (69 people) living outside the QN. Similarly, 54% (194 respondents) of those living outside the QN felt the QN had been 'not at all effective' at reducing motor vehicle volumes, compared to 32% (299 respondents) of those who live within the area. The same pattern is true (to varying degrees) for all elements of this question, except for the aspect of "maintaining resident/visitor access to the area", to which 53% of both those inside (500 respondents) and outside (190 respondents) the area said that the QN had been 'very ineffective'.

- 6.5 Figure 6-2 shows that a similar pattern occurred when analysing the response to this question by car ownership. For all aspects by which the QN was rated, a higher proportion of respondents who do not own a car felt that the QN had been effective than those who own at least one car.
- 6.6 For several aspects by which the QN was rated, a greater proportion of respondents without a car felt that the QN had been 'very effective' than 'not at all effective', in contrast to the trend in the overall dataset. This was the case for 'reducing motor vehicle speeds', 'reducing motor vehicle volume', 'reducing traffic noise', 'enabling more walking and cycling' and 'creating a general feeling of safety'.

Figure 6-2 Perceived effectiveness of the QN by car ownership and residence inside/outside the QN



7. Suggestions

- 7.1 Respondents were asked to 'describe your suggestions and be as specific as possible' as an open response answer. There were 1,191 responses to this question, and the average word count was 113 words. The 2% cut-off minimum for this question was 24 responses (i.e., only codes with 24 responses or more are included in this section, but codes mentioned less frequently can be found in Appendix B). It should be noted that not all respondents answered this question directly; regardless, responses not referring directly to suggestions have been considered and coded within this section.
- 7.2 Please note, the sum of the numbers given in this section is not equivalent to the total responses to this question. This is because most answers reference more than one of the codes.

Support

- 108 respondents **offered general comments** of support (such as simply stating that they were in favour of the QN); 85% of these comments came from respondents inside the QN
- 64 respondents **provided a caveat** to an oppose comment (e.g., they supported the goals of the QN, but not the QN as it currently is); 78% of these comments came from respondents inside the QN
- 38 respondents referred to a perceived **reduction in traffic volumes**; 92% of these comments came from respondents inside the QN
- 34 respondents said that the **streets felt safer** as a result of the QN; 91% of these comments came from respondents inside the QN
- 29 respondents said that the area felt **quieter** as a result of the QN, 93% of these comments came from respondents inside the QN

Oppose

- 7.3 Many respondents referred to the transport or environmental impacts of the QN:
- 432 respondents referred to a perception of **traffic being displaced or worsened**; 66% of these comments came from respondents inside the QN
 - 301 respondents referred to a perceived **increase in air pollution**; 67% of these comments came from respondents inside the QN

- 52 respondents referred to the perceived **obstruction of emergency services**; 73% of these comments came from respondents inside the QN
- 36 respondents referred to a perception of the QN **having little/no impact on traffic/pollution**; 69% of these comments came from respondents inside the QN
- 35 respondents referred to a perceived **increase in noise pollution**; 63% of these comments came from respondents inside the QN

7.4 A number of respondents commented about the person-related impacts of the QN:

- 221 respondents referred to a perceived **increase in journey times**; 76% of these comments came from respondents inside the QN
- 159 respondents commented on **feeling unsafe** due to traffic; 84% of these comments came from respondents inside the QN
- 125 respondents referred to feeling **unwilling or reluctant to use the A406**; 88% of these comments came from respondents inside the QN
- 105 respondents referred to a perceived **reduction in mobility or feeling 'trapped' by the QN**; 84% of these comments came from respondents inside the QN
- 65 respondents referred to a **negative impact on their own or other's mental health**; 68% of these comments came from respondents inside the QN
- 53 respondents felt that there had been a negative impact on **children's health and safety**; 74% of these comments came from respondents inside the QN
- 52 respondents perceived the QN to be causing an **obstruction to emergency services**; 73% of these comments came from respondents inside the QN
- 35 respondents referred to a perceived **negative impact on work/local businesses or deliveries**; 66% of these comments came from respondents inside the QN
- 34 respondents referred to **healthcare workers being obstructed or difficulties accessing healthcare**; 68% of these comments came from respondents inside the QN
- 33 respondents commented about **feeling unsafe** as a result of a perceived increase in crime or a perceived increase in the risk of crime; 70% of these comments came from respondents inside the QN
- 28 respondents felt the QN was **damaging their own or other's physical health**, such as by aggravating breathing conditions due to a perceived increase in pollution; 71% of these comments came from respondents inside the QN

- 26 respondents commented about **perceived increasing petrol usage/fuel bills or higher taxi fares**, 85% of these comments came from respondents inside the QN
- 7.5 Some respondents referred to the availability of alternative transport options:
- 38 respondents said that **public transport/active travel was not a suitable alternative** in general, 78% of these comments came from respondents inside the QN
- 7.6 Some respondents commented about specific points about the QN or the reasons the QN was being pursued:
- 84 respondents felt that the QN had been **unfair on residents**; 58% of these comments came from respondents inside the QN
 - 69 respondents were **against the Brownlow Road bus gate/closure**; 64% of these comments came from respondents inside the QN
 - 47 respondents felt there had been a lack of/poor **engagement with the community**; 72% of these comments came from respondents inside the QN
 - 29 respondents thought that **non-residential traffic cutting through the area had increased/not been stopped by the QN**; 76% of these comments came from respondents inside the QN
 - 26 respondents said that **traffic in the area wasn't a problem** before the QN; 69% of these comments came from respondents inside the QN
 - 26 respondents raised concerns about **drivers ignoring the Palmerston/Kelvin no-right-turn**; 96% of these comments came from respondents inside the QN
 - 25 respondents felt that the QN had **divided the community**; 72% of these comments came from respondents inside the QN

Suggest

- 7.7 The focus of this question was suggestions – and there were 62 coded common suggestions in total. These codes are very detailed in order to capture all of the suggestions made by respondents, for them to be considered in future versions of the QN. All coded suggestions over the 2% threshold are set out here.
- 7.8 Some respondents gave fairly general suggestions on the QN:
- 171 respondents suggested **stopping/reversing the QN**; 55% of these comments came from respondents inside the QN

- 135 respondents suggested generally **leaving roads open**, including those who suggested that all roads be left open, and those who said specific roads should be left open, but there were too few responses to warrant making an individual code for them. 61% of these comments came from respondents inside the QN
- 69 respondents suggested that **access to/from the south of the QN was preferable to access to the A406**; 94% of these comments came from respondents inside the QN
- 36 respondents suggested **continuing with the current QN**; 78% of these comments came from respondents inside the QN

7.9 Some respondents made suggestions about traffic control measures and road layouts:

- 69 respondents suggested **changes to the road layout**; 74% of these comments came from respondents inside the QN
- 64 respondents suggested a **one-way system**; 78% of these comments came from respondents inside the QN
- 62 respondents generally suggested introducing **traffic calming measures** (without specifying what type of traffic calming QN they would like to be introduced); 69% of these comments came from respondents inside the QN
- 37 respondents suggested a **20mph zone**; 65% of these comments came from respondents inside the QN
- 27 respondents specifically suggested that **speed bumps** should be introduced; 74% of these comments came from respondents inside the QN

7.10 Some respondents made suggestions referring to specific roads or closure points:

- 199 respondents suggested **re-opening the Maidstone Road and/or Warwick Road closures**; 93% of these comments came from respondents inside the QN
- 78 respondents suggested **blocking all or some specific northern entrances/exits to the A406** (this was often said in conjunction with preferring access to the south of the QN, but not always); 94% of these comments came from respondents inside the QN
- 71 respondents suggested **re-opening the York Rd closure**; 94% of these comments came from respondents inside the QN
- 60 respondents suggested **altering the Warwick Rd-A406 junction** (e.g., by introducing a no-right turn); 93% of these comments came from respondents inside the QN

- 57 respondents suggested **removing the A109 Bounds Green/A406 no right-turn**; 88% of these comments came from respondents inside the QN
- 38 respondents suggested **changing the position of filters to the middle of the roads**; 87% of these comments came from respondents inside the QN
- 37 respondents suggested **re-opening Palmerston Road to the A406**; 84% of these comments came from respondents inside the QN
- 37 respondents suggested **not introducing a bus gate on Brownlow Rd**; 65% of these comments came from respondents inside the QN
- 36 respondents suggested **removing the no left-turn from A109 Bounds Green onto Brownlow Rd**, 86% of these comments came from respondents inside the QN

7.11 Some respondents made suggestions on the details of restrictions:

- 251 respondents suggested **residents-only access (e.g., ANPR)**; 96% of these comments came from respondents inside the QN
- 42 respondents suggested **other access restrictions** (e.g., width/weight restrictions, emergency vehicles only); 86% of these comments came from respondents inside the QN
- 38 respondents suggested introducing **on-street car parking restrictions**; 92% of these comments came from respondents inside the QN
- 35 respondents suggested **enforcing access restrictions more strictly**; 65% of these comments came from respondents inside the QN

7.12 Some respondents made suggestions about how the QN is represented and communicated:

- 52 respondents suggested **better signage**; 92% of these comments came from respondents inside the QN
- 47 respondents suggested conducting a **full consultation with residents**; 79% of these comments came from respondents inside the QN
- 34 respondents suggested **co-ordination with neighbouring boroughs**; 82% of these comments came from respondents inside the QN

7.13 Some respondents made suggestions relating to greener infrastructure:

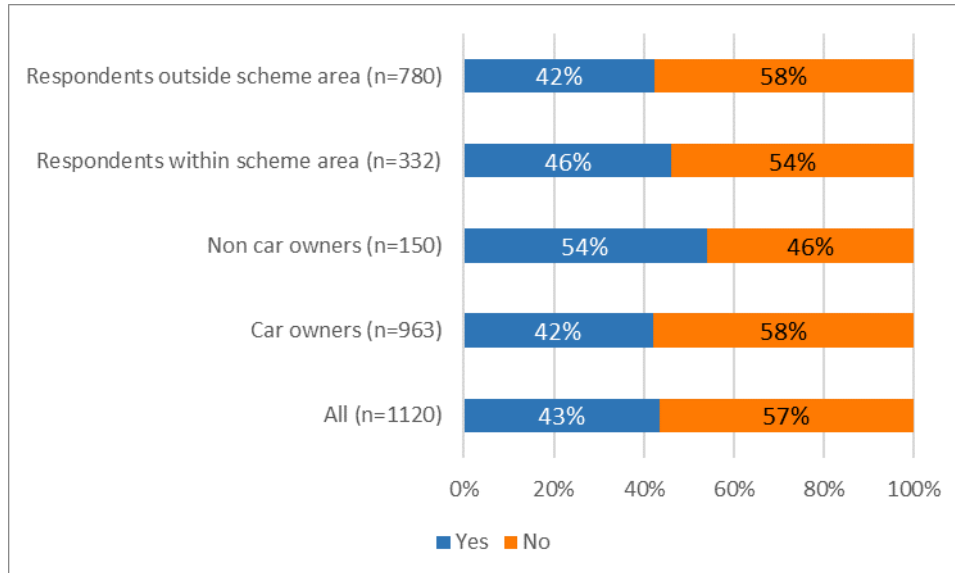
- 85 respondents suggested **improving cycling/pedestrian infrastructure**; 80% of these comments came from respondents inside the QN

- 31 respondents suggested **electric charge points/encouraging greener vehicles**; 48% of these comments came from respondents inside the QN
- 29 respondents suggested **improving public transport provision**; 38% of these comments came from respondents inside the QN

8. Phase 2 & Permit parking scheme

- 8.1 A closed question was included which asked, 'Further consultation would need to take place if a parking permit scheme were to be taken forward but, in principle, do you think this is a good idea?'. Overall, 486 respondents (37%) said 'yes', while 634 (48%) said 'no'. A further 211 (16%) did not respond to the question.
- 8.2 In contrast to most of the questions in the survey, there was only a small amount of difference between responses from people within/outside the QN, and people who did or did not own a car. Of those who answered the question, 42% of respondents (330 people) who lived within the QN thought a permit parking scheme was a good idea, compared to 58% of respondents (450 people) outside the QN. In terms of car ownership, 42% of respondents (404 people) who did own a car said that a permit parking scheme was a good idea, compared to 54% of respondents (81 people) who did not own a car. This information is shown in Figure 8-1 below.

Figure 8-1: Proportion of responses to 'In principle, do you think a permit parking scheme is a good idea?' by car ownership and residence inside/outside the QN.



Open question

- 8.3 Respondents were asked to 'provide any other feedback you would like to share on the proposal to create one area wide QN, by delivering further measures in Phase 2', as an open response answer. There were 1,039 responses to this question, and the average

word count was 74 words. The 2% cut-off minimum for this question was 21 responses (i.e., only codes with 21 responses or more are included in this section, but codes mentioned less frequently can be found in Appendix B). It should be noted that not all respondents answered this question directly; regardless, responses not referring directly to suggestions have been considered and coded within this section.

- 8.4 Please note, the sum of the numbers given in this section is not equivalent to the total responses to this question. This is because most answers reference more than one of the codes.

Support

- 8.5 There were 76 respondents who provided general support in responses to this question (84% of these comments came from respondents inside the QN). Additionally, 56 respondents **supported the Brownlow Road restrictions**, stating that they were necessary (75% of these comments came from respondents inside the QN).

Oppose

- 8.6 A number of respondents raised points relating to Phase 1:
- 112 respondents referred to a perceived **increase or displacement of traffic** during Phase 1; 76% of these comments came from respondents inside the QN
 - 63 respondents were **against Phase 1** in general; 73% of these comments came from respondents inside the QN
 - 43 respondents referred to **increased/not improved air pollution**; 84% of these comments came from respondents inside the QN
 - 43 respondents referred to **increased journey times** under Phase 1; 84% of these comments came from respondents inside the QN
 - 33 respondents felt that **access had been reduced**; 85% of these comments came from respondents inside the QN
 - 27 respondents felt that **safety had worsened** (in relation to traffic) during Phase 1; 85% of these comments came from respondents inside the QN
 - 17 respondents referred to **negative impacts on mental health** for residents during Phase 1; 76% of these comments came from respondents inside the QN
- 8.7 Some respondents raised points relating to Phase 2:

- 378 respondents were **against Phase 2/the Brownlow Road bus gate**; 66% of these comments came from respondents inside the QN
 - 257 respondents were concerned that **the volume of traffic would increase, or traffic be displaced** during Phase 2; 67% of these comments came from respondents inside the QN
 - 106 respondents were concerned that Phase 2 would result in a **reduction of access**; 83% of these comments came from respondents inside the QN
 - 60 respondents referred to the Phase 2 plans being **unfair on residents**; 75% of these comments came from respondents inside the QN
 - 43 respondents were concerned that **journey times would increase** under Phase 2; 84% of these comments came from respondents inside the QN
 - 43 respondents were concerned that Phase 2 would result in an **increase in air pollution**; 84% of these comments came from respondents inside the QN
 - 41 respondents were concerned that Phase 2 would result in **impacts on local businesses/work**; 46% of these comments came from respondents inside the QN
 - 40 respondents were concerned that Phase 2 would result in **worsening of safety (in relation to traffic)**; 83% of these comments came from respondents inside the QN
 - 37 respondents were concerned that Phase 2 would result in **worsening feelings of being 'trapped' and isolation**; 86% of these comments came from respondents inside the QN
 - 34 respondents referred to being **unsure about how they would access their homes** under Phase 2; 79% of these comments came from respondents inside the QN
 - 21 respondents referred to being **unsure how emergency vehicles/deliveries will be able to access the area** under Phase 2; 76% of these comments came from respondents inside the QN
 - 19 respondents were concerned that Phase 2 would result in **negative impacts on mental health** for residents; 74% of these comments came from respondents inside the QN
- 8.8 There were some respondents that did not specifically refer to either Phase 1 or Phase 2:

- 35 respondents referred to **public transport/active travel not providing a suitable alternative (general)**; 51% of these comments came from respondents inside the QN
- 34 respondents expressed **an unwillingness to use the A406**; 91% of these comments came from respondents inside the QN
- 34 respondents referred to a **lack of consultation/communication/transparency with residents/the QN being undemocratic**; 47% of these comments came from respondents inside the QN
- 29 respondents referred to **community division**; 55% of these comments came from respondents inside the QN

Suggest

8.9 Some respondents referred to suggestions for the QN. Some of these were similar as for the 'suggestions' open question:

- 40 respondents suggested **allowing access for residents** (e.g., through ANPR); 93% of these comments came from respondents inside the QN
- 31 respondents suggested **other road layout changes**; 58% of these comments came from respondents inside the QN
- 31 respondents suggested **better coordination with neighbouring boroughs**; 68% of these comments came from respondents inside the QN
- 25 respondents suggested a request for **more information on how residents will be able to move around**; 64% of these comments came from respondents inside the QN
- 23 respondents suggested **removing the no right-turn between Bounds Green Rd (A109)/A406**; 91% of these comments came from respondents inside the QN
- 23 respondents suggested **conducting a full consultation** with residents; 83% of these comments came from respondents inside the QN

8.10 Some respondents made suggestions related to the progression of the QN:

- 210 respondents suggested **stopping or removing the QN**; 54% of these comments came from respondents inside the QN
- 55 respondents suggested **not closing Brownlow Road/not introducing bus gate**; 85% of these comments came from respondents inside the QN
- 51 respondents suggested to **continue with the QN**; 75% of these comments came from respondents inside the QN

9. Communications

9.1 The survey asked respondents a closed question about their perceptions of the communications regarding the QN. This had four aspects:

- The initial information leaflet delivered to properties explaining the QN;
- Letters delivered direct to properties in the area, including notification of works and details about the consultation;
- Information held on the Let's Talk Enfield project page, including FAQs; and
- Information displayed on lamp columns.

9.2 Respondents were asked to indicate how useful they had found these materials on a scale from 'not at all useful' to 'highly useful'. The proportions given to each of these ratings for each aspect of the communications for this QN are shown in Table 9-1 and Figure 9-1.

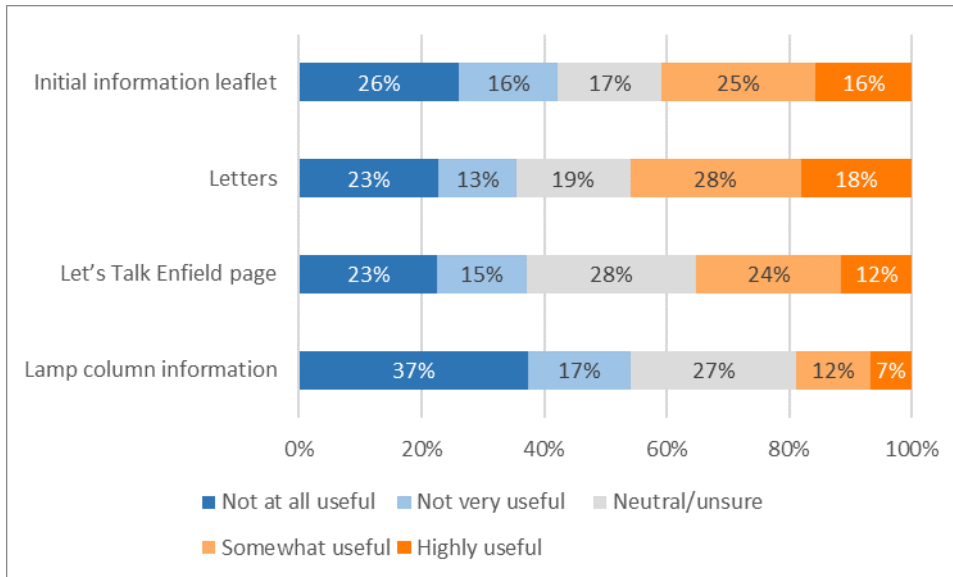
Table 9-1: Summary of responses to closed communication question

How useful have our communications tools and materials been?	Not at all useful	Not very useful	Neutral/ unsure	Somewhat useful	Highly useful	Total
Initial information leaflet	338	209	221	324	205	1297
	26%	16%	17%	25%	16%	
Letters	292	162	239	357	232	1282
	23%	13%	19%	28%	18%	
Let's Talk Enfield page	289	186	355	302	149	1281
	23%	15%	28%	24%	12%	
Lamp column information	480	215	347	157	86	1285
	37%	17%	27%	12%	7%	

9.3 This shows that the most useful method of communication, as rated by respondents to this question, was the letters delivered to properties, with 46% (589 respondents) rating it as either 'highly useful' or 'somewhat useful'. In contrast, the least useful

method of communication was the lamp column information with 54% of respondents (695) rating it as either 'not at all useful' or 'not very useful'.

Figure 9-1: Responses to communications questions



Open question

- 9.4 Respondents were also asked 'What do you think we could do that is more useful in the future in communicating similar schemes?', as an open response answer. There were 870 responses to this question, and the average word count was 56 words. The 2% cut-off minimum for this question was 18 responses (i.e., only codes with 18 responses or more are included in this section, but codes mentioned less frequently can be found in Appendix B). It should be noted that not all respondents answered this question directly; regardless, responses not referring directly to suggestions have been considered and coded within this section.
- 9.5 Please note, the sum of the numbers given in this section is not equivalent to the total responses to this question. This is because most answers reference more than one of the codes.

Support

- 9.6 There were 42 respondents who offered **general support** for the QN; 88% of these comments came from respondents inside the QN.

Oppose

- 9.7 There were a number of respondents that referred to the consultation process:
- 96 respondents referred to a perceived **lack of/poor communication/consultation**; 81% of these comments came from respondents inside the QN
 - 31 respondents referred to a perception that the Council had **only contacted those within the QN**; 45% of these comments came from respondents inside the QN
 - 26 respondents referred to a perception that the QN implementation had been an **undemocratic process**; 92% of these comments came from respondents inside the QN
 - 26 respondents referred to **complaints against senior councillors**; 81% of these comments came from respondents inside the QN
 - 25 respondents referred to a perception that the Council had **only contacted a small group of people** (e.g., residents' groups); 76% of these comments came from respondents inside the QN
 - 24 respondents referred to being **ignored or not listened to**; 88% of these comments came from respondents inside the QN
- 9.8 There were a number of respondents that referred to the impacts of the QN:
- 41 respondents referred to the perception that the QN had **created a social or community divide**; 90% of these comments came from respondents inside the QN
 - 24 respondents referred to a perception that the QN had resulted in **increased air pollution**; 67% of these comments came from respondents inside the QN

Suggest

- 9.9 Some respondents made suggestions about the communications linked to the QN:
- 230 respondents suggested **conducting the consultation before the implementation of the QN**; 87% of these comments came from respondents inside the QN
 - 180 respondents suggested using **alternative forms of engagement**; 66% of these comments came from respondents inside the QN

- 104 respondents suggested **widening or improving engagement** with local residents; 63% of these comments came from respondents inside the QN
- 92 respondents suggested **better/more consultation in general**; 70% of these comments came from respondents inside the QN
- 76 respondents suggested **more information/better evidence**; 78% of these comments came from respondents inside the QN
- 73 respondents suggested **better 'listening' to residents' concerns**; 71% of these comments came from respondents inside the QN
- 50 respondents suggested **engaging the community beyond the QN**; 24% of these comments came from respondents inside the QN
- 49 respondents suggested **giving more notice before implementing QNs**; 90% of these comments came from respondents inside the QN
- 30 respondents suggested **stopping the QN**; 70% of these comments came from respondents inside the QN
- 29 respondents suggested **better community engagement from senior councillors** in the future; 83% of these comments came from respondents inside the QN
- 25 respondents suggested **better transparency** in future; 68% of these comments came from respondents inside the QN
- 25 respondents suggested **holding physical consultations** if possible; 88% of these comments came from respondents inside the QN

10. Emails

- 10.1 The Council received 924 emails from 604 unique email addresses. As was the case for the survey responses, only the first email from each email address was coded.
- 10.2 There were five responses on behalf of stakeholder groups:
- One response on behalf of ETRA
 - Two responses on behalf of Friends of the Green, Bounds Green
 - Two responses on behalf of Haringey Bounds Traffic Action Group
- 10.3 Enfield Council requested a list of themes mentioned by those providing their feedback on the QN by email, without frequencies of each theme's occurrence. This was because emails could cover such a broad range of issues, due to a lack of scope that would ordinarily be provided by a question.
- 10.4 The themes which occurred in the emails are reported on below in no particular order, although they have been grouped with similar themes where possible.

Support

- 10.5 A number of emails contained one or more of the following themes in support of the QN in terms of traffic:
- A perception that the QN had **improved air quality**
 - A perception that the QN had **improved traffic in the area**
 - A perception that the QN had **reduced noise pollution**
 - A perception that the QN had **reduced non-residential traffic cutting through the area**
 - A perception that the QN had **improved access for emergency vehicles**
 - General support of **Phase 2/the Brownlow Road bus gate**
 - A perception that **non-residential traffic cutting through the area needed to be addressed**
 - A perception that the **traffic in the area surrounding the QN has not been adversely affected**
 - A belief that **the trial should continue for its full course** before any decisions are made

10.6 Some emails contained one or more of the following themes in support of the QN on an individual level:

- A perception that **streets felt safer** due to the QN
- A perception that the QN had encouraged residents to be **more active**
- A perception that the QN had **encouraged a transportation mode-shift** (e.g., from using a car to using a bike for certain journeys)
- A perception that the QN had **improved individuals' mental health**
- A perception that the QN had **improved individuals' physical health**
- A perception that the QN had **improved individuals' quality of life**
- A perception that the QN had **become cleaner**
- A perception that the QN had brought **benefits to pregnant women/parents** (e.g., feeling safer walking with small children)
- A perception that the QN had brought **benefits to disabled people** (e.g., feeling safer walking with mobility issues)
- A perception that the QN had caused **minimal inconvenience**
- A perception that the QN has **increased the sense of community** in the area

Oppose

10.7 A number of emails contained one or more of the following themes referring to the perceived negative impacts of the QN in terms of traffic:

- A perception that the QN had **increased/not improved air pollution**
- A perception that the QN had **increased journey times**
- A perception that the QN had **reduced emergency vehicle access**
- A perception that the QN had **increased traffic**
- A perception that the QN had **displaced traffic**
- A perception that the QN had **reduced access for tradesmen/deliveries/taxis**
- A perception that the QN had **increased noise pollution**
- A perception that the QN had exacerbated **issues with traffic lights**
- A perception that the QN had **increased/not reduced non-residential traffic cutting through the area**
- A perception that **traffic had not been an issue** before the implementation of the QN

- A perception that **Warwick Road was the only road with traffic issues previously**
- A perception that **cycle lanes in the area are under-utilised**
- A perception that **collisions with parked cars has increased as a result of the QN**
- A prediction that **traffic would become worse after lockdown**
- A perception that the number of journeys being made by car have increased due to the **inability to car share** as a result of the QN
- A perception that **emergency services were not fully consulted and do not always have access through physical barriers**
- A perception that **wildlife is being harmed** by a perceived increase in traffic as a result of the QN

10.8 Several emails contained one or more of the following themes referring to the perceived negative impacts of the QN on an individual level:

- A perception that the QN had **reduced safety** in general due to traffic, with some emails specifically mentioning **children's safety** in relation to traffic
- A perception that the QN had made it **harder to access healthcare** or for **carers to gain access to patients**
- Some individuals felt **'trapped'/isolated/that their mobility had been reduced** due to the QN
- A perception that there had been a **class divide** in the experience of the QN
- A perception that the QN had **divided the community**
- A perception that the QN had **reduced mobility for disabled people**
- A perception that the QN had **worsened children's health**
- A perception that the QN had **damaged individuals' mental health**
- A perception that the QN had **reduced mobility for elderly people**
- Public transport/active travel not being a suitable alternative **in general**
- Public transport/active travel not being a suitable alternative **for older or disabled people**
- Public transport/active travel not being a suitable alternative due to **COVID-19**
- Public transport/active travel not being a suitable alternative due to **slow journey times**

- Public transport/active travel not being a suitable alternative due to **needing a car for work**
- A perception that the QN had **negatively impacted on people's work**
- A perception that the QN had created a **lack of safety for women/elderly/otherwise vulnerable people** in relation to crime
- A perception that the QN had **damaged individuals' physical health**
- A perception that the QN had **made it impossible or much harder to visit friends/family or to have visitors**
- A perception that there had been an **increase crime** since the QN implementation
- A perception that the QN had impacted **house sales/values** or **made people move** from the area
- A perception that the QN had adversely affected the **BAME community**
- A perception that the QN had **increased fuel bills for drivers**
- A perception that the QN had made it **harder to access childcare/school** and worsened associated **time pressures** for working parents
- A perception that the **negative impacts of the QN outweighed the positive impacts**
- A perception that the **area has become deserted** as a result of the QN
- **Opposition from those paying road tax over not being able to use all roads** in the QN
- A perception that **students are being affected by delays to public transport** perceived to be a result of the QN

10.9 Some emails contained one or more of the following themes about specific aspects of the QN:

- A perception that the **signage used was not clear enough**
- Some individuals were **unwilling or reluctant to use the A406**
- A perception that there was a **lack of active travel infrastructure** inside and/or outside of the QN
- A perception that there were **not enough local amenities** to support a QN
- A perception that the **camera-operated road filters are not effective**
- Concerns over **how the success of the QN will be measured**
- A perception that the QN was **poorly designed**

- A perception that **pedestrian infrastructure is of low quality**/in poor condition
 - A perception that **there hadn't been an issue with the walking and cycling provision in the area in the first place**
 - A perception that **increased exercise is not as important as diet in tackling obesity**
 - A perception that the **public transport system/infrastructure** to support public transport (e.g. bus network) was **insufficient**
- 10.10 Some emails contained one or more of the following themes referring to the QN's implementation:
- A perception that the **Council had not met legal requirements/individuals were considering legal action against the Council**
 - A perception that the **Council had not fully considered the impact of the QN on equalities**
 - A perception that there had been a **lack of traffic/pollution monitoring**
 - A perception that there had been a **lack of transparency in the decision-making process behind the QN**
 - General opposition to **the implementation of Phase 2/a bus gate on Brownlow Road**
 - A perception that the QN had created/worsened **parking issues**
 - A perception that the QN was a **misuse of funds**
 - A perception that the QN was a **revenue-generating scheme**
 - A perception that there has been a **lack of an assessment of the impact of the QN on businesses**
 - A perception that the **timing of the introduction of the QN** given the COVID-19 pandemic **was poor**
- 10.11 Some emails contained one or more of the following themes about the consultation, engagement or communications on the QN:
- A perception that there had been a **lack of consultation or poor community engagement**
 - A perception that **only those in the QN had been contacted**
 - Some individuals **felt ignored**
 - A perception that the Council had **only communicated with a particular residents' group**

- **Complaints against senior councillors**
- A perception that there had been a **lack of notice**
- A perception that **schools have not been consulted on the QN**
- A perception that there had been a **lack of multi-lingual communication regarding the QN**
- Some individuals **objected to the use of the term “rat-runner”**
- A perception that **emergency services were not fully consulted and do not always have access through physical barriers**
- A perception that the scheme is **only supported by a vocal minority**
- A perception that there was **no information** available to the public to advise **on where the scheme closures were located**

Suggest

10.12 Some emails contained one or more of the following suggestions relating to the continuity of the QN:

- **Stopping/not continuing with the QN**
- **Continuing with the QN**
- **Extending the QN area**

10.13 Some emails contained one or more of the following suggestions relating to specific elements of the QN:

- Introducing **residents-only access** (e.g., ANPR)
- Introducing **timed access** restrictions (e.g., ANPR)
- **Leaving roads open or re-opening closed roads** in general
- **Re-opening Maidstone Road and/or Warwick Road closures** (re-instating access to the south)
- **Re-opening York Road**
- **Removing right/left turning restrictions**
- **Altering the Warwick Road/A406 junction**
- **Removing the A109 Bounds Green/A406 no right-turn**
- Introducing **traffic calming measures**, such as speed bumps, speed cameras and reducing speed limits
- Introducing a **one-way system**

- Introducing a **school street closure on Highworth Road**
- **Improving signage**
- **Improving public transport provision**
- **Improving cycle/pedestrian infrastructure provision**
- Introduce **electric vehicle charging points and/or encourage more sustainable vehicles**
- **Catering to all of the community's** traffic issues and needs
- **Reducing resting times for vehicles**
- **Banning ICE vehicles**
- **Improving street lighting**
- **Cleaning streets**
- Trialling the scheme **once COVID-19 restrictions have been lifted**
- Residents concerned about traffic levels **should move away from the area**

10.14 Some emails contained one or more of the following suggestions relating to consultation, engagement and communication:

- **Conducting a full consultation** with residents
- **Better community engagement** from the Council
- **Using forms of engagement other than the Enfield Council website**
- **Better 'listening' to residents' concerns**
- **Consulting before implementing** future schemes
- **Conducting a vote/poll**
- **Better transparency** from the Council
- **Collecting/monitoring data**
- **Improving active travel infrastructure**
- **Better co-ordination with neighbouring boroughs**
- **Informing satellite navigation providers of changes**
- Making the consultation process **unbiased**

11. Conclusion

- 11.1 To conclude, this report has laid out the quantitative and thematic analysis of responses received by the Council in relation to the Bowes Primary and Surrounding Streets Quieter Neighbourhood. The analysis that has been undertaken has aimed to remain objective and has reported numbers without weighting and with minimal data manipulation.
- 11.2 Whilst many of the findings of this survey are reliable given the large sample size of the combined online and paper surveys (with 1,325 respondents in total), certain groups are still represented by a relatively small sample. Therefore, where this is noted, apparent trends in the data should be treated with caution.
- 11.3 This report will be submitted to the Council in May 2021 for their consideration in relation to the following Phases of the QN, and decisions will follow. The report may also be used to inform Haringey's decisions.

Appendix A

Consultation Survey Form

Bowes Primary Quieter Neighbourhood Consultation Analysis - Final Report

Bowes Primary Area Quieter Neighbourhood

Let's Talk Enfield

Consultation - Bowes Primary & Surrounding Streets Quieter Neighbourhood

Residents in the Bowes Primary & Surrounding Streets Quieter Neighbourhood Area have raised concerns with Enfield Council over traffic issues in the area for many years, alongside Ward Councillors and Bambos Charalambous MP who presented a petition to Parliament in 2018. This trial is a response to those concerns.

The trial is being funded from the first tranche of the Department for Transport Emergency Active Travel Fund, an initiative that has been launched in response to the COVID-19 pandemic.

There will be a range of assessments made when judging the overall success of this trial, which includes:

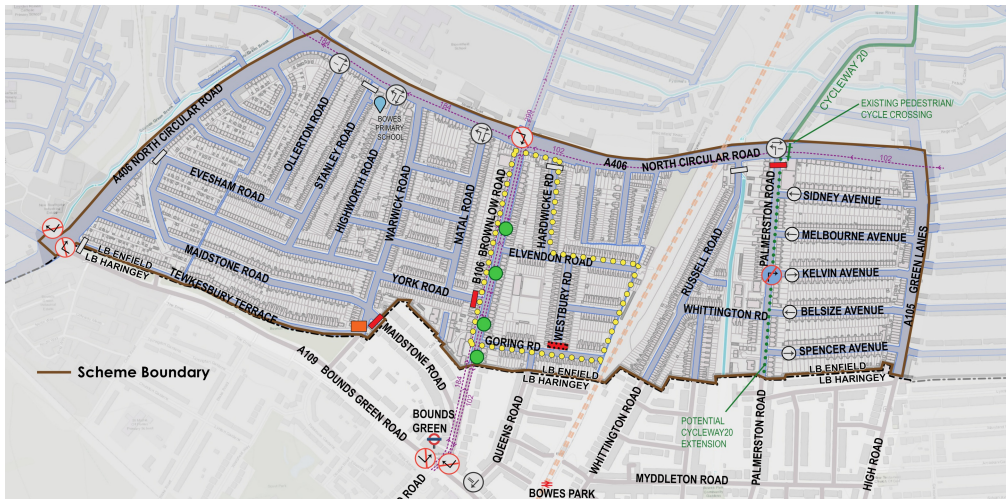
- Residents' views on how the benefits of the scheme compare against the disadvantages
- Data on the volume of motor vehicle movements in the area
- Data on the speed of motor vehicles in the area
- Impacts on the primary roads surrounding the area
- Air quality considerations
- Bus journey time considerations through discussion with Transport for London
- Outcomes of ongoing dialogue with the Emergency Services

The project is implemented as a trial using experimental traffic orders (ETO) which includes the consultation with community during the trial period.

Now that the community have had the opportunity to experience the trial working in practice, we would like to invite you to share your feedback. We will be reviewing feedback through the consultation period and there is the ability to amend the scheme during the trial period.

The Privacy Notice can be found [here](#).

About you



In relation to the Bowes Primary and Surrounding Streets Quieter Neighbourhood, I am a:

(Choose any 2 options) (Required)

...

Bowes Primary Area Quieter Neighbourhood

Let's Talk Enfield

- Resident within the scheme area (shown on the map above)
- Resident outside the scheme area (shown on the map above)
- Haringey resident outside the scheme area (shown on the map above)
- Business owner within the scheme area (shown on the map above)
- Business owner outside the scheme area (shown on the map above)
- Enfield Ward Councillor within the scheme area
- Haringey Ward Councillor
- Visitor to the area

Answer this question only if you have chosen Visitor to the area for In relation to the Bowes Primary and Surrounding Streets Quieter Neighbourhood, I am a:

If you are a visitor to the area, please provide the primarily reason for visiting the area

Bowes Primary Area Quieter Neighbourhood

Let's Talk Enfield

My postcode is:

(Required)

The name of my street is:

(Required)

If you are representing a community group or organisation when sharing your views in this survey, please specify the group's name

Do you own a car?

(Choose any one option)

Yes

No

Bowes Primary Area Quieter Neighbourhood

Let's Talk Enfield

Answer this question only if you have chosen Yes for Do you own a car?

If yes, how many cars are registered at your address?

(Choose any one option)

- 1
- 2
- 3
- 4
- 5+

Equalities Impact Assessment

As part of our ongoing Equality Impact Assessment for the Bowes Primary and Surrounding Streets Quieter Neighbourhood, we would like to ask you some questions to help us understand how the scheme impacts people based on the protected characteristics as detailed in the Equality Act 2010. According to the Equality Act 2010, the protected characteristics are:

- Disability
- Marriage and civil partnership
- Sexual orientation
- Sex (gender)
- Gender reassignment
- Pregnancy and maternity
- Ethnicity
- Religion and belief
- Age

Are you willing to share with us some information on your demographic profile in order for us to understand potential impacts on particular individuals and groups?

(Choose any one option) (Required)

- Yes
- No

Bowes Primary Area Quieter Neighbourhood

Let's Talk Enfield

Answer this question only if you have chosen Yes for Are you willing to share with us some information on your demographic profile in order for us to understand potential impacts on particular individuals and groups?

Do you consider yourself to have a disability?

(Choose any one option)

- Yes
- No
- Prefer not to say

Answer this question only if you have chosen Yes for Do you consider yourself to have a disability?

If yes, please specify the nature of your disability

(Choose all that apply)

Bowes Primary Area Quieter Neighbourhood

Let's Talk Enfield

- Physical/mobility impairment, such as a difficulty using your arms or mobility issues which require you to use a wheelchair or crutches ii.
- Visual impairment, such as being blind or having a serious visual impairment
- Hearing impairment, such as being deaf or having a serious hearing impairment
- Mental health condition, such as depression or schizophrenia
- Learning disability/difficulty, such as Down's syndrome or dyslexia or a cognitive impairment such as autistic spectrum disorder
- Long-standing illness or health condition, such as cancer, HIV, diabetes, chronic heart disease or epilepsy
- Other (please specify)

Answer this question only if you have chosen Yes for Are you willing to share with us some information on your demographic profile in order for us to understand potential impacts on particular individuals and groups?

Are you married or in a civil partnership?

(Choose any one option)

- Yes
- No
- Prefer not to say

Answer this question only if you have chosen Yes for Are you willing to share with us some information on your demographic profile in order for us to understand potential impacts on particular individuals and groups?

I am:

(Choose any one option)

- Heterosexual
- Gay man
- Gay woman/lesbian
- Bisexual
- Prefer not to say
- Other (please specify)

Bowes Primary Area Quieter Neighbourhood

Let's Talk Enfield

Answer this question only if you have chosen Yes for Are you willing to share with us some information on your demographic profile in order for us to understand potential impacts on particular individuals and groups?

I am:

(Choose any one option)

- Female
- Male
- Transgender
- Non binary
- Prefer not to say
- Other (please specify)

Answer this question only if you have chosen Yes for Are you willing to share with us some information on your demographic profile in order for us to understand potential impacts on particular individuals and groups?

Do you identify as transgender?

(Choose any one option)

- Yes
- No
- Prefer not to say

Answer this question only if you have chosen Yes for Are you willing to share with us some information on your demographic profile in order for us to understand potential impacts on particular individuals and groups?

Are you or have you recently been pregnant, or have young children?

(Choose any one option)

- Yes
- No
- Prefer not to say

Answer this question only if you have chosen Yes for Are you willing to share with us some information on your demographic profile in order for us to understand potential impacts on particular individuals and groups?

What is your ethnicity?

(Choose any one option)

- White - English/Welsh/Scottish/Northern Irish/British
- White - White - Irish
- White - Greek
- White - Greek Cypriot
- White - Turkish
- White - Turkish Cypriot
- White - Italian
- White - Polish
- White - Russian
- White - Kurdish
- White - Gypsy/Irish Traveller
- White - Romany
- Other Eastern European
- Any other White background
- Mixed - White and Black Caribbean

Bowes Primary Area Quieter Neighbourhood

Let's Talk Enfield

- Mixed - White and Black Caribbean
- Mixed - White and Black African
- Mixed - White and Asian
- Mixed - Mixed European
- Mixed - Multi ethnic islander
- Any other mixed background
- Asian or Asian British - Indian
- Asian or Asian British - Pakistani
- Asian or Asian British - Bangladeshi
- Asian or Asian British - Sri Lankan
- Asian or Asian British - Chinese
- Any other Asian background
- Black/African/Caribbean/Black British - Caribbean
- Black/African/Caribbean/Black British - African - Ghanaian
- Black/African/Caribbean/Black British - African - Somali
- Black/African/Caribbean/Black British - African - Nigerian
- Black/African/Caribbean/Black British - Other African
- Any other Black background
- Arab
- I do not wish to state my ethnic group

Answer this question only if you have chosen Yes for Are you willing to share with us some information on your demographic profile in order for us to understand potential impacts on particular individuals and groups?

What is your religion?

(Choose any one option)

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

Answer this question only if you have chosen Yes for Are you willing to share with us some information on your demographic profile in order for us to understand potential impacts on particular individuals and groups?

What is your year of birth?

Answer this question only if you have chosen Yes for Are you willing to share with us some information on your demographic profile in order for us to understand potential impacts on particular individuals and groups?

In addition to understanding impacts on the protected characteristic groups, we would also like to understand the potential impacts on people of different income brackets, and carers who may visit/work with someone who lives in the Bowes Primary and Surrounding Streets Quieter Neighbourhood.

What is the total annual income of your household (before tax and deductions, but including benefits/allowances)?

(Choose any one option)

Bowes Primary Area Quieter Neighbourhood

Let's Talk Enfield

- Below £10,000
- Between £10,001 and £20,000
- Between £20,001 and £30,000
- Between £30,001 and £40,000
- Between £40,001 and £50,000
- Between £50,001 and £60,000
- Between £60,001 and £70,000
- Between £70,001 and £80,000
- Between £80,001 and £90,000
- Between £90,001 and £100,000
- Above £100,001
- Prefer not to say

Answer this question only if you have chosen Yes for Are you willing to share with us some information on your demographic profile in order for us to understand potential impacts on particular individuals and groups?

Do you receive care assistance in your home?

(Choose any one option)

- Yes
- No
- Prefer not to say

Are you a carer (of an elderly or disabled person)?

(Choose any one option)

- Yes
- No
- Prefer not to say

Answer this question only if you have chosen Yes for Are you willing to share with us some information on your demographic profile in order for us to understand potential impacts on particular individuals and groups?

Considering the protected characteristic groups outlined above, from an equalities point of view how do you think the trial has impacted you?

Questions	Very negatively	Somewhat negatively	Neutral/unsure	Somewhat positively	Very positively
Please rate:					

Answer this question only if you have chosen Yes for Are you willing to share with us some information on your demographic profile in order for us to understand potential impacts on particular individuals and groups?

Please provide any more information that can help inform our Equalities Impact Assessment.

Bowes Primary Area Quieter Neighbourhood

Let's Talk Enfield

What is important to you?

How important are the following to you?

Questions	Not at all important	Not very important	Neutral/unsure	Somewhat important	Very important
Access in and out of the area to the A406					
Access in and out of the area via Brownlow Road					
Access in and out of the area to Bounds Green Road					
Ability to drive right through the area					
Time it takes to drive north of the scheme area (e.g. towards Southgate, Palmers Green etc)					
Time it takes to drive south of the of the scheme area (e.g. towards Wood Green and Alexandra Palace)					
Reduced number of motor vehicles cutting through the area					
Slower speeds of vehicles travelling in the area					
Feeling safe to walk and cycle in the area					
Improved air quality throughout the area					

How effective is the current phase 1 of the trial?

How effective do you think the scheme has been on the following?

Questions	Not at all effective	Not very effective	Neutral/unsure	Somewhat effective	Very effective
Reducing motor vehicle speeds					
Reducing motor vehicle volume					
Reducing traffic noise					
Maintaining resident/visitor access to the area					
Enabling more walking & cycling					
Maintaining access to public transport					
Enabling residents to continue to make private car journeys					
Creating a general feeling of safety					
Improved air quality					

What would you change?

Low Traffic Neighbourhoods are part of the council response to improving the health of our local communities and taking action to address the effects of climate change. You may have alternative suggestions or changes you would like to see to the trial that can improve the scheme whilst still delivering on these aims.

Please describe your suggestions and be as specific as possible.

Bowes Primary Area Quieter Neighbourhood

Let's Talk Enfield

Note: Answer this question if it applies

If you wish, you are able to upload a diagram or drawing that may help to illustrate your ideas suggested in the question above.

Help Shape Phase 2

- Phase 2 of the Bowes Low Traffic Neighbourhood (LTN) proposes a 'bus gate' on Brownlow Road. A 'bus gate' would be a point along Brownlow Road that only buses, waste and emergency services are able to pass through. This would be enforced by a camera. This proposal would reduce the level of general traffic on Brownlow Road, but may also require additional closures on other roads to prevent alternative cut throughs being used. Further discussions with both Haringey and Transport for London are required to consider this proposal in more detail. We would like to gather your early views to help inform these discussions. In addition to your comments here, subject to any Covid-19 restrictions, we also plan to host a pop-up event where we can listen further to your views on Phase 1 and Phase 2.

Please provide any other feedback you would like to share on the proposal to create one area wide LTN, by delivering further measures in Phase 2.

Controlled Parking Zone

A permit parking scheme (or Controlled Parking Zone) can be an effective way to manage on-street parking, enabling space to be used by residents rather than commuters or others from outside the area. The controlled hours can vary, but a one hour restriction during the day can be an effective way of preventing commuting parking around stations. The costs for a permit, currently related to engine size and the duration of the restrictions, are set out on the [Council's website](#).

Further consultation would need to take place if a permit parking scheme were to be taken forward but, in principle, do you think this is a good idea?

(Choose any one option)

Yes

No

How We Communicate

Please help us understand how useful our communications tools and materials have been in communicating the scheme to residents and businesses.

Questions	Not at all useful	Not very useful	Neutral/unsure	Somewhat useful	Highly useful
The initial information leaflet delivered to properties explaining the scheme					
Letters delivered direct to properties in the area, including notification of works and details about the consultation					
Information held on the Let's Talk Enfield project page, including FAQs					
Information displayed on lamp columns					

What do you think we could do that is more useful in the future in communicating similar schemes?

Appendix B

Longlist of themes identified in the online consultation survey in fewer than 2% of responses

Bowes Primary Quieter Neighbourhood Consultation Analysis - Final Report

Please provide any more information that can help inform our Equalities Impact Assessment.

Support

- A perception that **respondents' mental health had improved** as a result of the QN
- A perception that **respondents' physical health had improved** as a result of the QN
- A perception that **respondents had become more active** as a result of the QN
- Some **respondents provided caveats to oppositions** to the QN
- A perception that **respondents' quality of life had improved** as a result of the QN
- A perception that **disabled people and those with health problems had benefitted** from the QN
- A perception that **pregnant women and mothers had benefitted** from the QN
- Some respondents **expressed a desire for the QN to continue**
- A perception that **respondents' mobility had improved** as a result of the QN
- Some respondents expressed **support for the Brownlow Road bus gate**
- A perception that **lower income groups had benefitted** from the QN
- A perception that **carers had improved access** to the area as a result of the QN
- A perception that the **disruption was due to COVID-19, not the QN**
- A concern that the **perceived benefits of the QN may be disregarded due to a perceived strong negative reaction to the QN by some**
- A belief that **concerns from those unhappy to use the A406 due to safety concerns should be balanced against** a presumption that **all driving licence holders should be able to drive on all public highways**

Oppose

- A perception that public transport and/or active travel are not suitable alternatives to car journeys due to **longer journey times**
- A perception that **parking issues had been created by QN**
- A perception that there had been a **lack of consultation regarding the QN**

- Some respondents expressed an **opposition to the Brownlow Road bus gate**
- A perception that **noise pollution had increased** as a result of the QN
- A perception that there is **not enough infrastructure outside of QN for safe active travel routes**
- A perception that **cycling is not a suitable alternative to car journeys for children as they cannot cycle longer distances and/or over tougher terrain**
- A perception that **crime has increased** as a result of the QN
- A perception that the **QN had impacted house sales/values or made people move from the area**
- A perception that there is a **lack of cycle infrastructure inside the QN**
- A perception that there has been a **class divide** in the experience of and/or the desire for the QN
- A perception that the **Council has not met legal requirements** and/or **legal action against the Council is being considered** in relation to the QN
- A perception that there has been a **lack of data provision and/or collection** in relation to the QN
- A perception that it is **harder to access Bounds Green Industrial Estate** as a result of the QN
- Some respondents **expressed concerns and/or opposition** to the Haringey QN
- A perception that there were **issues with the online survey**
- A perception that **those who want to live in an area with low traffic levels should not live in a busy city**
- A perception that **those who cannot afford to live close enough to their place of work** to be able to use active travel or public transport conveniently to commute **are being punished**
- A perception that **children's education is being affected** by increased journey times

Suggest

11.4 Some respondents suggested:

- **Re-opening Palmerston Road**
- **Expanding** the current QN

- **Changing the position of the filter on Warwick Road** from the southern to the northern end
- **Residents' access** through the filters
- A **20mph zone**
- Making **Highworth Road a one-way street**
- Using **cameras to detect cyclists on pavements**
- **Providing residents with data on the pollution levels** of their area
- **Improving pavements**
- **Improving safety for women** in the QN
- **Listening** to residents' concerns

Please describe your suggestions and be as specific as possible.

Support

- A perception that **air quality had improved** as a result of the QN
- A perception that the QN had caused **minimal inconvenience**
- A perception that **non-residential traffic cutting through the area had improved** as a result of the QN
- A perception that **respondents' quality of life had improved** as a result of the QN
- A perception that the QN had **encouraged a mode shift** in respondents' transportation
- Some respondents expressed their **support for Phase 2** and/or a **Brownlow Road bus gate**
- A perception that **misunderstandings are informing those against the QN**
- Some respondents expressed their **support for planters/filters**
- A perception that **more parking spaces have been available** since the start of the QN
- A concern that the **perceived benefits of the QN may be disregarded due to a perceived strong negative reaction to the QN by some**
- A perception that **work productivity has improved** as a result of the QN

Oppose

- A perception that public transport/active travel is not a suitable alternative for **families**
- A perception that there are **not enough amenities** to support a QN
- A perception that public transport/active travel is not a suitable alternative for **elderly people**
- A perception the QN poses a **potential risk to life**
- A perception that **women feel unsafe walking in the QN**
- A perception that public transport/active travel is not a suitable alternative due to **COVID-19**
- A perception that **mobility for disabled people has been reduced** by the QN
- A perception that the QN is a **misuse of funds/a waste of money**
- A perception that public transport/active travel is not a suitable alternative due to **work commitments**
- A perception that the QN has been a **net negative**
- A perception that there have been **parking issues** as a result of the QN
- A perception that **traffic would become worse after lockdown** (from responses received during the COVID-19 lockdowns that occurred while the survey was live)
- A perception that public transport/active travel is not a suitable alternative for **disabled people**
- A perception that a perceived increase in congestion as a result of the QN is **negatively affecting public transport**
- A perception that the QN is a **revenue-generating scheme**
- A perception that a **perceived increase in congestion** as a result of the QN is negatively affecting active travel
- Some respondents reported **road layout issues** associated with the QN
- A perception that the QN had **impacted house sales/values or made people move from the area**
- A perception that there has been a **lack of data provision and/or collection** in relation to the QN
- A perception that there has been a **class divide** in the experience of and/or the desire for the QN

- A perception that **mobility has been reduced for the elderly** as a result of the QN
- Some respondents reported **feeling unsafe due to moped/scooter/motorbike-related crime**
- A perception that the **signage regarding the QN is not clear enough**
- Some respondents reported that they were **against the Palmerston Road-Kelvin Road no right-turn**
- A perception that the **impact on equalities has not been fully considered**
- A perception that the QN is **undemocratic**
- A perception that public transport is not a suitable alternative due to **an insufficient public transport network in the area**
- A perception that there is **a lack of cycle facilities/infrastructure provision in the area**
- Some respondents made **general oppositions to no right-turns**
- A perception that there was a **lack of evidence being used to support decisions**
- A perception that there is **inadequate street lighting in the QN**
- A perception that the QN has **disrupted childcare**
- A perception that the **Brownlow Road bus gate should have been introduced in Phase 1**
- Some respondents **reported traffic light issues in the area** (e.g., lack of turning filters, poor timings, etc.)
- A perception that there had been a **lack of investment/improvement of A406 junctions** on the perimeter of the QN
- A perception that **the streets in the QN are not fit for the disabled**
- A perception that **those who want to live in an area with low traffic levels should not live in a busy city**
- A perception that the QN was **poorly designed**
- A perception that **levels of air pollution will be reduced by a transition to electric vehicles** and that, therefore, there is no need to reduce the number of vehicles on the roads
- A perception that the consultation was **biased**
- A perception that **vibrations from heavy goods vehicles** being redirected as a result of the QN are **causing structural damage to houses**

- A perception that **damage to parked cars has increased** since the start of the QN

Suggest

11.5 Some respondents suggested:

- **Installing speed cameras**
- **Introducing timed restrictions** (e.g., residents-only access during peak hours)
- **More data collection**
- **Planting more trees**
- **Extending the area of the QN**
- **Introducing the proposed bus gate** on Brownlow Road
- **Removing the no right-turn from Brownlow Road onto Bounds Green Road (A109)**
- **Better community engagement** from the Council
- **Removing the no right-turn into Brownlow Road from the A406**
- **Creating a park**
- **Removing the no right-turn into Kelvin Avenue**
- **Removing cycle lanes**
- **Improving the quality of roads**
- **Extending Green Lanes-A406 traffic light timings** for vehicles travelling on Green Lanes/introducing a right-turn filter
- **Introducing a smarter travel campaign**
- **Removing a no right-/left-turn**
- **Re-opening Evesham Road**
- **Introducing a school street on/closing Highworth Road**
- **Improving community cohesion**
- **Introducing a Powys Lane/A406 traffic light filter**
- **Introducing disabled-only access**
- **Not introducing any additional parking restrictions**
- **Conducting a poll/vote**
- **Encouraging car sharing schemes**
- **Extending traffic light timings** for Brownlow Road-Bounds Green Road

- **Informing satellite navigation providers of the road layout changes**
- **Introducing a rota of street closures**
- **Extending traffic light timings** for Brownlow-A406
- **Improving Durnsford Road-Bounds Green Road junction**
- Introducing a **no right-turn from A406 to Bounds Green Road**
- Introducing a **Powys Lane bus gate/closure**
- **Making the bollard on York Road more visible**
- **Reducing the pavement width**
- **Increasing taxation to discourage car usage**
- **Removing senior councillors from their position**
- **Building a tunnel** for the A406
- **Stopping the use of the term “rat-runners”**
- Working with Thames Water to effectively **fix a water main which is perceived to burst on a regular basis**, causing congestion on the A406
- **Using simpler language** in future communications
- **Not building any more apartments** along the A406
- **Limiting household vehicle ownership**
- **Collating deliveries** to the area so that fewer deliveries have to be made
- Trialling the QN **once COVID-19 restrictions have been lifted**
- **Facilitating the creation and growth of local businesses**, and building more schools, medical centres and hospitals, so that the distance to travel to amenities is reduced
- **Removing all road restrictions whilst any road works are conducted** in and around the immediate area
- Providing greater security by **increasing police presence or CCTV surveillance**
- **Improving street lighting**
- Introduce **more QNs across London**

Please provide any other feedback you would like to share on the proposal to create one area wide QN, by delivering further measures in Phase 2.

Support

- A prediction that there will be **less congestion if Phase 2 is implemented**
- A prediction that **air pollution will be reduced** if Phase 2 is implemented
- A perception that the **volume of traffic has decreased** as a result of the QN
- A prediction that **road safety will improve** if Phase 2 is implemented
- A prediction that **a mode shift will be encouraged** if Phase 2 is implemented
- A prediction that **traffic cutting through residential areas will reduce** if Phase 2 is implemented
- A prediction that Phase 2 will **increase connectivity**
- A perception that **road safety has improved** as a result of the QN
- A perception that **roads are quieter/ there is less noise pollution** as a result of the QN
- A perception that **pollution has improved** as a result of the QN
- A prediction that **community cohesion will improve** if Phase 2 is implemented
- A perception that **some respondents' physical and mental health will benefit** as a result of the QN
- A perception that **parking restrictions for non-residents are necessary**
- A perception that **cleanliness has improved** as a result of the QN
- Some respondents reported **an improvement in their quality of life**
- A perception that the **area is already well connected**, and cars are unnecessary
- A prediction that some respondents' **quality of life will improve** as a result of the QN

Oppose

- Some respondents reported **feeling "trapped"** as a result of the road closures
- A perception that public transport/active travel is not a suitable alternative for **elderly and disabled people**

- A perception that **emergency services/deliveries are unable to access the area**
- A perception that there is a **lack of amenities required for a self-contained area**
- A perception that public transport/active travel is not a suitable alternative due to **safety**
- A prediction that the **health of children will worsen** if Phase 2 is implemented
- A prediction that it will be **harder to access healthcare** if Phase 2 is implemented
- Some respondents reported **they would move out of the area if Phase 2 is implemented**
- Some respondents felt that the QN is a **revenue-generating scheme by the Council**
- A perception that it is **hard to access healthcare**
- A prediction that the **mobility of disabled people will reduce** if Phase 2 is implemented
- A prediction that **property value will decrease** if Phase 2 is implemented
- A perception that the QN has had a **negative effect on children's education**
- A prediction that the **mobility of elderly people will reduce** if Phase 2 is implemented
- A prediction that **noise pollution will increase** if Phase 2 is implemented
- Some respondents reported being **against parking restrictions**
- A perception that there is a **lack of monitoring/evidence for the QN**
- A perception that public transport/active travel is not a suitable alternative due to **COVID-19**
- A perception that safety has been **reduced in relation to crime** as a result of the QN
- A prediction that the **physical health of residents will reduce** if Phase 2 is implemented
- A perception that there is a **class divide** in the experience of/desire for the QN
- A perception that the **mobility of elderly people has reduced** as a result of the QN
- A perception that public transport/active travel is not a suitable alternative due to **poor infrastructure/service**
- A perception that public transport/active travel is not a suitable alternative for **travel to work**

- A perception that **traffic will become worse after lockdown**
- A perception that **noise pollution has increased or not improved** as a result of the QN
- A prediction that **safety, in relation to crime, will reduce** if Phase 2 is implemented
- A perception that the **health of children at Bowes Primary School has been negatively affected** by Phase 1 of the QN
- A perception that the **mobility of disabled people has reduced** as a result of the QN
- Some respondents reported that **local businesses/work have been negatively affected** by phase 1 of the QN
- Some respondents reported that there are **not enough roads to get on to the A406**
- A perception that **disruptions from accidents are magnified** by the QN
- A perception that the Council has **not met legal requirements and/or legal action against the Council is being considered** in relation to the QN
- A perception that **some respondents' physical health has worsened** as a result of the QN
- A perception that **the QN poses a threat to life**
- A perception that the **enforcement of measures is not strong enough**
- Some respondents reported **poor road signage**
- A perception that the **mobility of residents has reduced**
- A prediction that the **mobility of residents will reduce** if Phase 2 is implemented
- A prediction that the **ULEZ extension and a transition to electric vehicles will reduce emissions** in any case
- A perception that **the number of cars is greater than the number of pedestrians and cyclists** on most roads
- A belief that **conducting the QN trial during a period of multiple COVID-19 lockdowns does not give a representative reflection** of the effect that the QN will have on traffic flow in the future
- A perception that the **narrowing of streets for bike lanes has caused congestion**

Suggest

Some respondents suggested:

- **Re-opening the roads** within the QN
- **Improving the cycle provision**
- **Improving** the frequency/value/quality of **public transport**
- **Including other access restrictions** within the QN (e.g., weight-based restrictions)
- Improving the **pedestrian infrastructure**
- Improving the **communication with residents**
- **Introducing the gate at another location**
- **Introducing parking restrictions**
- **Introducing traffic-calming measures** within the QN
- **Introducing timed restrictions**
- **Providing some car access for Brownlow Road** even with the bus gate
- **Incentivising/facilitating electric vehicles**
- **Introducing speed bumps**
- **Improving the transparency** of decision-making
- Introducing Phase 2 **only if Phase 1 is removed/altered**
- Amending Phase 1, and **then consulting on the possibility of Phase 2**
- Introducing **speed cameras**
- Implementing a **one-way system**
- **Improving A406 road quality**
- **Re-opening access to Bounds Green Road** (by removing Maidstone Road and/or Warwick Road closures)
- Ensuring **access for emergency/delivery vehicles**
- Implementing **data collection/monitoring**
- Introducing a **lower speed limit**
- **Banning the turning** onto the **A406 from Brownlow Road**
- Introducing a **no right-turn from Warwick Road onto the A406**
- Introducing **filters at all/some junctions with the A406**
- **Re-opening York Road**
- Implementing a **road closure rota**

- That **access via the south** of the QN (Bounds Green Road) would be **preferable to the north** of the QN (A406)
- Implementing a **left turn only onto the A406 from Brownlow Road**
- **Providing better signage**
- **Planting trees**
- **Removing the no left-turn** from **Palmerston Road** onto the **A406**
- **Closing Queens Road to Bounds Green Road**
- Implementing a **school street on Highworth Road**
- **Increasing taxation** for households with **multiple cars**
- **Conducting a vote/poll**
- **Building a tunnel** for the A406
- Creating a **bypass to the west of the area**
- Installing a **roundabout at the A406-Bounds Green Road junction**
- **Working with the Tottenham Area Community** to tackle their similar issues
- **Removing the current councillors** from their positions
- **Slowing down the implementation** of the scheme
- **Removing highly polluting vehicles** from the roads
- Ensuring **motorbikes/scooters are not able to drive through the barriers**
- **Limiting the volume of music** played in cars
- **Improving street lighting**
- Focussing on **reducing crime** in the area

What do you think we could do that is more useful in the future in communicating similar schemes?

Support

- Some respondents reported that they **understood the difficulties** with regards to the speed of communication and implementation of schemes
- A perception that there has been **clear communication**
- A perception that the QN has **reduced air pollution**
- A perception that **safety has improved** as a result of the QN

- Some respondents **reported little or no impact on visitors/contractors/emergency services** coming to the area
- A perception that there are **fewer rat runners** as a result of the QN
- A perception that the **QN has reduced traffic**
- A perception that the **roads are quieter** as a result of the QN
- An **appreciation that it is difficult to please everyone**
- A perception that **Council workers were treated poorly by protestors**
- A perception that **those not living in the area should not expect to be consulted** about the scheme
- A perception that the **information video on the QN was useful**
- A perception that **supporters of the QN are not necessarily vocalising their support** for the QN in order to **avoid confrontation**
- A perception that the **webinar held by the Council was useful**

Oppose

- A perception that the **lack of technology ability/access excluded some** from being consulted
- A perception that there has been **increased/displaced traffic** as a result of the QN
- Some respondents reported **longer journey times** as a result of the QN
- A perception that there is a **lack of transparency**
- Some respondents reported that they felt **unhappy with the reasoning for a lack of notice**
- A perception that **traffic will increase**
- A perception that some respondents' **mental health has been negatively impacted** as a result of the QN
- A perception that there is a **lack of clear signage**
- A perception that there has been a **misuse of funding**
- Some respondents recorded **complaints against senior councillors**
- A perception that **accessibility has been reduced** as a result of the QN
- A perception that the QN has **reduced mobility for disabled people**
- A perception that the QN is a **dangerous scheme** in relation to traffic

- A perception that there has been a **lack of evidence for decisions or impacts of the QN**
- A perception that there was a **lack of notice** before the QN's implementation
- A perception that **air pollution will worsen** as a result of the QN
- A perception that the QN has **reduced mobility in general**
- A perception that the QN has a **negative impact on children's health/safety**
- A perception that the **impact on equalities has not been fully considered**
- A perception that the Council is **not meeting legal requirements** with some respondents considering legal action
- A perception that some respondent's **physical health has been negatively impacted** as a result of the QN
- A perception that the QN has **reduced mobility for elderly people**
- A perception that the QN has **reduced mobility for families**
- A perception that the QN has **hampered emergency vehicles**
- A perception that the **Council will lose votes**
- A perception that the **EQIA for the QN has been poor**
- A perception that **accessibility to houses will be reduced** as a result of the QN
- A perception that **safety has been reduced** in relation to crime as a result of the QN
- A perception that there has been **insufficient consultation/consideration of disabled people**
- A perception that **delivery vehicles have been hampered** as a result of the QN
- Some respondents reported that there are **not enough local amenities** within the QN
- Some respondents reported **feelings of entrapment**
- A perception that the QN has **impacted house sales/values or made people move from the area**
- A perception that there is a **class divide** in experience of the QN
- A perception that the QN has **negatively affected BAME groups**
- A perception that **women are affected more negatively by the QN** as they are perceived to be more likely to act as caregivers
- A perception that **cyclists still travel on Brownlow Road and on pavements**

- A perception from **members of the BAME community that they are being placed at a greater risk of COVID-19** by being encouraged to use public transport by the QN
- A perception that introducing the trial during the COVID-19 pandemic was **poor timing**
- A **dislike of having to sign up to the Council's website** to participate in the consultation survey
- A perception that **results from the perceptions survey should not have been used to justify the QN**
- A perception that letters about the QN were **hard to read for non-native speakers**
- A perception that the **maps given to residents were too small**
- A perception that the **QN was poorly designed**
- A perception that the **tone of all communications** was designed to **make car-users feel guilty**

Suggest

Some respondents suggested:

- Undertaking a **vote/poll**
- **Improving website accessibility** to enable feedback
- **Holding virtual consultations**
- Improving **coordination with neighbouring boroughs**
- **Better community engagement** from Councillor Barnes in the future
- Using **multilingual communication**
- Introducing **better signage**
- That **nothing** needs to change
- Developing a **smarter travel campaign**
- Developing an **environmental strategy**
- Giving **more consideration to BAME groups**
- Holding **consultations with disabled individuals**
- **Approving changes** with the **emergency services**
- **Treating all road users equally**

- **Communicating how the QN could facilitate safer travel** during COVID-19
- Placing a **greater emphasis on community spirit**
- **Engaging schools and younger people**
- **Acknowledging the difficulties** of introducing a QN **during the COVID-19 pandemic**
- Listening to **feedback provided by the police**
- **Engaging** effectively with **ward councillors**
- **Banning more polluting vehicles**
- Upgrading the **Bounds Green railway bridge**
- Introducing a **roundabout at the A406-Bounds Green Road junction**
- Building a **fly-over or a tunnel for the A406 to cross Bounds Green Road**
- Using **simpler language** and more **intuitive communication**
- Using **larger-scale maps**
- **Removing the current councillors** from their positions
- Improve the **honesty of communications**
- **Increased policing** and/or **surveillance**
- **Not rushing** the introduction of future schemes
- Providing a **thorough EqlA from the start** of future projects
- Providing **regular updates about road works** and other traffic delays
- Introducing **electric car meters**



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Enfield Equality Impact Assessment (EqIA)

Introduction

The purpose of an Equality Impact Assessment (EqIA) is to help Enfield Council make sure it does not discriminate against service users, residents and staff, and that we promote equality where possible. Completing the assessment is a way to make sure everyone involved in a decision or activity thinks carefully about the likely impact of their work and that we take appropriate action in response to this analysis.

The EqIA provides a way to systematically assess and record the likely equality impact of an activity, policy, strategy, budget change or any other decision.

The assessment helps to focus on the impact on people who share one of the different nine protected characteristics as defined by the Equality Act 2010 as well as on people who are disadvantaged due to socio-economic factors. The assessment involves anticipating the consequences of the activity or decision on different groups of people and making sure that:

- unlawful discrimination is eliminated
- opportunities for advancing equal opportunities are maximised
- opportunities for fostering good relations are maximised.

The EqIA is carried out by completing this form. To complete it you will need to:

- use local or national research which relates to how the activity/ policy/ strategy/ budget change or decision being made may impact on different people in different ways based on their protected characteristic or socio-economic status;
- where possible, analyse any equality data we have on the people in Enfield who will be affected e.g. equality data on service users and/or equality data on the Enfield population;
- refer to the engagement and/ or consultation you have carried out with stakeholders, including the community and/or voluntary and community sector groups and consider what this engagement showed us about the likely impact of the activity/ policy/ strategy/ budget change or decision on different groups.

The results of the EqIA should be used to inform the proposal/ recommended decision and changes should be made to the proposal/ recommended decision as a result of the assessment where required. Any ongoing/ future mitigating actions required should be set out in the action plan at the end of the assessment.

The completed EqIA should be included as an appendix to relevant EMT/ Delegated Authority/ Cabinet/ Council reports regarding the service activity/ policy/ strategy/ budget change/ decision. Decision-makers should be confident that a robust EqIA has taken place, that any necessary mitigating action has been taken and that there are robust arrangements in place to ensure any necessary ongoing actions are delivered.

SECTION 1 – Equality Analysis Details

Title of service activity / policy/ strategy/ budget change/ decision that you are assessing	Bowes Primary & Surrounding Streets Quieter Neighbourhood Area
Lead officer(s) name(s) and contact details	Richard Eason
Team/ Department	Place – Healthy Streets
Executive Director	Sarah Cary
Cabinet Member	Leader of the Council Cllr Caliskan
Date of EqIA Commencement	1st July 2020
Last Updated	7th December 2021

SECTION 2 – Summary of Proposal

Please give a brief summary of the proposed service change / policy/ strategy/ budget change/project plan/ key decision

Please summarise briefly:

What is the proposed decision or change?

What are the reasons for the decision or change?

What outcomes are you hoping to achieve from this change?

Who will be impacted by the project or change - staff, service users, or the wider community?

The consultation survey for this project ran from 28 September 2020 to 2 May 2021. Consultation analysis was ongoing during this period and a report (referred to as 'Consultation Analysis' in this EqIA) provides a detailed analysis and summaries of the responses. In recognition of comments from disabled people and carers during the consultation period, an additional consultation exercise was launched in March

2021 which specifically targeted disabled people, carers, those receiving care, and Blue Badge holders that live within the Bowes Primary area.

Residents in the Bowes Primary & Surrounding Streets Quieter Neighbourhood Area have raised concerns with Enfield Council over traffic issues in the area for many years. In 2018, MP Bambos Charalambous presented a petition to Parliament on behalf of the Bowes ward, calling for a live trial of a low traffic neighbourhood. This petition was signed by 377 local residents. In response to this petition, in 2019 the Council engaged residents in the Bowes Primary & Surrounding Streets Quieter Neighbourhood Area through a Perception Survey to better understand the issues that they were experiencing.

In total 263 residents participated and provided these top responses:

- Concerns about streets being used as rat-runs.
- Concerns about speed and volume of traffic; and
- Concerns about pollution.

78% of participants thought vehicle speeds are a serious problem and 87% of participants said the volume of traffic is a serious problem¹. The full findings from the survey can be found at <https://letstalk.enfield.gov.uk/BowesQN>

Enfield Council has implemented various restriction points with the intention to:

- 1) deny a route to motorised through-traffic along Warwick Road and connecting estate roads
- 2) deny a route to motorised through-traffic along the northern section of Palmerston Road and connecting estate roads.

The Council extended into the Enfield part of Brownlow Road, and the estate to the east, the 20mph speed limit to complement the same speed limits in the adjacent areas to the south of A406 to the south and west. This offers better consistency to drivers and should reduce the sense of traffic domination on Brownlow Road. A second phase is planned to remove through-traffic, except buses, on Brownlow Road by way of a further restriction point on Brownlow Road and potentially a point closure on Westbury Road which will be subject to where the bus gate on Brownlow Road will be located.

Warwick Road, Palmerston Road and their connecting estate roads are unclassified roads. They are typically narrow and have close-fronting homes. Through traffic is better accommodated on the perimeter roads that border the area, namely: A406 North Circular Road, A105 Green Lanes, and A109 Bounds Green Road. Removing through traffic within these neighbourhoods has established more attractive conditions for walking and cycling within the neighbourhood, with modal filters for cycling at the closure points further boosting the convenience of cycling over car use for local trips. Access for buses is also planned to be maintained on Brownlow Road which further priorities use of public transport of private car.

¹ <https://letstalk.enfield.gov.uk/2794/widgets/9476/documents/4491>

Lowering the level of traffic on Palmerston Road aims to make it better suited for on-road cycling, helping complete a cycle route into Haringey that already links to Palmers Green and Enfield Town to the north. Reducing the overall volume of traffic to levels that better match the character of these narrow, densely populated streets also aims to improve air quality within the zone.

These proposals followed ongoing engagement with London Fire Brigade, London Ambulance Service and Metropolitan Police as well as Enfield Waste Collection services. Camera controls, rather than a physical barrier, are included on Warwick Road to avoid hindering emergency access and waste collection services in and out of the estate to/from the south and reducing response times. In this regard the proposals represent an improvement over the existing width restriction. Where closure points and islands are placed, the removal of some adjacent kerbside parking/loading space will be required so that parking does not foul access around narrowed sections of road or occupy space needed to be left clear for drivers to turn vehicles around. The proposals, including the localised parking controls, are supported by experimental traffic orders so that the Council can assess their impact further, consider representations and make amendments if necessary.

A conscious decision has been made to trial the proposals experimentally. Experimental traffic orders allow for schemes to be implemented and a consultation to take place whilst they are live. This allows a true consultation to take place in respect of the actual impact. During the experiment, changes can be made to the measures in place and the law requires further consultation following changes before any scheme can be converted to a permanent scheme.

The effects of the implementation are being monitored throughout the experimental phase. The authority does not currently have data for people passing through the scheme area and any protected characteristics they may have; so the ward profile for the Bowes Ward has been used as the basis for demographic data.

SECTION 3 – Equality Analysis

This section asks you to consider the potential differential impact of the proposed decision or change on different protected characteristics, and what mitigating actions should be taken to avoid or counteract any negative impact.

According to the Equality Act 2010, protected characteristics are aspects of a person's identity that make them who they are. The law defines 9 protected characteristics:

1. Age
2. Disability
3. Gender reassignment.
4. Marriage and civil partnership.
5. Pregnancy and maternity.
6. Race
7. Religion or belief.
8. Sex
9. Sexual orientation.

At Enfield Council, we also consider socio-economic status as an additional characteristic.

“Differential impact” means that people of a particular protected characteristic (e.g. people of a particular age, people with a disability, people of a particular gender, or people from a particular race and religion) will be significantly more affected by the change than other groups. Please consider both potential positive and negative impacts, and, where possible, provide evidence to explain why this group might be particularly affected. If there is no differential impact for that group, briefly explain why this is not applicable.

Please consider how the proposed change will affect staff, service users or members of the wider community who share one of the following protected characteristics.

Information has been gathered regarding groups with protected characteristics in Enfield as a whole, and for Bowes specifically (referred to as the ‘Study area’). London Travel Demand Survey (LTDS) and Census 2011 data have been the two primary data sources, though other data sources have been used, and are referenced throughout. For each protected characteristic, data has been collected and analysed, with comparisons made at borough, regional and national level where relevant.

The project team consider that there would be no disproportionate impact on Gender Reassignment, Sexual Orientation or Marriage and Civil Partnerships as protected groups, therefore they have been excluded from the assessment. This is based on the evidence from consultation responses which show no clear trends or patterns

indicating an issue in these protected characteristic groups. The project team will reassess this if deemed necessary.

Age

This can refer to people of a specific age e.g. 18-year olds, or age range e.g. 0 – 18-year olds.

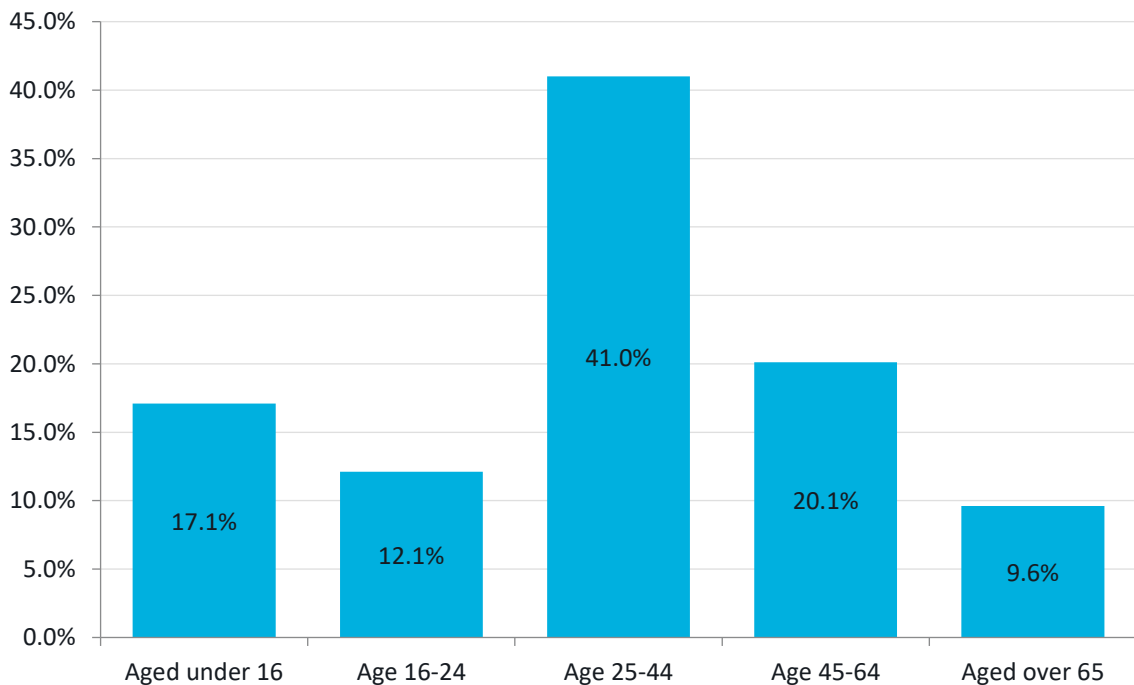
Will the proposed change to service/policy/budget have a **differential impact [positive or negative]** on people of a specific age or age group (e.g. older or younger people)?

Please provide evidence to explain why this group may be particularly affected.

Evidence base

As demonstrated within Figure 1, the majority of residents within Bowes are aged 25-44, making up 41% of all residents. There is an almost even split of those aged older and younger than that age bracket, with 29.2% aged under 24, and 29.7% aged over 45.

Figure 1: Age distribution within study area

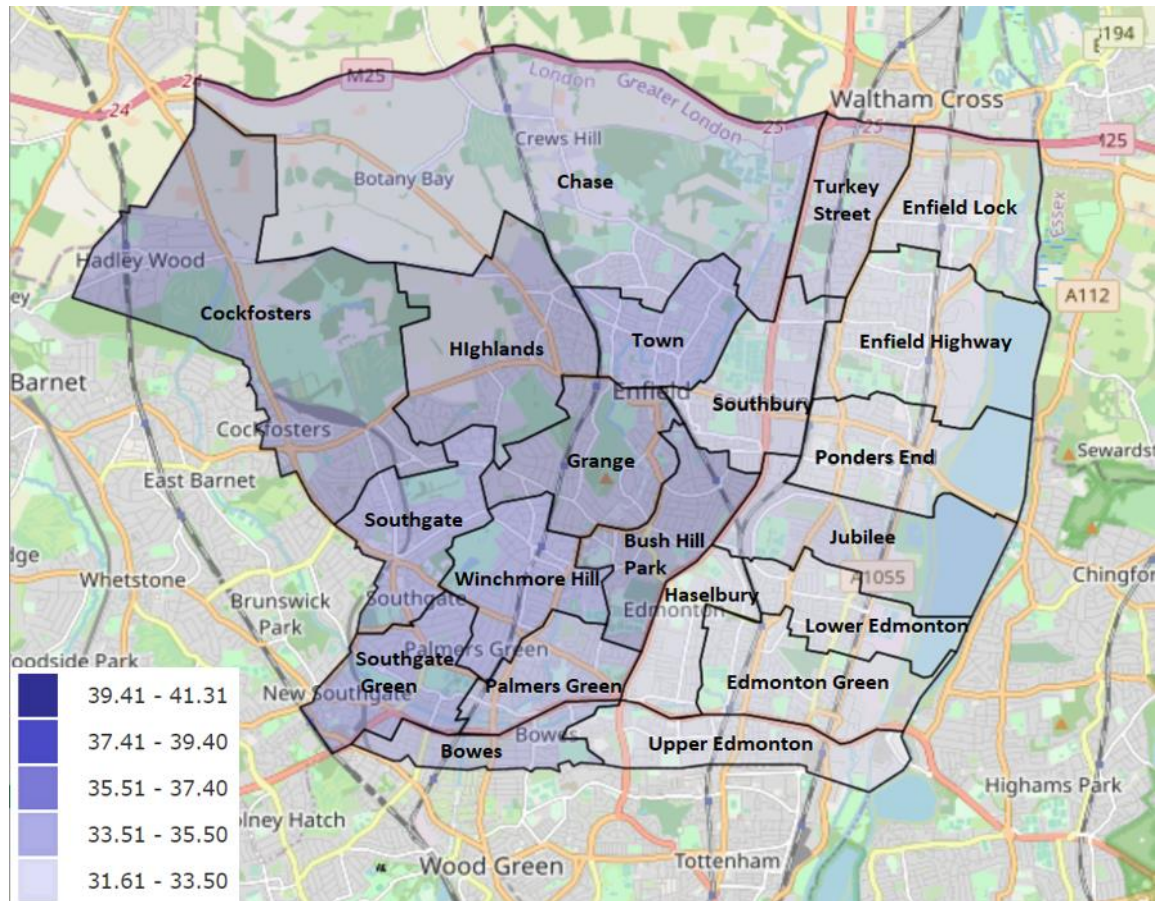


Source: UK Census 2011

Figure 2 presents the spatial distribution of the mean age across Enfield’s wards. A clear trend can be observed whereby the northern and eastern wards have some of the lowest mean ages in Enfield and the southern and western wards some of the

highest. Bowes, located in the southwest of Enfield, has one of the oldest mean ages in the borough.

Figure 2: Mean age by ward in Enfield

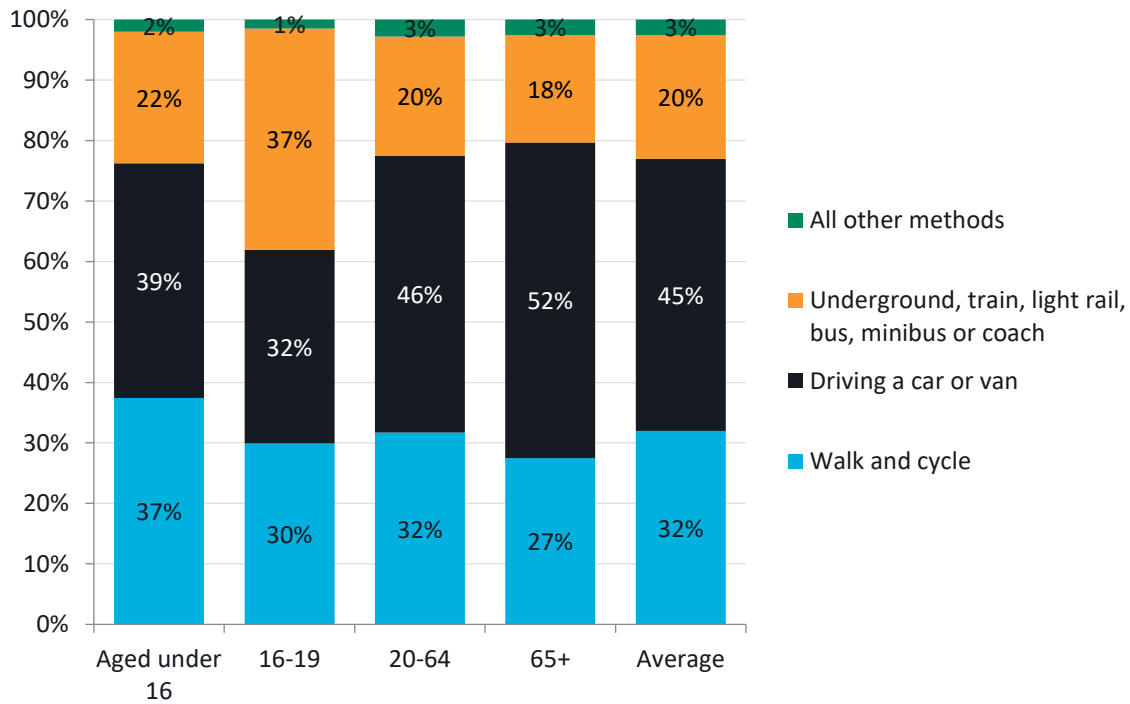


Source: UK Census 2011

Figure 3 presents LTDS data on how people travel around Enfield within each age category.

In general, younger people in Enfield walk and cycle more, and drive less than their elderly counterparts. Young people are less likely to be impacted as a driver and this is reflected in lower levels of response in the engagement surveys. The highest percentages of walking and cycling can be seen in those aged under 16, with 37% of all trips made on foot or by bike. Those aged 65 and over have the lowest levels of walking and cycling, with 27% of all trips, but the highest percentage of trips driven (or as a passenger in a car or van) at 52%. Public transport use is disproportionately higher in 16 to 19-year-old group, making up 37% of all journeys. This is 15% higher than the nearest age group (those aged under 16). Furthermore, as per the latest data from 2016, the average age to start driving in the UK was 26, and this is expected to have reduced further over the previous five years².

² <https://www.insurancefactory.co.uk/news/August-2016/Average-age-to-start-driving-increases-to-26>

Figure 3: Mode share by Age in Enfield


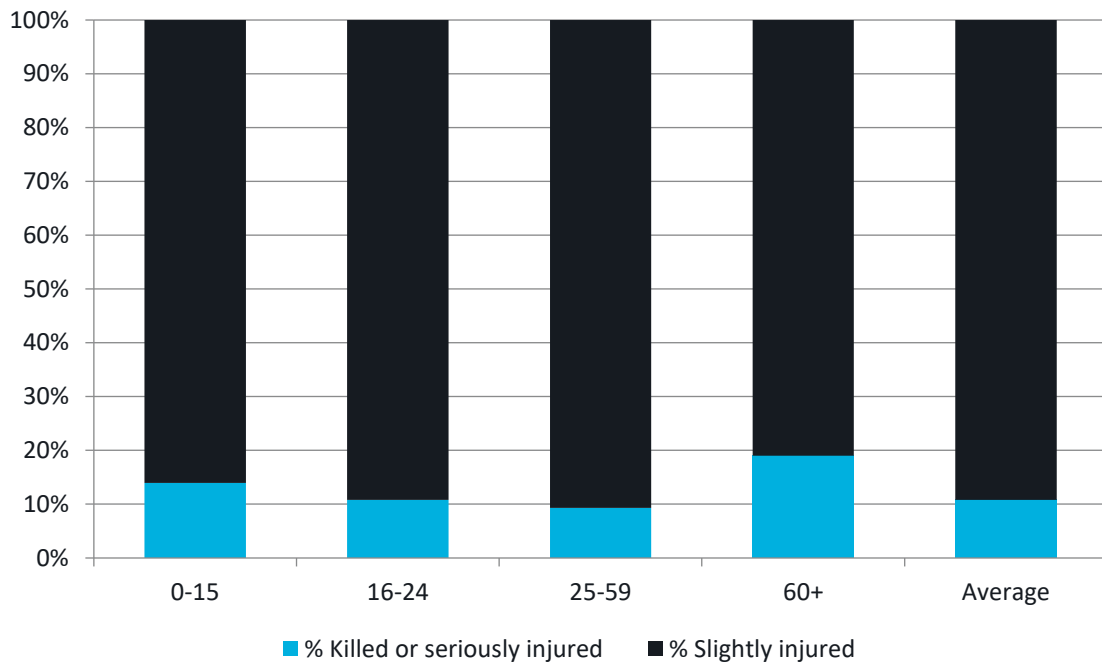
Source: LTDS (2016/17, 2017/18 and 2018/19)

The proportion of Killed or Seriously Injured (KSIs) and Slightly Injured casualties per age category is shown in Figure 4 below. KSIs are higher than average for those age 60 and over (19%) and those aged Under 16 (14%). As such, this indicates that these age groups are disproportionately more likely to suffer more severe consequences if they are a casualty in a collision. Lower speeds and volumes of traffic reduce the chance of children being killed or seriously injured.

Across the UK, 10-14 age group road accidents make up over 50% of all external causes of death. 15-19 years olds experience almost double the risk of death from road traffic accidents (82.5 deaths per million population) in comparison to the general population (42.2 deaths per million population). For males in this age group the risk is higher still at 127.3 deaths per million population³.

3

http://www.racfoundation.org/assets/rac_foundation/content/downloadables/road%20accident%20casualty%20comparisons%20-%20box%20-%2020110511.pdf

Figure 4: Percentage killed or seriously injured by Age in Enfield


Source: DfT Road traffic statistics (2019)

Differential impact assessment

People of young and old age are more vulnerable to poor air quality⁴, and Bowes has one of the oldest mean ages in Enfield. The delivery of this Quieter Neighbourhood aims to enable mode shift, ultimately reducing emissions from private vehicle use and increasing active modes of travel, benefit these age groups disproportionately through improved air quality.

Younger people in Enfield are less likely to drive than older people in the borough, are more likely to walk and cycle. Improvements to volumes of traffic in Bowes will benefit those who already cycle, and therefore may disproportionately benefit younger people. However, the improvements are also likely to benefit those who do not currently cycle by providing safer and more attractive conditions to do so. This may allow for a selection of residents which is more evenly dispersed across the age groups to partake in active travel modes – and reaping the health benefits associated with a more active lifestyle. Therefore, while the changes may initially benefit younger people, over time there may be longer term benefits across the age groups that rectifies this initial imbalance.

The proportions of respondents in the survey in each age group reporting either perceived positive or negative impacts of the QN were generally very similar across the bandings (with around 50% of respondents reporting perceived negative impacts), except for the 80 years and over age group, which consisted of 7 negative responses (78%). However, this outlier must be treated with caution, given this group's very low sample size of nine. The lower age groups (20 up to 49 years of

age) showed higher proportions of responses from respondents that reported perceived positive impacts from the QN.

Variations between age groups were small for both respondents inside and outside the QN, although perceptions were slightly more positive for those inside the QN across all the age groups. The relative proportions of positive and negative perceptions for each age group were broadly similar across those inside and outside the QN.

Reductions in motor vehicle traffic are expected to create safer streets with an improved experience for pedestrians – such as reduced noise and air pollution and reduced fear of being involved in a collision. These improvements to the walking environment are likely to disproportionately benefit those who are aged 16 and under who currently make 37% of journeys by walking (or to a lesser degree, cycling). Furthermore, those aged 16-19 who make 37% of trips by public transport are also likely to disproportionately benefit, as every public transport journey starts or ends on foot or cycle. The scheme should also reduce northbound bus journey times due to the reduction of through traffic in the area which will benefit younger age groups who make most of their trips via public transport or walking/cycling.

On the contrary, this scheme may cause increased congestion in the short to medium term on arterial roads as traffic is reassigned from minor roads within Bowes. As such, these impacts may disproportionately impact younger age groups. This could be mitigated with Bowes Primary school by further developing active travel measures to take advantage of the safer QN environment.

Older people are more likely to suffer from slight mobility impairments due to aging, which do not fall under the disability PCG. This can include slower movement and reaction time, and some may use mobility aids for walking. A reduction in motor vehicle traffic is likely to be particularly beneficial for those who require extra time to cross the street due to physical or visual impairments. The NHS however state that the over 65 age group are the most sedentary age group and should continue to engage in moderate exercise at 150mins a week to prevent mental and physical decline.

The Quieter Neighbourhood measures will significantly reduce the volumes of traffic through the area, reducing the threat caused by motor traffic, particularly from larger vehicles such as vans or HGVs who can no longer pass through the area. While these improvements are likely to benefit all ages groups, as those aged under 16 and over 60 are disproportionately killed or seriously injured by motor traffic, they are likely to benefit the most from the changes.

While these measures are likely to create safer, healthier streets for residents of Enfield, they may lead to longer journey times for people who rely on private cars, taxis or Dial-a-Ride. The scheme may also lead to short- or medium-term delays to motor traffic on arterial roads as traffic is reassigned from minor roads in Bowes.

⁴ https://www.london.gov.uk/sites/default/files/air_quality_for_public_health_professionals_-_city_of_london.pdf

Private cars, taxis or Dial-a-Ride are particularly popular for people aged 65 and over. Travelling can also be uncomfortable for some people, particularly for the elderly, therefore extended journey times could exacerbate this issue.

It is noted that some people may be more likely to use a private car as travel patterns and preferences change due to the pandemic. This may lead to increased journey times for those who rely on private cars, taxis or Dial-a-Ride.

The Consultation Analysis report highlighted an under-representation of younger people responding to the consultation, and an over-representation of older people. In the 2011 Census, those aged 16-29 and 30-39 made up 25% and 21% of all age groups, however in the survey, only 4% of respondents said they were aged 16-29, and 16% aged 30-39. In older people, the opposite trend can be seen. In the Census 2011, 14% of people stated they were aged between 40-49, 10% between 50-59, and 6% between 60-69, however the survey received 29%, 22% and 20% of responses from those age groups, respectively.

The Consultation Analysis report also highlighted some of the opposition to the scheme related to the impacts of the scheme on mobility and alternatives to private car use. 44 responses (out of 447 open question responses to the corresponding question) referred to public transport or active travel not being a suitable alternative due to disability or age (of these, 13 were disabled, and 16 were aged over 60).

Mitigating actions to be taken

Continue to work with Bowes Primary School to develop safer active journeys to school.

Disability

A person has a disability if they have a physical or mental impairment which has a substantial and long-term adverse effect on the person's ability to carry out normal day-day activities.

This could include:

Physical impairment, hearing impairment, visual impairment, learning difficulties, long-standing illness or health condition, mental illness, substance abuse or other impairments.

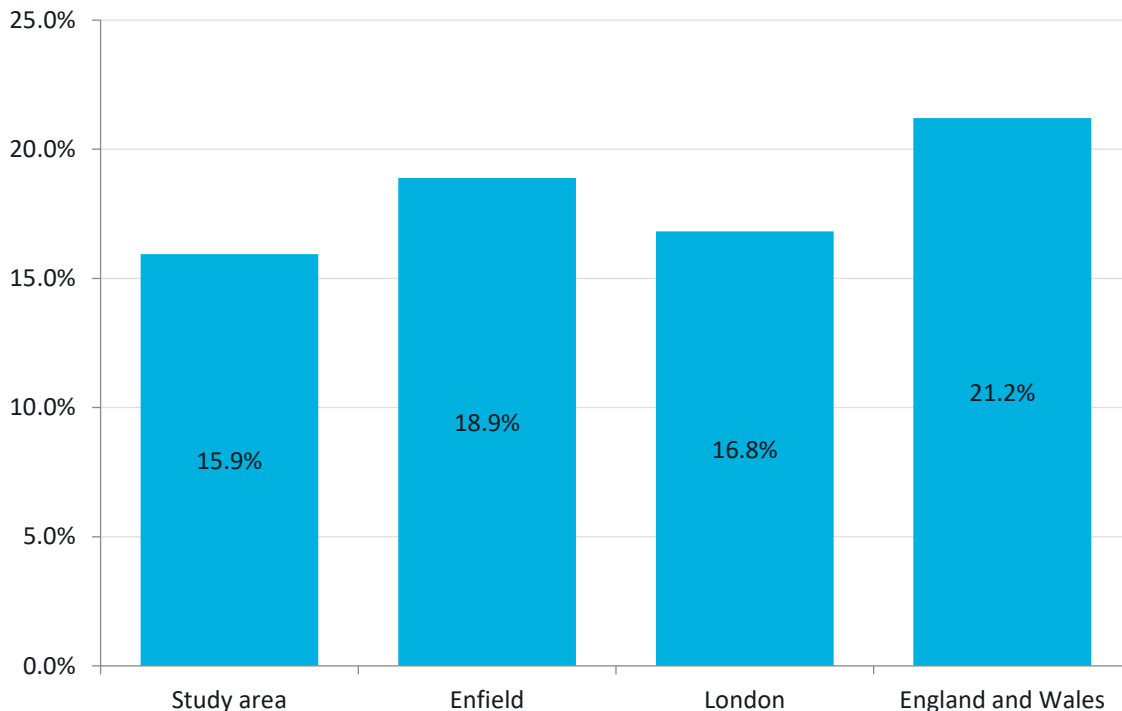
Will the proposed change to service/policy/budget have a **differential impact [positive or negative]** on people with disabilities?

Please provide evidence to explain why this group may be particularly affected.

Evidence base

In Enfield, Census 2011 data shows that 81.1% of residents feel that they have no limitations on their activities. This is slightly higher than both England and Wales (79.8%) but lower than in Greater London (83.2%). 18.9% of the population of Enfield stated that they were limited by a long-term health problem or disability. In Bowes ('Study area') this percentage is lower, at 15.9% of the population.

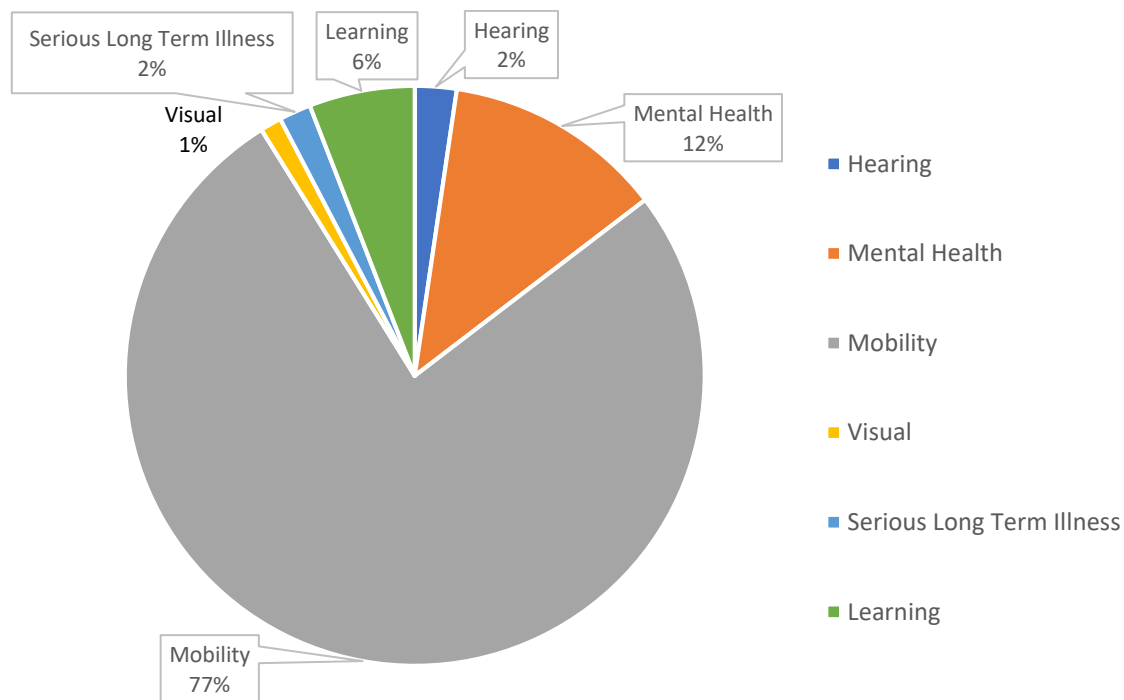
Figure 5: Percentage limited by a long-term health problem or disability in Enfield



Source: UK Census 2011

Disability types stated by those who live in Enfield and have a disability affecting daily travel (including old age) is shown in Figure 6 below. Mobility impairment represents the highest proportion (77%) followed by impairment due to mental health (12%). It should be noted that this data is based on a small sample, therefore results should be taken as a general indication only. It is important to note that various physical and mental disabilities can lead to travel limitations.

Figure 6: Disability types stated by those with a disability affecting travel



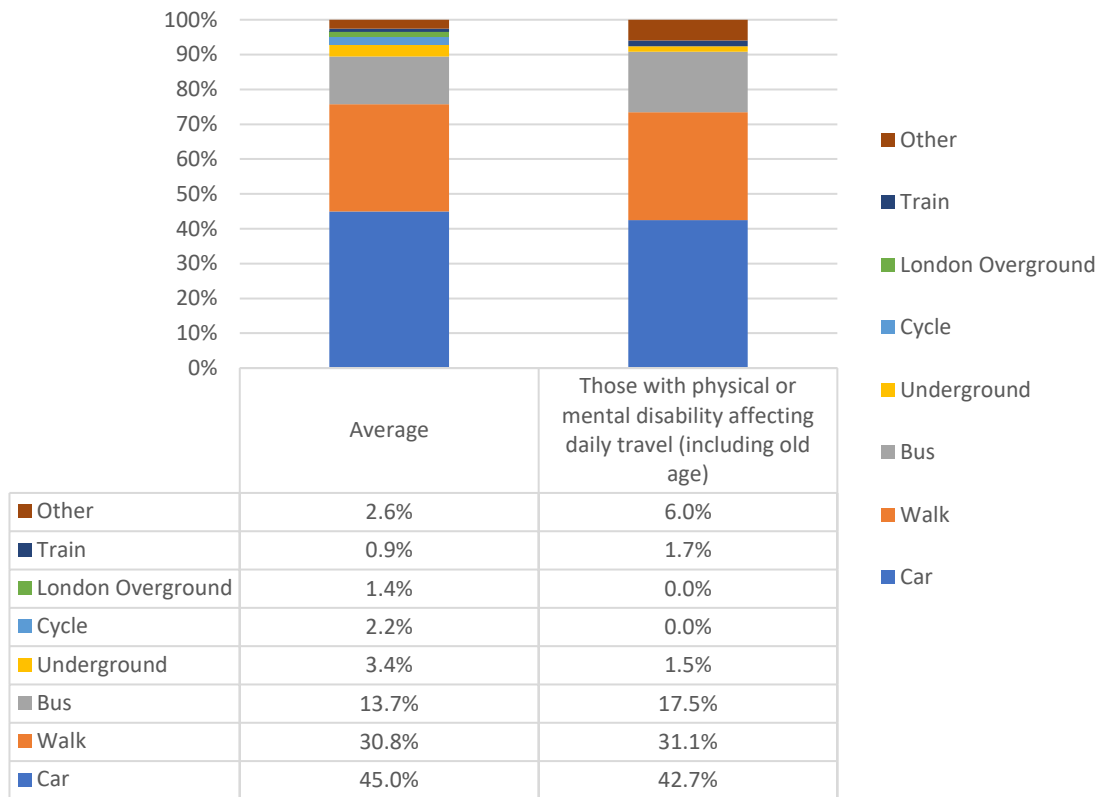
Source: LTDS (2016/17, 2017/18 and 2018/19)

Focusing solely on cyclists who have a disability, the Wheels for Wellbeing annual survey⁵ shows that 72% of disabled cyclists use their bike as a mobility aid, and 75% found cycling easier than walking. Survey results also show that 24% of disabled cyclists' bike for work or to commute to work and many found that cycling improves their mental and physical health. Inaccessible cycle infrastructure was found to be the biggest barrier to cycling.

Mode split for people with a physical or mental disability is shown in Figure 7. When compared to the LTDS mode split of trips made by all people, car use for those with disabilities is lower (42.6% compared to 45%), bus use is greater (17.5% compared to 13.7%) and walking is marginally higher (31.1% compared to 30.8%).

⁵ Wheels for Wellbeing Annual Survey 2018: <https://wheelsforwellbeing.org.uk/wp-content/uploads/2019/04/Survey-report-final.pdf>

Figure 7: Mode split by those with a physical or mental disability affecting daily travel



Source: LTDS (2016/17, 2017/18 and 2018/19)

Let’s Talk is the software platform engagement is conducted on. It meets and exceeds WCAG 2.1, the current global web accessibility standard⁶.

Text, graphics and figures should be able to be read by screen readers, and all content should be made available in alternative formats for those with visual impairments. Braille can be made available on request (though it is acknowledged that only a small proportion of visually impaired people use braille) or the opportunity offered to speak to someone over the phone or in person about the scheme.

Disabled people make less trips than those with no disability, with the difference increasing above the age of 65. Both disabled and non-disabled adults rely predominantly on car travel, but for disabled people in a third of journeys they are likely to be the passenger whereas a non-disabled person is a passenger in around one fifth of journeys. There are lower rates of commuting with disabled people which is expected as a result of the lower proportion of disabled people in full or part time employment.⁷

Differential impact assessment

Improved cycling conditions will benefit disabled cyclists and could potentially encourage people with disabilities to try cycling, if their disability allows. Some disabled people rely upon cycling as their primary means of mobility.

The project aims to decrease motor vehicle traffic in a residential area, creating a safer environment, particularly for disabled people who are more likely to be pedestrians. Quieter roads will also benefit those whose physical impairments necessitate more time to cross the road, or whose mobility aids may require use of the road, such as mobility scooters.

Quieter Neighbourhoods may negatively impact on journey times for those with mobility impairments who may find it more difficult to walk or cycle, and therefore prefer the use of door-to-door transport services such as private cars, taxis or Dial-a-Ride.

Visually impaired people will be pedestrians in the affected area, users of public transport or passengers in other vehicles. Visually impaired people will have varying degrees of ability to see the changes in the environment around them. This will include changes to traffic flows or directions of traffic. Although likely to benefit from decreased traffic flows, the initial change could be confusing.

Within the Bowes area is Bowes Primary School which hosts Special Educational Needs children and has an Additionally Resourced Provision for pupils with autism. Some children may experience discomfort with the changes to the local environment especially where this may cause a change in route.

Any changes or removal of the scheme may disproportionately impact residents with certain impairments or disabilities as adapting to changes in their environment can present challenges.

Reduction to through-traffic is likely to reduce conflict between different road users on the whole. This will create a safer environment, particularly those with physical disabilities. Quieter streets also mean that those traveling with wheelchairs or mobility scooters are able to use the roadway if they choose to circumvent blockages across the pavement (e.g. if the pavement is too narrow to navigate due to bins).

A letter to Blue Badge holders was sent to residents in the area on 26 February 2021. The letter invited residents to participate in a survey, separate to the main consultation survey. This survey aimed to find out more about how people with disabilities and carers perceive the scheme. A paper copy of the survey was included in the letter delivery. Additionally, all respondents to the main consultation survey who indicated they have a disability, receive care, or provide care to someone in the area, were sent an email advising them of the additional survey and how to participate.

⁶ <https://www.w3.org/TR/WCAG/>

⁷

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/972438/transp-ort-disability-and-accessibility-statistics-england-2019-to-2020.pdf

Findings from this disabled people/Blue Badge holder consultation showed that disabled people had concerns about reaching locations such as Bounds Green Group Practice, Bounds Green Underground station, North Middlesex Hospital, Brownlow Road pharmacy and dentists within the area. It was noted that they perceived increases in journey times, increases in traffic, and some responses referred to respondents being unable or finding it much harder to visit friends or family, or to welcome visitors to their own home.

The carers also had concerns about reaching similar destinations, including North Middlesex Hospital, the GP on Gordon Road (Bounds Green Group Practice) as well as a pharmacy or pharmacies in the area. There was a noted perceived increase in journey times, as well as responses referring to respondents finding it harder to access healthcare or for carers to gain access to patients.

The responses recorded were broadly representative of the types of disabilities that people have within Bowes. While those who identified as having a learning disability/difficulty appear to be under-represented, it is possible that a percentage of these people chose the option of 'Other'. It is understood that this may be caused in part by the electronic survey only allowing respondents to select a single disability, rather than multiple, therefore they chose 'Other' and listed numerous disabilities.

Following this disability specific consultation, a report was produced and is attached at appendix A. Respondents indicated whether they would be willing to participate in focus groups.

Three separate focus groups were held with disabled people following this survey in June to delve further into the issues raised in the survey. The attendance at the focus groups was predominantly carers for disabled people and almost all were regular car users.

During the focus groups, the carers described the types of support they provide. In some cases, carers reside with the person they care for, which is particularly true in the case of disabled children. In a few cases, carers described taking car journeys with things like washing or hot food to another address within a mile or so as part of they care they deliver. Their experience had been the journey took longer and at times they may have waited in heavier traffic. An increase in traffic volumes from increased car ownership or use would potentially create a similar effect as the current traffic volumes will not remain constant as since 2008 traffic has continued to increase and has nearly doubled in ten years. Clearly at this rate a similar effect would be felt by the carers in the increased volumes of traffic, notwithstanding the fact that the impact seems to be more immediately felt by them. General issues with congestion and traffic were raised and there was recognition that the situation before the measures was not flowing without congestion.

Attendees were asked about travel to hospitals and expressed general concerns about travel times, but did suggest that travelling to Whittington and Royal Free were journeys which had been impacted.

One member of the group commented that they had used an asthma inhaler twice a day for many years and since the implementation of the LTN they had not used it more than every couple of weeks. No public health data about severity of asthma symptoms in the area is available.

Much of the discussion during focus groups centred on the limitation on travel choices available to disabled people. For example, people with back injuries may find it painful and uncomfortable to use buses or those with walking aids may be unable to get to a bus stop without places to stop and rest. Once at the bus stops, several people remarked that the bus stop seating was not suitable for them to recover and wait for the bus.

Carers also described situations where friends who may have assisted with caring duties previously find the journey by car more difficult now. Attendees also described circumstances where ride hailing services or taxis cancelled journeys at short notice when they had been booked in advance. The team held a meeting with a representative of London Cab Drivers and there seemed to be a misunderstanding that drivers could not enter the area at all. This was corrected in the meeting and conveyed to back to black cab drivers.

Anxiety around the time it might take to return home was cited by some as a factor in making choices to leave the area to social journeys.

Carers described that in some cases therapists include travel time within their appointment, meaning that therapy time has been reduced. The way care costs are funded in some cases means that families are given a care budget to source services. This means providers can deliver the service subject to their own terms and conditions.

In some cases, the initial changes were described as confusing for some people who may have learning difficulties or autistic spectrum disorders. Bowes Primary School has been engaged with on the scheme and is the local SEN provision for ASD's.

Some disabled people with complex needs undertake a significant number of journeys for appointments and to regular locations such as school. They may use a car in order to transport a wheelchair, complex mobility aid or medical equipment. For people with complex needs, journeys in the car can be very uncomfortable or distressing. Whilst the journeys may be considered short in distance for a person who is not disabled, shorter journeys in distance are likely to be disproportionately impacted by the scheme.

In order to better understand the experience of disabled people, the Programme Director and Project Manager visited the home of a disabled resident who had been involved in several events relating to the scheme. During the visit he was able to indicate to them the day to day challenges in moving around the area.

Mitigating actions to be taken
<p>If any changes to the scheme or its removal is recommended, consideration should be given to residents who may have challenges adapting to changes in their surroundings.</p> <p>Consider installing benches or other seating in locations around the area to allow people to stop and rest.</p> <p>Consider installing suitable seating near bus stops to allow places to disabled people to wait for the bus in a more comfortable way.</p> <p>Consider long term monitoring of public health outcomes.</p> <p>Consider a review of how information is conveyed to drivers about access to the zone.</p> <p>Minimise further changes to avoid confusion.</p> <p>Monitor traffic impact to ascertain the actual impact on traffic flow and journey times.</p> <p>An exemption scheme should be explored and considered for deployment to mitigate the impact on shorter journeys which may be undertaken by disabled people and the people providing care for them.</p>

Gender Reassignment
<p>This refers to people who are proposing to undergo, are undergoing, or have undergone a process (or part of a process) to reassign their sex by changing physiological or other attributes of sex.</p>
<p>Will this change to service/policy/budget have a differential impact [positive or negative] on transgender people?</p>
<p>Please provide evidence to explain why this group may be particularly affected.</p>
<p>It is considered that this scheme is unlikely to have a disproportionate impact on grounds of Gender Reassignment and no issues of note were raised during the experimental period from that group.</p>
Mitigating actions to be taken
<p>N/A</p>

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Marriage and Civil Partnership

Marriage and civil partnerships are different ways of legally recognising relationships. The formation of a civil partnership must remain secular, where-as a marriage can be conducted through either religious or civil ceremonies. In the U.K both marriages and civil partnerships can be same sex or mixed sex. Civil partners must be treated the same as married couples on a wide range of legal matters.

Will this change to service/policy/budget have a **differential impact [positive or negative]** on people in a marriage or civil partnership?

Please provide evidence to explain why this group may be particularly affected

It is considered that this scheme is unlikely to have a disproportionate impact on grounds of Marriage and Civil partnership and no issues of note were raised during the experimental period from that group.

Mitigating actions to be taken

N/A

Pregnancy and maternity

Pregnancy refers to the condition of being pregnant or expecting a baby. Maternity refers to the period after the birth and is linked to maternity leave in the employment context. In the non-work context, protection against maternity discrimination is for 26 weeks after giving birth, and this includes treating a woman unfavourably because she is breastfeeding.

Will this change to service/policy/budget have a **differential impact [positive or negative]** on pregnancy and maternity?

Please provide evidence to explain why this group may be particularly affected

Evidence base

The birth rate in Enfield was 15.1 births per 1000 people in 2016, approximately 28% above the national average that year of 11.8, though on par with the Outer London average of 15.0 per 1000 people. Therefore, there are statistically more likely to be pregnant and maternal people who reside in Enfield than the national average, however this is near equal to Outer London.

Differential impact assessment

Reduction to through-traffic is likely to reduce conflict between different road users overall. This will create a safer environment, particularly for pregnant people and parents with infants and/or young children. This will also provide benefits to pedestrians travelling with prams who require additional time to navigate curbs when crossing the street. Quieter streets also mean that those traveling with prams can use the roadway if they choose to circumvent blockages across the pavement (e.g. if the pavement is too narrow to navigate due to bins).

The implementation of the Quieter Neighbourhood scheme may negatively impact on car journey times for a portion of those who are pregnant and with parents with infants and/or young children who may prefer the use of door-to-door transport services such as private cars, taxis or Dial-a-Ride.

Improvements in air quality are likely to disproportionately benefit infants and children who are more vulnerable to breathing in polluted air than adults due to their airways being in development, and their breathing being more rapid than adults.

Expectant mothers and mothers who have recently given birth may have increased numbers of medical appointments. Where this travel is made by car it may take slightly longer, but where the journey is walked or cycled through the experimental area, it is likely to be less polluted and have reduced volumes of traffic. The Royal college of Midwives recommends exercise such as brisk walking for new and expectant mothers. Furthermore, exposure to poor air quality while at home for long periods should reduce over time as a result of lower traffic volumes inside the area.

The Consultation Analysis showed that across all genders, the proportions of responses from people pregnant or with young children stating they had experienced a 'somewhat negative' or 'very negative' impact were very similar to those who were not pregnant or with young children.

Mitigating actions to be taken

Continued monitoring of journey times.

Race

This refers to a group of people defined by their race, colour, and nationality (including citizenship), ethnic or national origins.

Will this change to service/policy/budget have a **differential impact [positive or negative]** on people of a certain race?

Please provide evidence to explain why this group may be particularly affected

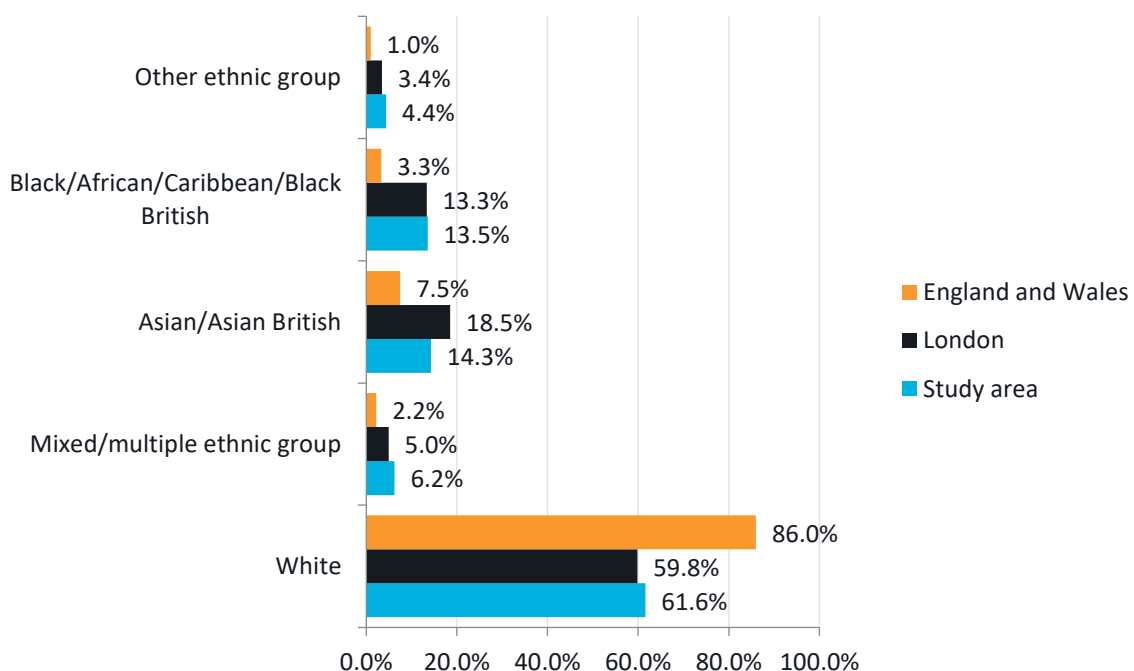
Evidence base

Figure 8 presents the population of Bowes ('Study area') by ethnicity. Based on Census 2011 data, 61.6% of Bowes residential population is 'White', making it the most common ethnicity in the area. This is very similar to the average across London, with Bowes being 1.8% higher than the average across London of 59.8%.

The second most populous ethnicity is 'Asian/Asian British', of which 14.3% of the population identify. This is only 0.8% higher than the next most populous ethnicity 'Black/African/Caribbean/Black British' at 13.5% of the population.

Within the Bowes ward 23.3% of households do not have English as a first language – with Polish, Turkish, Greek, and Gujarati comprising the most common languages otherwise spoken.

Figure 8: Population of Study area by ethnicity (versus London; England and Wales)

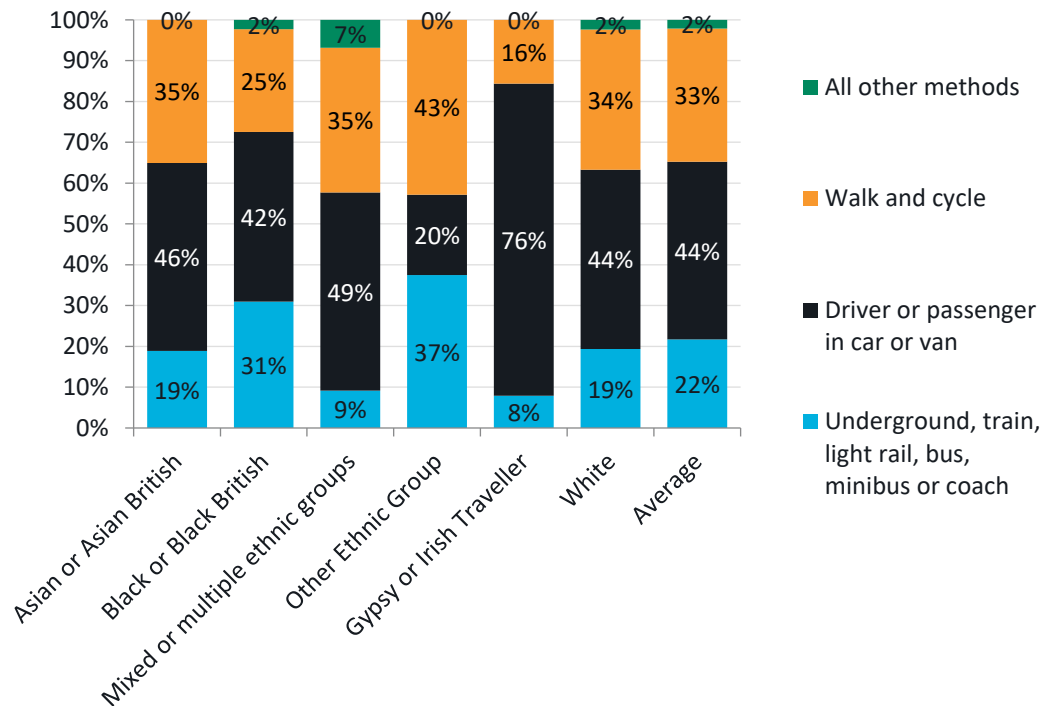


Source: UK Census 2011

Based on average travel modes from the LTDS data presented in Figure 9, in Enfield all ethnic groups except for 'Other Ethnic Group' are more than likely to drive or be driven in a car or van than use any other mode. 'Other Ethnic Group', 'Asian or Asian British' and 'Mixed or multiple ethnic groups' are most likely to walk and cycle, with

a mode share of between 35 and 43%. It is important to note that the sample size of LTDS data is small, therefore these percentages may not accurately reflect the travel behaviours of each ethnic group.

Figure 9: Mode share by ethnicity in Enfield



Source: LTDS (2018/19)

Differential impact assessment

The proposed measures are likely to improve conditions for pedestrians and cyclists, by reducing conflicts with motorised vehicles. This will disproportionately benefit ethnic groups who are disproportionately likely to walk ('Asian or Asian British', 'Mixed or multiple ethnic groups' and 'Other Ethnic Groups'), as well as 'Black and Black British' and 'Other Ethnic Groups' who are disproportionately likely to use public transport (as every public transport journey starts or ends on foot or cycle). On the contrary, this scheme may cause increased congestion in the short to medium term on arterial roads as traffic is reassigned from minor roads within Bowes. As such, these impacts may disproportionately impact 'Black and Black British' and 'Other Ethnic Groups' who are disproportionately likely to use public transport.

Apart from those self-identifying as 'Other Ethnic Groups', car usage in Enfield is high, particularly for 'Gypsy or Irish Travellers'. For this reason, the scheme may disproportionately affect this ethnic group – such as causing slightly longer journey times for trips made by car. This could have some financial impacts such as

increased cost of travel and increased commuting times. However, the delivery of this scheme has the potential to offer genuine alternatives to car journeys and reduce the reliance on cars within this ethnic group.

It is important to note that reducing car dominance and car usage is a key aspect of Enfield's broader transport strategy, and as such it is acknowledged that this disproportionate impact is necessary to facilitate a shift across Enfield to more sustainable, healthy and equitable modes.

The Consultation Analysis highlighted that the proportions of responses from Mixed, Asian and Black respondents was lower than might be expected from the 2011 Census, with Black respondents particularly under-represented (only 1% responding to the consultation identified as Black vs 14% identifying as Black the Census 2011).

The Consultation Analysis also show that a higher proportion of responses from people from Asian backgrounds said that the scheme had 'very negatively' or 'somewhat negatively' impacted them (70%) than average (51%). The White ethnic group showed the highest level of positive impacts, with 28% of responses stating that the schemes had impacted them 'very positively' or 'somewhat positively'. Around half of the Asian respondents were also disabled with an average age of 50 yrs.

Consultation and engagement communications materials have been offered in several languages on request.

There is often poor awareness of local walking and cycling schemes amongst those who rarely walk, cycle or travel outside their immediate area, particularly in those who do not speak English at all, or it is not their first language.

Mitigating actions to be taken

Promote active travel to non-English speaking communities.

It is recommended that Enfield officers work internally with the Gypsy Roma Traveller (GRT) lead to discuss the unique characteristics of this ethnic group. Consideration should be given as to how schemes could assist with reducing car usage and encouraging modal shift.

Continue to monitor bus journey times using TfL data, and consider mitigation measures if there is an impact.

Religion and belief

Religion refers to a person’s faith (e.g. Buddhism, Islam, Christianity, Judaism, Sikhism, Hinduism). Belief includes religious and philosophical beliefs including lack of belief (e.g. Atheism). Generally, a belief should affect your life choices or the way you live.

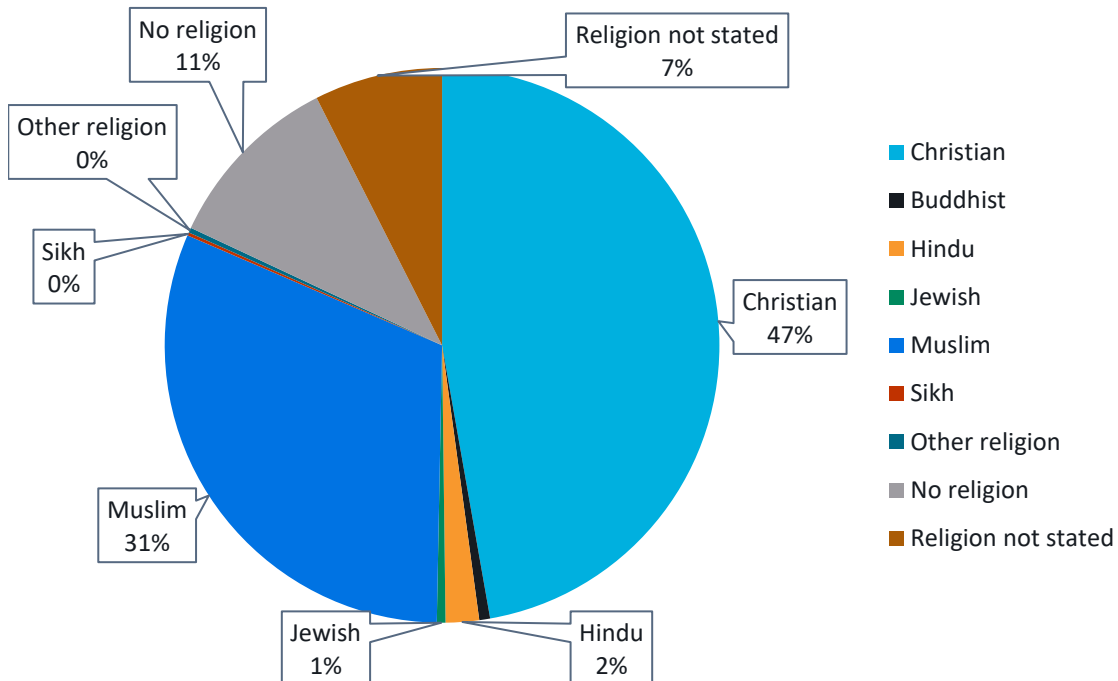
Will this change to service/policy/budget have a **differential impact [positive or negative]** on people who follow a religion or belief, including lack of belief?

Please provide evidence to explain why this group may be particularly affected.

Evidence base

Figure 10 presents Census 2011 data on religion and belief in Enfield. Enfield is a predominantly Christian borough, with 47% of the population identifying as Christian. 23% of people do not follow a religion or did not state a religion. 17% of residents identify as Muslim, making it the second most common religion or belief. Enfield is also home to smaller proportions of residents compared to the other faiths including Buddhist (0.6%), Hindu (3.5%), Jewish (1.4%) and Sikh (0.3%).

Figure 10: Breakdown of religion/belief within Enfield



On certain dates and at certain times of the day, religious services and observances can have an impact on travel patterns. Places of worship and faith-based schools are major destinations for large populations from different groups. There are several places of worship in the Bowes area which have been identified and outlined below. Access to these places of worship will be fully maintained, but the route by motor

vehicle may change due to the restrictions in place. It is acknowledged that the route taken by worshippers accessing places of worship outside the Bowes area may also change.

Palmers Green & Southgate Synagogue

Anyone now arriving to the Synagogue by car from the York Road is prevented from driving to the site up Brownlow Road. However, there is currently limited parking provision at the Synagogue (3 vehicles approx.) and two bus stops are located outside the Synagogue. There is no additional nearby parking apparent and the residential premises nearby have significant crossovers. The scheme should also reduce northbound bus journey times due to the reduction in through traffic.

St Michael at Bowes

Located at junction at Palmerston Road and Whittington Road. Reasonable off-road parking available. Attendees by car now have to leave using the same route as when arriving to the church, as they would be unable to exit from Palmerston Road onto the Westbound North Circular. This may increase some journey times for those travelling by car.

Trinity-at-Bowes Methodist Church

Located on Palmerston Road and adjacent to North Circular. TfL made recent changes as part of which they have prohibited turning left into Palmerston Road when travelling Westbound on A406. There is a reasonable parking provision at the church, and so whilst leaving the church would present a slightly longer journey time, the arrival would be swifter owing to less traffic attempting to join the North Circular from Palmerston Road.

Riverside Community Church

Only on-street parking apparent. Positioned near the end of Russell Road. Attendees by car now have to leave using the same route as when arriving to the church, as they would be unable to exit from Palmerston Road onto the Westbound North Circular.

Elim Pentecostal Church

Only on-street parking apparent. Positioned near the end of Russell Road. Attendees by car now have to leave using the same route as when arriving to the church, as they would be unable to exit from Palmerston Road onto the Westbound North Circular.

Nanak Darbar North London

Only on-street parking apparent. Positioned in High Road New Southgate. From the centre of the Quieter Neighbourhood is around a one-mile journey.

St Marys Church

Limited on street parking. Trinity Road has a historic modal filter in place which prevents through-traffic.

Differential impact assessment

Improving conditions for walking and cycling is likely to positively benefit those who follow a religion and regularly attend places of worship. Destinations such as this are generally local and have large walking and cycling catchments. Although it is acknowledged that this scheme is likely to increase journey times for some worshippers who drive to their place of worship, which remain accessible via car as prior to the implementation of the scheme.

Religious commitments can sometimes leave little time for sporting activities, for example, as young Asian Muslims attend mosque after school, they do not have much leisure time as those from non-religious backgrounds⁸. Therefore, creating environments that enable and encourage people to cycle more often can lead to exercise being built into their day, rather than having to go out of their way to achieve it.

The Consultation Analysis highlighted that there was potential under-representation of those with a religious belief in the consultation period. The proportion of people who identified as having no religion (and the proportion of those not answering the question) is a much higher percentage than what was captured within the 2011 Census. The proportion of responses from Christians, Hindus and Muslims are all lower than would be expected from the 2011 Census data. This may be affected by ward-specific changes since the Census was collected in 2010. However, no comments of significance relating to religion or places of worship were received in the consultation responses.

Mitigating actions to be taken

Any future engagement should target places of worship that were under-represented within the initial consultation period.

Sex

Sex refers to whether you are a man or woman.

Will this change to service/policy/budget have a **differential impact [positive or negative]** on men or women?

Please provide evidence to explain why this group may be particularly affected.

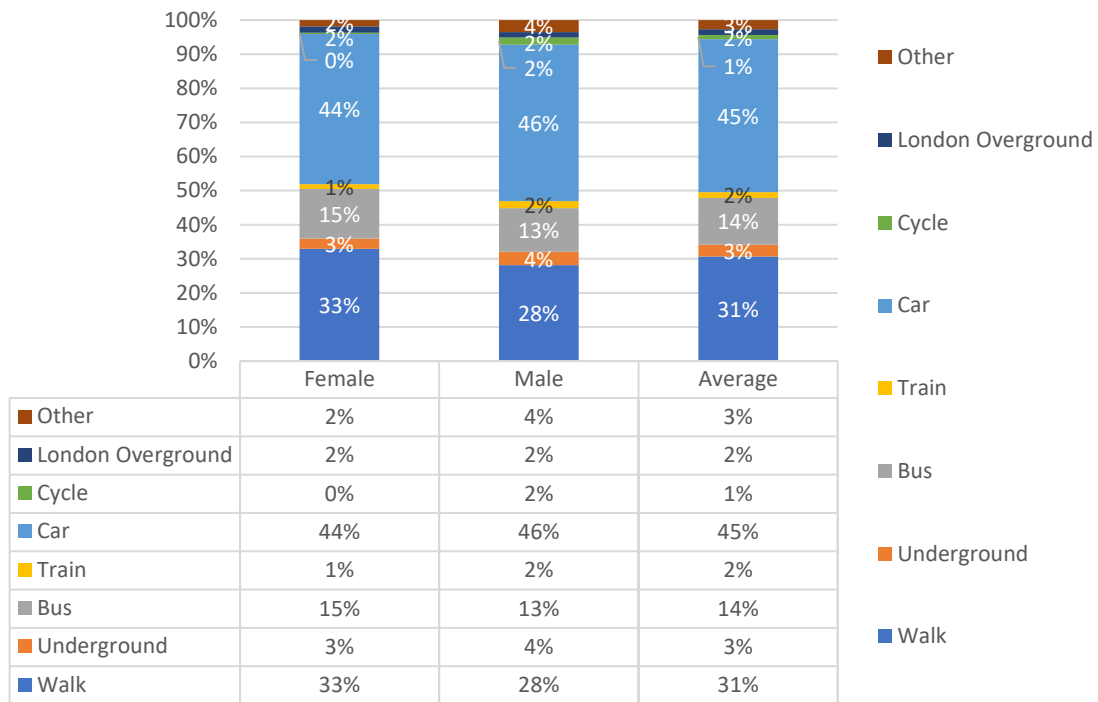
⁸ <http://content.tfl.gov.uk/barriers-to-cycling-for-ethnic-minorities-and-deprived-groups-summary.pdf>

Evidence base

According to the Census 2011, in Enfield 48.9% of residents identify as male and 51.1% as female. This is very similar to the percentage split for London as a whole (49% male, 51% male).

Figure 11 presents the mode share by sex in Enfield. Walking is the most commonly used type of transport by females, making up 33% of all trips. This is 5% higher than males. On average, females drive slightly less than males, making up 44% of trips vs 46% with males. Females are also use the bus more than males (15% vs 13%).

Figure 11: Mode share by sex in Enfield



Source: LTDS (2016/17, 2017/18 and 2018/19)

Across Greater London, research undertaken by TfL shows walking is the most commonly used type of transport by females (95% walk at least once a week). Females are also more likely to use buses than males (62% compared with 56%) but are less likely to use other types of transport including the Tube (38% women compared with 43% males).

Female Londoners take more trips on a weekday than male Londoners, 2.5 compared to 2.3⁹. This pattern however is reversed amongst older adults, with older female Londoners taking fewer weekday trips than older male Londoners, 2.0

⁹ <https://content.tfl.gov.uk/travel-in-london-understanding-our-diverse-communities-2019.pdf>

compared to 2.2. It is important to recognise that females are more likely than males to be travelling with buggies and/or shopping, and this can affect transport choices.

Females aged 17 or over who are living in London are less likely than males to have a full driving licence (58% compared with 72%) or have access to a car (63% of all females compared with 66% of all males). These factors are likely to be related to the frequency of car use as a driver.

79% of females in London report being able to ride a bike, compared with 91% of males¹⁰.

Differential impact assessment

Females are less likely to drive in Enfield and are more likely to walk than males. They are also less likely to cycle. Improvements made to the safety and convenience of cycling to reduce the barriers to cycling disproportionately faced by females and increase the percentage of females choosing to cycle.

Females are more likely to use the bus than males. As many public transport journeys start or end on foot or cycle, improvements in safety and convenience to these networks will improve their access to public transport services. On the contrary, this scheme may cause increased congestion in the short to medium term on arterial roads as traffic is reassigned from minor roads within Bowes. As such, these impacts may disproportionately impact females who use buses more often than males.

Increasing resident access to favourable cycling conditions is likely to disproportionately benefit females, particularly due to higher number of trips they make daily compared to males, as well as their role in taking children to and from educational and recreational facilities. The intervention would reduce a significant barrier to cycling.

Following the murder of Sarah Everard, a national movement highlighted the concerns of women and how safe they feel at particular times of the day, notably at night. Reduced volumes of motor vehicle traffic create a significantly quieter environment which can heighten the apprehension of threat. This perception particularly impacts women making trips by foot or bicycle, as part of a public transport journey or a trip on its own. There is some concern that this perceived risk impacts women's willingness to make trips by active travel modes after dark. In contrast, an academic report¹¹ however suggested a positive improvement in the measured crime rate after introducing low traffic neighbourhoods. The report examined the impact on street crime of introducing low traffic neighbourhoods in Waltham Forest which was associated with a 10% decrease in total street crime,

¹⁰ <http://content.tfl.gov.uk/attitudes-to-cycling-2014-report.pdf>

¹¹ <https://findingspress.org/article/19414-the-impact-of-introducing-a-low-traffic-neighbourhood-on-street-crime-in-waltham-forest-london/>

with significant decreases in violence and sexual offences specifically, and this effect increased with a longer duration since implementation.

Mitigating actions to be taken

Continue to monitor bus journey times using TfL data, and consider mitigation measures if there is an impact.

Continue to engage with the Metropolitan Police and monitor crime and anti-social behaviour within the QN area since implementation.

Provide reassurance messages around personal safety, crime and disorder

Sexual Orientation

This refers to whether a person is sexually attracted to people of the same sex or a different sex to themselves. Please consider the impact on people who identify as heterosexual, bisexual, gay, lesbian, non-binary or asexual.

Will this change to service/policy/budget have a **differential impact [positive or negative]** on people with a particular sexual orientation?

Please provide evidence to explain why this group may be particularly affected.

It is considered that this scheme is unlikely to have a disproportionate impact on grounds of Sexual Orientation.

No matters were raised during the consultation survey.

Mitigating actions to be taken

N/A

Socio-economic deprivation

This refers to people who are disadvantaged due to socio-economic factors e.g. unemployment, low income, low academic qualifications or living in a deprived area, social housing or unstable housing.

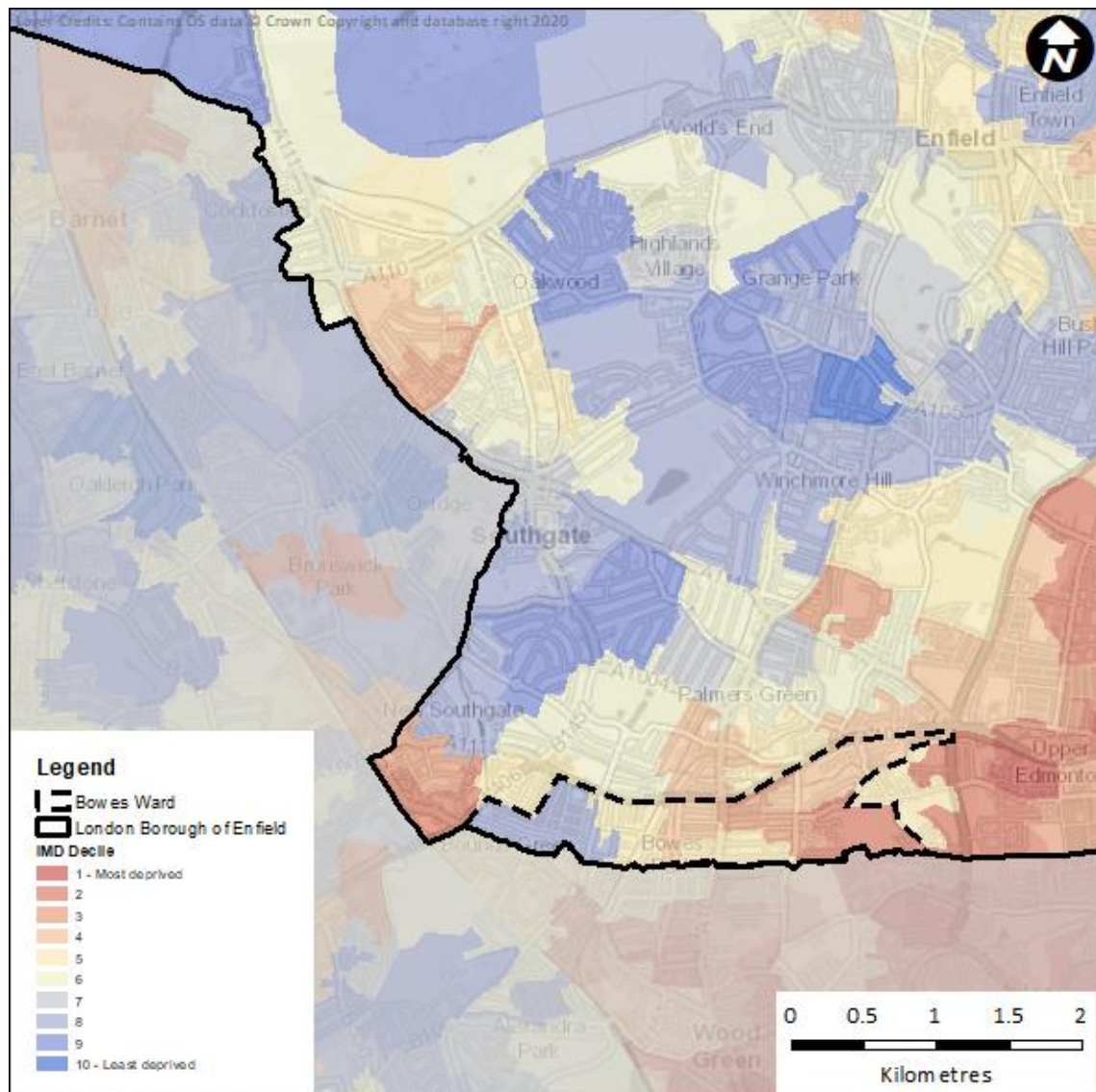
Will this change to service/policy/budget have a **differential impact [positive or negative]** on people who are socio-economically disadvantaged?

Please provide evidence to explain why this group may be particularly affected.

Evidence base

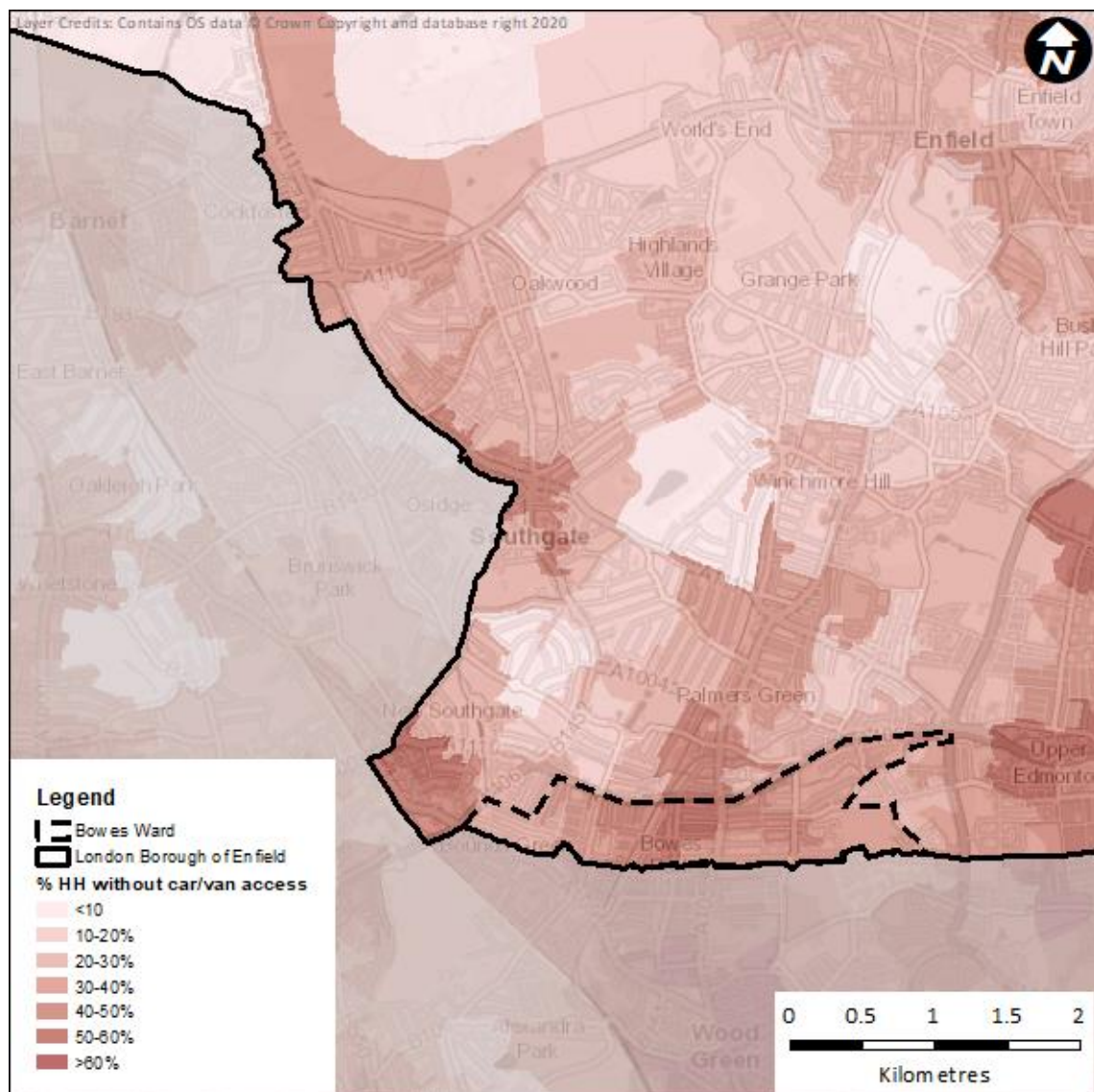
As outlined within the Enfield Transport Plan (2019), Enfield is one of the most deprived Outer London boroughs. Enfield is now the 12th most deprived London borough, whereas it was 14th in 2010. The Borough's overall ranking in the 2015 Indices of Multiple Deprivation remained unchanged from 2010 at 64th most deprived out of 326 English local authorities

Figure 12 presents a visual representative of deprivation across Enfield. Bowes sits within the southwest of Enfield. In broad terms the eastern areas of Enfield have more levels of deprivation, whereas the west and northwest areas have the least. However, Figure 12 shows that the area of interest has a diverse spread of deprivation levels – with the western portion of the area being one of the least deprived within the borough, and the rest of the scheme sitting between 5 and 3 on the IMD Decile, making it some of the most deprived.

Figure 12: Deprivation in Enfield


Data source: Department for Communities and Local Government 2019

Figure 13 presents the percentage of households without access to a car or van. Across the borough, areas with lower access to a car or van broadly correlate with indices of deprivation. This is reflected within the scheme area, as there are lower levels of access to car/van in the eastern portion – which is also the area with the highest levels of deprivation. The rest of the scheme areal has average levels of access to a car or van at around 30-50% without access.

Figure 13: Percentage of Enfield Households Without Access to a Car or Van


Data source: UK Census 2011

TfL research shows that low income Londoners also tend to travel less frequently than Londoners overall – 2.2 trips per weekday on average compared to 2.4 among all Londoners. Among this group, a greater proportion of journeys are completed for the purposes of shopping and personal business: 31% for Londoners with household income of less than £20,000 compared with 22% all Londoners (in line with 31% and 22% observed in 2013/14)¹².

Londoners in lower income households are the most likely equality group to use the bus at least weekly; seven in 10 Londoners in households with an annual income of less than £20,000 do so (69%).

Differential impact assessment

While Bowes is not one of the most deprived areas in Enfield, nor does it have the highest levels of households without access to a car/van, there is still a significant percentage of residents in this category. Cycling and walking present a low-cost form of transport and can connect people safely and quickly to local centres, as well as to stations as part of multi-modal longer distance journeys (e.g. into inner London). As such, the Quiet Neighbourhood improvements to Bowes will benefit cycling and walking and therefore are likely to disproportionately benefit those without access to cars.

Primary roads are more likely to experience the impacts of reassigned traffic in the short term. These roads may have pockets of dense housing on them and so the impact on the residents needs to be considered.

People on lower incomes are less likely to be able to afford to adapt to the measures (e.g. buying a new bike), therefore may not experience the full benefits of the scheme compared to those from higher income backgrounds. This may mean that those on higher incomes disproportionately benefit from the scheme.

Mitigating actions to be taken.

It is recommended that the benefits of this scheme and active travel are advertised, with a specific focus on reaching those with lower households' incomes.

Specific consideration should be given to where traffic is likely to be reassigned to, to review the impact on adjacent properties when reviewing traffic data. This includes consideration for impact on buses which people from more disadvantaged areas are more likely to use more frequently.

Encourage lower income households to make use of free bike repair services, such as Dr Bike, and opportunities to access affordable cycles, such as second-hand bike markets.

SECTION 4 – Monitoring and Review

How do you intend to monitor and review the effects of this proposal?

Who will be responsible for assessing the effects of this proposal?

¹² <https://content.tfl.gov.uk/travel-in-london-understanding-our-diverse-communities-2019.pdf>

The project aims to improve conditions for those already walking and cycling and also to help make non-car transport options more attractive by them safer, more accessible, and ultimately, more convenient. It is acknowledged that these improvements come at an ongoing inconvenience to drivers. The altering of traffic flow will add some level of complication to trips and will increase the length of many car journeys made through the study area. However, access to all locations is maintained. This impact will be felt disproportionately by individuals who rely upon cars as their primary or only mode of transport, which is common for elderly or disabled people and certain ethnic groups. It is important to carry out quality consultation with those who rely upon cars to minimise any adverse impacts.

The monitoring and evaluation for this project is critical for many of the recommendations set out in this EqIA. Alongside consultation and engagement, these are the primary means of monitoring benefits and disbenefits of the project. Activities include monitoring of traffic volumes including bus journey times, air and noise quality, and engagement with emergency services. Consultation and engagement activities are planned to reflect relevant recommendations in this EqIA. The outcomes of monitoring, consultation and engagement will help to inform whether the project has been successful in achieving its objectives and in identifying, and if possible mitigating, the potential inequalities raised in this EqIA.

This EqIA is not a static document will continue to be developed during the course of this project.

SECTION 5 – Action Plan for Mitigating Actions.

Protected Characteristic	Identified Issue	Action Required/Comments	Lead officer	Timescale /By When	Costs	Review Date/ Comments
Age	Under-representation of younger people in consultation responses	Any future engagement should target those aged under 40 (and especially under 30) who have been highly under-represented, to gain better insights into whether there are any specific disproportionate impacts (either positive or negative) on younger people. This could be achieved through measures such as targeted advertising on social media, or at locations frequented by the younger generation such as leisure centres or gyms.	Christina Gordon	During-scheme monitoring	Included within scheme budget	11/11/21 Further engagement opened for 21 days in November 2021
Age	Traffic reassignment onto main roads may delay bus services, affecting younger people in particular	Continue to monitor bus journey times using TfL bus journey time data, and consider mitigation measures if there is an impact.	Christina Gordon	During-scheme monitoring	Included within scheme budget	11/11/21 monitoring plan examining bus journey times
Age Disability	Longer journey times for people who rely on private cars, taxis or Dial-a-Ride.	Investigate the impact on local private hire vehicle and taxi with respect to journey times, cost and accessibility.	Christina Gordon	During-scheme monitoring	Included within scheme budget	21/07/21 Meeting held with Black cab representative

Disability	Consultation showed that disabled people had concerns about reaching locations such as hospitals, pharmacies and dentists within the area.	Identify travel patterns to local hospitals to monitor whether the scheme is having a disproportionate impact on those who make regular essential trips by car. This could be reviewed via focus groups with disabled residents.	Christina Gordon	During-scheme monitoring	Included within scheme budget	15/06/21 Focus groups held, updated text.
Disability	Some children may experience discomfort with the changes to the local environment especially where this may cause a change in route.	Maintain contact with Bowes Primary School to discuss any changes and to review impacts.	Christina Gordon	During-scheme monitoring	Included within scheme budget	11/11/21 Scheme maintained in current form with minimal changes
Disability	Changes or removal of the scheme may present challenges for people with certain disabilities.	If any changes to scheme or its removal is recommended, consideration should be given to residents who may have challenges in their surroundings.	Christina Gordon	During-scheme monitoring	Included within scheme budget	11/11/21 Scheme maintained in current form with minimal changes
Race	Consultation analysis highlighted that the proportions of responses from	Any future engagement to target community organisations.	Christina Gordon	During-scheme monitoring	Included within scheme budget	11/11/21 Further engagement opened for

	Mixed, Asian and Black respondents was lower than might be expected from the 2011 Census.					21 days in November 2021
Race	Car usage in Enfield is high, particularly for 'Gypsy or Irish Travellers'. For this reason, the scheme may disproportionately affect this ethnic groups – such as causing longer journey times for trips made by car.	It is recommended that Enfield officers work internally with the Gypsy Roma Traveller (GRT) lead to discuss the unique characteristics of this ethnic group. Consideration should be given as to how schemes could assist with reducing car usage and encouraging modal shift.	Christina Gordon	During-scheme monitoring	Included within scheme budget	11/11/21 GRT accommodation needs assessment reviewed. No issues. Specific mode shift targeting as part of broader programme.
Race	Traffic reassignment onto main roads may cause short term delays to bus services, affecting 'Other Ethnic Groups' in particular.	Continue to monitor bus journey times using TfL data, and consider mitigation measures if there is an impact.	Christina Gordon	During-scheme monitoring	Included within scheme budget	11/11/21 Monitored as part of monitoring plan

Religion and belief	Consultation analysis highlighted that there was potential under-representation of those with a religious belief in the initial consultation period.	Any future engagement should target places of worship that were under-represented within the initial consultation period.	Christina Gordon	During-scheme monitoring	Included within scheme budget	11/11/21 Review of responses did not yield any concerns. Further consultation period open.
Religion and belief	The scheme is likely to increase journey times for some worshippers that live within the QN	Any future engagement should target places of worship to review the specific needs of their religious community.	Christina Gordon	During-scheme monitoring	Included within scheme budget	11/11/21 Review of responses did not yield any concerns. Further consultation period open.
Sex	Traffic reassignment onto main roads may cause short term delays to bus services, affecting females in particular	Continue to monitor bus journey times using TfL data, and consider mitigation measures if there is an impact.	Christina Gordon	During-scheme monitoring	Included within scheme budget	11/11/21 Monitored as part of monitoring plan

Sex	Public perception of personal security due to the reduced 'passive surveillance' of passing motor traffic.	Continue to engage with the Metropolitan Police and monitor crime and anti-social behaviour within the QN area since implementation.	Christina Gordon	During-scheme monitoring	Included within scheme budget	11/11/21 Monitored as part of monitoring plan.
Socio-economic deprivation	People on lower incomes are less likely to be able to afford to adapt to the measures (e.g. buying a new bike).	Encourage lower income households to make use of free bike repair services, such as Dr Bike, and opportunities to access affordable cycles, such as second hand bike markets.	Christina Gordon	During-scheme monitoring	Included within scheme budget	11/11/21 A number of Dr Bike sessions and bike markets held since scheme introduced
Socio-economic deprivation	Reassignment of motor traffic may disproportionately impact those on lower incomes who are more likely to live on busier roads.	Specific consideration should be given to where traffic is likely to be reassigned to, to review the impact on adjacent properties when reviewing traffic data. This includes consideration for impact on buses which people from more disadvantaged areas are more likely to use more frequently.	Christina Gordon	During-scheme monitoring	Included within scheme budget	11/11/21 Traffic impact monitored as part of plan.

Report Title



Bowes Primary
Quieter Neighbourhood
Disabled People and Carers
Consultation Analysis

Final Report

May 2021





Bowes Primary Quieter Neighbourhood
Disabled People and Carers Consultation Analysis
Final Report

Version 2-0

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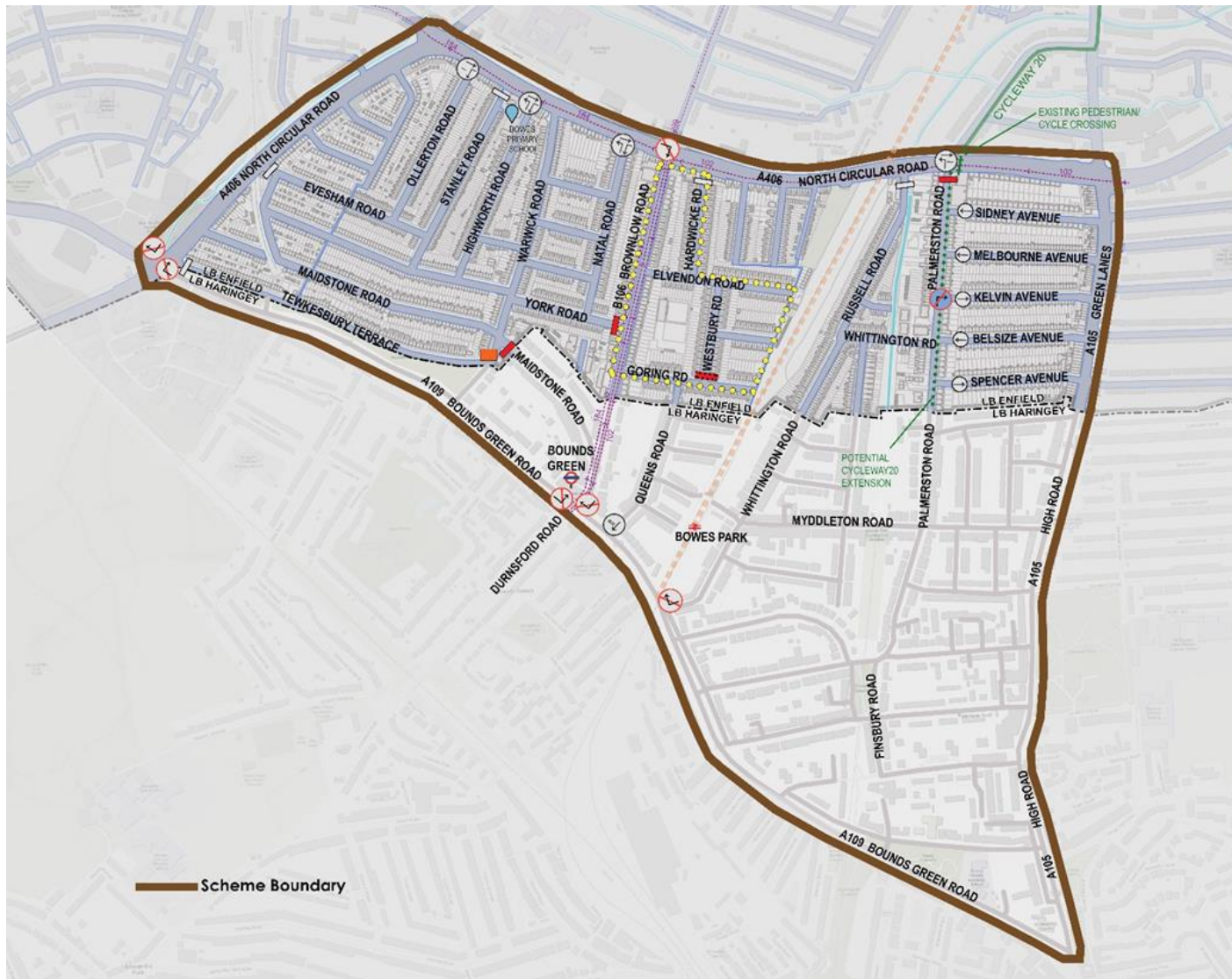
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Appendices

Appendix A	Survey questionnaire
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1. Introduction

- 1.1 In 2019, the London Borough of Enfield engaged with residents in the Bowes Primary & Surrounding Streets Quieter Neighbourhood area through a Perception Survey to better understand the issues that they were experiencing. The most common responses to this survey were problems relating to traffic volumes and speeds, and non-residential traffic cutting through the area.
- 1.2 Informed by this and following the outbreak of the COVID-19 pandemic, the Council used Experimental Traffic Orders (ETO) to implement a range of measures in the area using funding from TfL's Streetspace programme – creating a Quieter Neighbourhood (QN). The QN covers the boundary between Enfield and Haringey. The creation of the QN has involved installation of road closures to motor vehicles at the following locations:
- Maidstone Road at its junction with Warwick Road
 - York Road at its junction with Brownlow Road
 - Palmerston Road northbound at its junction with the A406 North Circular Road
 - Existing width restriction on Warwick Road, near its junction with Maidstone Road, replaced with point closure for all vehicles except for emergency vehicles and service vehicles
- 1.3 The full scope of the QN is shown in Figure 1-1.

Figure 1-1: Map of the Bowes Primary and Surrounding Streets Quieter Neighbourhood

- 1.4 The ETO allowed residents to provide feedback on the scheme via an online consultation survey. This consultation survey was opened on 28th September and closed on 2nd May 2021. ITP coded and analysed this survey on a rolling basis, so that a report could be provided to the Council shortly after its closing date for their consideration on the following Phases of the scheme.
- 1.5 In addition to this consultation survey, which was open to all members of the public, a survey specifically targeted at disabled residents and carers was distributed to Blue Badge holders and those who had indicated in the main survey that they were either disabled themselves or a carer. The Disabled People and Carers Survey was available both online and in paper format and was designed to be completed either directly by people with disabilities or on their behalf by a carer. The online survey received 70

responses from 63 respondents and there were 54 paper surveys returned to Enfield Council. Both forms of this survey were available for just over a month; between 27th February and 31st March 2021.

- 1.6 This report collates the analysis of the responses to the Disabled People and Carers Survey. When the report for the main consultation is published, this report will be appended to it. A copy of the survey questionnaire is provided in Appendix A.

About ITP

- 1.7 ITP is an award-winning UK transport planning and research consultancy. We have provided consultation analysis support for various UK and London local authorities, as well as for TfL on multiple projects. In this context, we analyse consultation responses in an independent, unbiased way to ensure that all residents' views are heard and represented. We work with the Council to provide feedback that can inform alterations to the scheme in line with the views of the local community, as well as providing reporting that can re-assure residents that their voices are considered. This report presents the findings of our analysis, without comment or recommendation, for the Council to make an independently informed decision going forward.

Structure of this report

- 1.8 This report covers the analysis of all information submitted on the scheme regarding the closed and open questions of the consultation survey, both online and in paper form. The structure of the report is as follows:
- **Section 2: Methodology** – covers the approach we took to analysing the sample characteristics and conducting the thematic analysis of the open questions.
 - **Section 3: Sample characteristics** – provides an overview of the characteristics of the survey respondents.
 - **Section 4: Positive aspects of the QN** – covers responses to the first open question regarding what aspects, if any, of the QN the respondents liked.
 - **Section 5: Negative aspects of the QN** – covers responses to the open question regarding what aspects, if any, of the QN the respondents disliked.
 - **Section 6: General comments** – covers responses to the open question asking for general feedback on the scheme.
 - **Section 7: Impact on accessibility of specific locations** – covers responses to the third, fourth and fifth open questions, all assessing the impact of the QN on the accessibility of specific locations.

- **Section 8: Communications** – covers responses to the sixth open question regarding what the Council could do to better improve communications in the future.
- **Section 9: Conclusion** – covers a summary of the report and next steps.

2. Methodology

- 2.1 Unlike the main consultation survey, the Disabled People and Carers Survey used only open questions to gauge respondents' opinions of the QN, rather than a mixture of open and closed questions. There were a small number of closed questions included in the survey used to gather the characteristics of the survey sample including data relating to respondents' year of birth, their home location (street name) and (where applicable) the nature of their disability or (if completing the survey on behalf of a disabled person) the relationship between the respondent and the disabled person they were responding on behalf of.
- 2.2 As the questions in the online and paper surveys were identical, they have been analysed as one data set, with responses to the paper surveys entered by Enfield Council staff into the online survey database.
- 2.3 All responses were either provided by an individual or on behalf of an individual. No responses were provided on behalf of a stakeholder group.

Analysing responses

Closed questions

- 2.4 Responses to the closed questions were analysed in MS Excel, allowing frequency counts and percentages of each response to be calculated.

Open questions

- 2.5 The consultation also asked seven open questions, which allowed respondents to give free-form responses. Not every person who responded to the survey provided answers to all the open questions. Every single response to an open question was read and coded by an experienced analyst.
- 2.6 The responses to these questions were subject to *thematic analysis*. Thematic analysis usually involves creating a list of common themes from a small sample of responses, and then using this list to 'code' responses. The list of common responses is referred to as a 'coding frame'. However, as this survey relates to similar issues covered by the main consultation analysis for the Bowes Primary and Surrounding Streets Quieter Neighbourhood, and because the sample sizes were no more than 120 responses, a combined coding frame collated from the four open questions of the main survey was used to form a comprehensive coding frame for this survey. The coding frame was altered where necessary to capture the themes occurring in this survey. For instance, a set of codes was created for specific locations where appropriate.

- 2.7 This approach allows us to categorise and group responses that mention the same or similar themes, giving overall proportions of people who agree with that sentiment. Any codes referenced by less than 2% of the overall sample were not considered in this analysis, to ensure a focus on key themes.
- 2.8 Codes were primarily arranged into three categories – Support, Oppose and Suggest. ‘Support’ codes relate to responses which gave positive or supportive comments about aspects of the scheme. ‘Oppose’ codes related to responses which raised concerns or opposed the scheme for a variety of reasons. ‘Suggest’ codes related to responses which gave specific suggestions for how to improve the scheme. Responses were not necessarily wholly supportive or opposing – all individual elements of the responses were coded separately.
- 2.9 In addition to these three categories, type of disability and specific locations were also coded where relevant. The disability typology included the six categories given in the closed question asking respondents to specify their disability, as well as any additional disabilities that did not fall into one of these six categories. Specific locations were coded for the three open questions assessing the impact of the QN on the accessibility of specific locations. Over 50 codes were used for each open question, providing a huge amount of extremely detailed data.
- 2.10 There is an amount of subjectivity with response coding, as an analyst is reading and coding each response. However, to minimise the impact of this, one analyst worked on the coding of all survey responses provided to minimise the potential variation in how these responses were coded.

Repeat responses

- 2.11 Respondents were able to send multiple responses to the online survey, and/or respond to the paper survey if they wished. Every unique survey response has been read and coded, regardless of whether that person had already sent a response. However, for the online surveys, only the respondent’s first response has been included in the analysis of the report.
- 2.12 Repeat respondents were identified in the online survey by matching responses with the respondent’s username and identifying how many responses came from usernames that had already submitted a response. As the paper surveys were all input by the same user at Enfield Council, there was no way of identifying repeat responses to the paper survey or those who had answered both the online and paper survey. However, this was not considered a significant issue, as only one copy of the paper survey was sent to each Blue Badge holder and there were only 7 repeat responses (10%) to the online survey.

Data in this report

- 2.13 The data shown in this report includes all data received up to the closing date of the consultation – 31st March 2021.

3. Sample characteristics

- 3.1 This section provides an overview of the characteristics of respondents to the survey. Some people did not respond to all the closed questions, and this has also been reported for each question.
- 3.2 As mentioned in the introduction, the survey received responses from 117 unique respondents, 63 of whom submitted online responses and the other 54 of whom responded to the paper survey. With such a small sample size, which is often reduced further by respondents leaving questions blank, the statistics presented in this report must be treated with caution. It also means that comparisons with the broader population or across multiple variables would be unreliable, so this has not been undertaken.

Carers

- 3.3 There was a relatively even split of respondents answering as a carer and from those who weren't, with 50 respondents (43%) answering as carers and 59 respondents (50%) not answering as carers. The question was left blank by 8 respondents (7%).
- 3.4 It is important to note that some responses from those answering as carers were, in fact, responses provided on behalf of people with disabilities. So, in the case of these responses, the views reflected in the open questions regarding the QN should have been the views of people with disabilities, not the carers answering the surveys.

Nature of respondents' disabilities

- 3.5 Respondents were asked if they were answering the survey as a disabled person, or on behalf of a disabled person. 98 responses (82%) were either given by a disabled person, or by a carer on behalf of a disabled person, with only 14 responses (14%) submitted by a carer, providing their own thoughts on the QN. There were also 5 responses (4%) which were left blank for this question.
- 3.6 Those that had reported that they were either disabled, or responding on behalf of a disabled person, were then given the opportunity to provide the broad nature of their disability or disabilities. These are presented in Table 3-1 below. Of those who reported that either they had a disability, or that they were responding on behalf of someone with a disability, over half (61) of these respondents (62%) reported having a physical or mobility impairment. 28 respondents (29%) reported having a long-standing illness or health condition and 11 respondents (11%) reported having a learning difficulty.

Table 3-1: Types of disability described by survey respondents

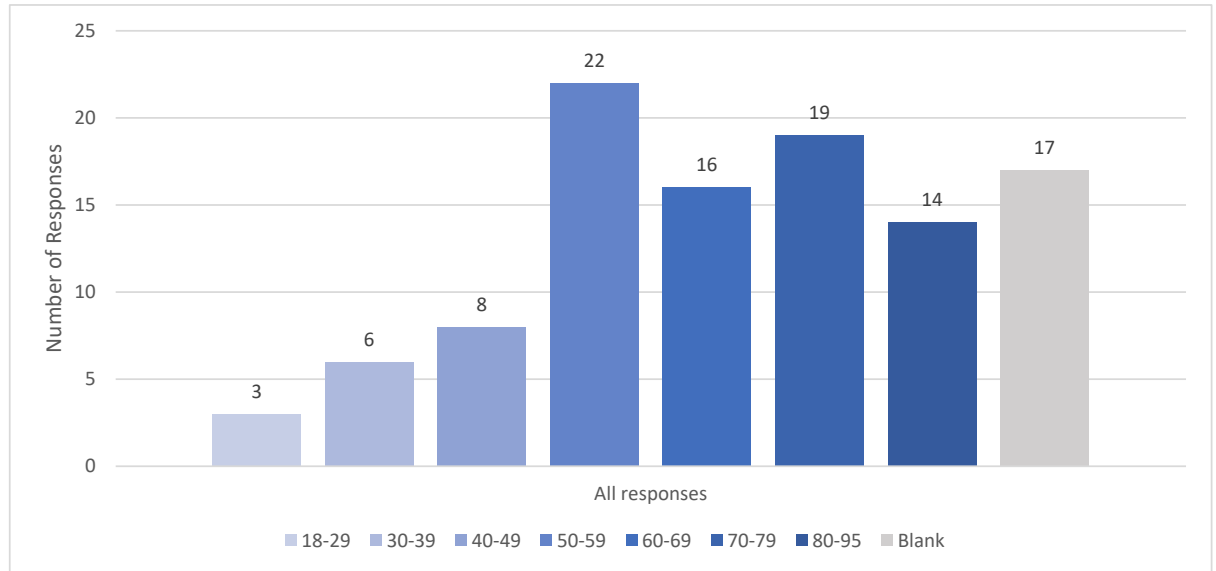
Disability type	No of respondents	% of respondents who reported that they had a disability (n=98)
Physical/mobility impairment, such as a difficulty using your arms or mobility issues which require you to use a wheelchair or crutches.	61	62%
Long-standing illness or health condition, such as cancer, HIV, diabetes, chronic heart disease or epilepsy	28	29%
Learning disability/difficulty, such as Down's syndrome or dyslexia or a cognitive impairment such as autistic spectrum disorder	11	11%
Hearing impairment, such as being deaf or having a serious hearing impairment	6	6%
Visual impairment, such as being blind or having a serious visual impairment	7	7%
Mental health condition, such as depression or schizophrenia	3	3%
Other	9	9%
Blank	2	2%

Age of respondents

- 3.7 The age of respondents was taken from the year of birth reported in the surveys, rather than also using the year of birth provided when signing up to Enfield Council's website, as some users were answering on behalf of someone else.
- 3.8 Figure 3-1 shows the number of respondents in ten-year age bands, except for 18 to 29, and 80 to 95. The respondents to this survey were overwhelmingly 50 years old or older, with 81% of respondents (71) in one of the oldest four age bands. The age band featuring the most respondents was the 50 to 59 years band, with 22 respondents (25%) within this age range. This was closely followed by the 70 to 79 years band with

19 respondents (22%). Only 3 respondents (4%) were aged under 30. It should be noted that 17 respondents (15% of all respondents) did not provide their age.

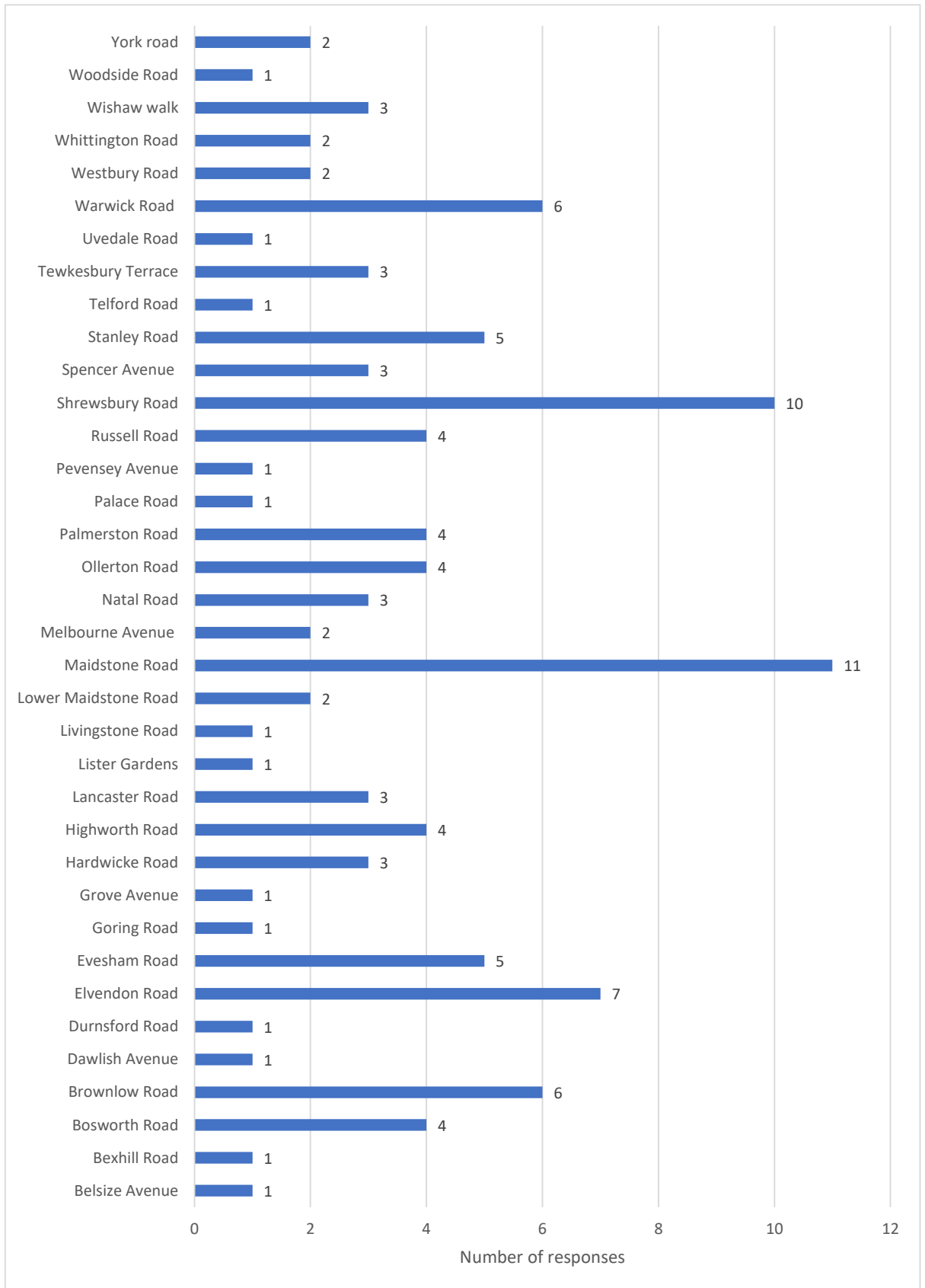
Figure 3-1: Number of responses from people in each age band



Respondents' location

- 3.9 Postcode data for responses could not be used to give an approximate location of responses as post codes were not asked for in the survey questions, and post code data from respondents' sign-up details could not be attributed to their responses as they may have been responding on behalf of someone else. Therefore, the street names provided in one of the closed questions were used to gain an approximate idea of the locations of responses.
- 3.10 The majority of respondents came from within the Bowes Primary QN, with 96 respondents (86% of those who provided their street name) submitted by respondents reporting to live on a street or road within the QN. As Figure 3-2 shows, the street with the most respondents was Maidstone Road with 11 (10%), closely followed by Shrewsbury Road with 10 respondents (9%). Brownlow Road and Warwick Road were home to 6 respondents (5%) each. It should be remembered that the sample size of 117 respondents for this survey is relatively small meaning that, with so many possible streets of origin and 7 respondents (6%) who didn't provide their street name, the relative proportions of respondents from each street should be considered with caution.

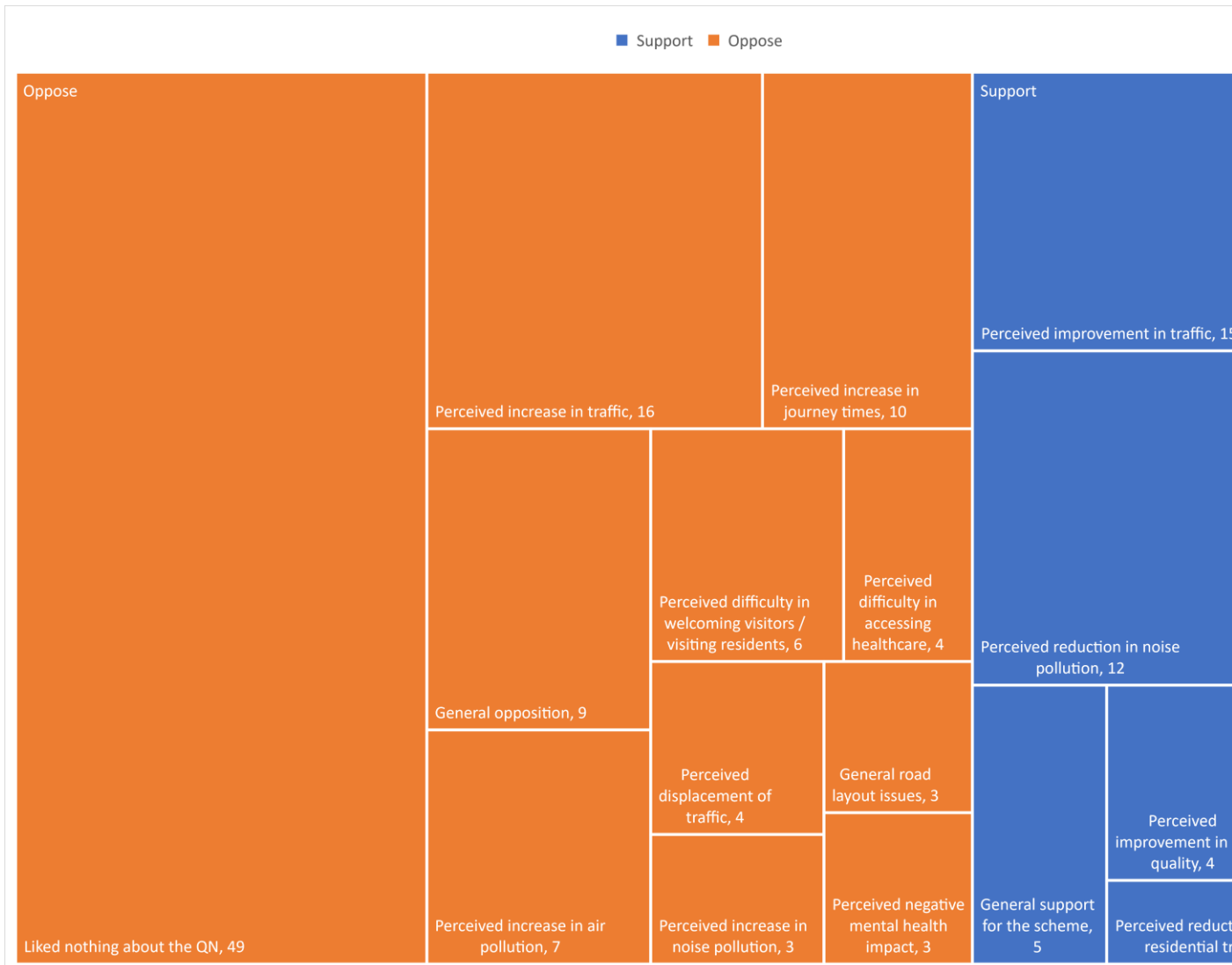
Figure 3-2: Number of responses from streets of respondents' homes



4. Positive aspects of the QN

- 4.1 Respondents were asked 'Overall, what have you liked and enjoyed, if anything, about the Bowes Primary and Surrounding Streets Quieter Neighbourhood?', as an open response answer. There were 112 responses to this question, and the average word count was 27 words. The 2% cut-off minimum for this question was 3 responses (i.e. only codes with 3 responses or more are included here). It should be noted that not all responses answered this question directly; regardless, responses not referring directly to things they liked about the QN have been considered and coded within this section (including aspects that people disliked).
- 4.2 Figure 4-1 shows that the most common responses were from those not answering the question directly and choosing to give a negative response, with 49 respondents (42%) saying that they did not like any aspect of the QN. The most common supportive comment related to a perceived decrease in traffic in the QN, with 15 respondents (13%) reporting this. This was closely followed by those who had perceived there to have been a reduction in noise pollution in the QN, with 12 respondents (10%) reporting this.
- 4.3 Please note, the sum of the numbers given in this section is not equivalent to the total responses to this question. This is because most answers referenced more than one of the codes. Some of the codes have been abbreviated in Figure 4-1, so a full list of codes and their frequencies is reported below it.

Figure 4-1: Overall, what have you liked and enjoyed, if anything, about the Bowes Primary and Surrounding Streets QN?



Support

- 15 responses referred to a perceived **improvement in traffic in the QN**
- 12 responses referred to a perceived **reduction in noise pollution**
- 6 responses referred to a perceived **improvement in the safety of streets**
- 5 responses offered **general support for the scheme** (with phrases such as “I am 100% in favour”)
- 4 responses referred to a perceived **reduction in air pollution or an improvement in air quality**
- 3 responses referred to the scheme **encouraging a mode shift** (e.g. respondents using their car less and walking more of their journeys)

- 3 responses referred to a perceived **reduction in non-residential traffic cutting through the area**

Oppose

- 49 responses referred to **liking nothing about the scheme**
- 16 responses referred to a perceived **increase in traffic**
- 10 responses referred to a perceived **increase in journey times**
- 9 responses referred to a **general opposition to the scheme** (e.g. "I don't like it")
- 7 responses referred to a perceived **increase in air pollution**
- 6 responses referred to respondents being **unable or finding it much harder to visit friends or family, or to welcome visitors to their own home**
- 4 responses referred to **respondents finding it harder to access healthcare or for carers to gain access to patients**
- 4 responses referred to a perceived **displacement of traffic** (within Bounds Green or to Haringey)
- 3 responses referred to a perceived **increase in noise pollution**
- 3 responses referred **generally to road layout issues with the QN**
- 3 responses referred to the respondents or someone else's **mental health being negatively impacted by the QN**

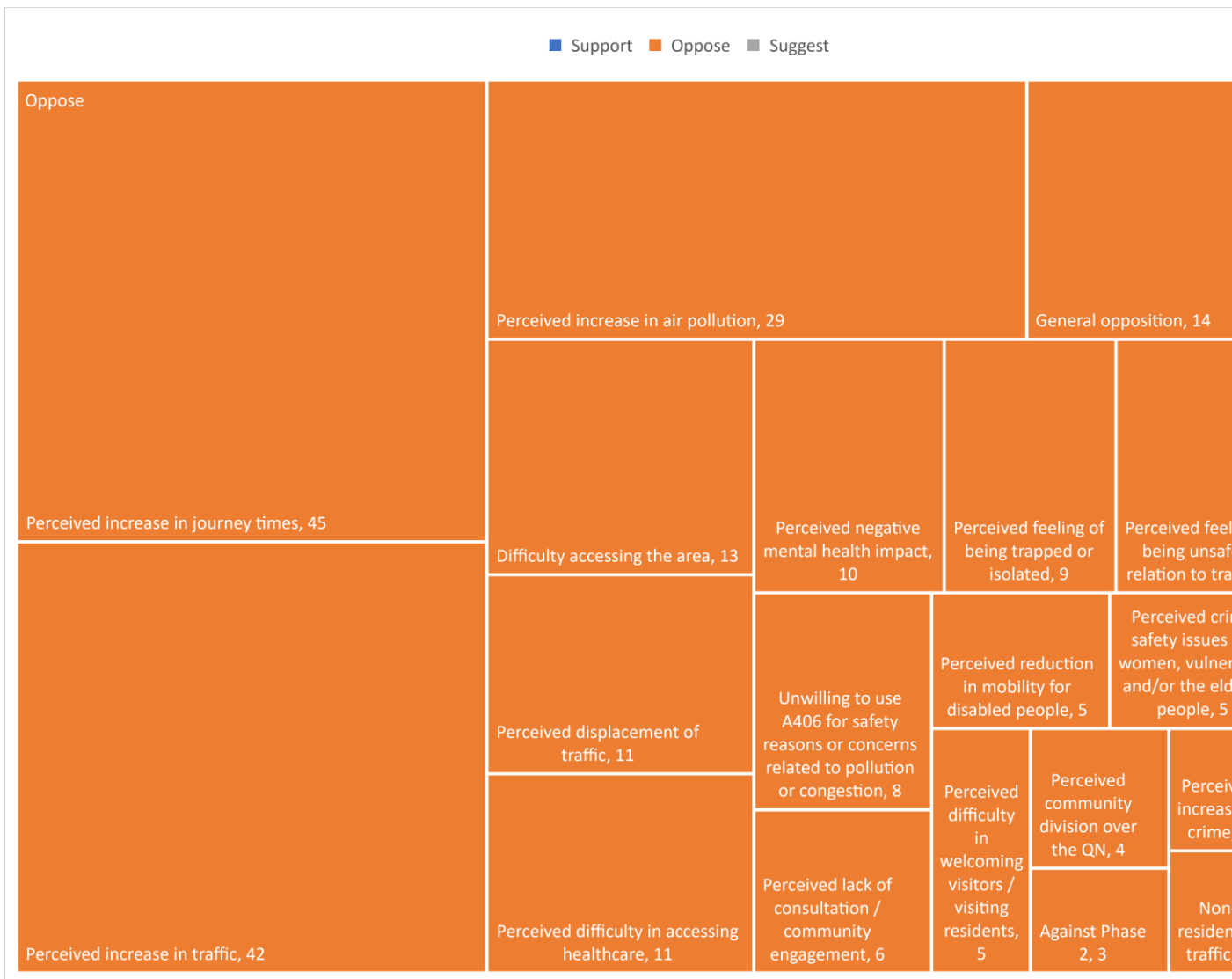
Suggest

- 4.4 There were no suggestions made in the responses to this question that met the minimum threshold of three responses.

5. Negative aspects of the QN

- 5.1 Respondents were asked 'Overall, what have you disliked, if anything, about the Bowes Primary and Surrounding Streets Quieter Neighbourhood?', as an open response answer. There were 112 responses to this question, and the average word count was 71 words. The 2% cut-off minimum for this question was 3 responses (i.e. only codes with 3 responses or more are included here). It should be noted that not all responses answered this question directly; regardless, responses not referring directly to things they disliked about the QN have been considered and coded within this section.
- 5.2 Figure 5-1 shows that the most common opposition to the scheme was a perceived increase in journey times, with 45 respondents (38%) reporting this. This was closely followed by a perceived increase in traffic in the QN, with 42 respondents (36%) reporting this.
- 5.3 Please note, the sum of the numbers given in this section is not equivalent to the total responses to this question. This is because most answers referenced more than one of the codes. Some of the codes have been abbreviated in Figure 5-1, so a full list of codes and their frequencies is reported below it.

Figure 5-1: Overall, what have you disliked, if anything, about the Bowes Primary and Surrounding Streets QN?



Support

- 8 responses **offered general support for the scheme** (e.g. "no issues")

Oppose

- 45 responses referred to a perceived **increase in journey times**
- 42 responses referred to a perceived **increase in traffic**
- 29 responses referred to a perceived **increase in air pollution**
- 14 responses referred to a **general opposition to the scheme**
- 13 responses referred to having **difficulty accessing the area**

- 11 responses referred to **respondents finding it harder to access healthcare or for carers to gain access to patients**
- 11 responses referred to a perceived **displacement of traffic** (within Bounds Green or to Haringey)
- 10 responses referred to the respondent's or someone else's **mental health being negatively impacted by the QN**
- 9 responses referred to **feeling trapped or isolated**
- 9 responses referred to **feeling unsafe in relation to traffic**
- 8 responses referred to being **unwilling or unhappy to use A406** (for reasons such as perceiving it to be unsafe, polluted or too congested)
- 6 responses referred to a perceived **lack of consultation or poor community engagement**
- 5 responses referred to a **perceived reduction in mobility for disabled people**
- 5 responses referred to **the QN being unsafe for women, the vulnerable and/or the elderly due to a perceived increase in crime or susceptibility to crime**
- 5 responses referred to respondents being **unable or finding it much harder to visit friends or family, or to welcome visitors to their own home**
- 4 responses referred to a perceived **division in the community caused by the scheme**
- 3 responses were **generally against the proposed Brownlow Road closure and/or Phase 2 as a whole**
- 3 responses referred to the respondent's or someone else's **physical health being negatively impacted by the QN**
- 3 responses referred to a perceived **increase in crime in the LTN area since its introduction**
- 3 responses referred to a perceived **increase in or failure to reduce non-residential traffic cutting through the area**

Suggest

- 4 responses suggested **stopping or not continuing with the scheme**

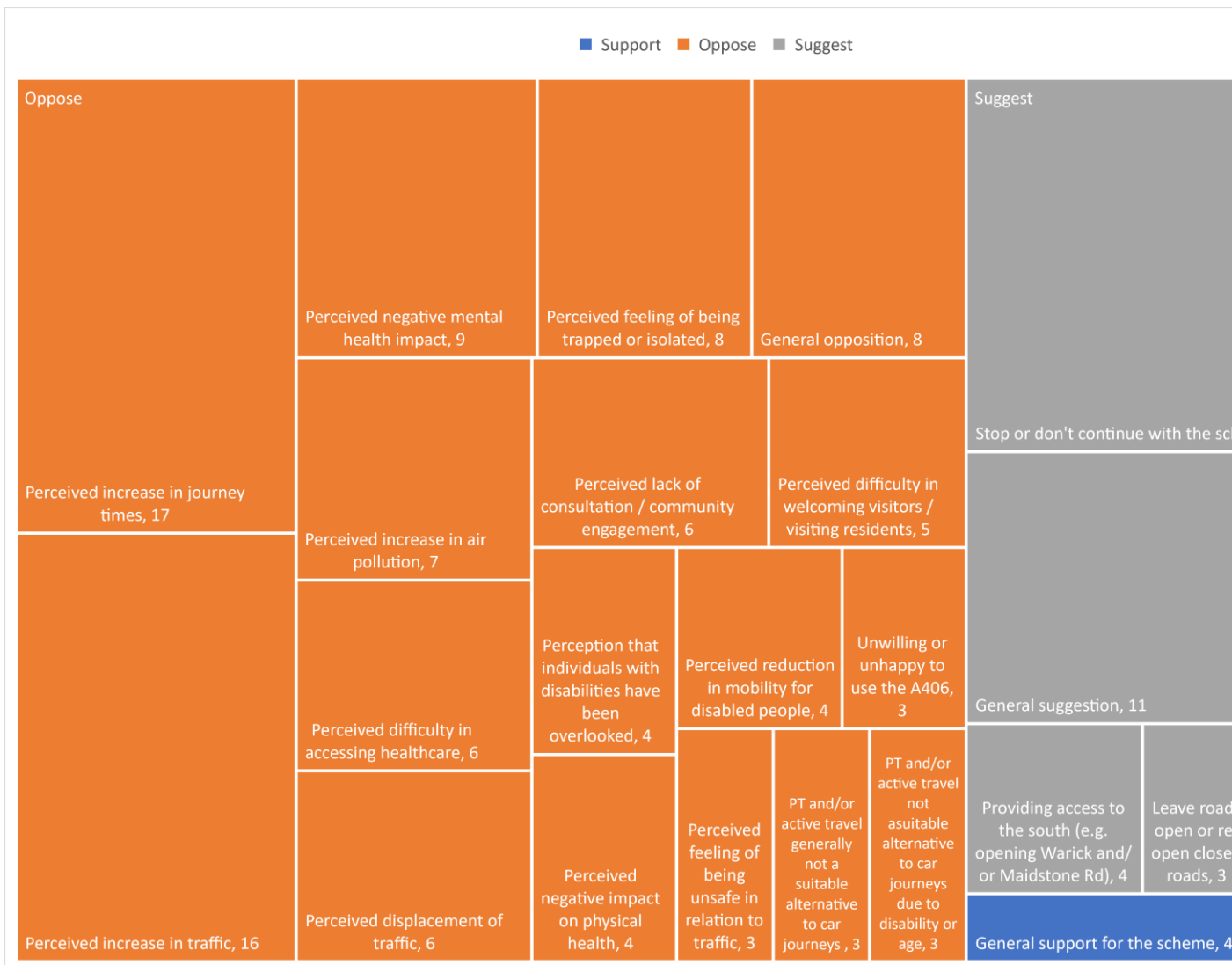
Disabilities mentioned

- 6 responses referred to a **physical/mobility impairment**, such as a difficulty using your arms or mobility issues which require you to use a wheelchair or crutches

6. General comments

- 6.1 Respondents were asked 'Do you have any other comments about this scheme that you would like to share?', as an open response answer. There were 104 responses to this question, and the average word count was 52 words. The 2% cut-off minimum for this question was 3 responses (i.e. only codes with 3 responses or more are included here). It should be noted that not all responses answered this question directly; regardless, responses not referring directly to things they disliked about the QN have been considered and coded within this section.
- 6.2 As Figure 6-1 shows, the codes in opposition to the scheme were generally reflective of those seen in the previous section, with 17 respondents reporting a perceived increase in journey times (15%) and 16 respondents reporting a perceived increase in traffic (14%), making them the most common oppositions. However, there were also a number of suggestions provided in answer to this question, with 22 respondents (19%) suggesting the scheme should be stopped.
- 6.3 Please note, the sum of the numbers given in this section is not equivalent to the total responses to this question. This is because most answers referenced more than one of the codes. Some of the codes have been abbreviated in Figure 6-1, so a full list of codes and their frequencies is reported below it.

Figure 6-1: Do you have any other comments about this scheme that you would like to share?



Support

- 4 responses offered **general support for the scheme** (with phrases such as “I am 100% in favour”)

Oppose

- 17 responses referred to a perceived **increase in journey times**
- 16 responses referred to a perceived **increase in traffic**
- 9 responses referred to the respondent’s or someone else’s **mental health being negatively impacted by the QN**
- 8 responses referred to **feeling trapped or isolated**
- 8 responses referred to a **general opposition to the scheme**



- 7 responses referred to a perceived **increase in air pollution**
- 6 responses referred to **respondents finding it harder to access healthcare or for carers to gain access to patients**
- 6 responses referred to a perceived **displacement of traffic** (within Bounds Green or to Haringey)
- 6 responses referred to a perceived **lack of consultation or poor community engagement**
- 5 responses referred to respondents being **unable or finding it much harder to visit friends or family, or to welcome visitors to their own home**
- 4 responses referred to a perception that **individuals with disabilities have been overlooked by the scheme**
- 4 responses referred to the respondent's or someone else's **physical health being negatively impacted by the QN**
- 4 responses referred to a **perceived reduction in mobility for disabled people**
- 3 responses referred to being **unwilling or unhappy to use the A406** (for reasons such as perceiving it to be unsafe, polluted or too congested)
- 3 responses referred to **feeling unsafe in relation to traffic**
- 3 responses referred generally to a perception that **public transport and/or active travel not being a suitable alternative to car journeys**
- 3 responses referred to a perception that **public transport and/or active travel not being a suitable alternative to car journeys due to disability or age**

Suggest

- 22 responses suggested **stopping or not continuing with the scheme**
- 11 responses offered **a general suggestion**
- 5 responses suggested **residents-only access** (e.g. via ANPR)
- 4 responses suggested **re-opening Maidstone Road and/or Warwick Road closures or generally suggested providing access to the south**
- 3 responses made a **general suggestion of leaving roads open or re-opening closed roads** (these included comments suggesting leaving all the roads in the QN open and comments that were not specific about the roads they were suggesting should be left open)
- 3 responses suggested **conducting a full consultation with residents**

Disabilities mentioned

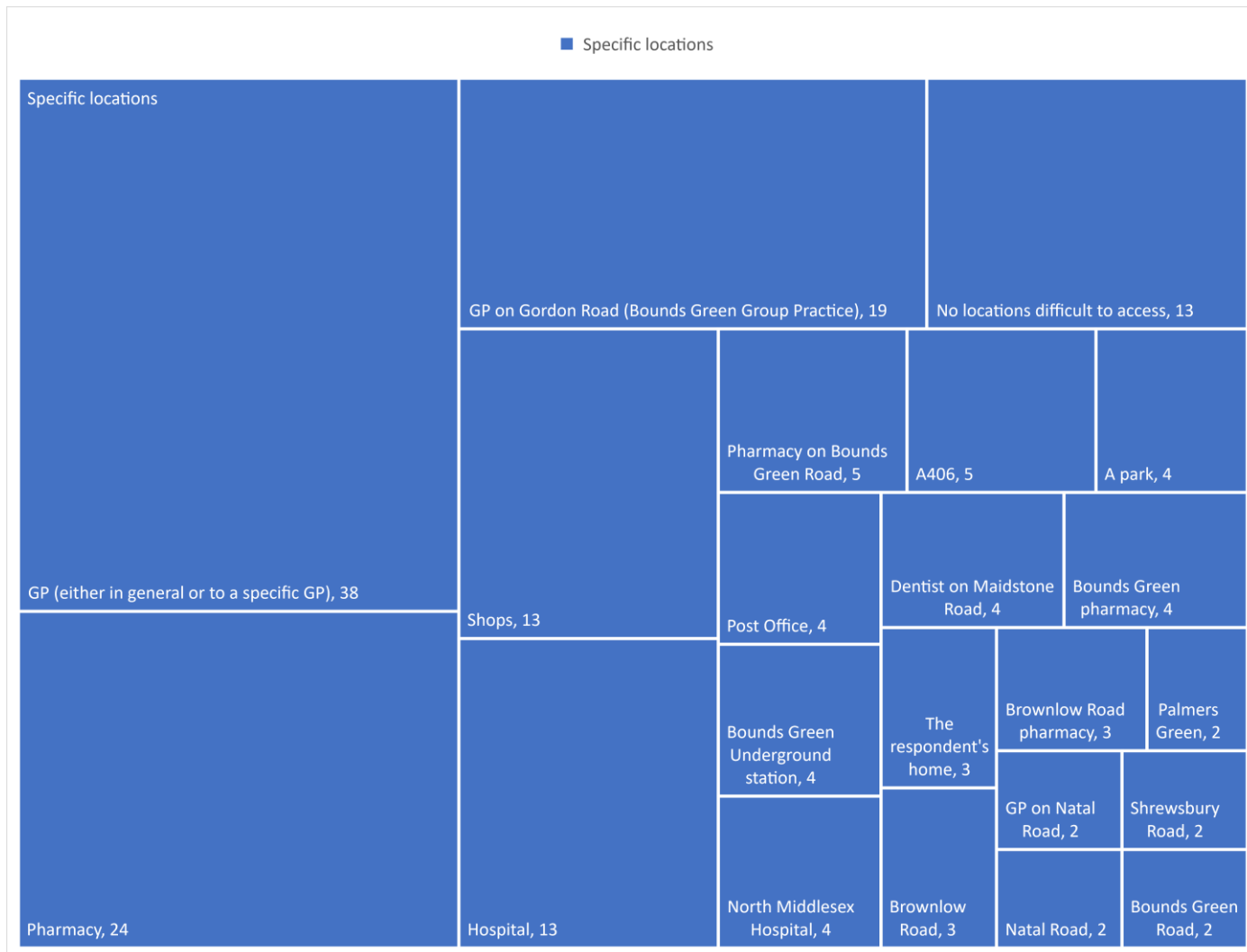
- 6.4 There were no disabilities that were mentioned frequently enough to meet the minimum threshold of three responses.

7. Impact on accessibility of specific locations

Disabled respondents / respondents answering on behalf of a disabled person

- 7.1 Respondents who were disabled, or were answering on behalf of a disabled person, were asked 'Are there any specific locations within or around the Bowes Primary and Surrounding Streets Quieter Neighbourhood that you are currently having trouble accessing as a result of the scheme? For example, doctors' surgeries, hospitals or pharmacies (please provide specific locations)', as an open response answer. There were 94 responses to this question, and the average word count was 49 words. The 2% cut-off minimum for this question was 2 responses (i.e. only codes with 2 responses or more are included here). It should be noted that not all responses answered this question directly; regardless, responses not referring directly to the impact on accessibility of specific locations as a result of the QN have been considered and coded within this section.
- 7.2 Whilst some respondents did offer some opposing and suggestive comments, Figure 7-1 only displays the specific locations that respondents perceived to have been made harder to access due to the scheme, as this was the main focus of the question. 38 respondents (32% of all respondents) mentioned a General Practice (GP), either specifically or generally, being difficult to access, with 19 of these respondents (59% of those who mentioned a GP) referring to the Bounds Green Group Practice in particular. Medical locations were the most common responses, with 24 respondents (21%) reporting having difficulties reaching a pharmacy and 13 respondents (11%) reporting having difficulties reaching a hospital, in addition to those who reported difficulties accessing a GP.
- 7.3 Please note, the sum of the numbers given in this section is not equivalent to the total responses to this question. This is because most answers referenced more than one of the codes. As only specific locations have been included in Figure 7-1, a full list of codes and their frequencies is reported below it.

Figure 7-1: Are there any specific locations within or around the Bowes Primary and Surrounding Streets Quieter Neighbourhood that you are currently having trouble accessing as a result of the scheme?



Specific locations mentioned

- 38 responses referred to a **GP** (either in general or to a specific GP)
- 24 responses referred to a **pharmacy or pharmacies**
- 19 responses referred to the **GP on Gordon Road (Bounds Green Group Practice)**
- 13 responses referred to **no locations being difficult to access**
- 13 responses referred to **shops**
- 13 responses referred to a **hospital**
- 5 responses referred to a **pharmacy on Bounds Green Road**
- 5 responses referred to the **A406**

- 4 responses referred to a **park**
- 4 responses referred to a **Post Office**
- 4 responses referred to **Bounds Green Underground station**
- 4 responses referred to **North Middlesex Hospital**
- 4 responses referred to the **dentist on Maidstone Road**
- 4 responses referred to the **Bounds Green pharmacy**
- 3 responses referred to the respondent's **home**
- 3 responses referred to **Brownlow Road**
- 3 responses referred to the **Brownlow Road pharmacy**
- 2 responses referred to **Palmers Green**
- 2 responses referred to **the GP on Natal Road**
- 2 responses referred to **Natal Road**
- 2 responses referred to **Shrewsbury Road**
- 2 responses referred to **Bounds Green Road**

Support

7.4 There were no supportive comments that met the cut-off minimum for this question.

Oppose

- 26 responses referred to a perceived **increase in journey times**
- 7 responses referred to a perceived **increase in traffic**
- 7 responses referred to respondents being **unable or finding it much harder to visit friends or family, or to welcome visitors to their own home**
- 4 responses referred to **respondents finding it harder to access healthcare or for carers to gain access to patients**
- 4 responses referred to being **unwilling or unhappy to use the A406** (for reasons such as perceiving it to be unsafe, polluted or too congested)
- 4 responses referred to the respondent's or someone else's **mental health being negatively impacted by the QN**
- 3 responses referred to **feeling trapped or isolated**
- 2 responses referred to having **difficulty accessing the area**
- 2 responses referred to a perceived **increase in air pollution**
- 2 responses referred generally to a perception that **public transport and/or active travel not being a suitable alternative to car journeys**

- 2 responses referred to a perception that **public transport and/or active travel not being a suitable alternative to car journeys due to disability or age**

Suggest

- 2 responses offered a **general suggestion**
- 2 responses made a **general suggestion of leaving roads open or re-opening closed roads** (this included comments suggesting leaving all the roads in the QN open and comments that were not specific about the roads they were suggesting should be left open)

Disabilities mentioned

- 7 responses referred to a **physical/mobility impairment**, such as a difficulty using your arms or mobility issues which require you to use a wheelchair or crutches
- 3 responses referred to a **need to be able to go to the toilet quickly**

People responding as carers or medical professionals

- 7.5 Respondents who were carers or medical professionals providing support to someone in the Bowes Primary and Surrounding Streets Quieter Neighbourhood were asked 'Are there any specific locations you are having trouble with accessing due to the scheme within or around the area? For example, doctors' surgeries, hospitals or pharmacies (please provide specific locations)', as an open response answer. There were 52 responses to this question, and the average word count was 41 words. There was effectively no cut-off minimum for this question as the 2% cut-off minimum for this question would have been 1 response. It should be noted that not all responses answered this question directly; regardless, responses not referring directly to the impact on accessibility of specific locations as a result of the QN have been considered and coded within this section.
- 7.6 The responses to this question were reflective of those in previous questions, with medical locations proving to be the most common locations that respondents felt had become difficult to access, and a perceived increase in journey times (13 respondents, 11%) and traffic (4 respondents, 3%) being two of the most popular opposing codes. Given the nature of the locations that were most often mentioned, it is unsurprising that the second most common opposing code related to healthcare being difficult to access, with 6 respondents (5%) answering as carers or medical professionals mentioning this.
- 7.7 Please note, the sum of the numbers given in this section is not equivalent to the total responses to this question. This is because most answers referenced more than one of the codes.

Specific locations mentioned

- 14 responses referred to a **GP** (either in general or to a specific GP)
- 9 responses referred to the **GP on Gordon Road (Bounds Green Group Practice)**
- 7 responses referred to a **pharmacy or pharmacies**
- 6 responses referred to a **hospital**
- 6 responses referred to **Warwick Road**
- 3 responses referred to **North Middlesex hospital**
- 2 responses referred to **no locations being difficult to access**
- 2 responses referred to the **dentist on Maidstone Road**
- 2 responses referred to **shops**
- 2 responses referred to a **pharmacy on Bounds Green Road**
- 2 responses referred to **Brownlow Road**
- 2 responses referred to **Maidstone Road**
- 1 response referred to **pharmacies in Winchmore Hill**
- 1 response referred to **schools**
- 1 response referred to **parks**
- 1 response referred to the respondent's **home**
- 1 response referred to the **GP on Natal Road**
- 1 response referred to **Finchley Memorial Hospital**
- 1 response referred to **Shrewsbury Road**
- 1 response referred to the **pharmacy on Alexandra Park Road**
- 1 response referred to the **surgery on Colney Hatch Lane**
- 1 response referred to the **Bounds Green pharmacy**
- 1 response referred to **Muswell Hill**
- 1 response referred to **N2**
- 1 response referred to **supported accommodations**
- 1 response referred to the **A406**
- 1 response referred to a **pharmacy in Palmers Green**
- 1 response referred to **Bounds Green Road**
- 1 response referred to the **Royal Free Hospital**
- 1 response referred to **UCLH**

- 1 response referred to **Health Care Harlow**

Support

7.8 There were no supportive comments for this question.

Oppose

- 13 responses referred to a perceived **increase in journey times**
- 6 responses referred to **respondents finding it harder to access healthcare or for carers to gain access to patients**
- 4 responses referred to a perceived **increase in traffic**
- 3 responses referred to a perception that **emergency vehicle access is being hampered**
- 3 responses referred to the respondent's or someone else's **mental health being negatively impacted by the QN**
- 2 responses referred to being **unwilling or unhappy to use the A406** (for reasons such as perceiving it to be unsafe, polluted or too congested)
- 2 responses referred to perceived **parking issues within the QN**
- 2 responses referred to having **difficulty accessing the area**
- 1 response referred to a perception that the QN has had **negative impact on the respondent's work**
- 1 response referred to the respondent's or someone else's **physical health being negatively impacted by the QN**
- 1 response referred to a perception that the QN is making it **harder to access childcare or school, or referred to time pressures for working mothers**
- 1 response referred to a perceived **impact on house saleability or a perception that people feel like they need to move away from the QN**

Suggest

7.9 There were no suggestions made in the responses to this question that met the minimum threshold.

Disabilities mentioned

- 2 responses referred to a **need to be able to go to the toilet quickly**
- 2 responses referred to a **physical/mobility impairment**, such as a difficulty using your arms or mobility issues which require you to use a wheelchair or crutches
- 2 responses referred to **medical conditions affecting cognitive functioning**, such as dementia

- 1 response referred to a **visual impairment**, such as being blind or having a serious visual impairment
- 1 response referred to a **life-threatening condition requiring immediate medical attention**

Respondents supported by a carer/medical professional

- 7.10 Respondents who were receiving support from a carer or medical professional were asked 'Has the scheme had any impact on their ability to provide you with support or care?' as an open response answer. This question could also be answered from the perspective of the carer, giving their view on their ability to provide support. There were 45 responses to this question, and the average word count was 32 words. There was effectively no cut-off minimum for this question as the 2% cut-off minimum for this question would have been 1 response. It should be noted that not all responses answered this question directly; regardless, responses not referring directly to the impact on accessibility of specific locations as a result of the QN have been considered and coded within this section.
- 7.11 In terms of specific locations mentioned, by far the most common response was a care recipient's home, with 16 respondents reporting that they were having trouble accessing this due to the scheme. Again, the opposing comments were reflective of previous questions, with a perceived increase in journey times (20 respondents, 17%), a perceived difficulty accessing healthcare (14 respondents, 12%) and a perceived increase in traffic (8 respondents, 7%) being the most common opposing comments.
- 7.12 Please note, the sum of the numbers given in this section is not equivalent to the total responses to this question. This is because most answers referenced more than one of the codes.

Specific locations mentioned

- 16 responses referred to a care recipient's **home**
- 2 responses referred to a **GP** (either in general or to a specific GP)
- 2 responses referred to a **pharmacy or pharmacies**
- 1 response referred to the **GP on Gordon Road (Bounds Green Group Practice)**
- 1 response referred to the respondent's **home**
- 1 response referred to a **hospital**
- 1 response referred to **St Michael's Primary Care Centre**
- 1 response referred to **Muswell Hill**
- 1 response referred to **Maidstone Road**

- 1 response referred to **York Road**

Support

- 2 responses offered **general support for the scheme** (with phrases such as “I am 100% in favour”)

Oppose

- 20 responses referred to a perceived **increase in journey times**
- 14 responses referred to **respondents finding it harder to access healthcare or for carers to gain access to patients**
- 8 responses referred to a perceived **increase in traffic**
- 6 responses referred to a perception that the QN has had **negative impact on the respondent’s work**
- 3 responses referred to perceived **parking issues within the QN**
- 3 responses referred to a perception that **emergency vehicle access is being hampered**
- 3 responses referred to the respondent’s or someone else’s **mental health being negatively impacted by the QN**
- 2 responses referred to having **difficulty accessing the area**
- 2 responses referred to a perception that **tradesmen, deliveries and/or taxis are struggling to get to properties**
- 1 response referred to a **general opposition to the scheme**
- 1 response referred to a perceived **increase in air pollution**
- 1 response referred to a perception that **individuals with disabilities have been overlooked by the scheme**
- 1 response referred generally to a perception that **public transport and/or active travel not being a suitable alternative to car journeys**
- 1 response referred to a perception that **public transport and/or active travel not being a suitable alternative to car journeys due to disability or age**

Suggest

7.13 There were no suggestions made in the responses to this question that met the minimum threshold.

Disabilities mentioned

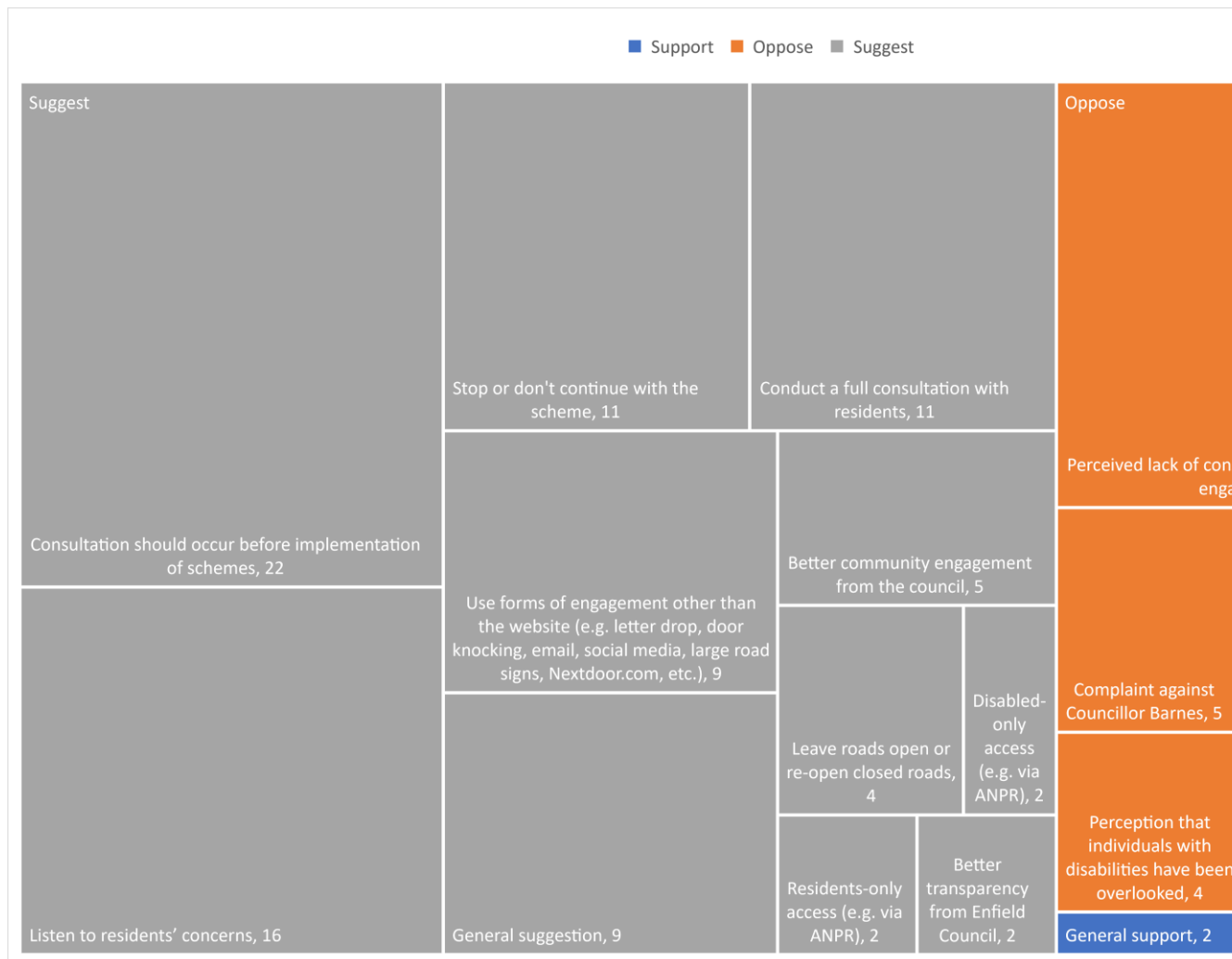
- 1 response referred to a **physical/mobility impairment**, such as a difficulty using your arms or mobility issues which require you to use a wheelchair or crutches

- 1 response referred to a **long-standing illness or health condition**, such as cancer, HIV, diabetes, chronic heart disease or epilepsy
- 1 response referred to **time-sensitive treatments**
- 1 response referred to **dialysis**

8. Communications

- 8.1 Respondents were asked 'What more, if anything, could the Council do to improve how it communicates with you and involves you in the design making process of the scheme?', as an open response answer. There were 96 responses to this question, and the average word count was 40 words. The 2% cut-off minimum for this question was 2 responses (i.e. only codes with 2 responses or more are included here). It should be noted that not all responses answered this question directly; regardless, responses not referring directly to things they disliked about the QN have been considered and coded within this section.
- 8.2 As Figure 8-1 shows, the most common response to this question was a desire for consultation to occur before the implementation of any future schemes, rather than being conducted retrospectively, with 22 respondents (19%) sharing this view. This was also partly reflected in the fact that the most popular opposing comment to the question was a perceived lack of consultation or poor community engagement from Enfield Council, with 20 respondents (17%) reporting this.
- 8.3 Please note, the sum of the numbers given in this section is not equivalent to the total responses to this question. This is because most answers referenced more than one of the codes. Some of the codes have been abbreviated in Figure 8-1, so a full list of codes and their frequencies is reported below it.

Figure 8-1: What more, if anything, could the Council do to improve how it communicates with you and involves you in the design making process of the scheme?



Support

- 2 responses offered **general support for the scheme** (with phrases such as "I am 100% in favour")

Oppose

- 20 responses referred to a perceived **lack of consultation or poor community engagement**
- 5 responses mentioned a **complaint against Councillor Barnes**
- 4 responses referred to a perception that **individuals with disabilities have been overlooked by the scheme**
- 2 responses referred to a **general opposition to the scheme**
- 2 responses referred to a perceived **increase in journey times**

- 2 responses referred to a perceived **displacement of traffic** (within Bounds Green or to Haringey)
- 2 responses referred to a perceived **exclusion of individuals whose first language is not English** from the consultation
- 2 responses referred to the respondent's or someone else's **mental health being negatively impacted by the QN**

Suggest

- 22 responses suggested that the **consultation should occur before implementation of schemes**
- 16 responses suggested **listening to residents' concerns**
- 11 responses suggested **stopping or not continuing with the scheme**
- 11 responses suggested **conducting a full consultation with residents**
- 9 responses suggested **using forms of engagement other than the website** (e.g. letter drop, door knocking, email, social media, large road signs, Nextdoor.com, etc.)
- 9 responses offered a **general suggestion**
- 5 responses suggested **better community engagement from the council**
- 4 responses made a **general suggestion of leaving roads open or re-opening closed roads** (this included comments suggesting leaving all the roads in the QN open and comments that were not specific about the roads they were suggesting should be left open)
- 2 responses suggested **disabled-only access** (e.g. via ANPR)
- 2 responses suggested **residents-only access** (e.g. via ANPR)
- 2 responses suggested **better transparency from Enfield Council**

Disabilities mentioned

- 8.4 There were no disabilities that were mentioned frequently enough to meet the minimum threshold of three responses.

9. Conclusion

- 9.1 To conclude, this report has laid out the thematic analysis of responses of disabled people and carers received by the Council in relation to the Bowes Primary Quieter Neighbourhood scheme. The analysis that has been undertaken has aimed to remain objective and has reported numbers without weighting and with minimal data manipulation. The frequencies and proportions of the thematic analysis in this report should be treated with caution, given the relatively low sample size of 117.
- 9.2 With that in mind, there are some themes that occurred throughout the questions which may indicate that they would have been reported by a significant amount of disabled people and carers, had the sample size been large enough. These were a perceived increase in journey times, a perceived increase in traffic and a perceived difficulty in accessing healthcare, all in relation to the QN.
- 9.3 Similarly, whilst the small sample sizes mean the following must be treated with caution, a common theme between carers and medical professionals, and disabled respondents seemed to be that medical locations, namely GPs, pharmacies and hospitals, were perceived to be harder to access due to the scheme. For respondents receiving care, their own home was the most frequently mentioned location perceived as difficult to access due to the scheme.
- 9.4 Again, while the sample size was small, there appeared to be a desire for the Council to conduct a consultation before any schemes are implemented in the future, as this was the most common response to the question regarding communication.
- 9.5 This report will be submitted to the Council in April 2021 for their consideration on the following Phases of the scheme, and decisions will follow. The report may also be used to inform neighbouring schemes in Haringey.

Appendix A

Survey Questionnaire



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