Contents

Glossary

Below are the meanings of some words used throughout this report that you may be unfamiliar with, or which may have a specific meaning in the report context:

AM Peak – In this report, "AM peak" refers to the hours between 07h00 and 10h00.

Automatic Traffic Counters – "Automatic Traffic Counters" (ATCs) measure traffic volumes and speeds using two thin tubes that run across the street and are connected to a sensor. When wheels pass over the tubes, the pressure impact is interpreted by the sensor to identify the type of vehicle passing over, and the speed at which it passed. ATCs are considered to be approximately 98% reliable. (See Appendix 1 for more details).

Boundary roads – For the purpose of this report, the "boundary roads" of the Canonbury East trial area are Southgate Road to the east (with data recorded at two locations, Southgate Road "North" and Southgate Road "South"), Baring Street to the south, New North Road to the southwest (leading to Canonbury Road) and Essex Road to the northwest. These roads are the boundary roads of multiple LTN trial areas and may have been affected by the redevelopment projects at Highbury Corner and Old Street Roundabout, which may have impacted some of the results. These roads are explored in more detail in the results and insights sections throughout the report.

Experimental Traffic Order – An "Experimental Traffic Order" (ETO) is like a permanent Traffic Regulation Order in that it is a legal document that imposes traffic and parking restrictions. However, unlike a Traffic Regulation Order, an Experimental Traffic Order can only stay in force for a maximum of 18 months while the effects are monitored and assessed. An Experimental Traffic Order is made under Sections 9 and 10 of the Road Traffic Regulation Act 1984.

Internal Roads – These are roads which fall in between two or more boundary roads in low traffic neighbourhoods. For the purposes of this report, "internal roads" are local roads in the Canonbury East trial area where the project aims to reduce the amount of traffic through the introduction of traffic filters. These roads are generally narrower than boundary roads. We have collected traffic counts on some, but not all, of the internal roads in the Canonbury East area.

Low Traffic Neighbourhood – A "low traffic neighbourhood" (LTN) is an area where a number of traffic filters are strategically placed to make it impossible or very difficult to cut through the area by motor vehicle. This stops drivers using local streets as shortcuts and makes it safer and easier to walk and cycle. In this report, the Canonbury East people-friendly streets (PFS) trial refers to a low traffic neighbourhood implemented in Islington under an Experimental Traffic Order. The position of the traffic filters means that drivers (including residents, delivery workers and emergency services) are still able to reach any part of the neighbourhood.

Normalised – In this report, "normalising" means to adjust traffic count figures to take into account the impact of Covid-19 and other macro-scale factors on traffic patterns. This methodology is explained below in more detail, but in simple terms it means that the traffic count figures have been increased to project what traffic counts may have looked like if traffic levels were at 2019 levels.

Observed – In this report, "observed" means the data that was collected, which has not been adjusted to take into account the impact of Covid-19 on traffic patterns. This is the actual data that was supplied by the data collection company used.

PM Peak – In this report, "PM peak" refers to the hours between 16h00 and 19h00.

Traffic Filters - "Traffic filters" are restrictions in the street to prevent motor vehicles passing through, either by presenting a physical barrier, such as bollards or planters, or by camera enforcement. Camera enforcement is used to enable buses and emergency vehicles to access the area. People are legally able to walk, cycle and wheel though filters (and use non-motorised scooters).

Introduction – Canonbury East LTN Final Report

As part of Islington Council's People Friendly Streets (PFS) programme and the need for an urgent transport response to Covid-19, Canonbury East became the second Low Traffic Neighbourhood (LTN) trial in the borough. It was created to allow more space for people to walk and cross the road safely, cycle as part of everyday life and to use buggies or wheelchairs, thereby making the area's roads safer, cleaner and healthier for residents. Traffic filters have been installed to prevent motor vehicles from cutting through the local area. Camera enforcement is used at certain locations so that buses and emergency vehicles, as well as vehicles with exemptions, can still pass through the traffic filters.

Since the scheme's inception, several monitoring reports have been produced to examine the impact of the road filters on a range of factors, including traffic volumes and speeds, air quality, bus journey times, emergency services and crime statistics.

The Interim Report was published in May 2021 and compared pre-implementation "baseline" data with data collected roughly six months after the scheme went live, and the Pre-Consultation Report was published in November 2021, comparing pre-implementation "baseline" data with data roughly one year after the scheme went live. Following this, a public consultation was held in November 2021. In January 2022, changes were made to some of the traffic filters and an exemption policy for Blue Badge holders was introduced.

Final Report

Unlike previous reports, which were aimed at determining the impact of the PFS scheme compared to a pre-implementation baseline, the purpose of this Final Report for the Canonbury East LTN is to serve as a **"final check"** on the scheme roughly one-year on from the pre-consultation stage of data collection. The report will look to understand how the scheme is bedding in now with the implementation of the exemption policy for local Blue Badge holders and the changes made at filters, and how it is likely to affect long-term transportation trends in the area.

Given the above, the **body of this report will focus on changes between pre-consultation data generally collected in July 2021 and final report data collected in July 2022**, with conclusions based on this comparison. The July 2020 pre-implementation baseline (for roads that were also monitored in July 2022) is included for reference only, for the key tables showing total motorised vehicles and cycles. Full details from this phase of data collection can be found in the appendices.

This report will monitor motorised traffic on internal roads and boundary roads, cycling volumes on internal and boundary roads, and air quality across the scheme area.

Scheme Context

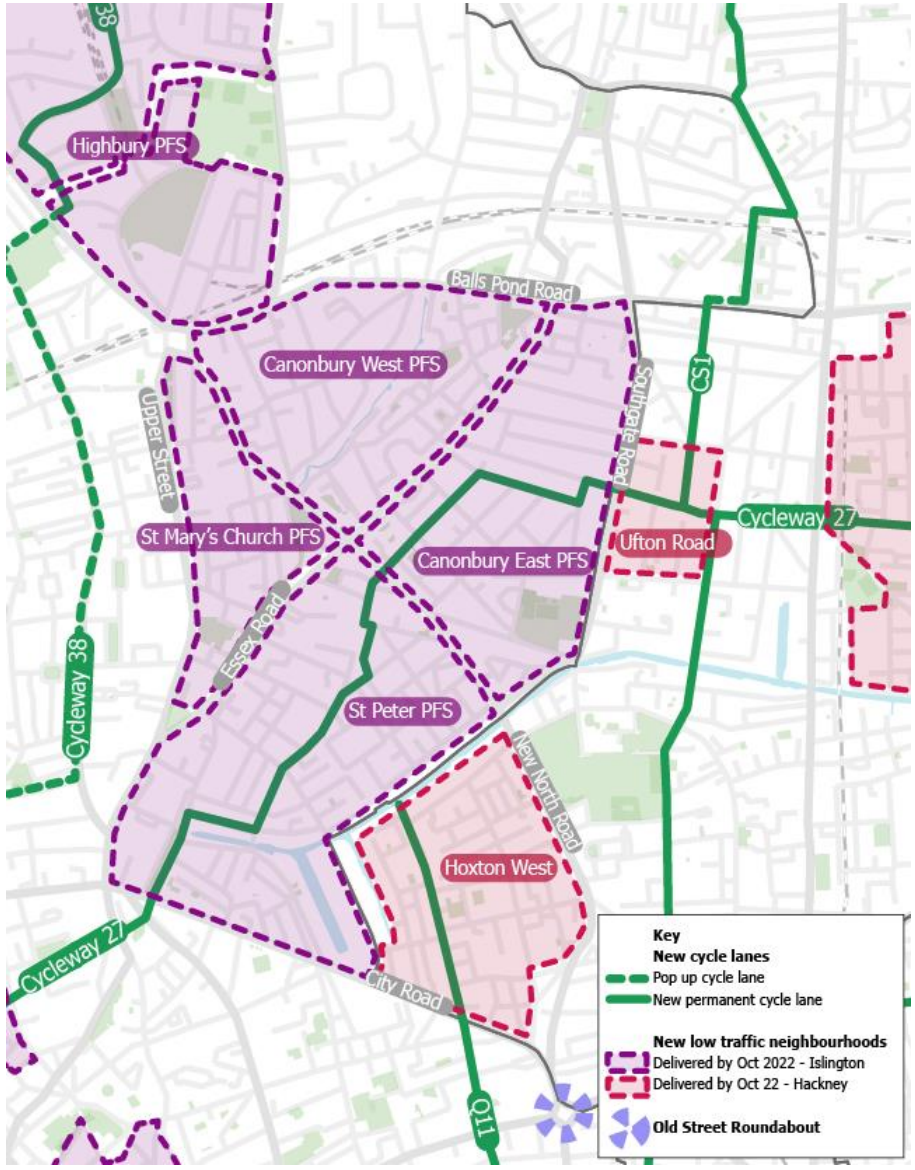
Initial PFS scheme – in July 2020 traffic filters were installed at ten key locations in the Canonbury East LTN. The filter locations were: Henshall Street, Dove Road, Ockendon Road, Englefield Road, Northchurch Road, Elmore Street, Cleveland Road, Halliford Street, Downham Road and Shepperton Road. Henshall Street, Cleveland Road and Shepperton Road traffic filters use bollards, operating without camera enforcement.

In January 2022, some of the traffic filter locations and layouts were changed to enable Blue Badge holders with a CBE Permit to pass through certain filters.

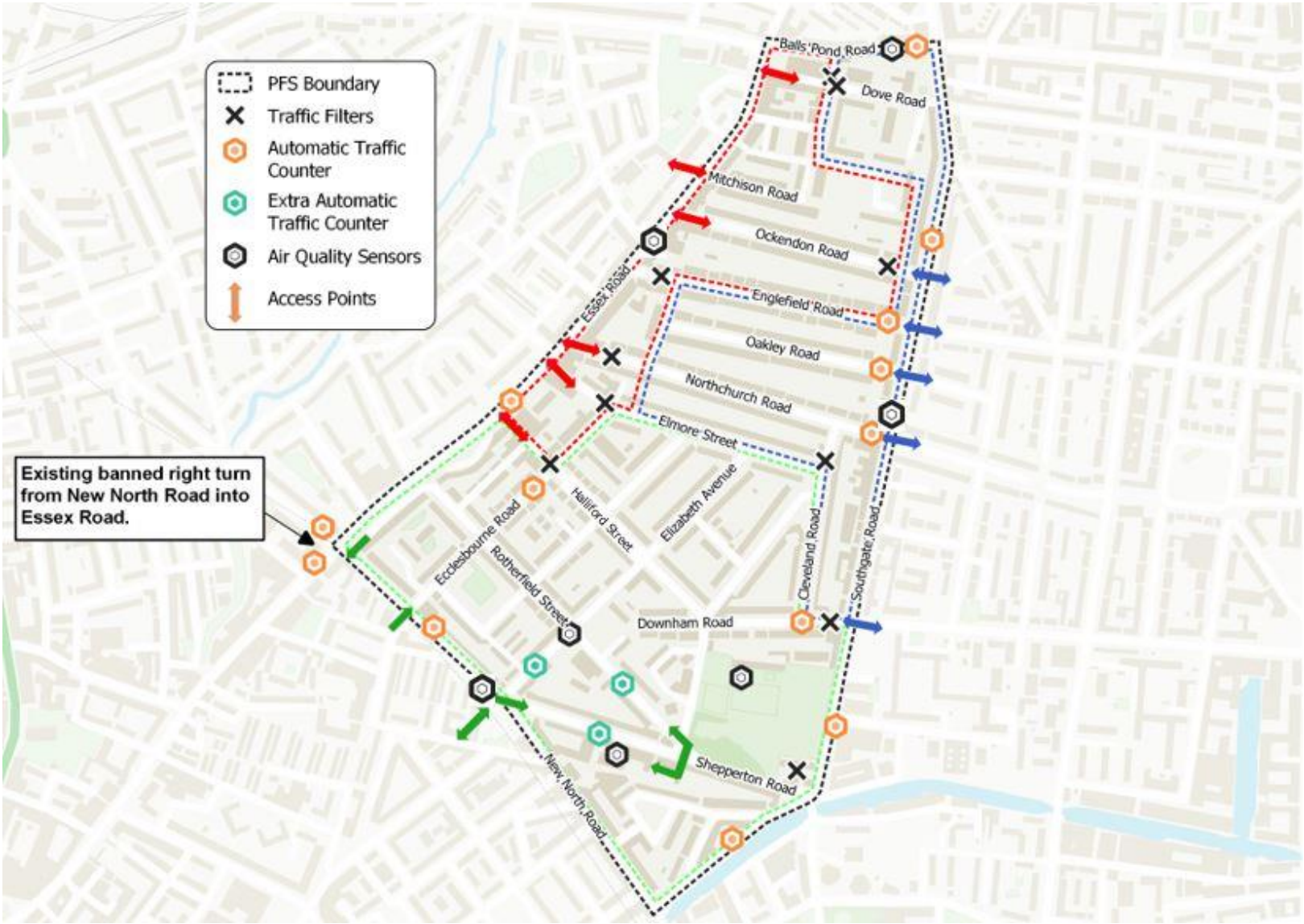
A new camera-enforced traffic filter was implemented at Ecclesbourne Road, south of the junction with Halliford Street. The filter at Elmore Street was made into a physical filter with bollards and the filter at Halliford Street became a camera-enforced filter.

The width restrictions at filters at Ockendon Road and Englefield Road were removed. Bollards in the carriageway at Dove Road, Elmore Street, Halliford Street and Downham Street were also removed. No changes were made to the filters at Shepperton Road, Henshall Street, Cleveland Road and Northchurch Road.

Map 1 : Canonbury East LTN in Wider Context of Nearby LTN Areas and Cycle Lanes



Map 2: Canonbury East LTN and monitoring sites



Pre-Consultation Monitoring Outcomes

As noted above, all final report data is compared against pre-consultation report data from July 2021. However, it is important to note that the PFS scheme had already resulted in significant changes aligned with council policy at that point. The key findings from the pre-consultation monitoring report are therefore as follows, comparing pre-consultation stage data against baseline stage data:

- The pre-consultation monitoring report showed that the Canonbury East people-friendly street (PFS) trials were having the intended impacts in the area. They reduced motorised traffic across internal roads by around 80%, making the area's roads greener, cleaner and healthier for residents.
- Volumes of motorised vehicle traffic fell quite significantly on almost all internal roads (except Oakley Road, which saw a minor increase in the raw number of vehicles travelling on it). In particular, Englefield Road saw a decrease of over 5,000 daily vehicles counted (-90%), and Downham Road and Elizabeth Avenue both saw 3,000 vehicle decreases (-97% and -62% respectively).
- On boundary roads, there was overall a limited change, with a total increase of 310 vehicles calculated against a total daily vehicle count of nearly 90,000. Balls Pond Road saw a 15% increase in traffic (+2,600 vehicles), whilst Essex Road East saw an 11% decrease (-2,100 vehicles). New North Road saw an increase of 11% in vehicles counted (+1,500).
- There was some redistribution of goods vehicles and motorcycles, but generally the numbers of these vehicles fell considerably.
- In most places, there was not a meaningful change in vehicle speeds, although Southgate Road North did see a notable increase in speed of nearly 4mph. Essex Road West saw a decrease of around 3mph in average speeds.
- Across all internal roads, there were considerable increases in the number of people counted cycling. The largest increase was on Northchurch Road, where an additional 613 cycling trips were counted each day on average. For internal roads, cycling volumes were up 48% overall. On boundary roads, the picture was more mixed, but cycling trips were still up 8% overall.
- Air quality changes in NO_2 reflected the wider pattern from across the borough, with no sites reporting levels above the legal limit.
- There were small increases in delays for buses on boundary roads, but this may be accounted for by other factors including temporary roadworks.

Independent Production of the Report by SYSTRA Ltd.

SYSTRA has been commissioned to prepare this report in partnership with the London Borough of Islington.

SYSTRA is a global leader in mass transportation and mobility, employing over 7,000 global employees across 80 countries. SYSTRA has the unique advantage of being not only a Transport Consultancy, but also Social and Market Research Consultancy. Their team members have an in-depth understanding of both the transport sector and of social and market research techniques, providing expert support in monitoring and evaluation both direct to clients and also in a peer review capacity. They provide a wealth of experience in conducting both qualitative and quantitative transport research with stakeholders to help understand their priorities and to inform options for future investment and policy development.

Neither SYSTRA nor LB Islington can be held accountable for errors in the data provided by third parties, where these errors have not been identified through normal checking processes.

Traffic Counts Approach

The count data presented in this report is not traffic modelling, but actual observed traffic, comparing traffic flows in June 2021 (which underpinned the Pre-Consultation report) with those in July 2022 (one year since the Pre-Consultation report, after the scheme was modified and exemptions were introduced in January 2022). Data from the pre-implementation period (generally July 2020) has been included for context and to calculate total differences from before the scheme was implemented, but is not the focus of the report.

There are several exceptions to when roads were monitored, generally due to vandalism or problems with survey equipment. The roads affected and relevant dates are presented in the section below.

Key Dates and Traffic Counts

Baseline (pre-implementation) counts: 29 June – 6 July 2020, 5 – 11 February 2020 (Shepperton Road), 8 – 14 June 2020 (New North Road)

Canonbury East Trial Begins: 3 August 2020

Pre-consultation counts: 12 – 18 July 2021, 1 – 7 February 2021 (Elmore Street – Interim counts used as site was vandalised during pre-consultation period)

Final counts: 11 – 17 July 2022

The council uses various traffic counting methods to understand traffic volumes and speeds within and around the LTN to assess if the scheme is having the desired impact and to respond (if required) with mitigating actions.

Automatic Traffic Counts (ATCs) are used at the majority of sites in the Canonbury East LTN. ATCs measure motorised and cycle traffic volumes and motorised traffic speeds and classify the traffic by type. Transport for London (TfL) use radar counts on the Transport for London Road Network (TLRN), which measure motorised traffic volumes and speeds. More information about the different types of counts and which type was used at each site is detailed in Appendix 1.

Analysis and Normalisation Methodology Overview

All of these counts were undertaken in full awareness of the disruption caused by the Covid-19 travel restrictions, and the need for a process to interpret the results in a way that accounts for this disruption.

Daily volumes of motorised traffic have been drawn from a range of 12 permanent traffic counters managed by Transport for London across Islington and used to establish monthly averages in 2019 and 2020. The locations of these counters are detailed in Appendix 1. The percentage difference between the same month across the two different years has been used to adjust the counts to normalise for Covid-19 disruption between the months in which counts have been taken. The methodology is set out in greater detail in Appendix 2. Drafting the baseline from TfL count locations outside of Islington and from additional years was considered and tested, but resulted in only small differences and was therefore not taken forward as the chosen methodology.

For context, the difference was greatest in April, where 2020 motorised traffic was approximately 50% of what it had been in April 2019.

Using the months of the Canonbury East counts, in June 2021 motorised traffic was approximately 8.9% lower than in June 2019 and in July 2022 motorised traffic was approximately 7.1% lower than in July 2019.

Table 1: Normalisation factors since March 2020 for traffic in Islington

Month	Impact
Mar-20	-27.97%
Apr-20	-49.87%
May-20	-38.34%
Jun-20	-22.10%
Jul-20	-13.46%
Aug-20	-6.55%
Sep-20	-6.90%
Oct-20	-10.48%
Nov-20	-22.13%
Dec-20	-16.11%
Jan-21	-25.70%
Feb-21	-24.80%
Mar-21	-31.28%
Apr-21	-22.52%
May-21	-18.68%
Jun-21	-8.90%
Jul-21	-6.16%
Aug-21	-2.59%
Sep-21	-4.17%
Oct-21	-4.90%
Nov-21	-5.85%
Dec-21	-5.19%
Jan-22	-4.79%
Feb-22	-2.18%
Mar-22	-16.12%
Apr-22	-14.53%
May-22	-12.27%
Jun-22	-8.44%
Jul-22	-7.08%
Aug-22	-6.93%
Sep-22	-6.19%

Interpreting Count Results

Unless specified otherwise, the seven-day daily average has been used and discussed in traffic volumes analysis in this report. Full data and flow profiles are provided in the Appendices.

Raw data has been analysed and compared to give the observed results. The observed results have then undergone the normalisation process described in the previous section to give the normalised results. Both the normalised results and the observed results can be found in the results tables in this report and in the appendices. The figures given for changes in volumes of traffic in this report are normalised, and percentages have been drawn from the differences between normalised results.

A negative number or percentage indicates a decrease between the two counts, while a positive number or percentage indicates an increase.

Please note that traffic flows fluctuate daily (generally up to 10%). As such, changes within -10% to +10% are considered insignificant (i.e. no or negligible change) and are not colour-coded. In contrast, changes of greater than 10% in a direction aligning with scheme goals (reduced traffic/pollution levels/speeds, and increased cycling) are highlighted in green, whilst changes of greater than 10% in the opposite direction are highlighted in red.

In addition, it must be noted that, as vehicles travelling through the LTN are likely to go through multiple counter sites, it is almost certain that the number of vehicles counted in the area is higher than the actual number of trips.

External Factors

It is important to consider all these results in the context of other external factors which could be impacting on the data. Whilst broader trends occurring over longer timescales and larger geographies are likely addressed through normalisation, more local or short-term impacts may also be present. It is not possible to adjust for these in calculations. There are five main external factors which could be influencing results, as follows:

Nearby Low Traffic Neighbourhoods – As can be seen in Map 1, the Canonbury East LTN is in close proximity to a number of other low traffic neighbourhoods. St Peter's (Islington), Canonbury West (Islington), St Mary's Church (Islington) and Hoxton West (Hackney), and a small one in De Beauvoir Rd and Square (Hackney) are all located in the vicinity of the Canonbury East LTN and were delivered

shortly before or after the Canonbury East LTN. It is therefore not possible to separate out the impacts these may be having on traffic on the boundary roads.

Weather – Weather can have a significant impact on travel choices, especially cycling, and air pollution.

During the week the pre-consultation traffic counts were taken in June 2021, the minimum temperature was 10°C and the maximum was 24°C. UK-wide data shows that the June 2021 mean temperature was 14.2°C, 1.2°C above the June average, and had London seeing double its average rainfall. The first twelve days of July (when additional counts were carried out) were mostly unsettled, with spells of heavy rain and showers, especially over England. Rainfall was double the average in London.

The final traffic counts were taken between 11th July and 17th July 2022. Temperatures were very hot and generally dry, with highs of 25°C to 34°C. It should be noted that the red heat warning posted by the Met Office ahead of record-breaking 40°C highs was for the 19th July, occurring after the monitoring period.

Major traffic projects nearby – In close proximity to the Canonbury East LTN trial are two major Transport for London projects which were in place during the trial period. These are the Highbury Corner gyratory upgrade and the ongoing works at Old Street roundabout. During the data collection period for the baseline counts, the works at Old Street roundabout were having a significant impact on traffic flows on both City Road and New North Road which both lead to the gyratory. It is not possible to separate out or control for the impact of the Old Street roundabout works on the boundary roads from the impact of the LTN.

Covid-19 Impacts – During the pre-consultation data collection period, formal restrictions around Covid-19 were in the process of being lifted. Most rules affecting outdoor social contact had been removed, two households or six people were allowed to meet indoors, indoor hospitality services were provided and hotels had been opened on 17th May. However, during the monitoring period, not all restrictions had been officially lifted, and face masks were still mandatory in certain settings.

In comparison, by July 2022 all Covid restrictions had been removed for several months under the government's "living with Covid" plan released at the end of February, and tests were no longer free for citizens. The virus was still in active circulation in the UK, but symptoms tended to be fairly mild and advice was generally to avoid coming to work or leaving the house until symptoms abated.

Through both monitored periods, working from home was a significant driver of how much people travelled, with a larger proportion of people returning to offices at least part-time during the final counts compared to the pre-consultation ones.

Cost of Living Crisis – In July 2022, during the final counts, rising inflation had significantly increased the price of petrol and other critical items, with the cost of driving and taking public transportation increasing compared to previous years and the affordability of

travel decreasing. This may have reduced the number of discretionary journeys taken by paid modes (both public and private), with some level of increase in walking and cycling likely.

ULEZ Extension – On October 2021, the ULEZ (Ultra Low Emission Zone) was extended to the North and South Circular Roads, encompassing the entirety of the Borough of Islington (previously, only areas south of City Road were subject to ULEZ levies).

In July 2022 Transport for London published the *Expanded Ultra Low Emission Zone – Six Month Report Including Low Emission Zone – One Year Report*. The report estimates that the new ULEZ reduced traffic by 21,000 vehicles in the zone on an average day, a reduction of 2 per cent of traffic flow compared to the weeks before the expanded ULEZ was implemented. Whilst it is expected that this broad change in cost of driving in the borough has been reflected in normalised data via TfL ATCs, it is possible that more localised effects exist.

Analysis of Vehicle Volumes

All Motorised Vehicle Volumes (7-Day Daily Average)

This section outlines the changes in observed and normalised traffic volumes for all motorised vehicles, including cars (both private cars and taxis/company-owned cars) and goods vehicles ranging from delivery vans to large articulated lorries. The total number of such motorised vehicles counted in the monitored week has been summed and divided by seven to create a daily average. The numbers presented have been rounded to the nearest whole number and raw/percentage changes calculated accordingly. It is noted that the number of cycles counted is not included in this analysis.

Table 2 on the overleaf focuses on changes in motorised vehicle volumes between the pre-consultation data collection period in 2021 and the final data collection period in 2022. For this overall summary, a comparison against the initial baseline is also provided for context. It is important that percentage change figures are considered in the context of raw changes, as a large percentage change could indicate a relatively minor change in actual vehicles counted on a particularly quiet road. Conversely, a busy road could see a small percentage change even if there the number of vehicles counted is quite different between the two monitored periods.

Further context for each site can be found in Appendix 5.

Table 2: Motorised Traffic Volumes on Internal Roads

	Pre-Consultation Observed: Jul-21	Pre-Consultation Normalised: Jul-21	Final Observed: Jul-22	Final Normalised: Jul-22	Difference Observed vs. Pre-Consultation	Difference Normalised vs. Pre-consultation	Difference Observed vs. Pre-Consultation (%)	Difference Normalised vs. Pre-Consultation (%)	Difference Normalised vs. Baseline (Jul-20)	Difference Normalised vs. Baseline (Jul-20) (%)
Downham Road	94	99	124	133	30	34	**32%**	**34%**	-3,510	**-96%**
Ecclesbourne Road	629	670	250	268	-379	-402	**-60%**	**-60%**	-1,286	**-83%**
Englefield Road	561	598	470	508	-91	-90	**-16%**	**-15%**	-5,627	**-92%**
Northchurch Road	845	900	846	910	1	10	0%	1%	-1,529	**-63%**
Oakley Road	344	366	313	337	-31	-29	-9%	-8%	41	**14%**
Rotherfield Street	322	344	351	378	29	34	9%	**10%**	New Site	New Site
Elizabeth Avenue	1,684	1,793	1,556	1,675	-128	-118	-8%	-7%	New Site	New Site
Total Internal	4,479	4,770	3,910	4,209	-569	-561	**-13%**	**-12%**	-11,911	**-85%**
Shepperton Road*	833	888	751	808	-82	-80	**-10%**	**-9%**	-875	**-52%**
Elmore Street**	392	521	297	319	-95	-202	**-24%**	**-39%**	-1,854	**-85%**

**Shepperton Road presented separately due to different month used for comparison (baseline from Feb 2020 as was not successfully measured during Jun 2020 baseline period, as per other counts).*

***Elmore Street presented separately due to different month used for comparison (interim from Feb 2021 rather than pre-consultation).*

Table 3: Motorised Traffic Volumes on Boundary Roads

	Pre-Consultation Observed: Jul-21	Pre-Consultation Normalised: Jul-21	Final Observed: Jul-22	Final Normalised: Jul-22	Difference Observed vs. Pre-Consultation	Difference Normalised vs. Pre-consultation	Difference Observed vs. Pre-Consultation (%)	Difference Normalised vs. Pre-Consultation (%)	Difference Normalised vs. Baseline (Jul-20)	Difference Normalised vs. Baseline (Jul-20) (%)
Baring Street	11,379	12,125	11,428	12,299	49	174	0%	1%	589	5%
Essex Road East	15,896	16,939	15,060	16,208	-836	-731	-5%	-4%	-3,748	**-19%**
Essex Road West	15,569	16,591	15,132	16,284	-437	-307	-3%	-2%	-262	-2%
Southgate Road North	11,727	12,495	10,340	11,128	-1,387	-1,367	**-12%**	**-11%**	-2,619	**-19%**
Southgate Road South	12,376	13,188	12,147	13,072	-229	-116	-2%	-1%	141	1%
Balls Pond Road	18,812	20,048	16,392	17,641	-2,420	-2,407	**-13%**	**-12%**	-701	-4%
New North Road East	16,658	17,751	15,165	16,321	-1,493	-1,430	-9%	-8%	1,701	**12%**
Canonbury Road	11,530	12,286	13,556	14,588	2,026	2,302	**18%**	**19%**	790	6%
Total Boundary	**113,947**	**121,423**	**109,220**	**117,541**	**-4,727**	**-3,882**	**-4%**	**-3%**	**-4,109**	**-3%**

Insights: All Motorised Vehicle Volumes

In Canonbury East, the volume of motorised traffic has continued to fall between pre-consultation and final monitoring periods. On internal roads monitored during the same months, total normalised traffic volumes fell by 561 daily vehicles, representing a 12% reduction. On boundary roads, traffic volumes decreased by nearly 4,000 daily vehicles, although this only represents a 3% decrease when set against the starting volume of over 100,000 vehicles on these roads.

In general, there is no clear shift in traffic patterns for Canonbury East other than an overall decrease in volumes. Ecclesbourne Road saw a 60% drop in motorised vehicle traffic, equating to 402 fewer daily vehicles, which followed from an existing trend of falling volumes (with a total 83% drop in volumes since the 2020 baseline). This is likely a result of the new filter on this street, and due to relocated filters at Halliford and Elmore Streets. Rotherfield Street and Downham Road saw increases in the volumes of vehicles counted (+10% and +34%, respectively), but in both cases these increases between pre-consultation and final reporting periods likely follow from significant drops in traffic flow vs. the baseline. On Downham Road, flows in the baseline were 3,643 per day, then 99 in the pre-consultation monitoring and 133 in the final monitoring – representing a slight bounce back in volumes equating to an overall 96% drop in total traffic levels. Whilst baseline data for Rotherfield Street was not available, it is likely that a similar pattern would have occurred given trends on neighbouring streets. Oakley Road has seen a 14% increase in vehicles counted since the initial baseline stage, although it is noted that this is a small number in actual daily vehicles (+41).

On boundary roads, the volume of traffic decreased by more than 10% on both Balls Pond Road and Southgate Road North (by 2,400 and 1,400 vehicles respectively). For Balls Pond Road, this likely represents a reversion to baseline flows, as final period flows are only 4% lower than in the baseline. For Southgate Road North, this is a further decrease representing a nearly 20% drop in traffic since the baseline period.

Conversely, Canonbury Road saw a 19% increase in traffic, representing an additional 2,300 daily vehicles. However, it is likely that this is, to some extent, a reversion to baseline flows, which were only 6% different from those counted in the final stage. Despite seeing a drop of 1,430 daily vehicles since pre-consultation stage, vehicle volumes on New North Road have increased 12% since the 2020 baseline.

These findings generally indicate that whilst there have been some small increases in traffic volumes on specific roads, these tend to represent rebounds after large drops from the baseline – and that in general, the Blue Badge exemption policy, which provided 152 Blue Badges to residents of Canonbury East and was implemented between the pre-consultation and final counts, has not materially impacted the scheme's success.

Goods Vehicles Volumes (5-Day Average)

This section outlines the changes in normalised traffic volumes for Light Goods Vehicles and Heavy Goods Vehicles.

LGV stands for Light Goods Vehicle. This is defined, for the purposes of this report (and differs from previous reports), as a rigid two-axle van, such as the type of van commonly used for deliveries. HGV stands for Heavy Goods Vehicle, which is a goods vehicle larger than the type of van described above.

The results shown are for 5-day average weekday volumes, excluding weekends. This is because goods vehicle traffic is generally lower at weekends, therefore the weekday data gives a better impression of the effects on goods vehicle traffic. Similarly, the % numbers given are percentages of total motorised traffic, rather than all vehicles counted. Changes in the proportion of LGV/HGV compared to total motorised traffic (or "dominance" of such vehicles) is presented as a percentage point difference.

Table 4: Goods Vehicles Volumes on Internal Roads (Normalised)

	LGV #: Jul-21	LGV Prop: Jul-21	LGV #: Jul-22	LGV Prop: Jul-22	LGV Change in Proportion	HGV #: Jul-21	HGV Prop: Jul-21	HGV Jul-22	HGV Prop: Jul-22	HGV Change in Proportion
Downham Road	5	6%	30	21%	**15%**	7	7%	7	5%	-2%
Ecclesbourne Road	67	9%	16	5%	-4%	57	8%	84	28%	**20%**
Englefield Road	79	13%	70	13%	0%	18	3%	15	3%	0%
Northchurch Road	71	8%	63	6%	-2%	141	15%	247	25%	10%
Oakley Road	21	6%	17	5%	-1%	4	1%	5	1%	0%
Rotherfield Street	50	12%	50	11%	-1%	10	3%	8	2%	-1%
Elizabeth Avenue	212	12%	201	12%	0%	22	1%	42	3%	2%
Total Internal	**505**	**11%**	**447**	**12%**	**1%**	**259**	**11%**	**408**	**21%**	**10%**
Shepperton Road*	108	11%	95	11%	0%	17	2%	15	2%	0%
Elmore Street**	68	12%	23	7%	-5%	42	7%	72	21%	**14%**

**Shepperton Road presented separately due to different month used for comparison (baseline from Feb 2020 as was not successfully measured during Jun 2020 baseline period, as per other counts).*

***Elmore Street presented separately due to different month used for comparison (interim from Feb 2021 rather than pre-consultation).*

Table 5: Goods Vehicles Volumes on Boundary Roads (Normalised)

	LGV #: Jul-21	LGV Prop: Jul-21	LGV #: Jul-22	LGV Prop: Jul-22	LGV Change in Proportion	HGV #: Jul-21	HGV Prop: Jul-21	HGV Jul-22	HGV Prop: Jul-22	HGV Change in Proportion
Baring Street	1,615	13%	1,960	16%	3%	168	1%	108	1%	0%
Essex Road East	2,028	12%	2,432	15%	3%	553	3%	555	3%	0%
Essex Road West	1,840	11%	1,712	11%	0%	711	4%	773	5%	1%
Southgate Road North	2,087	17%	1,720	15%	-2%	143	1%	127	1%	0%
Southgate Road South	1,395	10%	1,572	12%	2%	306	2%	251	2%	0%
Balls Pond Road	1,976	10%	2,444	14%	4%	447	2%	350	2%	0%
New North Road East	1,739	9%	1,786	11%	2%	219	1%	381	2%	1%
Canonbury Road	632	5%	921	6%	1%	353	3%	360	2%	-1%
Total boundary	**13,312**	**11%**	**14,547**	**12%**	**1%**	**2,900**	**2%**	**2,905**	**2%**	**0%**

Insights: Goods Vehicles Volumes

Overall, on internal roads, there has been limited change in the proportion of LGVs, the number of which has fallen generally in line with the reduction in other motorised vehicles. For HGVs, however, there has been an increase in both the total number of such vehicles and their dominance.

The only notable change for LGVs was seen on Downham Road, where LGVs increased from 6% of total vehicles to 21%. However, it is considered that the actual volumes of LGVs on this road are still very low overall, and this increase is perhaps explained by a small number of LGVs counted during the pre-consultation stage for this site.

For HGVs, there were large increases in volumes for a number of locations. On Northchurch Road, the volume of daily HGVs nearly doubled, from 141 to 247, and such vehicles increased in proportion by 10 percentage points. This also represents an increase compared to the baseline. From the raw data, it appears that there are now a large number of 4-axle trucks travelling along this road, which may relate to the widening of the filter on the west end of the road between the pre-consultation and final reporting periods (as such vehicles can physically now fit through the filter even though this is not permitted). The proportion of HGVs on Ecclesbourne Road has also increased quite significantly, although the actual number of additional daily HGVs is not significantly higher, indicating that whilst other vehicle classes reduced in volume, HGVs did not. On Elmore street, LGVs decreased by 48 but HGVs increased in line with the overall trend, with 30 more such vehicles.

On boundary roads, there has been limited change in both the proportion of LGVs and HGVs. There are slightly more LGVs in total across all boundary roads, with the largest increase seen on Balls Pond Road, which may relate to the increase in deliveries seen over the past few years.

Motorcycle Volumes (7-Day Average)

Motorcycle volumes are considered separately from other vehicles as they are occasionally able to travel through neighbourhood blocks using filters and streets in manners that cars and lorries cannot (for example by illegally using cycle filters). Similarly, on average, they create more noise than general traffic and are therefore of particular concern during the overnight period, especially as a result of the significant increase in their prevalence following Covid-19 and the spike in deliveries made by motorcycle in London.

Motorcycles are distinguished from pedal cycles in ATC counters by the weight and spacing of the vehicle tyres.

Table 6: Motorcycle Flows on Internal Roads (Normalised)

	Motorcycle #: Jul-21	Motorcycle Prop.: Jul-21	Motorcycle #: Jul-22	Motorcycle Prop.: Jul-22	Motorcycle Change in Proportion
Downham Road	14	14%	14	11%	-3%
Ecclesbourne Road	84	13%	31	12%	-1%
Englefield Road	76	13%	49	10%	-3%
Northchurch Road	85	9%	88	10%	1%
Oakley Road	41	11%	34	10%	-1%
Rotherfield Street	20	6%	35	9%	3%
Elizabeth Avenue	154	9%	158	9%	0%
Total Internal	**474**	**10%**	**409**	**10%**	**0%**
Shepperton Road*	75	8%	69	9%	1%
Elmore Street**	68	13%	37	12%	-1%

**Shepperton Road presented separately due to different month used for comparison (baseline from Feb 2020 as was not successfully measured during Jun 2020 baseline period, as per other counts).*

***Elmore Street presented separately due to different month used for comparison (interim from Feb 2021 rather than pre-consultation).*

Table 7: Motorcycle Flows on Boundary Roads (Normalised)

	Motorcycle #: Jul-21	Motorcycle Prop.: Jul-21	Motorcycle #: Jul-22	Motorcycle Prop.: Jul-22	Motorcycle Change in Proportion
Baring Street	620	5%	640	5%	0%
Essex Road East	909	5%	855	5%	0%
Essex Road West	717	4%	650	4%	0%
Southgate Road North	566	5%	537	5%	0%
Southgate Road South	609	5%	612	5%	0%
Balls Pond Road	942	5%	954	5%	0%
New North Road East	802	5%	747	5%	0%
Canonbury Road	436	4%	562	4%	0%
Total Boundary	**5,601**	**5%**	**5,557**	**5%**	**0%**

Insights: Motorcycle Volumes

In line with other modes, internal roads saw an overall decrease in motorcycle volumes, although with minimal change in proportion. Ecclesbourne Road saw the largest nominal change in such volumes, with 53 fewer motorcycles on average per day, which aligns with a reduction of similar magnitude on the adjacent Elmore Street. Rotherfield Street did see a slight increase in the number of motorcycles.

There was no notable change in motorcycle dominance on boundary roads, with motorcycles maintaining the same mode share at every monitored location. Overall, there was a total reduction of around 50 daily motorcycles across all roads, with the biggest decreases occurring on Essex Road (both sites) and New North Road. Canonbury Road, however, saw an increase of over 100 daily motorcycles.

Cycle Volumes (7-Day Average)

We have not normalised cycling figures for Covid-19 due to the lack of an available source that provides continuous month-to-month cycling levels encompassing all types of cycling trips (commute and leisure), and is at a local enough geographic scale to form a meaningful and robust benchmark.

Unlike motorised traffic trends, cycling levels are significantly impacted by seasonal weather change including temperature and rainfall; for example, there is normally much more cycling participation in July than in February, and there are similarly significantly more cycle trips completed in July than February. There are several interlinked factors when it comes to the impact seasonal weather variation has on cycling levels, while weather can still vary within a season, a month or even a day. As an indication of the impact weather can have, one 2011 study found a doubling in temperature could lead up to a 50% increase in cycling levels, before having a negative impact if too high (Study by Miranda-Moreno and Nosal, 2011).

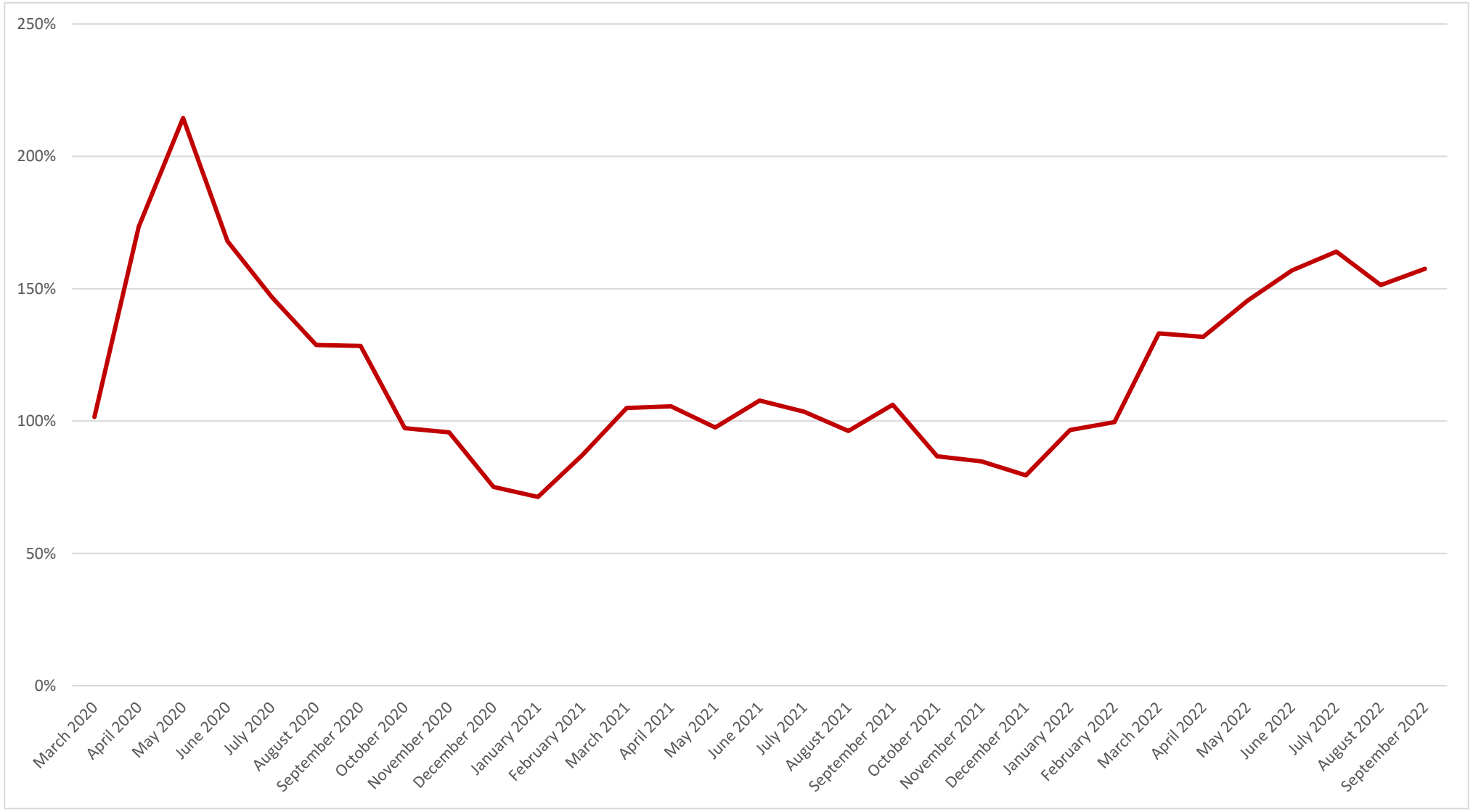
During June 2021, when pre-consultation counts were taken, the average daily high temperature for London (Heathrow) was 23°C, with an average low of 13°C, with significant rainfall. In comparison, in the month of the final counts, the average high was 30°C, with a low of 17°C, with very little rainfall.

Considering these caveats, it is also important to note that government regulations and guidance surrounding Covid-19, as well as the impact of the cost-of-living crisis in 2022, have significantly impacted wider cycling trends since March 2020 (data from DfT's Official Statistics, 2021). Graph 5 on the overleaf shows, on a national basis, the number of cycle trips completed as compared to the same month pre-pandemic (i.e., June 2021 compared to June 2019), indicating that whilst the first few months of the pandemic (i.e. early summer 2020) saw very high levels of cycling, levels since then have been driven by a range of factors (for example lower flows in the largely rainy summer of 2021 and higher flows in the hot and dry summer of 2022 during the cost of living crisis).

Route choices made by people cycling will also be impacted by the availability of nearby protected cycle infrastructure and Low Traffic Neighbourhoods, including the recently constructed Cycleway 38 to the north of the scheme, or the permanent Cycleway 27 going through the scheme area.

Following Graph 5, which outlines nationwide cycling trends, the table outlines changes in cycling volumes across the scheme area between pre-consultation and final counts, with comparison against baseline provided for context.

Graph 5: National Cycling Levels - % of Comparison Month in 2019*



*For example, July 2022 cycling levels are ~150% of the July 2019 average.

Table 8: Cycle Volumes on Internal Roads

	Pre-Consultation Observed (Jun-21)	Final Observed (Jul-22)	Difference vs. Pre-Consultation	Difference vs. Pre-Consultation (%)	Difference vs. Baseline (Jul-20)	Difference vs. Baseline (Jul-20) (%)
Downham Road	272	366	94	**35%**	157	**75%**
Ecclesbourne Road	978	1,234	256	**26%**	524	**74%**
Englefield Road	421	487	66	**16%**	251	**106%**
Northchurch Road	1,987	2,555	568	**29%**	1,114	**77%**
Oakley Road	64	66	2	3%	27	**69%**
Rotherfield Street	279	361	82	**29%**	New Site	New Site
Elizabeth Avenue	531	743	212	**40%**	New Site	New Site
Total Internal	**4,532**	**5,812**	**1,280**	**28%**	**2,073**	**79%**
Shepperton Road*	407	573	166	**41%**	352	**159%**
Elmore Street**	404	1,204	800	**198%**	414	**52%**

**Shepperton Road presented separately due to different month used for comparison (baseline from Feb 2020 as was not successfully measured during Jun 2020 baseline period, as per other counts).*

***Elmore Street presented separately due to different month used for comparison (interim from Feb 2021 rather than pre-consultation).*

Table 9: Cycle Volumes on Boundary Roads

	Pre-Consultation Observed (Jun-21)	Final Observed (Jul-22)	Difference vs. Pre-Consultation	Difference vs. Pre-Consultation (%)	Difference vs. Baseline (Jul-20)	Difference vs. Baseline (Jul-20) (%)
Baring Street	272	444	172	**63%**	60	**16%**
Essex Road East	1,626	2,174	548	**34%**	816	**60%**
Essex Road West	644	1,314	670	**104%**	555	**73%**
Southgate Road North	623	858	235	**38%**	265	**45%**
Southgate Road South	870	956	86	10%	238	**33%**
Balls Pond Road	927	1,257	330	**36%**	358	**40%**
New North Road East	902	1,209	307	**34%**	239	**25%**
Canonbury Road	712	996	284	**40%**	281	**39%**
Total Boundary	**6,576**	**9,208**	**2,632**	**40%**	**2,812**	**44%**

Insights: Cycling Volumes

Across internal roads measured during the same period (June 2021 to July 2022), the number of cycles counted increased by 28%, with an additional 1,280 new people cycling in the final counts. The largest increases were generally on the streets making up Cycleway 27, which routes via Ecclesbourne Road (+256 daily people cycling), Elmore Street (+800 daily people cycling, although notably by comparing February 21 with July 22 data) and Northchurch Road (+568 daily people cycling). Since the initial baseline, cycling volumes on comparable roads have increased by 121% or around 2,000 additional daily cyclists counted.

On boundary roads, cycling volumes increased by 40% or 2,632 daily cycles in the final counts – notably a larger percentage increase than on internal roads. The largest increase was on Essex Road West (+670 cycles, representing a doubling in flows), which is south of Canonbury Road and supports a large amount of north-south cycle traffic. All other boundary road sites except Southgate Road South saw increases of over 30%. The change since the 2020 baseline was 44%, amounting to roughly 2,800 additional cyclists counted.

While comparing cycling volumes between July 2021 and July 2022 should be considered in the context of much better weather in 2022 (thus supporting higher cycling levels), the results from this monitoring still support the fact that cycling levels are at least 10% higher on every single monitored road than in the baseline (for sites with baseline data).

Analysis of Vehicle Speeds

Speeding is a major contributing factor to road danger, so reducing speeding is vital to making roads safer for all.

Traffic counters measure motorised traffic speeds as well as volumes. Details about the dates and locations of the traffic volume and speed monitoring are in Appendix 5. The speed limit is 20mph on all monitored roads.

Speed monitoring results have not been normalised as they are not considered to have been impacted by Covid-19 in the same way and to the same extent as traffic volumes, though speeds may settle into new patterns post-Covid-19. The results presented here are seven-day averages. The 85th percentile is used in transport monitoring to gauge changes in speeds and speeding behaviour. It is the speed at or below which 85% of traffic will be travelling along a street (and therefore 15% of traffic will be travelling faster than this speed). Cycles and their speeds have been removed from calculations relating to vehicle speeds as including such counts would skew averages down.

Map 5: Average Vehicle Speed in mph (seven-day daily averages)

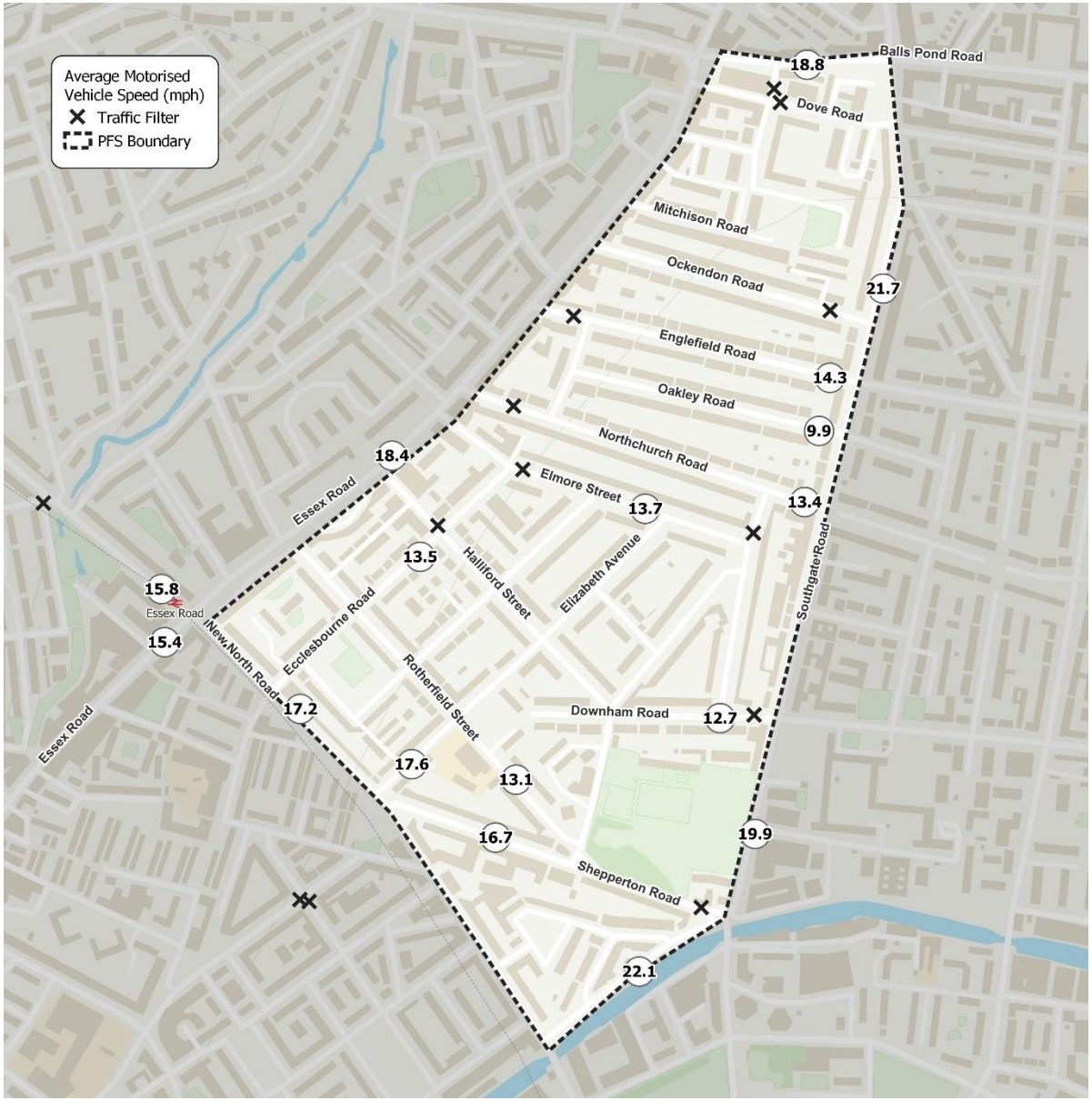


Table 10: Difference in Vehicle Speeds on Internal Roads

	Average Speed - Final (mph)	Average Speed - Diff. vs. Pre-Con (mph)	Average Speed - Diff. vs. Pre-Con (%)	Average Speed - Diff. vs. Baseline (mph)	Average Speed - Diff. vs. Baseline (%)	85th Percentile Speed - Final (mph)	85th Percentile Speed - Diff. vs. Pre-Con (mph)	85th Percentile Speed - Diff. vs. Pre-Con (%)	85th Percentile Speed - Diff. vs. Baseline (mph)	85th Percentile Speed - Diff. vs. Baseline (%)	% Speeding (above Posted Speed Limit)- Final (%)	% Speeding (above Posted Speed Limit)- Diff vs. Pre-Con (% pt.)	% Speeding (above Posted Speed Limit)- Diff vs. Baseline (% pt.)
Downham Road	12.7	0.9	8%	-4.2	**-25%**	16.5	2.1	**15%**	-5.2	**-24%**	6%	2%	**-20%**
Ecclesbourne Road	13.5	-0.8	-6%	-1.4	-9%	16.4	-1.3	-7%	-1.8	**-10%**	6%	0%	-2%
Englefield Road	14.3	-0.5	-3%	-0.4	-3%	17.9	-0.8	-4%	-0.2	-1%	7%	-2%	1%
Northchurch Road	13.4	-0.5	-4%	-2.0	**-13%**	16.9	-0.7	-4%	-2.2	**-12%**	5%	-1%	-5%
Oakley Road	9.9	0.1	1%	0.1	1%	11.8	0.0	0%	0.1	1%	0%	0%	0%
Rotherfield Street	13.1	-1.9	**-13%**	New Site	New Site	16.6	-2.0	**-11%**	New Site	New Site	4%	-4%	New Site
Elizabeth Avenue	17.6	-0.4	-2%	New Site	New Site	21.5	-0.4	-2%	New Site	New Site	24%	-3%	New Site
Weighted Average	**14.9**	**-0.5**	**-3%**	**-2.3**	**-15%**	**18.4**	**-0.6**	**-3%**	**-2.8**	**-15%**	**12%**	**-2%**	**-7%**
Shepperton Road*	16.7	-0.2	-1%	0.9	6%	21.3	-0.3	-1%	1.6	8%	21%	-2%	7%
Elmore Street**	13.7	-1.1	-7%	-1.6	**-10%**	17.0	-2.5	**-13%**	-2.6	**-13%**	7%	-6%	-6%

**Shepperton Road presented separately due to different month used for comparison (baseline from Feb 2020 as was not successfully measured during Jun 2020 baseline period, as per other counts).*

***Elmore Street presented separately due to different month used for comparison (interim from Feb 2021 rather than pre-consultation).*

Table 11: Difference in Vehicle Speeds on Boundary Roads

	Average Speed - Final (mph)	Average Speed - Diff. vs. Pre-Con (mph)	Average Speed - Diff. vs. Pre-Con (%)	Average Speed - Diff. vs. Baseline (mph)	Average Speed - Diff. vs. Baseline (%)	85th Percentile Speed - Final (mph)	85th Percentile Speed - Diff. vs. Pre-Con (mph)	85th Percentile Speed - Diff. vs. Pre-Con (%)	85th Percentile Speed - Diff. vs. Baseline (mph)	85th Percentile Speed - Diff. vs. Baseline (%)	% Speeding (above Posted Speed Limit)- Final (%)	% Speeding (above Posted Speed Limit) - Diff vs. Pre-Con (% pt.)	% Speeding (above Posted Speed Limit)- Diff vs. Baseline (% pt.)
Baring Street	22.1	-0.1	-1%	-0.3	-2%	26.5	-0.3	-1%	-0.4	-1%	67%	-2%	-2%
Essex Road East	18.4	-0.1	-1%	-0.4	-2%	21.8	-0.5	-2%	-1.1	-5%	29%	-4%	-8%
Essex Road West	15.4	-0.5	-3%	-3.4	**-18%**	19.9	-0.5	-2%	-5.2	**-21%**	14%	-2%	**-16%**
Southgate Road North	21.7	-3.1	**-13%**	0.8	4%	26.0	-6.1	**-19%**	0.2	1%	61%	-8%	6%
Southgate Road South	19.9	0.0	0%	0.1	1%	24.4	-0.1	0%	-0.5	-2%	47%	-1%	-4%
Balls Pond Road	18.8	0.9	5%	0.7	4%	23.4	0.4	2%	0.5	2%	36%	5%	3%
New North Road East	17.2	-3.1	**-15%**	-3.4	**-17%**	20.5	-3.7	**-15%**	-4.5	**-18%**	17%	**-30%**	**-34%**
Canonbury Road	15.7	-0.4	-2%	-0.3	-2%	20.6	-0.4	-2%	-0.4	-2%	18%	-3%	-4%
Weighted Average	**18.4**	**-0.8**	**-4%**	**-0.9**	**-4%**	**22.6**	**-1.4**	**-6%**	**-1.5**	**-6%**	**34%**	**-6%**	**-8%**

Insights: Vehicle Speeds

On internal roads, there has been, on average, a reduction of 0.5mph in average speeds and of 0.6mph in 85th percentile speeds. There has also been a 2-percentage point reduction in weighted average of vehicles traveling over the speed limit. For boundary roads, the average speed reduction was 0.8mph and 85th percentile speed reduction was 1.4mph; the was also a 6-percentage point drop in the weighted average of speeding vehicles.

Internally, Rotherfield Street has seen the largest change in speeds, with average speeds and 85th percentile speeds both dropping by around 2mph between the pre-consultation and final monitoring periods. Equally, Elmore Street saw average speed decrease by 1.1mph and 85th percentile speed by 13%. Downham Street, however, has seen increased 85th percentile speeds of around 2mph, equating to a 15% increase in this measure – the average speed changed by less than 1mph – however, this is set against the context of a total ~5mph decrease in 85th percentile speeds at this site since the 2020 baseline.

On boundary roads, Southgate Road North and New North Road both saw average speeds reduced by 3.1mph. Southgate Road North saw an even more substantial drop in 85th percentile speed, of over 6mph. New North Road saw a decrease in the number of vehicles speeding, which shifted from 48% to 17%. As traffic volumes did not increase on these roads, it appears unlikely that congestion has caused these drops in speeding and the results are more likely the result of improved driver compliance with speed limits. Since the 2020 baseline, speeding metrics have improved on both New North Road and Essex Road West.

Air Quality

Air quality refers to the air around us, how clean it is and how many pollutants (harmful chemicals or substances) it contains. The more pollutants the air contains the more air pollution there is and the worse the air quality is. Poor air quality is a concern as air pollution can impact health. The two main pollutants of concern that we monitor are:

- **Particulate matter of 10µm or less in size (PM10)** – tiny bits of solid material made of a range of substances suspended in the air.

- **Nitrogen dioxide (NO_2)** – one of a group of gases called nitrogen oxides.

There are three types of monitors in use, which will give slightly different data:

- **Automatic monitors**: monitor NO_2 and PM10 24 hours a day at two locations in the borough. These are our most accurate monitors.

- **Diffusion tubes:** provide monthly readings of NO_2. While not as accurate as the automatic monitors, they can be more widely deployed to provide trends over a larger area and time period and are a nationally approved monitoring technique. These tubes measure the air's concentration of nitrogen dioxide (NO_2), a toxic gas that can be very harmful to health. The tubes are replaced and analysed on a monthly basis. Research suggests that at urban roadside locations in the UK up to 80 per cent of the nitrogen dioxide measured comes from road transport.

- **Sensors:** these sensors can monitor a range of pollutants in a continuous manner like the automatic monitors, however they can have more uncertainty with regard to accuracy and these monitors have not gone through the same quality control process as our other monitors. There are also limited numbers of these monitors in the borough.

Islington's air quality sites are classified based on their location using Defra guidance**,** but are referred to in these PFS monitoring reports using PFS terminology. This has required the addition of a further category, as will now be explained. According to Defra, "Roadside sites" are those within one to five metres of a busy road. In the PFS monitoring reports, roadside monitoring equates to boundary road sites. According to Defra, "Urban background sites" are those in an urban location but more distanced from traffic sources. For the PFS monitoring we have further split the urban background results into sites on internal roadsides and sites away from

roads. These categorisations apply to the LTN and borough wide.

The long-term sites in Islington consist of nine roadside diffusion tubes, ten background urban diffusion tubes, one automatic main road site and one automatic background urban site. One of the main road diffusion tubes was moved in 2019 and is therefore not being included in PFS monitoring using this time period. One of the long-term sites is on the boundary of Canonbury East and so has not been included as part of wider borough sites for this area, but instead looked at as part of Canonbury East averages. More details of these sites can be viewed in our annual report.

The air quality monitoring sites in Canonbury East are listed in Appendix 3, with details about type and if they have been added as part of the PFS programme or were pre-existing. The long-term sites that are being used for comparison work in this pre-consultation Canonbury East report consist of four boundary road diffusion tubes, two internal road diffusion tubes and one non-street diffusion tube.

Methodology

Time period of study

Air quality varies naturally over time due to a variety of factors, including seasonal variations, weather and other non-transport factors. It is therefore important to look at trends over a longer period of time, for at least a year, to identify real changes in air quality due to this scheme. However, as there has not been a full year's worth of data between the pre-consultation report and final report (data is only available to March 2022 due to a lag in the review time for this), data from the eight month period between August 2021 and March 2022 has been compared against data from the same eight month period from the previous year (i.e. August 2020 and March 2021), after the scheme was implemented but before the pre-consultation counts were taken. The pollution levels in these periods, particularly Pre-Consultation, are likely to have been impacted by Covid-19. Studies into the impacts of lockdown on air pollution, by Defra, for example, show lower than average levels of the pollutant NO_2 during the first lockdown.

The ultimate goal of our air quality strategy is to reduce air pollution as much as possible, and certainly to within legal limits. As such, the newer sites will be used to monitor if air quality is at legal levels in and of itself.

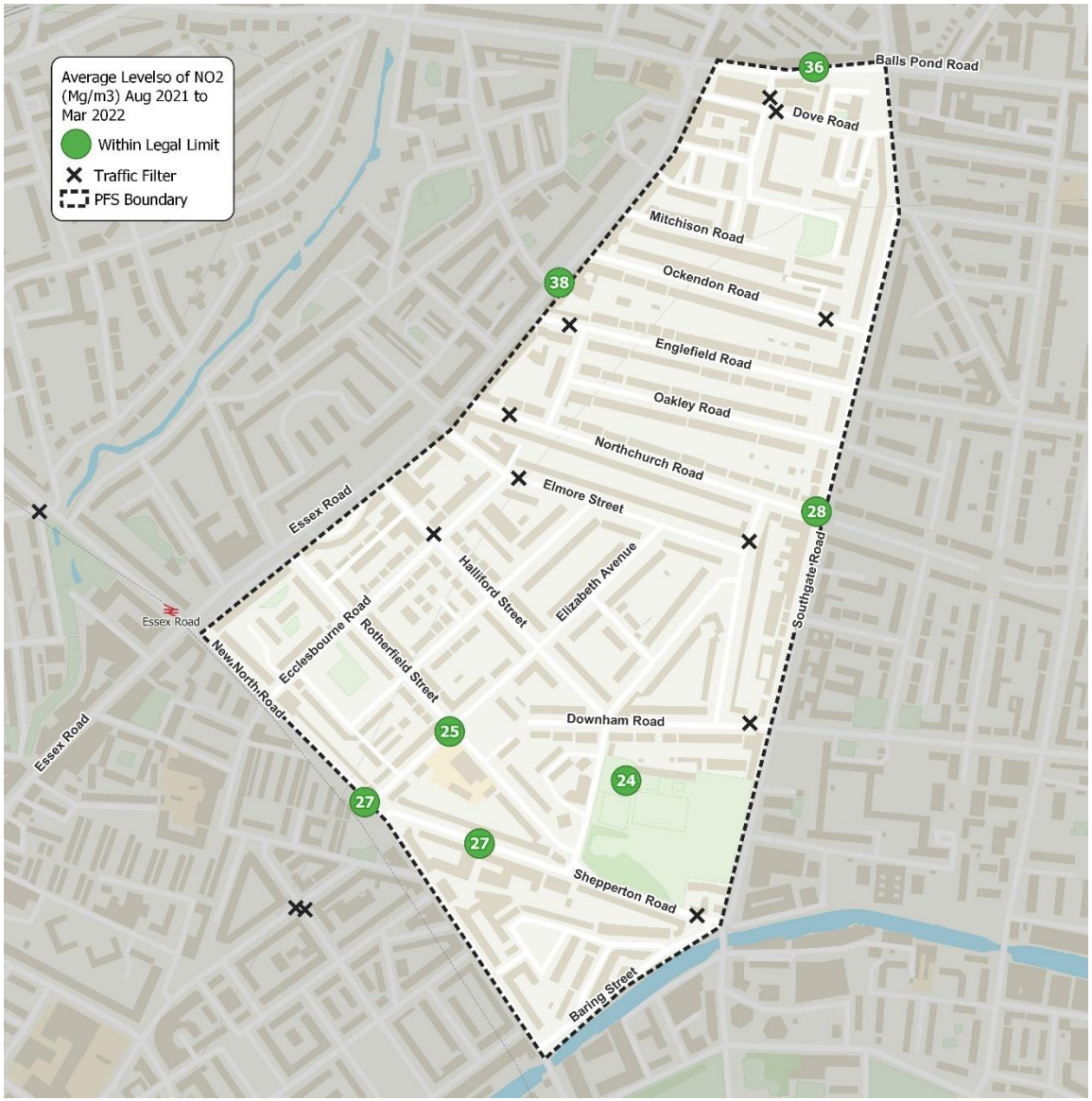
Results: Air Quality Diffusion Tubes

The results shown in this section use NO_2 data from diffusion tubes only. It was therefore not possible to provide results for PM10 for Canonbury East.

Please note, the values in this section show the average results for all monitors in each category where the data is available, with figures rounded to the nearest whole number, so the differences may look different to what is expected from the NO_2 values given.

To improve accuracy levels of diffusion tubes it is necessary to bias correct the results based upon local or national collocation studies with the more accurate reference monitors. It is also necessary to calculate the data capture, and if this is less than 75%, the results should be annualised. More information on this process can be found in the council's annual air quality report. The results from 2022 have yet to be published as they require a full years' data, so the 2022 data presented here is in "raw" format and may change once the bias adjustment values are made available.

Map 3: Average levels of NO_2 (µg/m3) August 2021-March 2022



Map 4: Percentage change in NO_2 (µg/m3) between August 2020-March 2021 and August 2021-March 2022

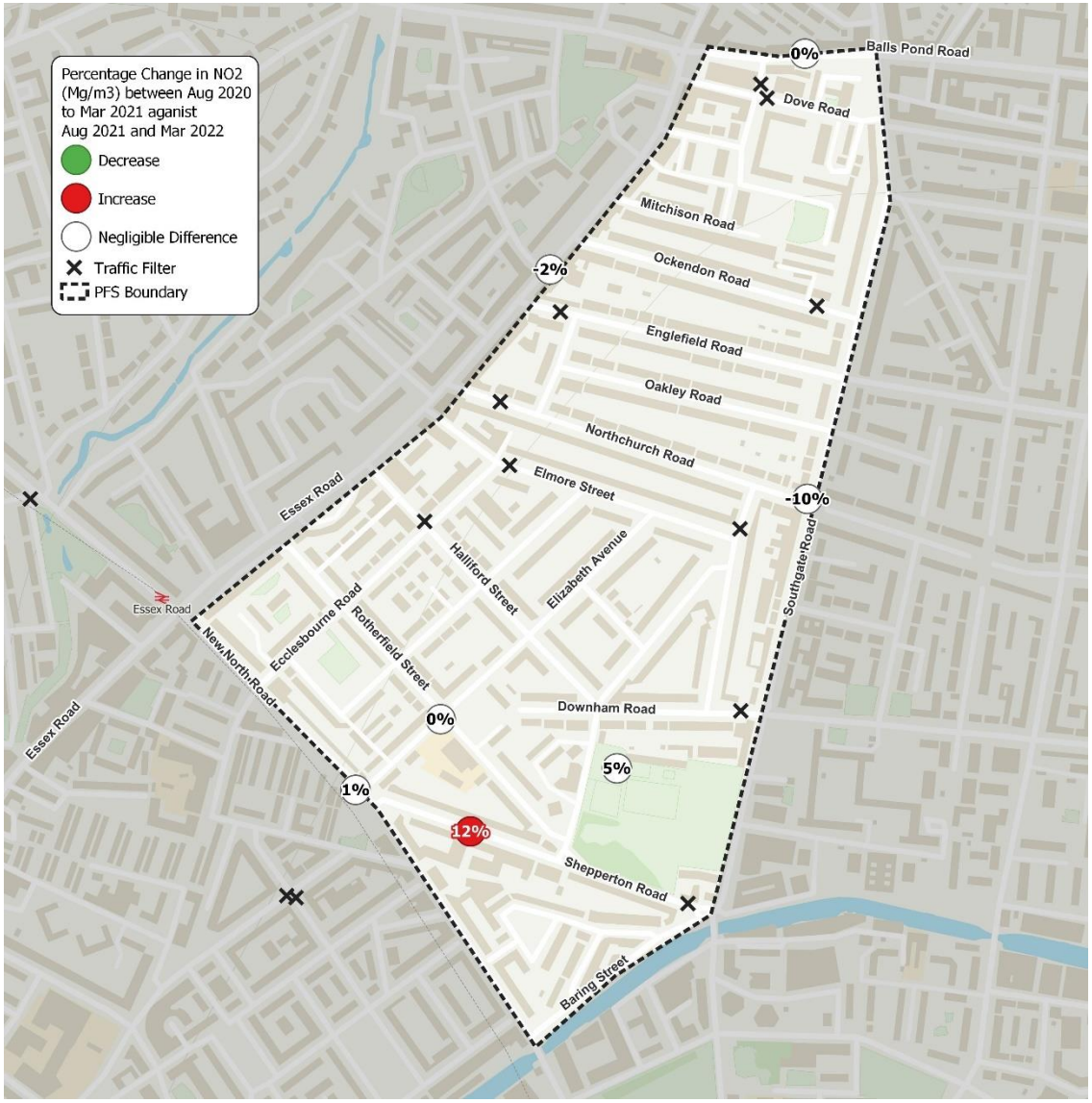


Table 12: (Boundary roads) NO_2 levels in Canonbury East and borough long-term diffusion tube sites

	Aug '20 – Mar '21 NO_2 (µg/m3)	Aug '21 – Mar '22 NO_2 (µg/m3)	Change in NO_2 (µg/m3)	Change in NO_2 (% change)
Canonbury East	33	32	-1	-2%
Whole borough long term sites	33	32	-1	-3%

Table 12 provides average NO_2 levels for the four boundary roads for Canonbury East, as well as seven boundary roads spread across the remainder of the borough. In both cases, there was a negligible difference in recorded air quality between the reporting periods, with a 2-3% improvement in both cases.

It is worth noting that boundary roads including Southgate Road, New North Road, Canonbury Road and Essex Road sit in direct proximity to more than one Low Traffic Neighbourhood or PFS scheme, so it is not possible to independently assign the impact of the Canonbury East scheme, particularly to counters on these boundary roads.

Table 13: (Internal roads) NO2 levels in Canonbury East and borough long term diffusion tube sites

	Aug '20 – Mar '21 NO_2 (µg/m3)	Aug '21 – Mar '22 NO_2 (µg/m3)	Change in NO_2 (µg/m3)	Change in NO_2 (% change)
Canonbury East	24	25	1	0%
Whole borough long term sites	24	25	1	3%

For internal roads, two from Canonbury East and six from the wider borough have been included in the averages in Table 13. As with boundary roads, there is a negligible difference in air quality between the modelled period, with a <1% change across LTN scheme monitoring locations and a 3% increase across the borough long-term sites. Note that changes in NO_2 are based on rounded numbers and % changes are not.

Table 14: (Non-street-based sites) NO2 levels in Canonbury East and borough long term diffusion tube sites

	Aug '20 – Mar '21 NO_2 (µg/m3)	Aug '21 – Mar '22 NO_2 (µg/m3)	Change in NO_2 (µg/m3)	Change in NO_2 (% change)
Canonbury East	23	24	1	5%
Whole borough long term sites	23	23	0	-1%

For non-street locations, there is only one such site for Canonbury East compared to four sites across the borough. Table 14 therefore only shows a single site's data for Canonbury East compared to an average for the rest of the borough – this can also be seen in Graph 5 on the overleaf, where there are some data gaps. Based on available data, there has been a slight, but negligible increase in NO_2 levels at this site.

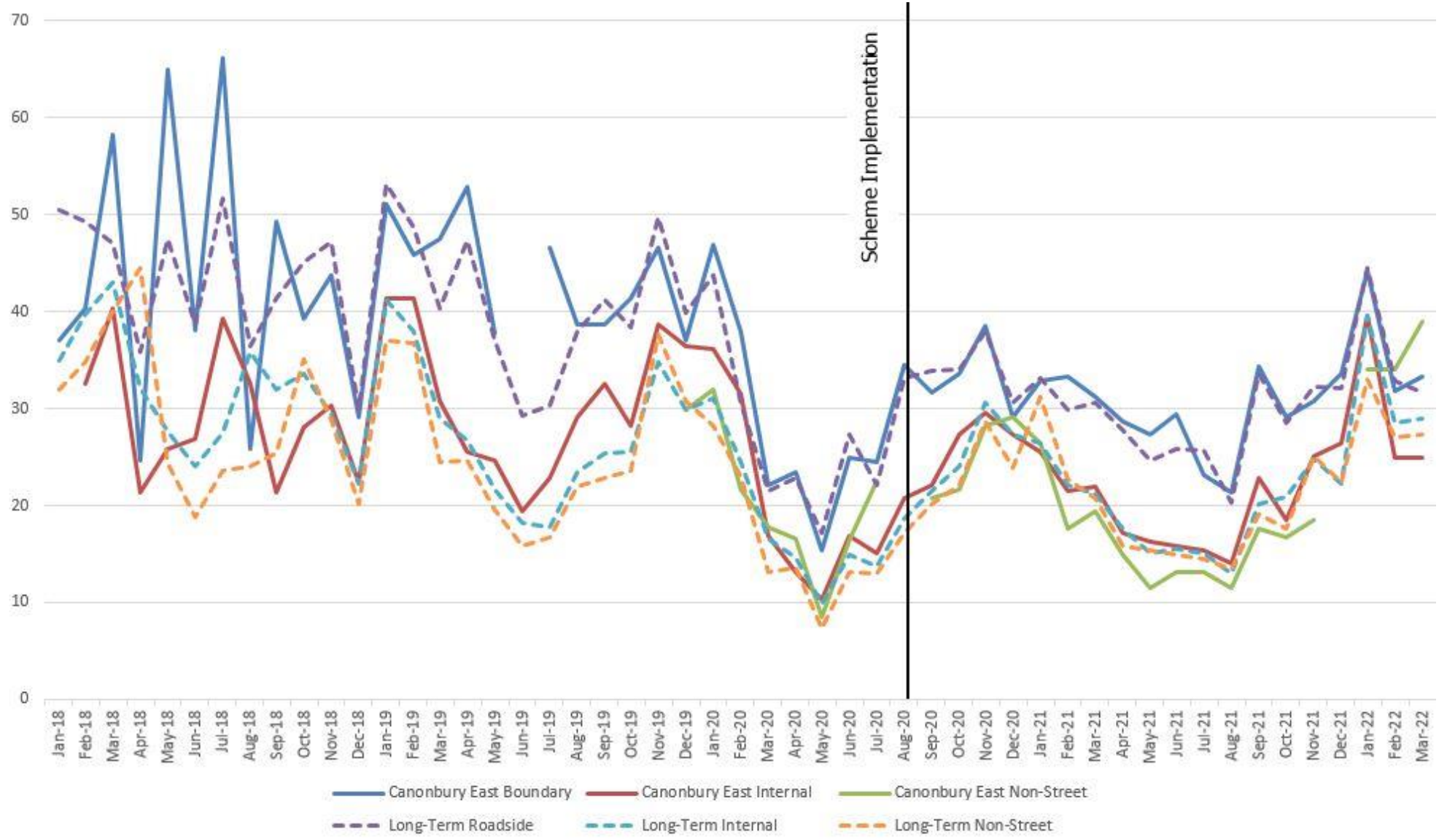
Table 15: (Overall) NO2 levels in Canonbury East and borough long term diffusion tube sites

	Aug '20 – Mar '21 NO_2 (µg/m3)	Aug '21 – Mar '22 NO_2 (µg/m3)	Change in NO_2 (µg/m3)	Change in NO_2 (% change)
Canonbury East	29	30	1	1%
Whole borough long term sites	28	27	-1	-1%

Taking the average of all sites for Canonbury East and the wider Borough, there have been negligible changes in air quality.

Graph 5 compares the trends in NO_2 levels in Canonbury East LTN across Boundary roads, Internal roads and Non-Street sites from January 2018 through to March 2022.

Graph 1: Average NO_2 levels in Canonbury East LTN compared to long-term borough-wide sites from diffusion tubes



Insights: air quality

The results in Tables 12 to 15 show that there has been limited change in the concentration of NO_2 between the two periods assessed, both within Canonbury East and across the borough at large. There was no change of greater than 10% at any Canonbury East site, and across the borough there were similarly minimal changes in average air quality.

As Graph 5 shows, despite the significant seasonality of pollution levels (higher in winter and lower in summer), the general annual trend of NO_2 shows a decrease between 2018 and 2022. It is noted that whilst in 2020, reduced traffic levels during Covid-19 would have played a notable role in delivering this decrease, motorised traffic levels were almost the same as pre-Covid levels in early 2022 – yet pollution levels had not risen to Pre-Covid levels.

In summary these results show:

- Overall changes in levels of NO_2 in Canonbury East reflect those in the borough more widely and have not materially changed between the eight-month period before the pre-consultation counts and the eight-month period before the final counts.
- NO_2 levels in Canonbury East have been within the annual objective level of 40μg/m3 at all sites since people-friendly streets started, including on boundary roads.
- These are generally positive results in line with the objectives of the scheme suggesting the trial has not had an adverse impact on air quality to date.

Concluding Remarks

As previously noted, the goal of this report has been to assess how the scheme has been bedding in since the changes made in January 2022 – serving as a "final check" to compare pre-consultation and final data, and particularly to understand whether exemptions for Blue Badge holders have impacted the scheme's success.

Based on the range of data presented, it is clear that the scheme is continuing to remove traffic from inside the Canonbury East neighbourhood without significant impacts to traffic flows on boundary roads. Overall, volumes of traffic on internal roads surveyed during the same set of months have dropped by another 12% between pre-consultation and final reporting periods – a change that is in addition to the initial significant drop in vehicle flows as has been described in previous monitoring reports. Whilst there are some roads where traffic has increased since the pre-monitoring stage, these are typically locations where the drop in traffic from the baseline was greatest and for which the net decrease in vehicles counted is still substantial. There are a few locations where the mix of vehicles traveling has changed slightly, namely with additional HGVs on Northchurch Road and Ecclesbourne Road, which is potentially due to the widening of the Northchurch Road filter. There has also been a moderate uptick in LGV volumes on boundary roads.

In terms of vehicle speeds, the overall trend has generally been towards lower speeds (across all presented metrics), although with some variation between roads. Downham Road has seen a slight increase in speeds (particularly for 85th percentile), whilst Rotherfield Street, Elmore Street, Southgate Road North and New North Road have all seen moderate to large decreases in speed.

For cycling counts, volumes are markedly up overall for both internal (+121%) and boundary (+44%) roads. It has been noted that there is likely some impact of seasonality and particularly good weather during the survey period that has increased cycling activity, but the results are promising nonetheless, particularly on Essex Road as a major arterial route as well as on Cycleway 27, which runs through the PFS scheme.

In air quality terms, there has been a negligible difference between the pre-consultation period and final report period across all metrics analysed. This indicates that air quality both near the scheme and across the wider borough has not changed since the January 2022 trial scheme but is generally lower than pre-pandemic.

Overall, this final check can confirm that the scheme continues to operate effectively against its goals, with no noticeable impact from the exemptions granted to Blue Badge holders who are now able to pass through some of the traffic filters.

Appendices

Appendix 1: Canonbury East Traffic Count Locations and Type

Islington-commissioned ATC (Automated Traffic Count) sites and dates

Boundary	**Type**
Southgate Road North	ATC
Southgate Road South	ATC
Balls Pond Road	ATC
New North Road	ATC
Canonbury Road	ATC
Essex Road East	ATC
Essex Road West	ATC
Baring Street	ATC
Internal	
Ecclesbourne Road	ATC
Northchurch Road	ATC
Elmore Street	ATC
Englefield Road	ATC
Oakley Road	ATC
Downham Road	ATC
Shepperton Road	ATC
Elizabeth Avenue	ATC
Rotherfield Street	ATC

TfL permanent traffic sites and coordinates (all ATCs)

Street name	Northing	Easting
A1 Archway	529219	187254
Pentonville Road	531004	183093
Camden Road	529924	185126
Caledonian Road	530708.1	183517.3
Clerkenwell Road	531863	182129
City Road	532762	182386
Old Street	532668	182448
St Johns Street	531460	183048
A1 Upper Street	531650	184311
Holloway Road	531239	185120
Canonbury Road	531885.4	184353.7
Southgate Road	532956	184553

TfL also has a counter on Essex Road, which has not been included in the normalisation methodology because of incomplete data that has not been processed.

ATCs measure traffic volumes and speeds using two thin tubes that run across the street and are connected to a sensor. When wheels pass over the tubes, the pressure impact is interpreted by the sensor to identify the type of vehicle passing over, and the speed with which it passed. They are considered to be approximately 98% reliable. Inaccuracies can arise when, for example, two vehicles pass at the same time they may be counted as one, or if a car and bicycle pass at the same time, it may be read as one car. However, the same method was used before and after and the method is considered a good industry standard. They are used as a standard in monitoring transport schemes.

Radar counts monitor speeds and vehicle volumes to a less specific categorisation using a radar sensor and do not include cycles. The suppliers state their accuracy rate is 98%.

Appendix 2: Traffic Count Normalisation Methodologies

To calculate the normalised percentage differences, the June 2021 traffic count volumes have been **divided** by 0.9110 and the July 2022 traffic counts by 0.9292 to give normalised volumes. In other words, in order to account for the fact that there was (generally) less traffic on Islington streets from January 2020 onwards, we have provided adjusted figures that provide an estimate for what the traffic would have been if there had not been disruptions from broad events such as Covid-19 or the cost-of-living crisis. This allows us to analyse the impacts of the LTN scheme rather than the impacts of current events / central government policy.

To calculate the percentage change, the difference between the two has been taken and divided by the normalised baseline volume to arrive at a normalised percentage change.

The normalisation figure for each month is reached by calculating the daily average percentage difference between the 'baseline' month (pre-Covid-19 impact) and the corresponding 'impacted' month (i.e. June 2021 and July 2022) across all the permanent TfL counter sites around Islington, and taking an average difference for the whole month.

Appendix 3: Air Quality Monitoring

We have been monitoring air quality since 2000 and have 21 long term monitoring sites across the borough. We also have additional monitoring in place for specific projects and have been monitoring air quality outside every school in the borough since 2018. As such, there is significant long-term air quality data collection across the borough, which will be used in the normalisation process. It also means there is existing air quality monitoring within the Canonbury East PFS trial area, though some monitoring equipment has been added to expand the air quality monitoring in and around an area.

The air quality monitoring sites in the Canonbury East LTN are listed below, with details about type and if they have been added as part of the PFS programme or were pre-existing.

Canonbury East air quality monitoring sites type and period of installation

Locations	PFS road type	Monitoring type	Installation	Site Type by DEFRA classification*
Balls Pond Road (BIS005/09)	Boundary	Diffusion tube	Pre-existing (since 2000)	Roadside
New North Road (PF1)	Boundary	Diffusion tube	New (since July 2020)	Roadside
Northchurch Road (PF2)	Boundary	Diffusion tube	New (since July 2020)	Roadside
Essex Road (PF4)	Boundary	Diffusion tube	New (since July 2020)	Roadside
Elizabeth Avenue (S46)	Internal	Diffusion tube	Pre-existing (since 2018)	Background urban
Shepperton Road (N47)	Internal	Diffusion tube	Pre-existing (December 2019)	Background urban
Rosemary Gardens (N48)	Non-street-based site	Diffusion tube	Pre-existing (December 2019)	Background urban

Islington's air quality team classify sites using Defra guidance based on their location. Roadside sites are those within one to five metres of a busy road, while urban background sites are those in an urban location but more distanced from sources and therefore more representative of wider background conditions.

Data quality control

As a council we are legally obliged to monitor air quality and report on this every year. To ensure data is as accurate as possible we follow national guidance for monitoring air quality, in terms of deployment and results analysis. For example: use of accredited monitors, personnel and laboratories or correction of diffusion tube data based on annual comparisons to automatic monitors. More information on this process can be found in our annual reports.

The data used in this analysis will follow these rules as much as possible, especially with regards to monitor deployment. However, it will not have fully gone through this process, especially with regards to normal end of year analysis processes for 2022, and should therefore be treated as provisional.

The 2018-2021 data in this report has been adjusted using a correction factor. Adjusting data in this way is standard practice in making air quality data as accurate as possible, more information on this process can be found in our annual air quality reports The data for 2022 is still raw as a bias correction factor has not yet been calculated. For time periods where less than 75% of data was captured the data has been "annualised", meaning it has been adjusted by comparing it to monitors that had data for the whole period. More information can be found on this process in the annual air quality report.

Insights background

Pollution levels are impacted by a range of local and wider sources. For example, the source apportionment study conducted for Islington in 2015 found only 3% of London's NO_2 emissions came from inside Islington. Therefore, it can be very hard to pick up on local changes caused by schemes such as the LTNs.

Pollution also varies significantly over time due to a range of external factors (such as weather) for which this study has not corrected. Therefore, ideally, a longer period of study would be required to analyse these results more fully. This would also allow further quality control of data that has not been possible with these results. There is also further uncertainty in recent results and whether these will represent longer term trends due to Covid-19. Studies of the first lockdown in March, for example by the Greater London Authority, show a decrease in overall motorised traffic and NO_2 levels but no consistent change in PM due to weather impacts.

Appendix 4: SYSTRA Statement

SYSTRA has been commissioned to prepare this report in partnership with the London Borough of Islington.

SYSTRA is a global leader in mass transportation and mobility, employing over 7,000 global employees across 80 countries. SYSTRA has the unique advantage of being not only a Transport Consultancy, but also Social and Market Research Consultancy. Their team members have an in-depth understanding of both the transport sector and of social and market research techniques, providing expert support in monitoring and evaluation both direct to clients and also in a peer review capacity. They provide a wealth of experience in conducting both qualitative and quantitative transport research with stakeholders to help understand their priorities and to inform options for future investment and policy development.

Neither SYSTRA nor LB Islington can be held accountable for errors in the data provided by third parties, where these errors have not been identified through normal checking processes.

Appendix 5: Individual Site Volumes & Speeds

The following section provides detail for each monitored site, including a breakdown of flows by monitoring period and by vehicle class, as well as a comparison of speeds.

It should be noted that the data presented in this appendix is drawn directly from raw data provided to LB Islington and SYSTRA, rather than summary reports produced by the relevant survey companies. Using the raw data has allowed a further set of checks to be conducted on the data to ensure there are no gaps or anomalies in the datasets (which often happens if vehicles park on the traffic counter, or in the case of a local traffic collision). As such, in several cases, missing data has been infilled with data from a similar period to ensure that blank periods do not cause misrepresentations in the data – therefore, it is likely there are some deviations from that data which was presented in previous reports.