London Borough of Lambeth: Tulse Hill LTN Monitoring Stage 2 Report

SYSTRA
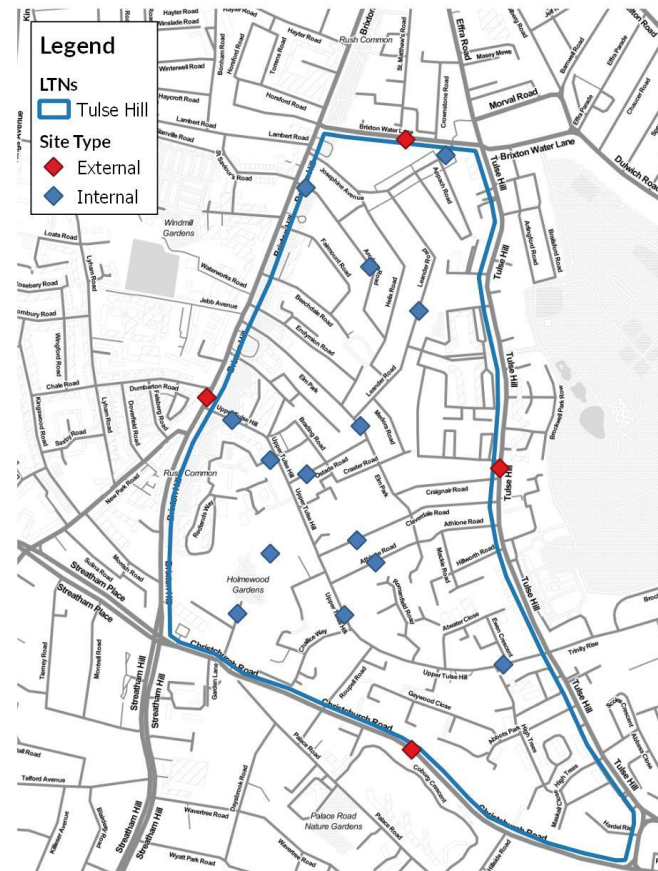
Executive Summary

Executive Summary (1)

- This monitoring report presents data reviewing the impact of the Tulse Hill Low Traffic Neighbourhood on local traffic flows, with count sites spread across the inside of the LTN as well as on its boundary roads.

- For analysis, count sites have been classed as "internal" or "external", as represented on the map to the right. Of the 18 total sites, **14 sites were internal (blue)** and **4 were external (red)**.

SYSTRA

Executive Summary (2)

- As pre-implementation data was sourced from studies taking place across several years, and post-implementation data was collected during 2020-2021 (a time of significant fluctuation in general traffic flows), a normalisation adjustment has been made to ensure a fairer comparison of pre- and post-implementation data.

- For the Tulse Hill LTN, the **average** adjustment to vehicle flows is **-4%** (i.e. 96% of pre-COVID flows), which is more conservative than a direct comparison of pre- and post-implementation flows.

- The following impacts have been observed between normalised pre-COVID data and data from May 2021:

  - **The overall volume of motor traffic recorded across all streets has decreased by -2%, equating to around 2,000 fewer daily vehicles counted.**

  - The **volume of vehicles** counted on **internal streets** has **decreased** by **-31%**, but has increased by **roughly +6% on external streets**.

  - **Cycle volumes** on **internal streets** have **increased** by **+107%** and by **+67%** on **external streets.**

  - Across all streets, the **volume of HGVs** has **decreased** by **-18%** whilst the **volume of LGVs** has **increased** by **+21%**.

  - The **volume of motorcycles** on **internal streets** has increased by **+84%** and increased by **+51%** on **external streets,** with a **+67% change overall**.

Executive Summary (3)

▪ The total number of motor vehicles (cars, light goods vehicles, heavy goods vehicles and motorcycles) and cycles recorded on internal and external roads (for pre- and post-implementation) are provided below. Details of further data (collected in October 2020) are provided within the main report.

▪ Data is presented both with and without the impacts of the South Circular (on the LTN's southern border), as evidence suggests that changes on this road could relate more to wider traffic trends specific to such orbital routes than local road filters in LTNs.

	All Motor Vehicles				Cycles*			
	Pre	Post – May 2021	Change	% Change May 2021	Pre	Post – May 2021	Change	% Change May 2021
Internal	21,265	14,697	-6,567	-31%	945	1,953	1,008	107%
External	68,590	72,953	4,363	6%	562	940	378	67%
External (without South Circular**)	56,358	59,094	2,736	5%				
All Counts	**89,855**	**87,651**	**-2,204**	**-2%**	1,507	2,893	1,386	92%
All Counts (without South Circular)**	**77,623**	**73,792**	**-3,831**	**-5%**				

*The South Circular & Streatham Hill use data sources which aggregate vehicle classes and do not capture cycles
**The impact of the South Circular has been split in two, with half allocated to each of the Tulse Hill & Streatham Hill LTNs.

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Scheme Introduction

Tulse Hill LTN Background

- The Tulse Hill Low Traffic Neighbourhood occupies an area between Brixton Hill and Tulse Hill, and is bounded by Brixton Water Lane to the north and Christchurch Road (A205/South Circular) to the south.

- This LTN has been divided into three main sub-cells identified in green, yellow and purple, as can be seen in the map to the right. Travel between these areas is blocked by modal filters for motor vehicles.

- The major route that is blocked with the introduction of this LTN is east-west traffic along Upper Tulse Hill between Tulse Hill and Brixton Hill. Smaller through-flows on Elm Park and Leander Road are similarly filtered.

- In early 2021, an additional filter was added on Arodene Road slightly east of Brixton Road (in blue).

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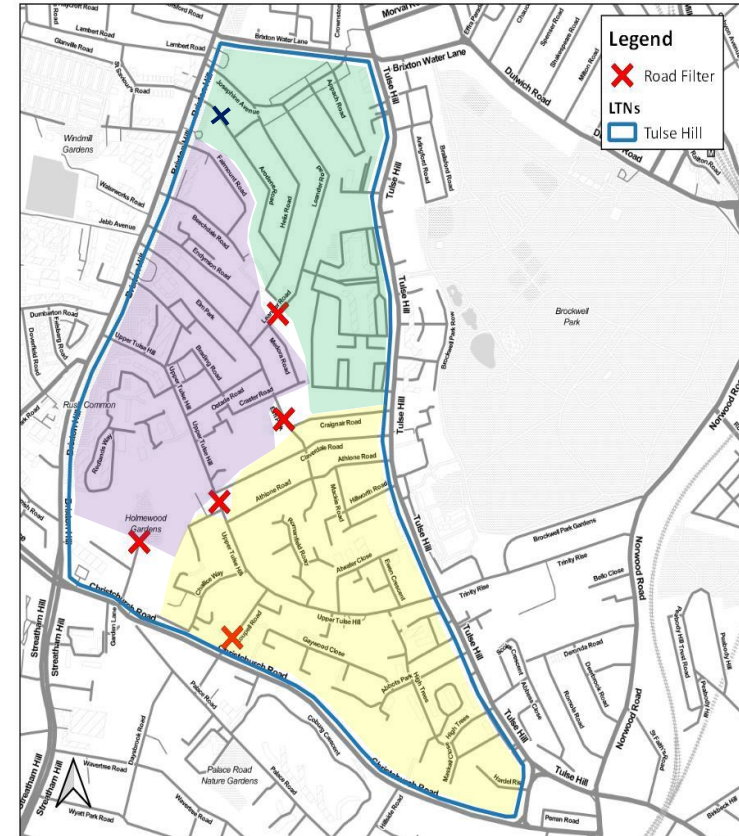
Monitoring Study

Scheme Background

- LB Lambeth implemented a number of measures as part of its emergency COVID-19 transport response. These included Low Traffic Neighbourhoods (LTNs), in accordance with national and regional guidance. In the <u>short term</u>, these measures were intended to:

  - Assist residents in **social distancing**

  - Enable **essential journeys** to be made safely

- Now, over the <u>longer term</u>, the introduction of the Lambeth LTNs aims to promote a wider change away from motor vehicle use towards active travel (walking and cycling) and public transport, improving air quality and safety, and reducing greenhouse gas emissions in line with the Lambeth Transport Strategy 2019

- These measures have been implemented as trials under Experimental Traffic Orders (ETOs), with data collection and analysis completed to inform future decisions about their permanence.

- This data collection and analysis will form the basis of the **monitoring study.**

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Source: TfL

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Monitoring Programme

- SYSTRA are leading the traffic monitoring programme for LB Lambeth's new Low Traffic Neighbourhoods to understand the effectiveness of the schemes at reducing vehicular traffic flows, with data collection completed by survey company MHTC.

- Across the Borough, data has been collected at a large number of individual points using mostly Automatic Traffic Counters (ATCs) (and occasionally radar surveys) for a full seven-day week, providing flows and speeds by vehicle type. This has then been **compared to historic data** from those sites or a suitable proxy site to **understand the impact of the LTNs** on different modes during different time periods.

- Monitoring for the LTNs will be completed over three stages:

  ▪ **Stage 1:** Initial adjustment (September 2020)

  ▪ **Stage 2:** Settling down (May 2021) - *current stage*

  ▪ **Stage 3:** Regular use (if scheme unsuccessful at stage 2)

- For qualitative feedback from residents, LB Lambeth is also running a separate Commonplace consultation.

- Further independent air quality modelling is also being conducted.

SYSTRA

Data Collection

- For this Tulse Hill LTN Stage 2 report, data was collected at 18 sites, which have been classed as "internal" or "external", as represented on the map to the right.

- Of the 18 total sites, **14 sites were internal (blue)** and **4 were external (red)**. Details for individual sites and their locations can be found in **Appendix C.**
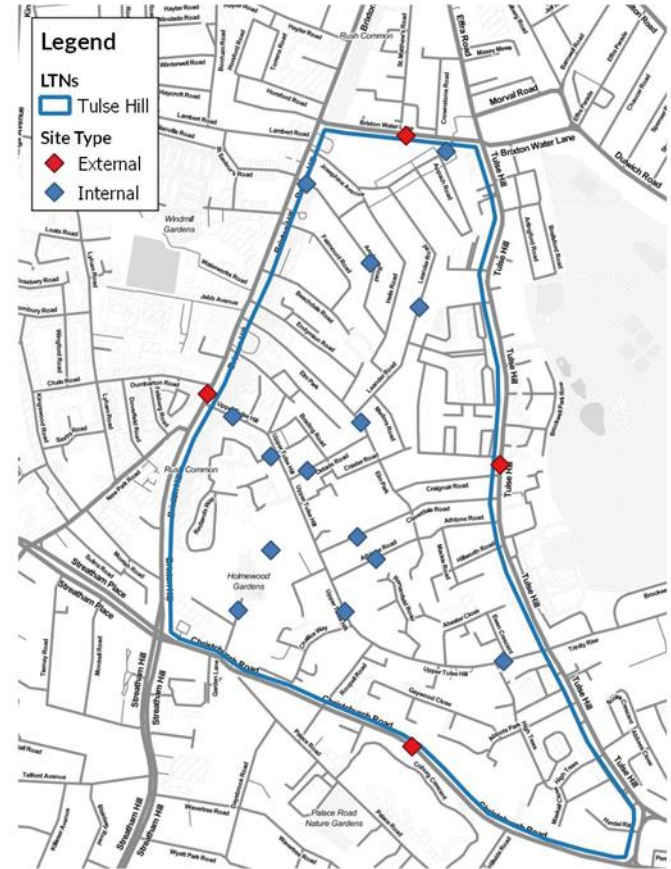
Data Collection

- As the LTN was introduced as a response to COVID-19, no comprehensive dataset existed to represent pre-implementation data. Instead, data was drawn from the following studies commissioned by LB Lambeth since 2017:

  - **Healthy Routes:** two rounds of data collection to support development of Healthy Cycling Routes (Nov 2019-Mar 2020)

  - **20mph Study**: data collected to underpin analysis on the 20mph Borough-wide speed limit (Jan 2017)

  - **The Floow**: GPS telemetry data, providing detail on vehicle routing through neighbourhood cells; this data will be used alongside Healthy Routes data for roads where no historic data was collected to approximate vehicle flows

- Of the ATC sites, **2** sites use the Healthy Routes study, **7** sites use the 20mph study and **7** utilise both The Floow data and Healthy Routes. A further **2** sites use data directly from TfL ATCs.
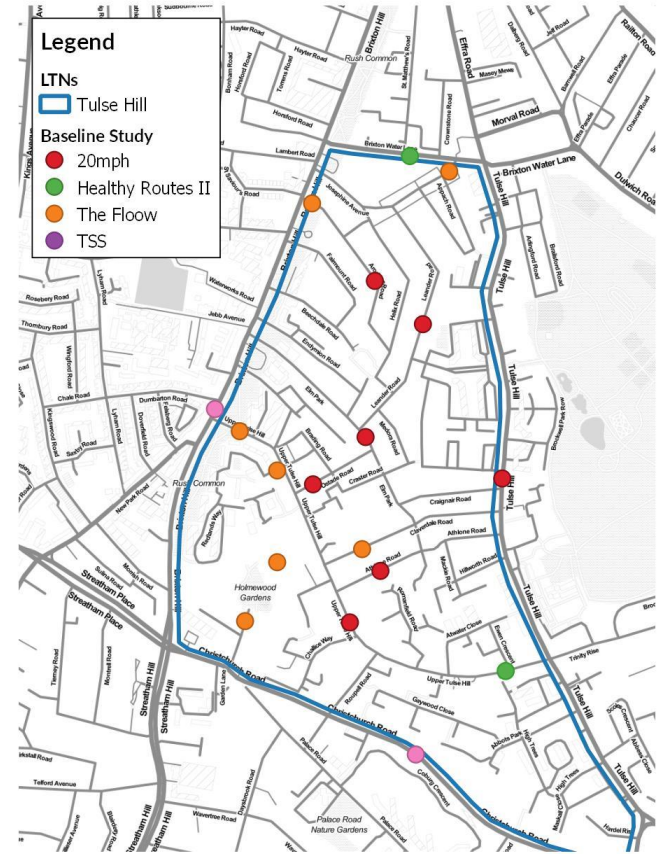
COVID-19
Impacts on traffic flows

Impact of COVID-19 on vehicular traffic

▪ Since the onset of the pandemic, people's travel behaviour has changed significantly, with the majority making far fewer trips, particularly during national lockdowns. This has led to reductions in vehicle traffic throughout the country. Therefore in analysing the data collected, it will be important to consider these impacts. The chart below compares traffic across Lambeth, within 2km of the Tulse Hill LTN and a nearby closest count site (Brixton Hill), to volumes in January 2017, according to continuous Automated Traffic Counter (ATC) counts collected by TfL.

Difference in Traffic Volume vs. Jan-17


Legend: All Lambeth | Tulse Hill 2km | Brixton Hill
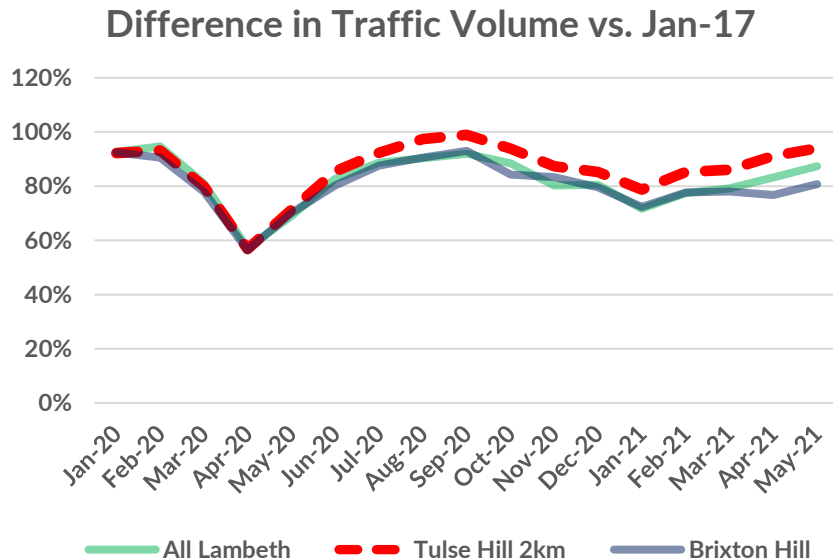
▪ Traffic has been consistently lower than pre-pandemic, with particularly pronounced drops during lockdowns. To account for this a process of normalisation has been applied to all data collected.

▪ The normalisation process adjusts the data collected to the month when the most recent data was recorded (i.e. April 2021), and can therefore represent "what would be expected without the LTN" so all data can be compared on a like-for-like basis.

▪ Further detail on the normalisation process is provided in **Appendix C**. All car, LGV and HGV volumes have been normalised in the same manner.

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Impact of COVID-19 on cycle flows

- As with motor traffic volumes, the number of people cycling has also been affected by the pandemic. The Department for Transport's Road Traffic Statistics estimate a 38% increase in cycling in London in 2020, relative to the average for 2017-2019. Other estimates include:

  - a 35% increase in London from 2019 to 2020 among Strava users;

  - a 7% increase in Inner London and a 22% increase in Outer London from 2019 to 2020 as measured by the company Eco-Counter.

- The chart below shows the volume of cycle trips compared to a pre-COVID, March baseline across England[1]. A large increase is shown in 2020, although levels appear to have reverted to below or similar to pre-COVID levels in the latter part of the year and 2021. This will partly be related to the weather, given the comparison to March.

Cycle Volumes in England Compared to National March Baseline


Week Ending
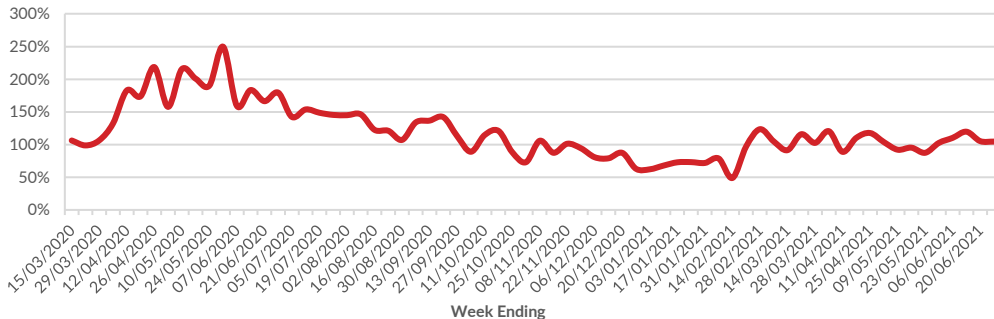
- Unlike for motor vehicles, a continuous pre-COVID data set does not exist that is sufficiently comparable to cycling in Lambeth to allow for normalisation of cycle trips. Therefore such a process has not been completed, so changes in cycle flows observed should be considered in the context of the changes described.

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Pre-Implementation Flows

Pre-Implementation Flows

- Pre-implementation flow data for cars, HGVs and LGVs was drawn from a range of studies which took place mostly between 2017 and early 2020. These are presented to the right. All data has been normalised using background flow data from ATCs within 2km of the LTN – **this process has been outlined in detail in Appendix B.**

- Cycle flow data has not been normalised, reflecting the absence of an appropriate data set with which to perform this process. Similarly, motorcycle data has also not been normalised, as the impact of COVID-19 on motorcycles is likely to have been significantly different to that of general traffic, due to the changes in factors such as take-away food deliveries. However, a historic dataset for these alone is not available.
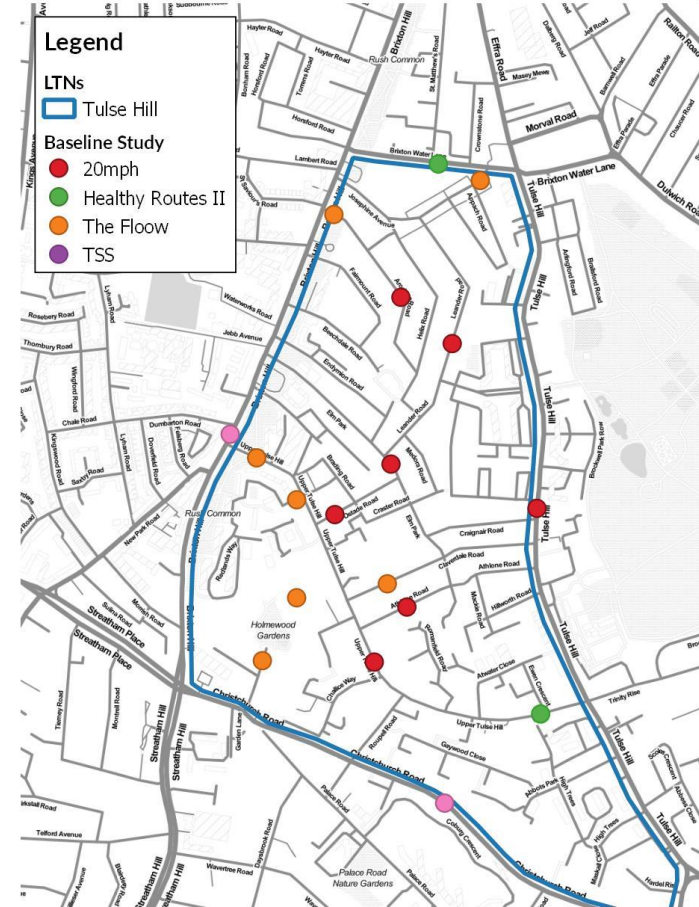
Pre-Implementation Flows – Cars

- As previously outlined, calculated **pre-implementation flows** are those that would be projected based on background TfL data.

- Daily pre-implementation flows are presented in the map to the right, showing the general trend of traffic within and surrounding the Tulse Hill LTN.

- Within the LTN study area, the highest flows are recorded along Upper Tulse Hill (above 2,000 vehicles per day) and on Elm Park, which form natural through-routes.

- In other residential roads flows are usually below 1,000 vehicles per day.

- The highest flows are recorded on external roads such as Christchurch Road/South Circular (24,464), Brixton Hill (24,471) and Tulse Hill (11,565). It should be noted that for the first two of these, TfL data sources do not distinguish between cars and motor vehicles, and thus these values are **totals for all motor vehicles.**

Legend
Daily Flow (Car)
- <4000
- 4,000 -6,000
- 6,000 - 8,000
- 8,000 - 10,000
- > 10,000

Basemap: Stamen

Pre-Implementation Flows – Cycles

- As cycle travel does not follow the same patterns as car usage and varies significantly based on local conditions, cycle flows have not been normalised. The map to the right shows daily flows.

- Cycle flows were generally low in the area, with slightly higher flows recorded on peripheral roads such as Tulse Hill (198 daily cycles) and Brixton Water Lane (364 daily cycles).

- It should be noted that cycle movements are not split out in TfL ATC data on Christchurch Road or on Brixton Hill.

Legend
Daily Flow (Cycle)
- < 250
- 250 - 500
- 500 - 750
- 750 - 1000
- > 1000

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Pre-Implementation Flows – HGVs

- The map to the right plots **pre-implementation** HGV flows.

- HGV flows on surveyed roads were fairly low – in many cases below 10 on an average day.

- The only locations inside the LTN carrying over 100 daily HGVs per day were two locations on Upper Tulse Hill (268 and 139 HGVs per day). Externally, Tulse Hill carried 140 daily HGVs on average.

- It should be noted that HGV movements are not split out in TfL ATC data on Christchurch Road or on Brixton Hill.

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SYSTRA

Pre-Implementation Flows – LGVs

- The map to the right plots **pre-implementation** LGV flows.

- In general, LGV flows were higher on roads on the periphery, especially on Tulse Hill (967 vehicles per day) and Brixton Water Lane (473 vehicles per day).

- There were still some high flows through the LTN, such as on Upper Tulse Hill, where there were 228 LGVs per day were recorded on one site.

- It should be noted that LGV movements are not split out in TfL ATC data on Christchurch Road or on Brixton Hill.

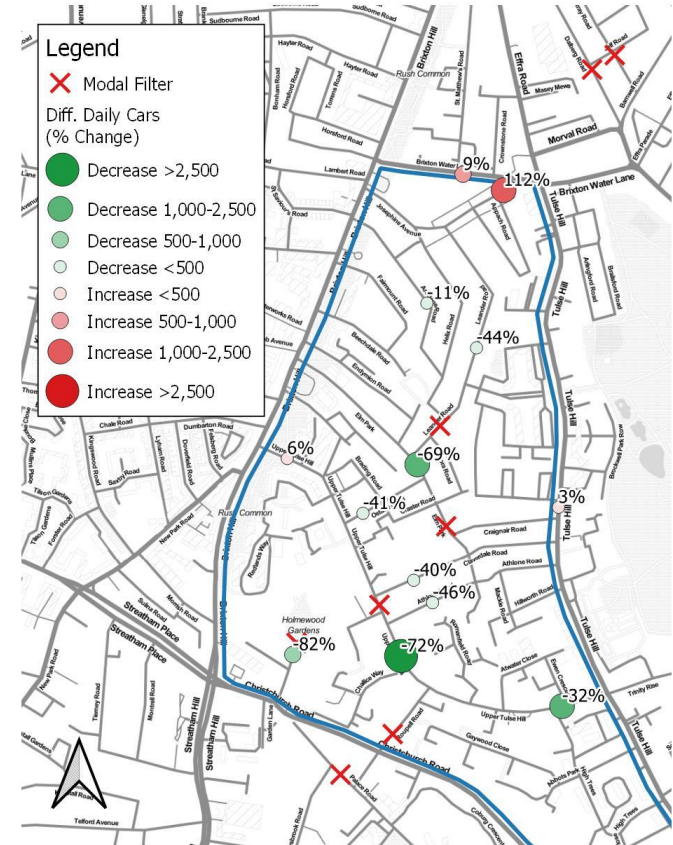Basemap: Stamen

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Pre-Implementation Flows – Motorcycle

- The map to the right plots **pre-implementation** motorcycle flows.

- These are generally low within the LTN, while the highest flows are recorded on boundary roads, such as Tulse Hill (346 daily motorcycles) and Brixton Water Lane (275 daily motorcycles)

- It should be noted that motorcycle movements are not split out in TfL ATC data on Christchurch Road or on Brixton Hill.
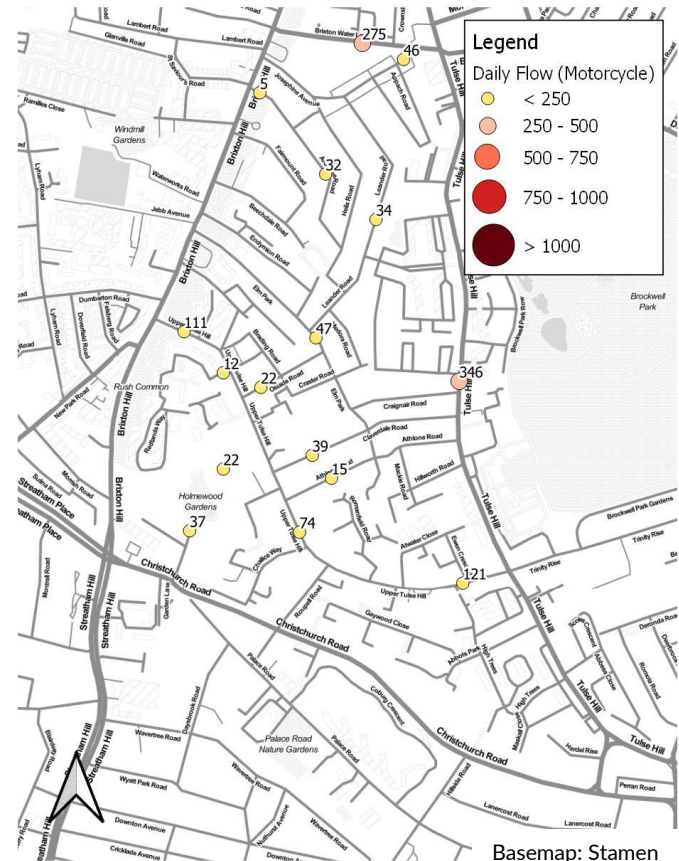
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Post-Implementation Monitoring Stage 1/October 2020

Stage 1 Goals

- This first round of monitoring was conducted in October 2020 after modal filters were installed for several months and enforcement of the scheme had begun.

- The goal at this stage of monitoring was to understand initial impacts of the LTN on traffic, so as to identify any opportunities for improvement in the scheme design.
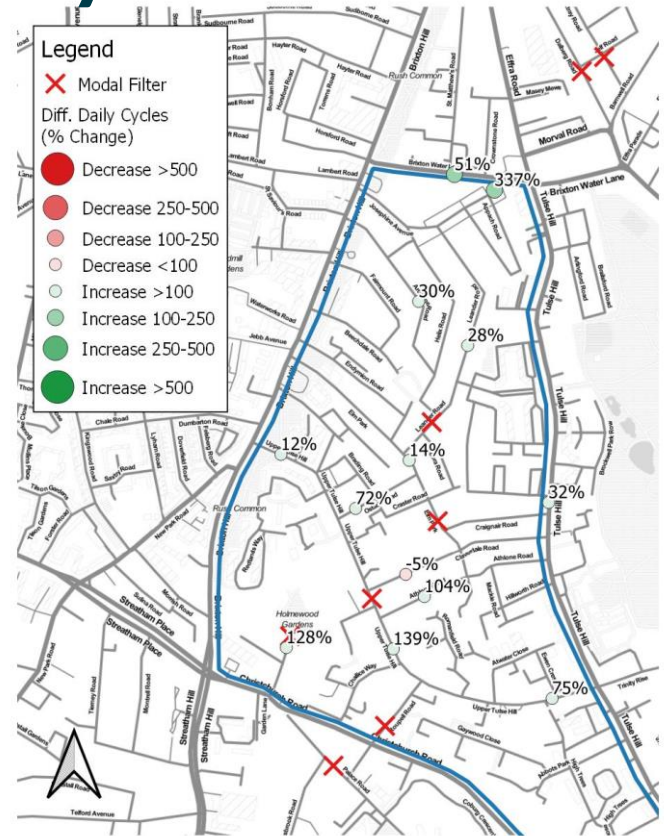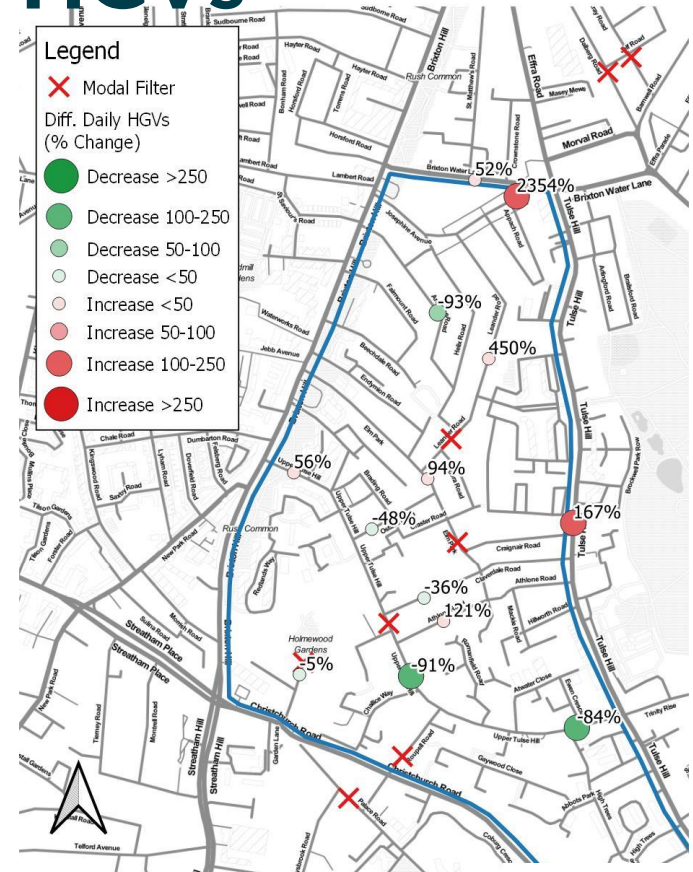
SYSTRA

October 2020 Flow Change – Cars

- The map to the right outlines changes in counts of LGVs compared to pre-implementation, at sites where data was collected in October 2020. This does not include several sites where data was not collected during this stage.

- Vehicle flows on streets with modal filters decreased, for example on Upper Tulse Hill where -72% and -31% fewer daily cars were counted, equating to -2,900 and -1,200 vehicles respectively.

- Cars were also down by -69% on Elm Park (-1,600 daily vehicles) and -82% on Cotherstone Road (-648 daily vehicles).

- Flows increased on Josephine Avenue by 112% (+1,100 daily vehicles), indicating that residents are likely rerouting via this link to reach their homes.

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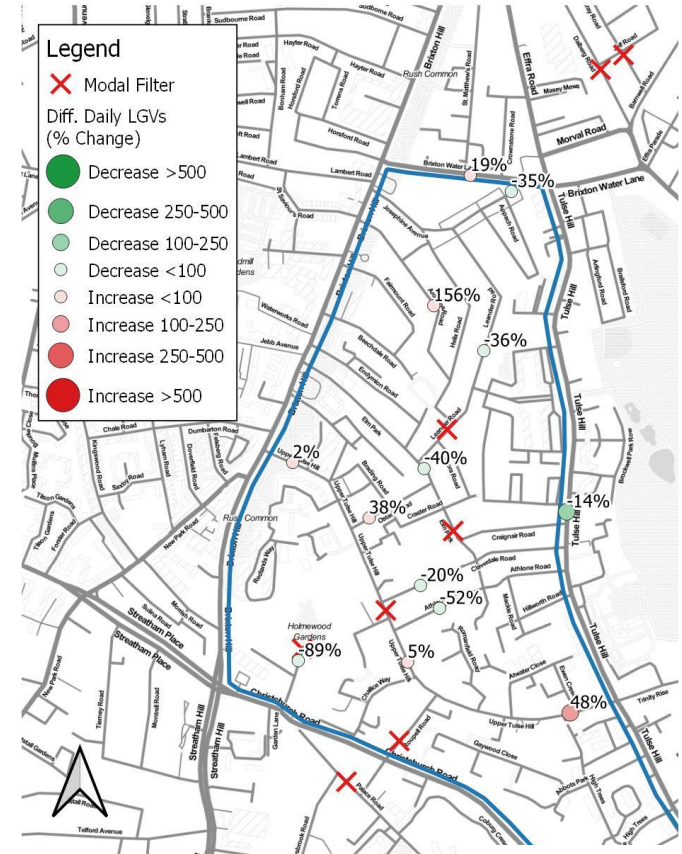
October 2020 Flow Change – Cycles

- The map to the right outlines changes in counts of LGVs compared to pre-implementation, at sites where data was collected in October 2020. This does not include several sites where data was not collected during this stage.

- In general, cycling levels were up in most places throughout the LTN, although it is acknowledged that high % increases generally corresponded to low nominal increases in flows.

- Josephine Avenue (+337% or +200 cycles) was the only location to see a notable change in cycling within the LTN, and Brixton Water Lane (+51% or +190 cycles) the only such location on external roads.

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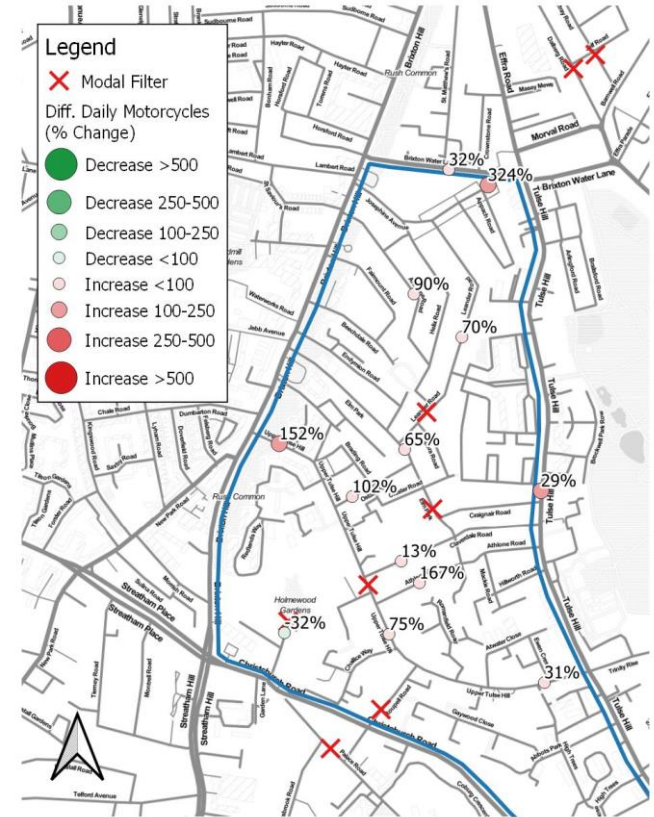
October 2020 Flow Change– HGVs

- The map to the right outlines changes in counts of LGVs compared to pre-implementation, at sites where data was collected in October 2020. This does not include several sites where data was not collected during this stage.

- Inside the LTN, changes in HGV flows were generally quite moderate, though with some exceptions. After filters were installed, Upper Tulse Hill saw significant decreases in such flows (-91% and -84%, or -130 and -230 daily vehicles), whilst Josephine Avenue saw a notable increase from 6 to nearly 160 daily HGVs, representing a very large percentage jump.

- On external roads, Tulse Hill saw the most notable change, with a +167% (+230 daily vehicle) increase.

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October 2020 Flow Change– LGVs

- The map to the right outlines changes in counts of LGVs compared to pre-implementation, at sites where data was collected in October 2020. This does not include several sites where data was not collected during this stage.

- The impact of the LTN on LGV flows was mixed, generally with limited nominal changes given low baseline flows.

- Inside the LTN, only Upper Tulse Hill east saw a change of >100 LGVs (+48% or +110 vehicles); externally, only Tulse Hill saw such a change (-14% or -140 vehicles).

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October 2020 Flow Change– Motorcycles

- The map to the right outlines changes in counts of motorcycles compared to pre-implementation, at sites where data was collected in December 2020. This does not include several sites where data was not collected during this stage.

- The most significant increase in motorcycle flows took place on Josephine Avenue (+324% or +150 motorcycles).

- Further significant increases were seen on Upper Tulse Hill (+152% and 75%, or +170 and +60 motorcycles) and Athlone Road (+167% or +25 motorcycles), although from a very low baseline.


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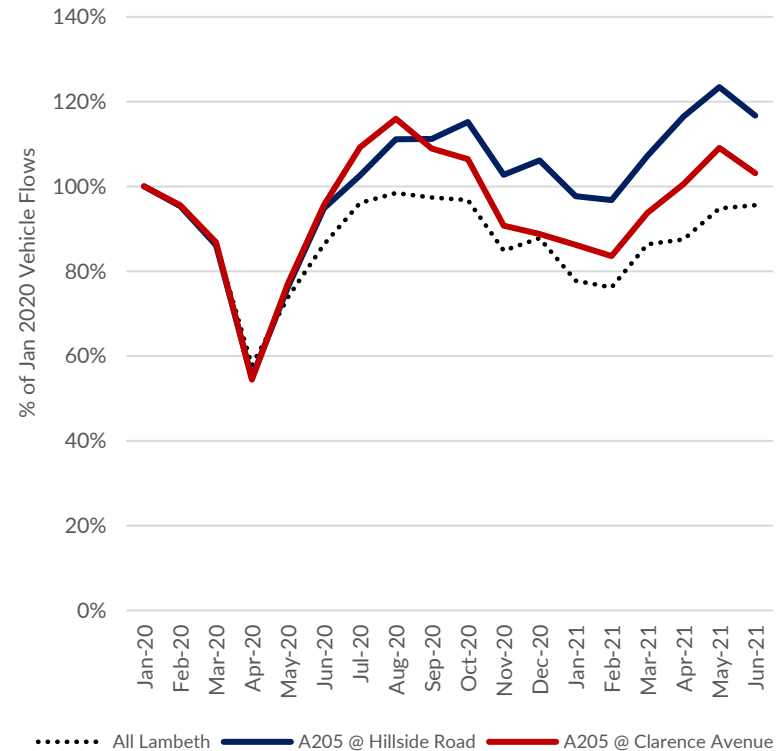**Post-Implementation Monitoring Stage 2/May 2021**

May 2021 Flow Change – Cars

- The map to the right outlines changes in counts of cars compared to pre-implementation, at sites where data was collected in May 2021.

- Flow patterns are similar to those recorded in October 2020, dropping on roads with filters (-77% and -51% on Upper Tulse Hill equating to -2,900 and -1,200 vehicles, and -75% on Elm Park equating to -1,600 vehicles). Josephine Avenue, however, has still recorded a notable increase (+116% or +1,100 vehicles), likely due to this being the main access for man residents in the northern half of the LTN.

- On boundary roads, change was minimal to the east (Tulse Hill) and west (Brixton Hill), but more significant to the north on Brixton Water Lane (+28% or +1,600 vehicles).

- Flows on Christchurch Road (the South Circular) have increased by 13% vs. the baseline, although it is considered this increase is partially due to wider routing trends rather than the LTN(s) themselves.


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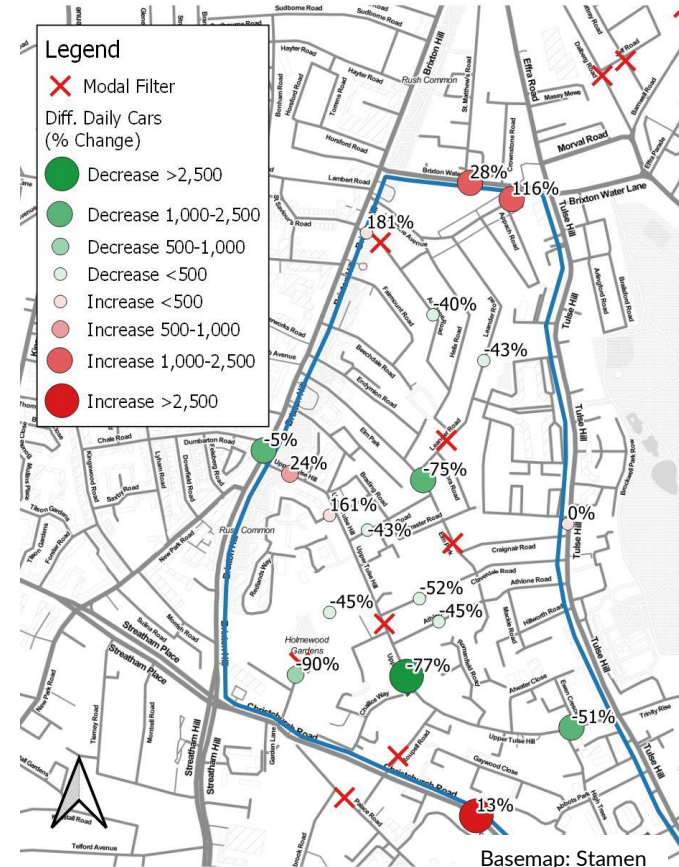
South Circular Analysis

- The chart to the right shows flows at two TfL count sites on the South Circular/A205 (one between the Tulse Hill/Streatham Hill LTNs and one near Clarence Avenue closer to Clapham), in comparison to the Borough average, depicting a faster return of traffic from June 2020 on the South Circular.

  - The Clarence Avenue site is not directly impacted by LTNs, yet flows have been 8% higher than the Borough average since April 2020. This is most likely occurring as orbital journeys (around the city) have recovered, whilst radial journeys (into the city centre) have not (due to working from home), so flows on an orbital route (i.e. the South Circular) are higher than the average.

  - It is considered that the section between the LTNs on Christchurch Road would be subject to a similar impact, as traffic along this route is up even where there is no LTN nearby.

  - For comparison, numbers have been presented in the executive summary both with and without this road.

May 2021 Flow Change – Cycles

- The map to the right outlines changes in cycle counts compared to pre-implementation, at sites where data was collected in May 2021.

- In general, cycling levels were up quite significantly in most places throughout the LTN, although it is acknowledged that high % increases generally corresponded to low nominal increases in flows.

- Brixton Water Lane and Josephine Avenue recorded the largest increase in flows, of 80% (+291 daily cycles) and +435% (+264 daily cycles) respectively. More moderate increases were seen on Cotherstone Road in the south of the LTN (+236%, +116 cycles per day).

- The only decrease in flows has been recorded on Fairview Place (-98%) equating to -15 cycles.

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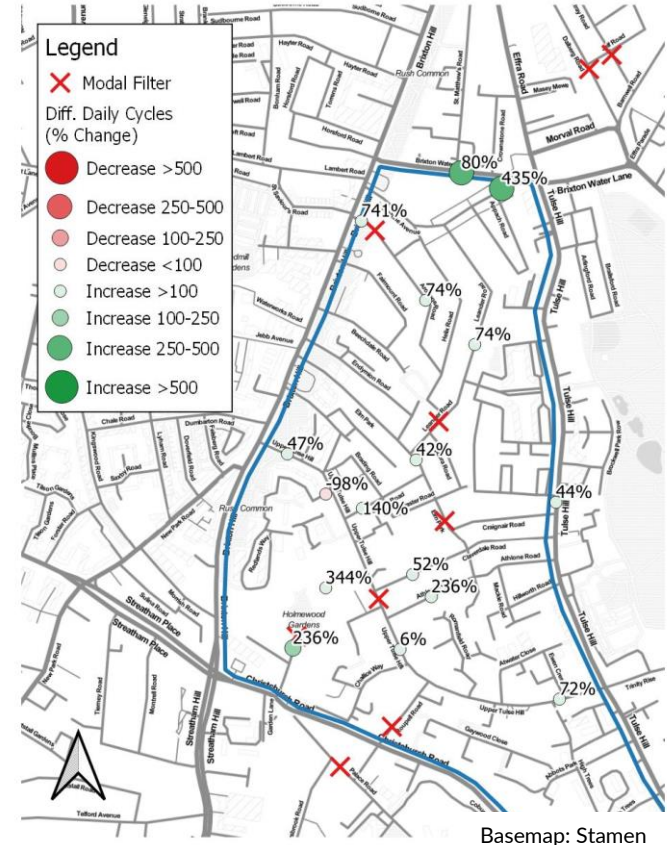
May 2021– Healthy Cycle Routes

- Healthy Routes are those which have the right conditions to enable more people to walk and cycle. They link people with key destinations, and are convenient, attractive and safe for all.

- For a Healthy Route to be designated as such in Lambeth, it must have certain key characteristics:

  - Fewer than 200 vehicles per hour in the average weekday peak hour.

  - Under 5% of vehicles using the route can be classified as HGVs.

  - Average vehicle speeds must be <20mph.

- The map to the right outlines LB Lambeth's designated Healthy Route, which passes through the southeast corner of the Tulse Hill LTN as part of its longer routing linking Brockwell Park and Streatham Common.


Legend

Healthy Routes

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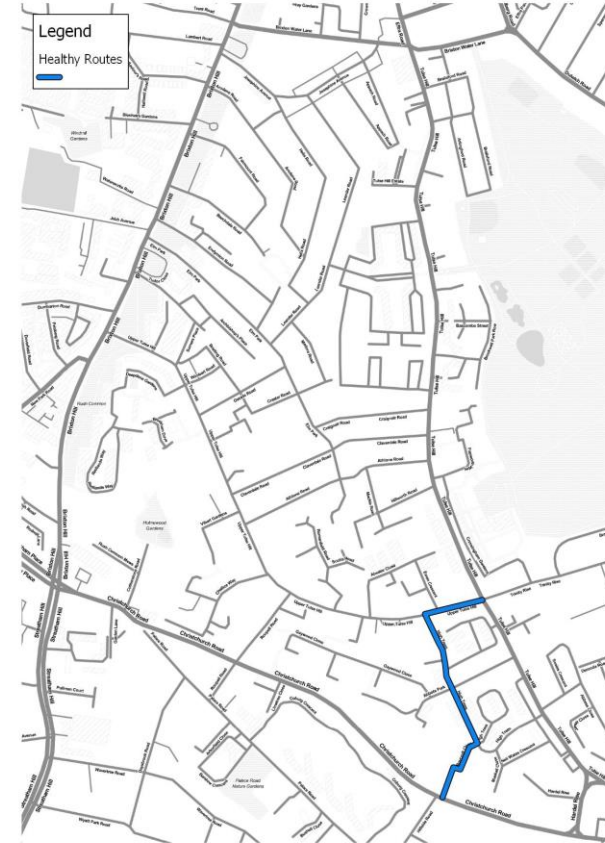
May 2021– Healthy Cycle Routes

- Inside the Tulse Hill LTN, evidence from May 2021 suggests the Healthy Route now meets standards due to a reduction of traffic on Upper Tulse Hill.

- All monitored streets within the LTN are expected to be safe for cycling under Healthy Routes criteria.

- On sections of Upper Tulse Hill and on Cotherstone Road, HGVs represent more than 5% of traffic; however, total traffic volumes are so small in both locations (<30 average peak hour) that the total number of HGVs (<2 hourly) is negligible regarding potential impact on cyclist and pedestrian safety.
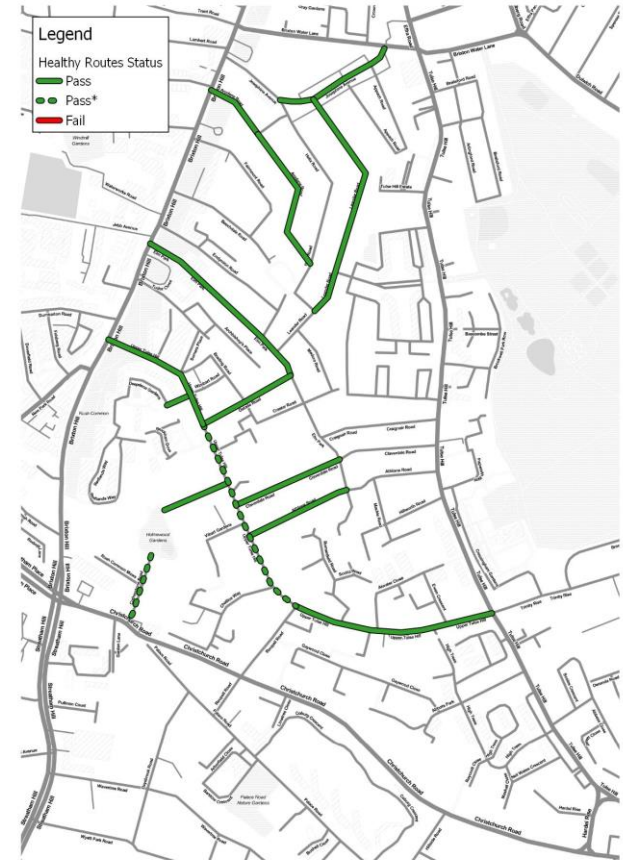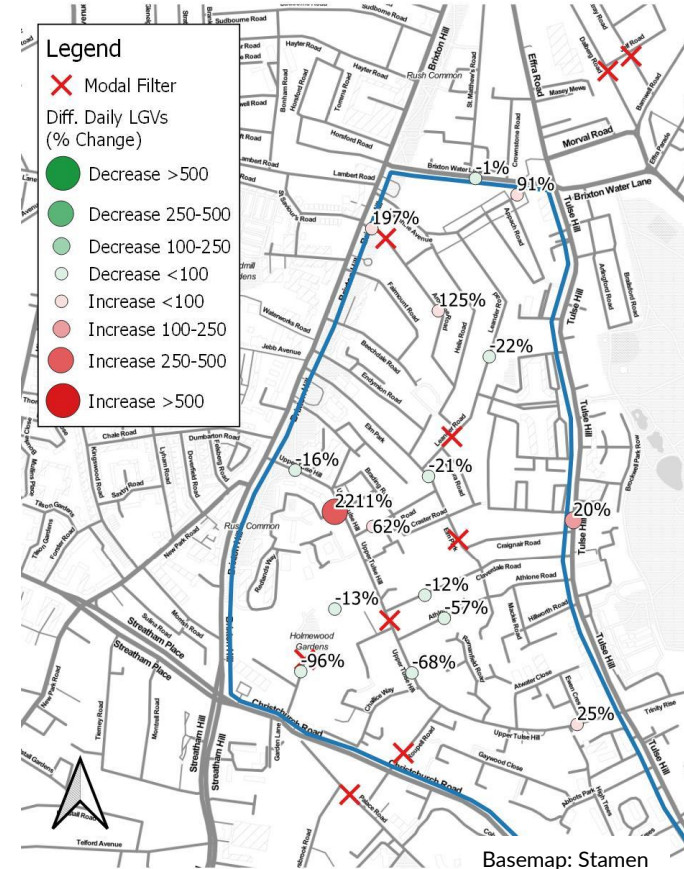
May 2021 Flow Change– HGVs

- The map to the right outlines changes in HGV counts compared to pre-implementation, at sites where data was collected in May 2021.

- HGV flows are similar to those reported from October 2020, with flows decreasing on roads where filters have been located, such as Upper Tulse Hill (-284 vehicles on Upper Tulse Hill East and -77 vehicles on Upper Tulse Hill Central)

- Some locations saw large percentage changes from baseline in HGV movements – however, these translate into very small differences in actual vehicles counted, such as on Arodene Road North (+1,052% or +7 vehicles) and Fairview Place (+264% or +4 vehicles).

- These numbers have been increased in line with overall traffic flows. However, on a national basis, whilst car traffic was at 84% of pre-COVID levels in April 2021, HGV traffic had already reached 110%* of such levels, suggesting normalised volumes may overestimate any increases.


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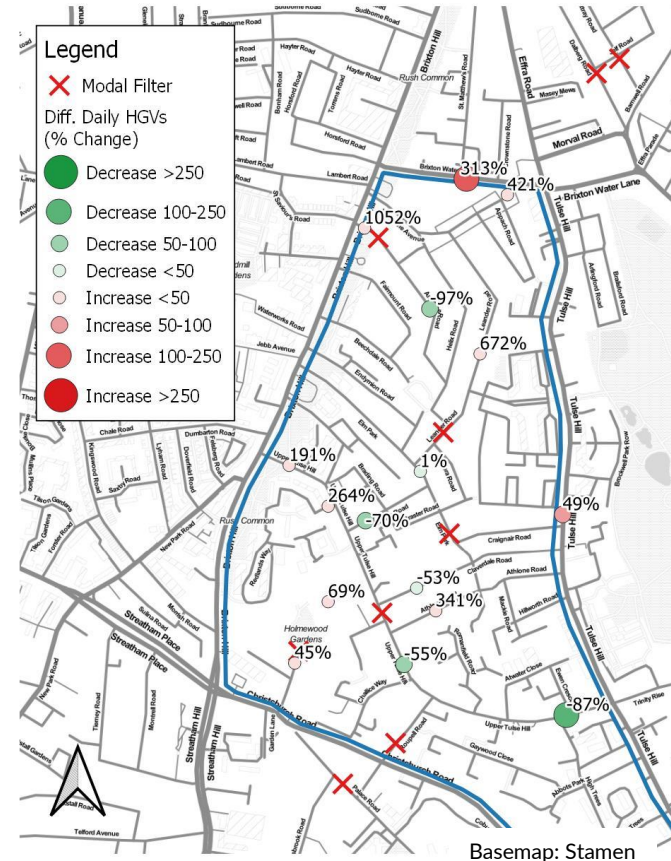
May 2021 Flow Change– LGVs

- The map to the right outlines changes in LGV counts compared to pre-implementation, at sites where data was collected in May 2021.

- Similarly to HGVs, LGV flows were similar to those collected in October 2020, with minimal change overall. The highest percentage and volume increase has been recorded at a new site on Fairview Place (+2,211% or +446 vehicles)

- The second largest increase in volumes was seen on Tulse Hill, with +195 vehicles (+20%).

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May 2021 Flow Change– Motorcycles

- The map to the right outlines changes in cycle counts compared to pre-implementation, at sites where data was collected in May 2021.

- Motorcycle flows have generally increased through the area, with the highest increase in Brixton Water Lane and Josephine Avenue (+56% and +335% respectively, ~155 motorcycles for both) and Tulse Hill (+46% or +160 motorcycles).

- On roads within the LTN, the highest increase has been recorded in Upper Tulse Hill West (+173% or 193 motorcycles).

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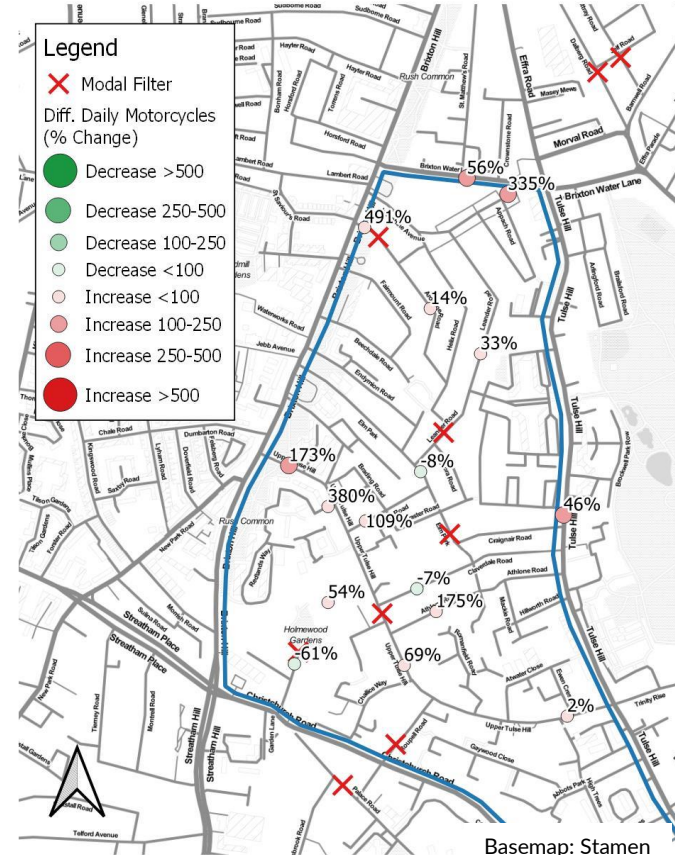
About SYSTRA

Introducing SYSTRA

- 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. Our 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.

- We 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.

Contact Us

SYSTRA

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For Lambeth Council media enquiries – **communications@Lambeth.gov.uk**

To provide feedback on the Tulse Hill Low Traffic Neighbourhood,
please contact the Lambeth Transport Team via the following channels:
        Commonplace engagement site – **https://tulsehillltn.commonplace.is/**
        Email – **LowTrafficNeighbourhoods@Lambeth.gov.uk**

Please note that due to the volume of questions we are unable to respond to individual queries; however, we
are working with LB Lambeth to create an FAQ document in relation to this reporting.

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