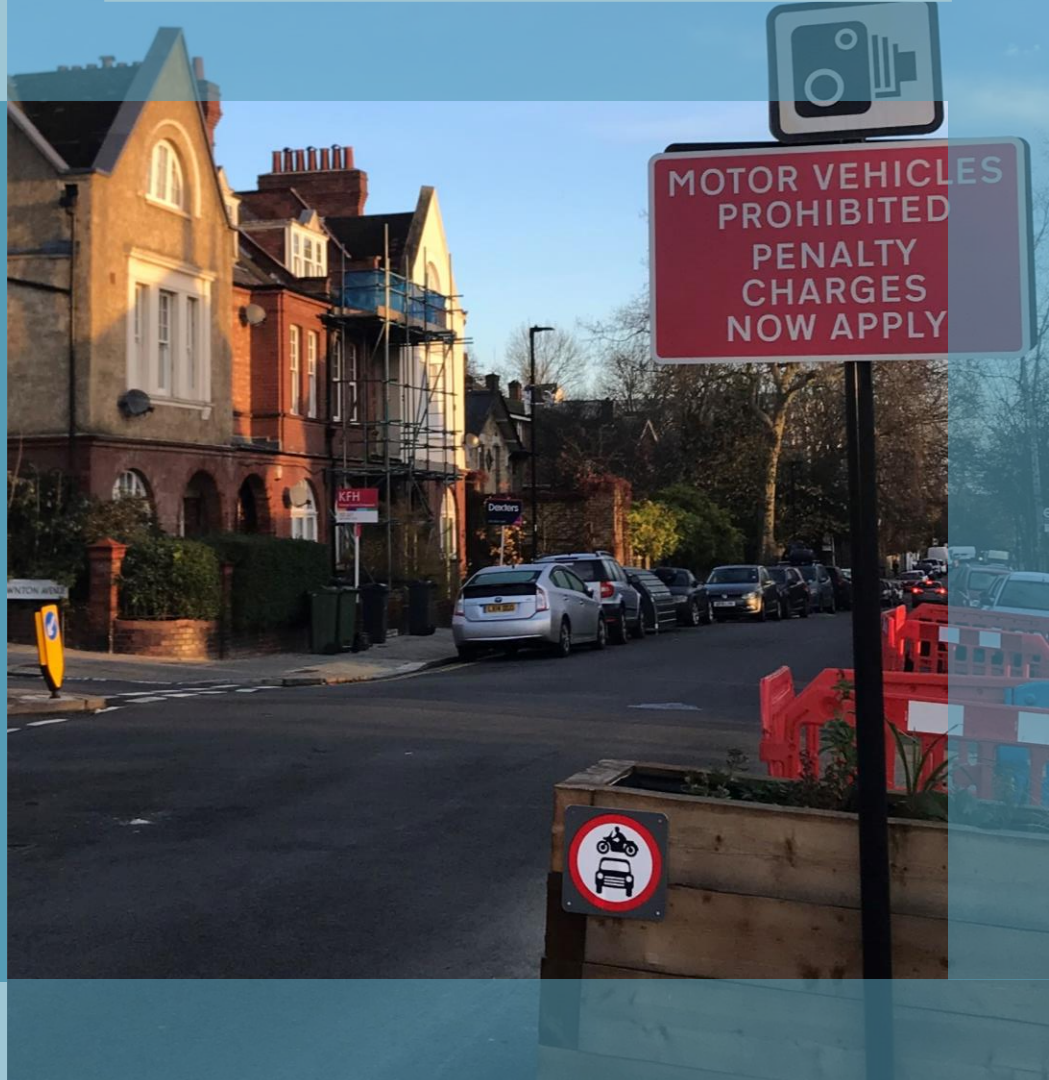
London Borough of Lambeth: Streatham Hill LTN Monitoring Stage 2 Report

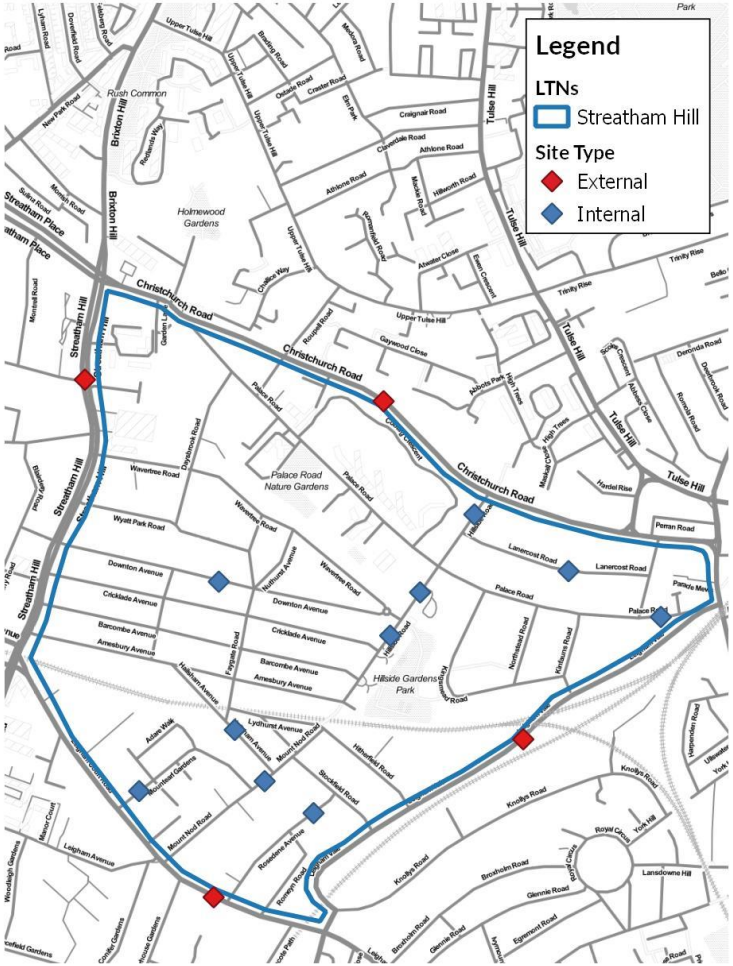


SYSTRA

Executive Summary

Executive Summary (1)

- This monitoring report presents data reviewing the impact of the Streatham 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, **10 sites were internal (blue)** and **4 were external (red)**.



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 Streatham 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 -5%, equating to around 4,500 fewer daily vehicles counted.**
  - The **volume of vehicles** counted on **internal streets** has **decreased** by **-54%**, but has increased by **roughly +13% on external streets**.
  - **Cycle volumes** on **internal streets** have **increased** by **+54%** and by **+57%** on **external streets.**
  - Across all streets, the **volume of HGVs** has **decreased** by **-22%** whilst the **volume of LGVs** has **decreased** by **-14%.**
  - The **volume of motorcycles** on **internal streets** has increased by **+80%** and increased by **+89%** on **external streets,** with a **+85% 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 northern 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.

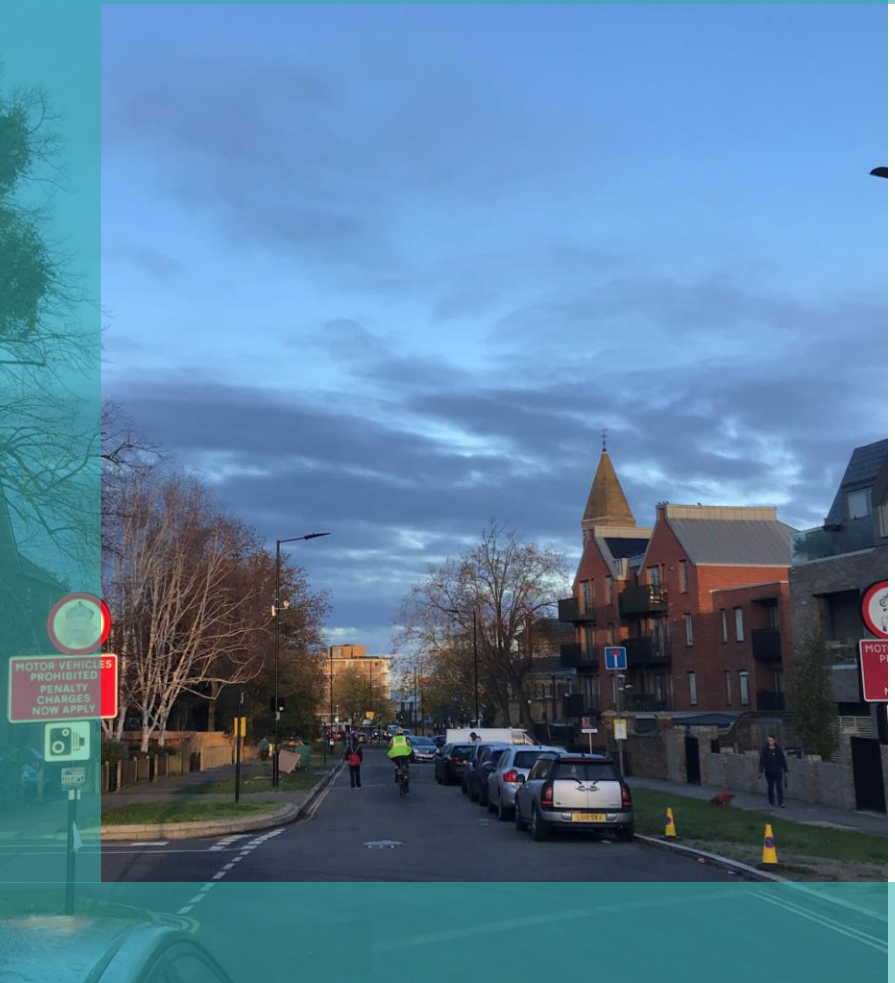
	All Motor Vehicles				Cycles*			
	Pre	Post – May 2021	Change	% Change May 2021	Pre	Post – May 2021	Change	% Change May 2021
Internal	22,724	10,427	-12,297	-54%	849	1,305	456	54%
External	60,434	68,235	7,801	13%	438	687	249	57%
External (without South Circular**)	48,202	54,376	6,174	13%				
All Counts	**83,158**	**78,662**	**-4,496**	**-5%**	**1,287**	**1,992**	**705**	**55%**
All Counts (without South Circular)**	**70,926**	**64,803**	**-6,123**	**-9%**				

*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.

Scheme Introduction

Streatham Hill LTN Background

- The Streatham Hill Low Traffic Neighbourhood occupies a trapezoidal area between the **Streatham Hill and Tulse Hill rail stations**. It is bounded by the South Circular/A205 to the north, Leigham Vale to the southeast, Leigham Court Road to the south and Streatham Hill to the west.
- Residential roads such as Hillside Road/Downton Avenue are often used to avoid congestion on the South Circular/A205 and Streatham Hill/Streatham High Road, drawing higher flows onto residential streets in the LTN.
- This LTN's modal filters are positioned to create several smaller neighbourhood cells, as depicted on the map to the right – there are four of these in total, with no through routes between them.



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 short term, these measures were intended to:
  - Assist residents in **social distancing**
  - Enable **essential journeys** to be made safely
- Now, over the longer term, 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.**

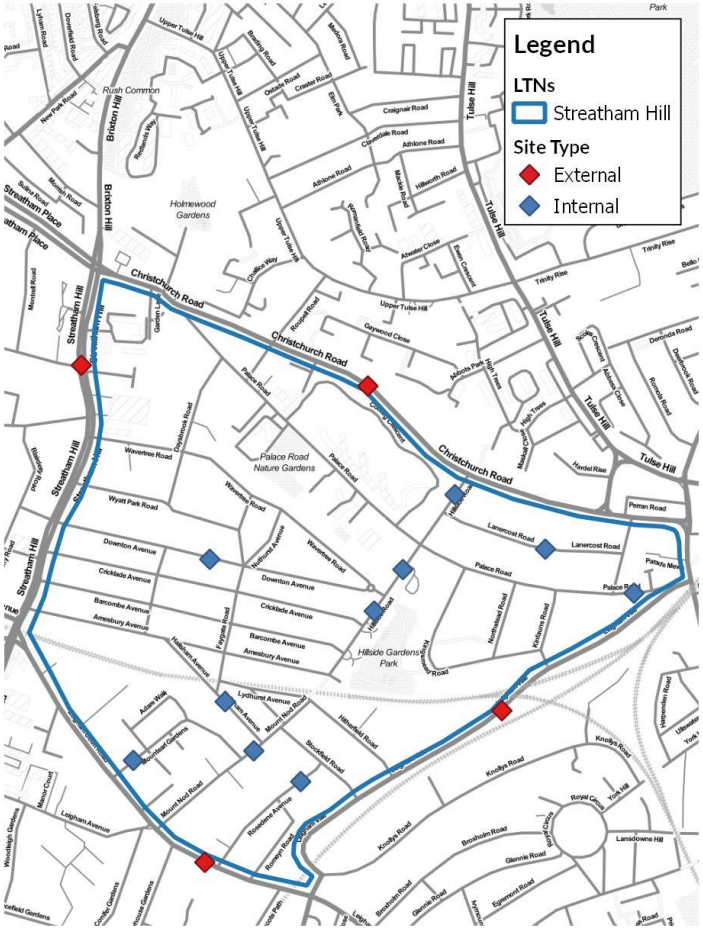
Source: TfL

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 (June 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.

Data Collection

- For this Streatham Hill LTN Stage 2 report, data was collected at 14 sites, which have been classed as “internal” or “external”, as represented on the map to the right.
- Of the 14 total sites, **10 sites were internal (blue)** and **4 were external (red)**. Details for individual sites and their locations can be found in **Appendix C.**



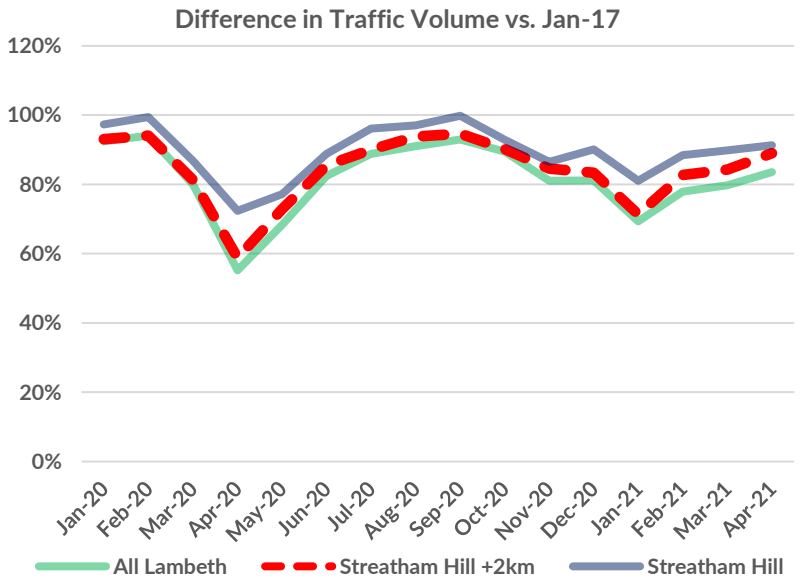
Data Collection

- 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 Leigham Vale site used data from the same study in 2015 as this location was impacted by Thames Water repairs during the 2017 study.
  - **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 14 ATC sites, **2** sites use the Healthy Routes study, **6** sites use the 20mph study and **3** utilise both The Floow data and Healthy Routes. A further **2** sites use data directly from TfL ATCs, and **1** site relies on a Sustrans study from July 2019.

COVID-19
Impacts on traffic flows

Impact of COVID-19 on vehicular traffic

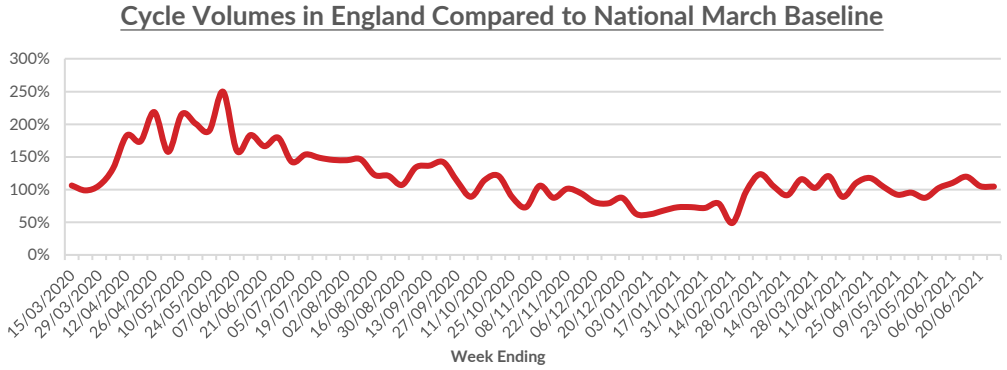
- Since the onset of the pandemic, people's travel behaviour has changed significantly, with the majority making far fewer trips, particularly during national lockdowns. This has led to reductions in vehicle traffic throughout the country. Therefore in analysing the data collected, it will be important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



- 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.

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.



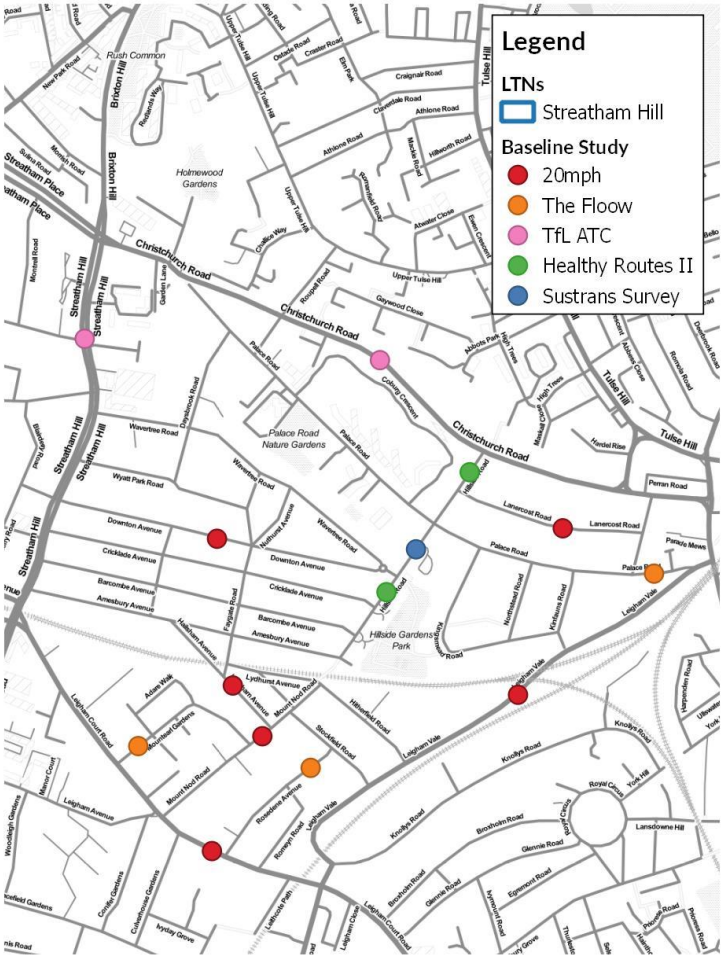
- Unlike for motor vehicles, a continuous pre-COVID data set does not exist that is sufficiently comparable to cycling in Lambeth to allow for normalisation of cycle trips. Therefore such a process has not been completed, so changes in cycle flows observed should be considered in the context of the changes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

[1]https://www.gov.uk/government/statistics/transport-use-during-the-coronavirus-covid-19-pandemic

Pre-Implementation Flows

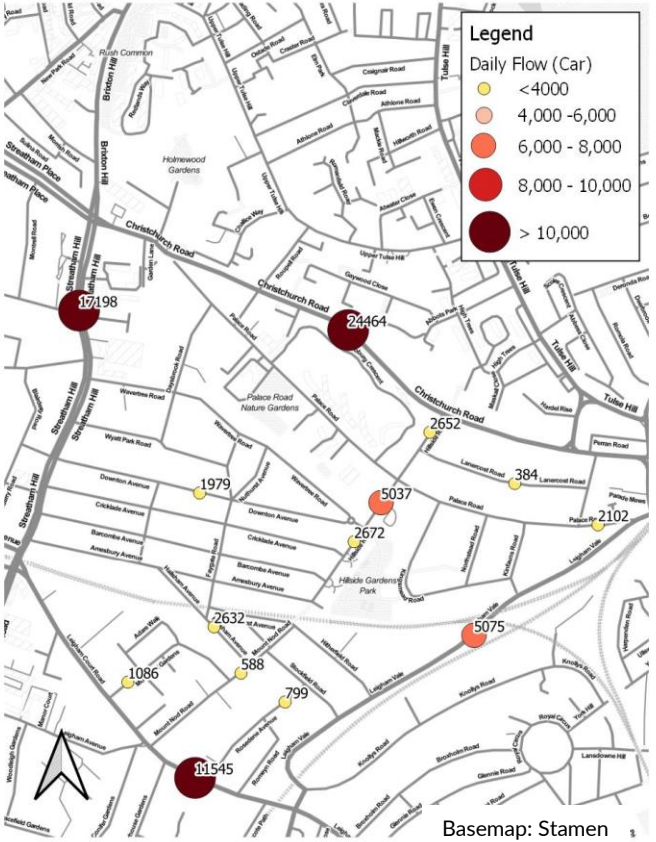
Pre-Implementation Flows

- 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 Streatham Hill LTN.
- In general, flows within the LTN are low to moderate, although the convergence of several through routes in the centre of Hillside Road leads to daily flows of around 5,000 there.
- The highest flows are recorded on external roads such as Christchurch Road/South Circular (24,464), Streatham Hill (17,198) and Leigham Court Road (11,545).
  - 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.**

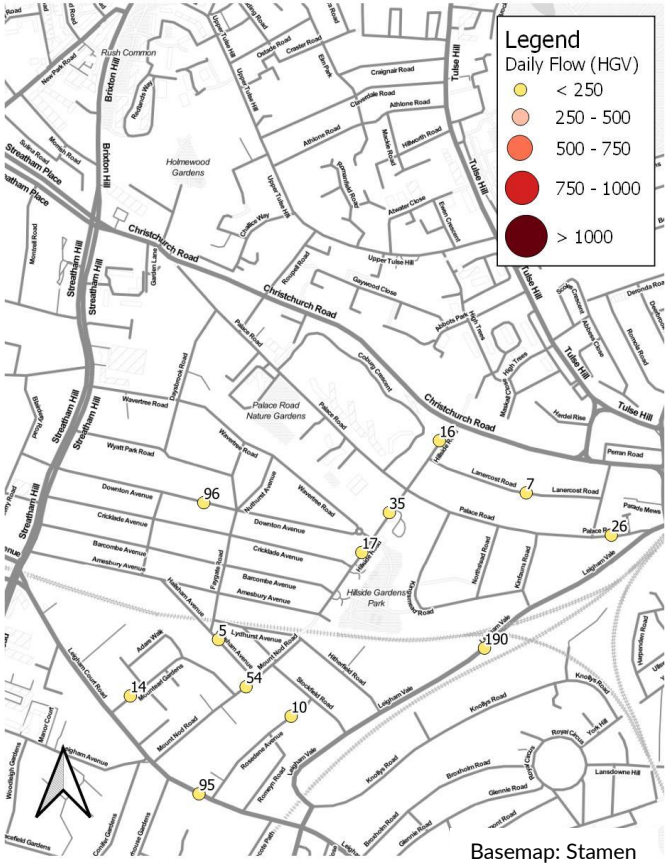


Pre-Implementation Flows – Cycles

- 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 are generally moderate throughout the LTN, with the highest flows on Hillside Road along the cycle route there. Palace Road also carries a moderate number of cyclists (>100 daily).
  - It should be noted that data from the middle Hillside Road location was from June 2019 vs. November 2019 for the other two Hillside Road locations – this leads to particularly high cycle counts here.
- On external roads, Leigham Vale carries over 250 daily cyclists, whilst Leigham Court Road carries around 180.
- It should be noted that cycle movements are not split out in TfL ATC data on Christchurch Road or on Streatham Hill.

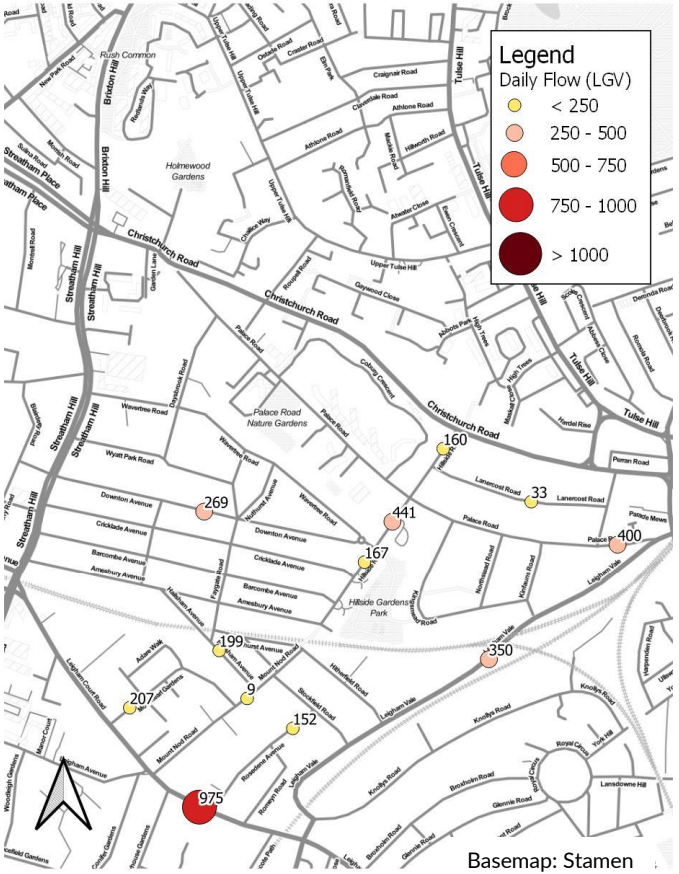
Pre-Implementation Flows – HGVs

- The map to the right plots **pre-implementation** HGV flows.
- HGV flows are fairly low throughout the interior of the LTN, with Downton Avenue carrying the highest daily volumes (close to 100).
- On external roads, Leigham Court Road carries 95 daily HGVs on average, whilst Leigham Vale carries 190.
- It should be noted that HGV movements are not split out in TfL ATC data on Christchurch Road or on Streatham Hill.



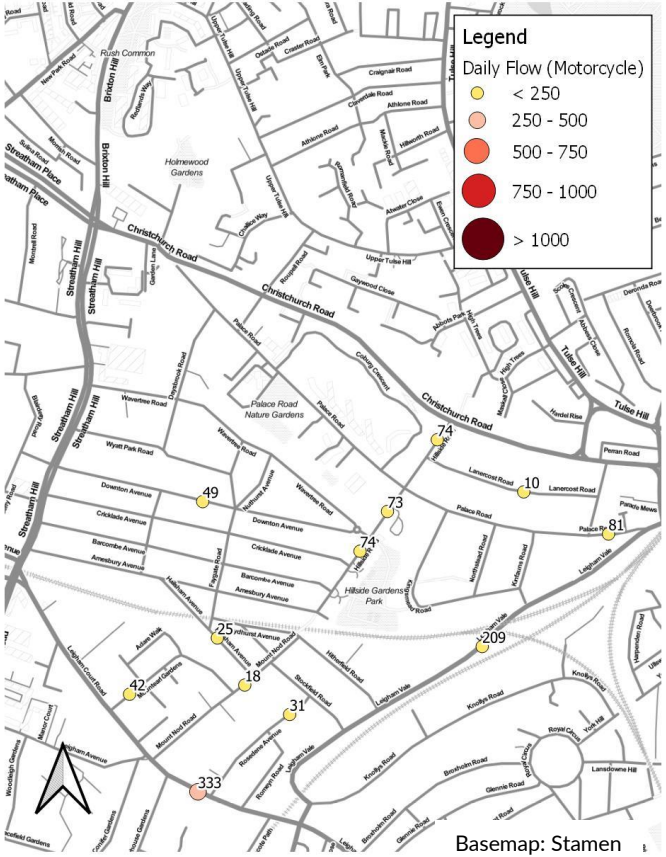
Pre-Implementation Flows – LGVs

- The map to the right plots **pre-implementation** LGV flows.
- In general, LGV flows are fairly low throughout the interior of the LTN, although slightly higher on the previous through route via Palace Road (400 vehicles), Hillside Road (441 vehicles) and Downton Avenue (269 vehicles).
- Outside the LTN, Leigham Court Road carries a much higher number of LGVs (975 daily).
- It should be noted that LGV movements are not split out in TfL ATC data on Christchurch Road or on Streatham Hill.



Pre-Implementation Flows – Motorcycle

- The map to the right plots **pre-implementation** motorcycle flows.
- These are generally low within the LTN, with all flows under 100. The highest external flow was recorded on Leigham Court Road (333 daily vehicles).
- It should be noted that motorcycle movements are not split out in TfL ATC data on Christchurch Road or on Streatham Hill.



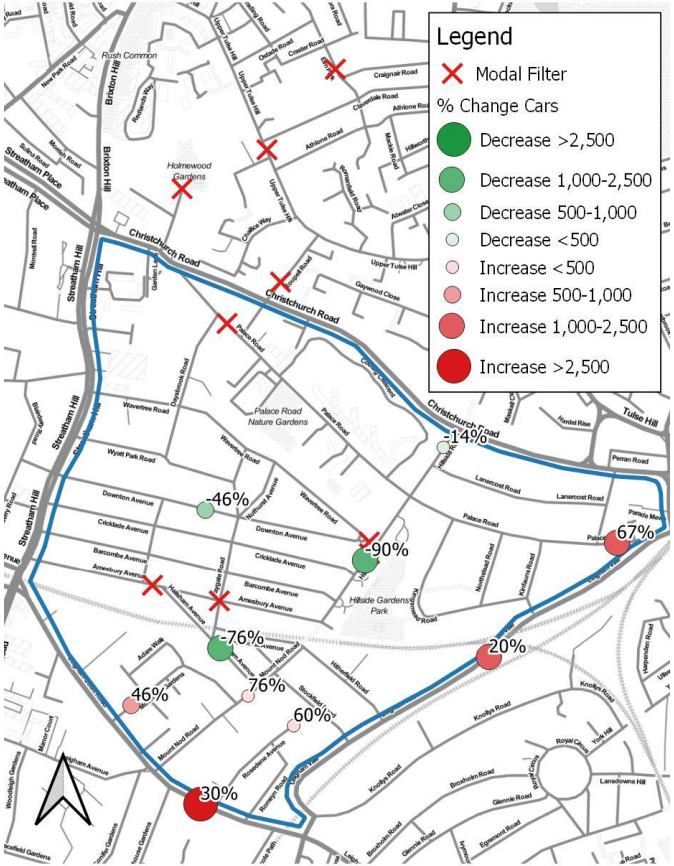
Post-Implementation Monitoring Stage 1/October 2020

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.

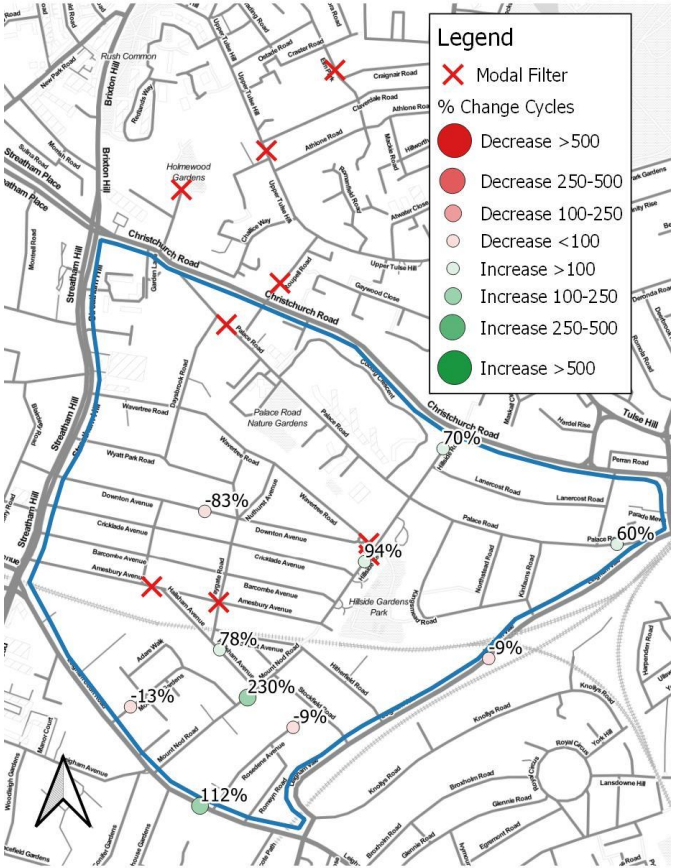
October 2020 Flow Change – Cars

- The map to the right outlines changes in counts of cars compared to those pre-implementation, at sites where data was collected in October 2020. This does not include several sites where data was of poor quality or not collected during this stage.
- In most locations, traffic was significantly down, for example on Hailsham Avenue (-76% or -2,000 daily vehicles) and Hillside Road (-90% or -2,300 daily vehicles), although traffic was up on Palace Road (+67% or +1,400), which is now used as a key access to the northerneastern quadrant of the LTN.
- The southern cell generally saw increases, although from small baseline volumes (+76% or +450 on Mount Nod Road and +60% or +500 on Rosedene Avenue).
- External roads to the south of the LTN both saw increases in traffic flow (+30% or +3,500 on Leigham Court Road and +20% or +1,000 on Leigham Vale).



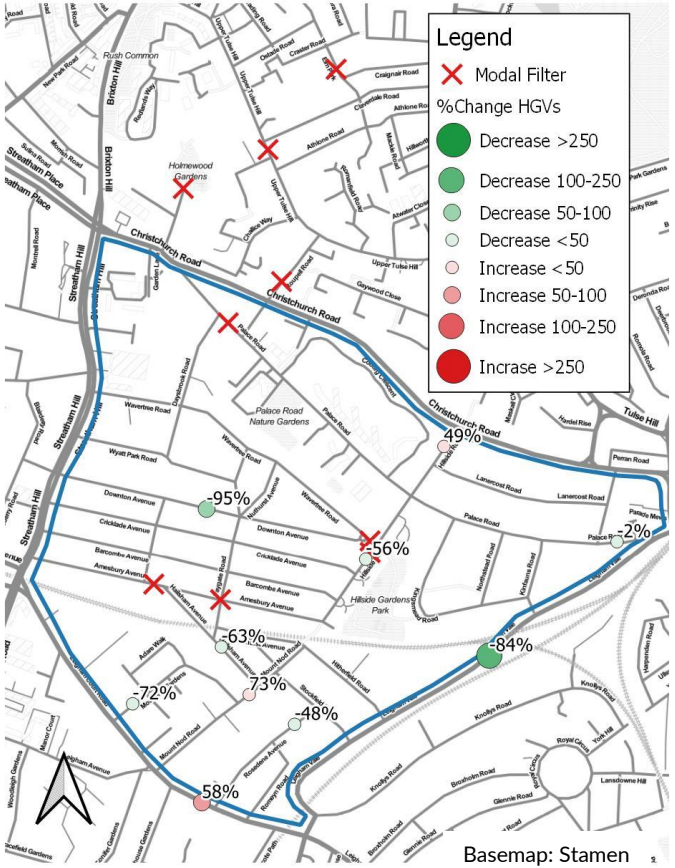
October 2020 Flow Change – Cycles

- The map to the right outlines changes in counts of cycles compared to pre-implementation, at sites where data was collected in October 2020. This does not include several sites where data was of poor quality or 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. Mount Nod Road (+230% or +160 daily cycles) and Hillside Road (+94% or +80 daily cycles) were the only locations of note within the LTN with regards to number of cycles counted.
- Outside the LTN, cycle counts were up 112% (+200 daily cycles) on Leigham Court Road, but down slightly on Leigham Vale.



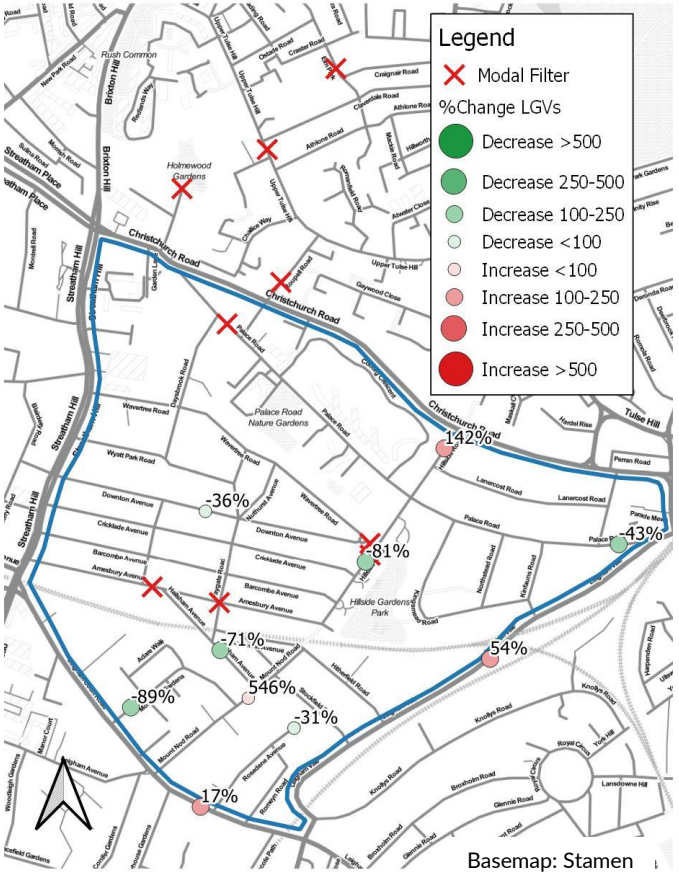
October 2020 Flow Change– HGVs

- The map to the right outlines changes in counts of HGVs compared to pre-implementation, at sites where data was collected in October 2020. This does not include several sites where data was of poor quality or not collected during this stage.
- The impact of the LTN on HGV flows was quite mixed, generally with limited nominal change given low baseline flows. Inside the LTN, only Downton Avenue saw a change of over 50 daily vehicles (-91 daily).
- On peripheral roads, HGV flows increased by 58% (+55 daily vehicles) on Leigham Court Road, but decreased by 84% on Leigham Vale (-160 daily vehicles).



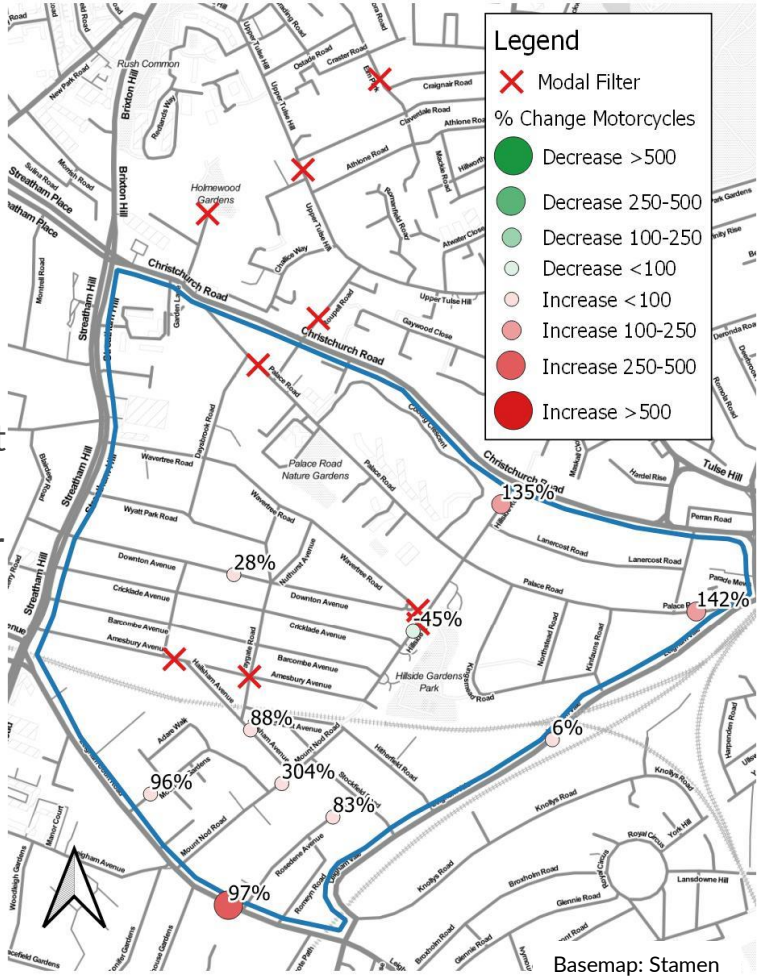
October 2020 Flow Change– LGVs

- 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 of poor quality or not collected during this stage.
- The impact of the LTN on LGV flows was mixed, as it was for HGVs, generally with limited nominal change given low baseline flows. Inside the LTN, Hillside Road south saw a 81% decrease (-130 vehicles) in LGVs and Palace Road saw a 43% decrease (-170 vehicles), whilst Hillside Road north saw a 142% increase (+230 vehicles).
- On peripheral roads, LGV flows increased by 17% (+160 daily vehicles) on Leigham Court Road, and by 54% on Leigham Vale (+190 daily vehicles).



October 2020 Flow Change– Motorcycles

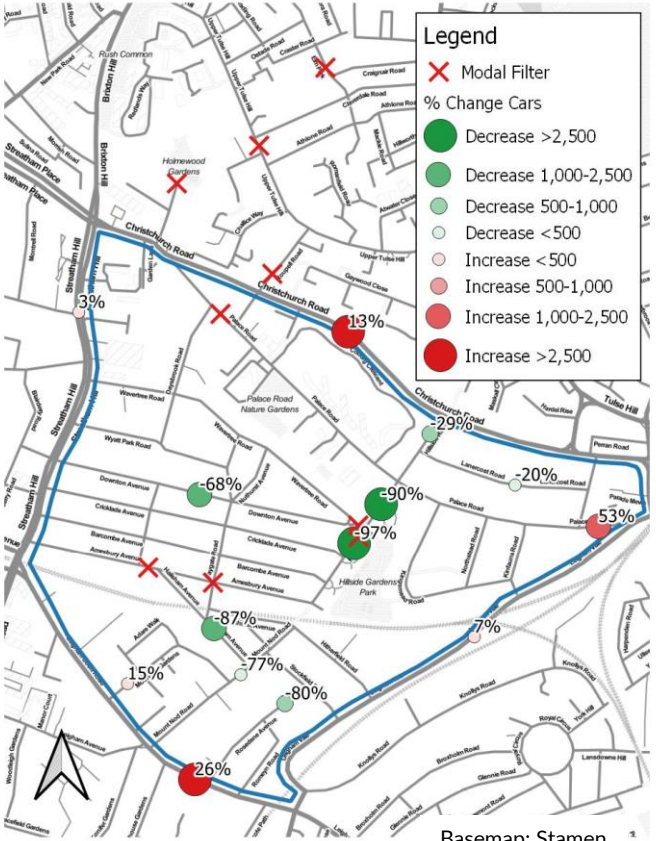
- The map to the right outlines changes in counts of motorcycles compared to pre-implementation, at sites where data was collected in December 2020. This does not include several sites where data was of poor quality or not collected during this stage.
- Changes in motorcycle flows are somewhat mixed, although most locations see limited change in actual flows vs. the baseline.
- The only locations seeing changes in motorcycles flows at or over 100 daily vehicles all represent increases, with +300, +100 and +115 on Leigham Court Road, Hillside Road and Palace Road, respectively.



Post-Implementation Monitoring Stage 2/April 2021

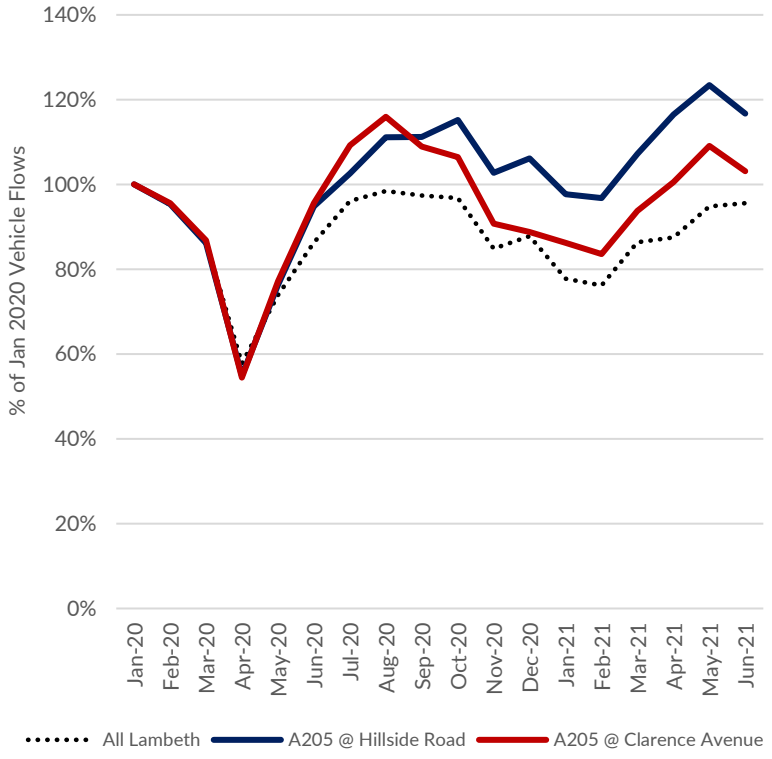
June 2021 Flow Change – Cars

- The map to the right outlines changes in counts of cars compared to pre-implementation, at sites where data was collected in June 2021.
- In most places, flow patterns were similar to those recorded in October 2020. Traffic was significantly down on Hailsham Avenue (-87% or -2,300 daily vehicles) and Hillside Road (-97% or -2,600 daily vehicles), and the only internal location with a notable increase in traffic was Palace Road (+53% or +1,100 vehicles).
- Since October, the southern quadrant has generally seen significant reductions in traffic flows due to newly banned turns, although it is noted that the volume of traffic reduced here is comparatively moderate (i.e. -600 daily vehicles on Rosedene Avenue).
- Vehicle flows have remained similarly high on external roads, particularly Leigham Court Road (+26% or +3,000 daily vehicles). Flows on Leigham Vale and Streatham Hill have increased vs. the baseline, but by more moderate amounts.
- 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.



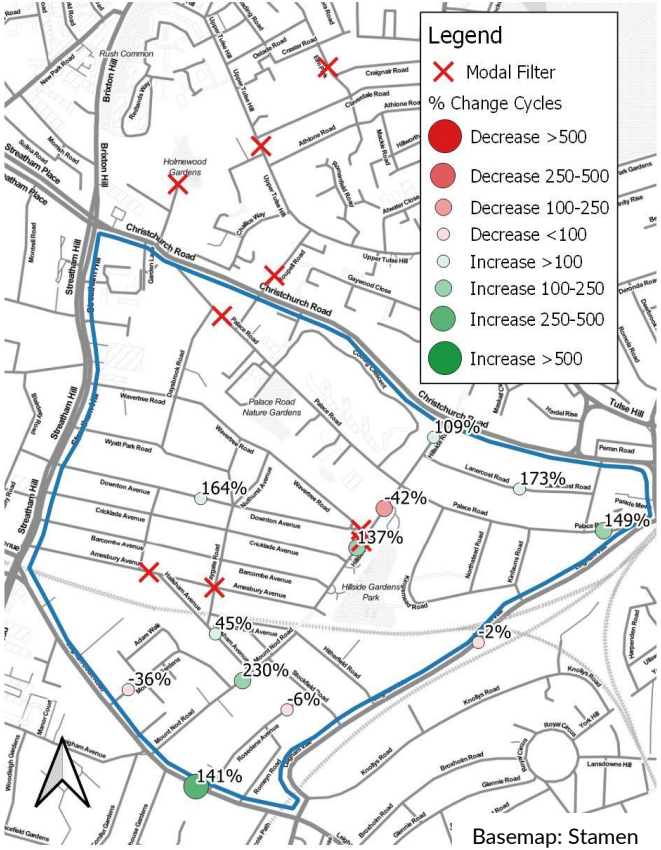
South Circular Analysis

- 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.



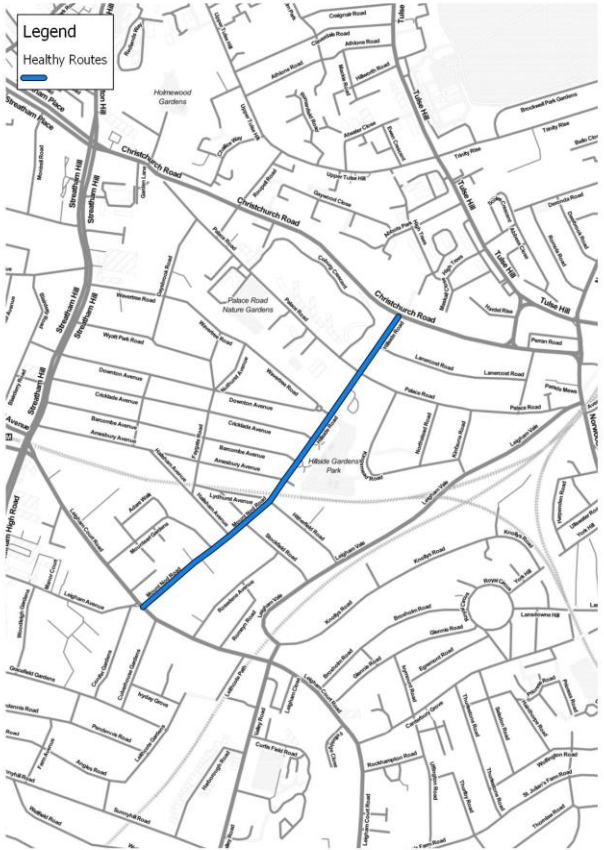
June 2021 Flow Change – Cycles

- The map to the right outlines changes in cycle counts compared to pre-implementation, at sites where data was collected in June 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.
- Palace Road (+149% or 160 daily cycles), Mount Nod Road (+230% or 160 daily cycles) and Hillside Road (+137% or 120 daily cycles) were the only locations of note within the LTN with regards to cycling levels.
  - It should be noted that the Hillside Road site between Downton Avenue and Palace Road uses baseline data from June 2019 rather than November 2019 (per the other two Hillside Road sites), and the number of cycles counted along the entirety of Hillside Road is relatively consistent despite the differences in % change.
- Cycling levels on Leigham Court Road remained higher despite the increase in vehicles at this location (+141% or 250 daily cycles).



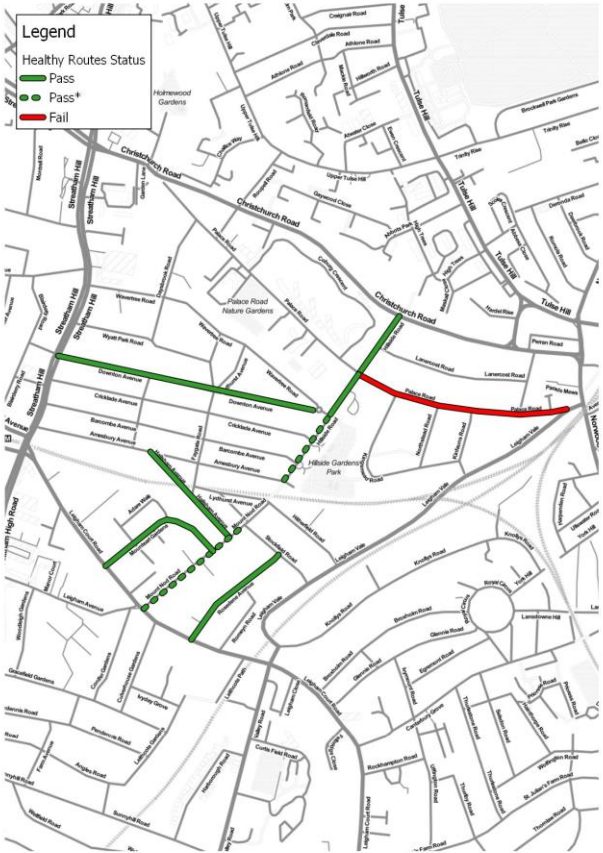
June 2021– Healthy Cycle Routes

- 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 Streatham Hill LTN along Hillside Road and Mount Nod Road via a shared pedestrian space above the rail line.



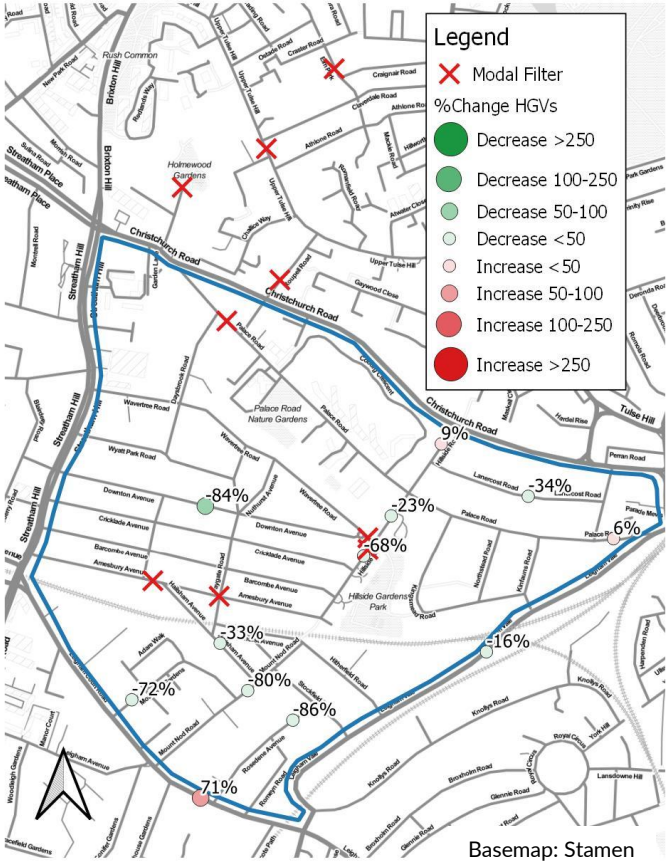
June 2021– Healthy Cycle Routes

- Inside the Streatham Hill LTN, evidence from June 2021 suggests the Healthy Route now meets standards due to a reduction of traffic on Hillside Road
- Most monitored streets within the LTN are expected to be safe for cycling under Healthy Routes criteria, although rerouting of vehicles via Palace Road has not aided safe cycling on this link (although safe alternatives are available).
- On Hillside Road (south) and on Mount Nod 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.



June 2021 Flow Change– HGVs

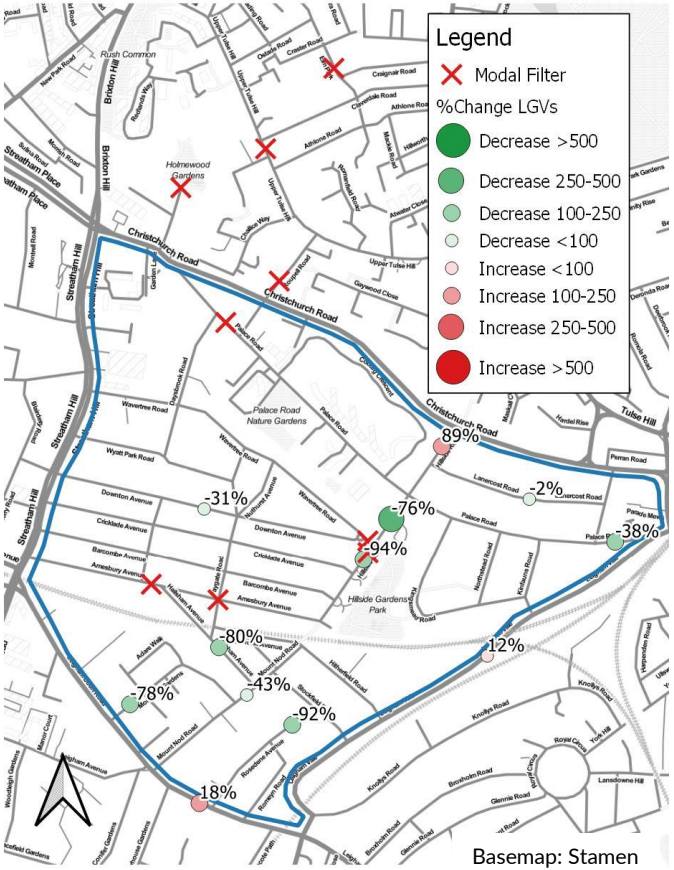
- The map to the right outlines changes in HGV counts compared to pre-implementation, at sites where data was collected in June 2021.
- HGV flows generally did not change significantly in June 2021; Downton Avenue and Leigham Court Road were the only locations that saw changes of over 50 daily vehicles (-81 daily vehicles on Downton Avenue and +68 on Leigham Court Road).
- These numbers have been increased in line with overall traffic flows. However, on a national basis, whilst car traffic was at 97% of pre-COVID levels in June 2021, HGV traffic had already reached 112%* of such levels, suggesting normalised volumes may overestimate any increases.



*https://www.gov.uk/government/statistics/transport-use-during-the-coronavirus-covid-19-pandemic

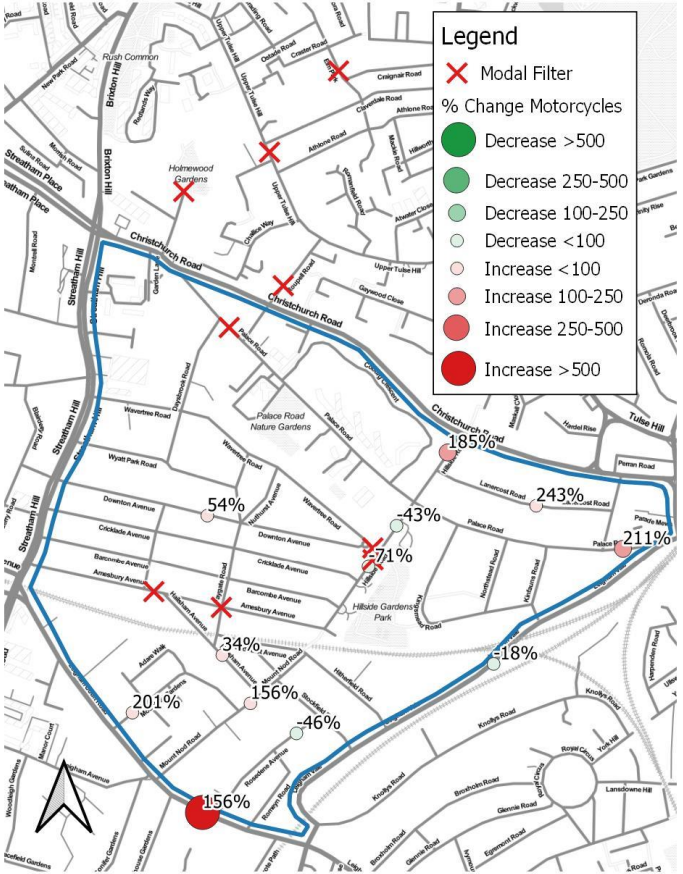
April 2021 Flow Change– LGVs

- The map to the right outlines changes in LGV counts compared to pre-implementation, at sites where data was collected in June 2021.
- Similarly to HGVs, LGV flows generally saw moderate changes across the LTN. The new Hillside Road site just south of Palace Road saw the biggest change (-76% or -330 daily vehicles), and flows also dropped in most other locations.
- The only internal location where LGVs increased in number was on Hillside Road north (+89% or 140 daily vehicles), likely due to this being one of the only remaining accesses to the LTN's northern cell.
- Externally, LGV numbers were up by 18% (+176 vehicles) on Leigham Court Road and 12% (+43 vehicles) on Leigham Vale.



June 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 June 2021.
- Changes in motorcycle flows are somewhat mixed, although there was only one location where a change of more than 250 daily vehicles – this was on Leigham Court Road, where motorcycles more than doubled (+521 daily vehicles).



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.
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For enquiries about this report* – info_uk@systra.com
For Lambeth Council media enquiries – communications@Lambeth.gov.uk

To provide feedback on the Streatham Hill Low Traffic Neighbourhood, please contact the Lambeth Transport Team via the following channels:

Commonplace engagement site – https://streathamhillltnmap.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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