APPENDIX D

Christ Church Primary Healthy School Street – Monitoring Factsheet

1. INTRODUCTION

1.1. A trial healthy school street outside Christ Church Primary School was implemented on Redhill Street on the 25th August 2022. This was accompanied by an at-all-times restriction at the junction of Redhill Street and Cumberland Market, as well as an except-for-access restriction on Nash Street at its junctions with Robert Street and Albany Street.

1.2. This document sets out data and other information gathered prior to the scheme's installation and during the trial period of the Christ Church Primary Healthy School Street. This data has been gathered and analysed to help assess the impact of the scheme during the trial period of operation. The results are summarised below.

2. TRAFFIC COUNT DATA

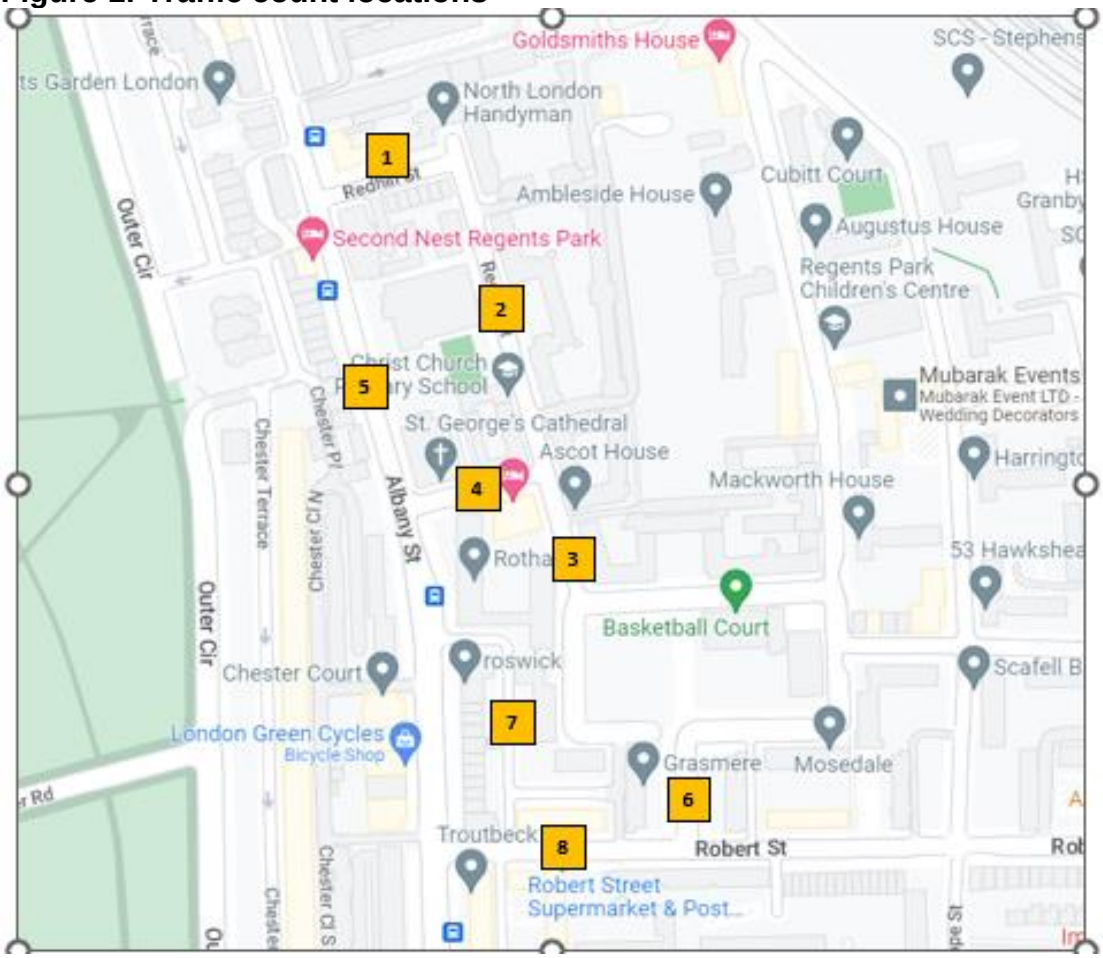
2.1. Weekly automatic traffic counts (ATCs), which count vehicles by type (pedal cycle, car, van, lorry, bus, cycle and motorcycle), were taken at the following locations on the seven-day periods indicated prior to the trial, after its implementation and towards the end of the trial.

Table 1: Traffic count dates and locations

Location and ATC site number	Pre-trial	Post-trial implementation	Trial-end
1. Redhill Street (north)	15/03/21-21/03/21	25/11/22-01/12/22 02/12/22-08/12/22	10/07/23-17/07/23
2. Redhill Street (outside school)	15/03/21-21/03/21	25/11/22-01/12/22 02/12/22-08/12/22	10/07/23-17/07/23
3. Redhill Street / Cumberland Market	15/03/21-21/03/21		10/07/23-17/07/23
4. Redhill Street (south)	15/03/21-21/03/21	01/12/22-07/12/22 08/12/22-14/12/22	10/07/23-17/07/23
5. Albany Street	15/03/21-21/03/21	25/11/22-01/12/22 02/12/22-08/12/22	10/07/23-17/07/23
6. Osnaburgh Street	04/10/21-10/10/21 11/10/21-17/10/21 18/10/21-24/10/21	27/11/22-03/12/22 11/12/22-17/12/22	10/07/23-17/07/23
7.Nash Street	06/06/22-12/06/22	03/11/22-09/11/22	10/07/23-17/07/23

2.2. The data count locations are shown in Figure 1, as follows (location numbers shown in Table 1 correspond to the map):

Figure 1: Traffic count locations



2.3. The data in

2.4. Table 2 shows average weekday and school street hour motor vehicle flows before and during the trial, as well as towards the trial end.

Table 2: Monday to Friday traffic counts: 24-hour weekday average counts, AM and PM peaks

Location and ATC number	24- hour weekday average motorised vehicle counts					AM School Street hours motorised vehicle count (8-9:15am)					PM School street hours peak motorised vehicle count (2:45-4pm)				
	Pre-trial 2021/ 2022	During - trial 2022	Trial-end 2023	% Change pre-trial/ during trial	% Change pre-trial / trial end	Pre-trial 2021/ 2022	During-trial 2022	Trial-end 2023	% Change pre-trial/ during trial	% Change pre-trial / trial end	Pre-trial 2021/ 2022	During-trial 2022	Trial-end 2023	% Change pre-trial/ during trial	% Change pre-trial / trial end
1.Redhill Street (north)	202	231	221	14%	9%	23	20	13	-14%	-43%	22	23	12	3%	-46%
2.Redhill Street (outside school)	169	208	171	23%	1%	26	15	12	-41%	-53%	26	20	15	-23%	-42%
3.Redhill Street / Cumberland Market	468	N/A	84	N/A	-82%	51	N/A	11	N/A	-78%	55	N/A	12	N/A	-77%
4.Redhill Street (south)	567	390	280	-31%	-51%	53	32	18	-40%	-66%	53	29	18	-45%	-66%
5.Albany Street	9,533	13,558	12,200	42%	28%	836	921	897	10%	7%	688	933	849	36%	23%
6.Osnaburgh Street	729	753	651	3%	-11%	66	61	53	-7%	-20%	66	68	60	4%	-9%
7.Nash Street	91	77	57	-15%	-37%	8	6	6	-19%	-26%	10	7	3	-23%	-67%
Totals/ Average	**11,759**	**15,970**	**13,664**	**36%**	**16%**	**1,062**	**1,055**	**1,010**	**-1%**	**-5%**	**919**	**1,081**	**969**	**18%**	**6%**
Totals/Average excluding Albany Street	**2,226**	**2,412**	**1,464**	**-25%**	**-34%**	**226**	**134**	**113**	**-41%**	**-50%**	**231**	**148**	**121**	**-36%**	**-48%**

NOTE: The counts collected data on the total number of vehicles on a Monday to Friday in school term time. The figures presented represent weekday averages calculated from this data collection. For the during-trial data collected in November and December 2022, data for multiple weekdays was merged and the results show an average of the results. In some cases, this was because data was lost from the collection process for some days or hours. The data excludes pedal cycle counts, which are shown below.

Comparing Pre-trial counts to during-trial counts

2.5. There was a decline in motorised traffic in the areas affected by the school street restriction during school street hours between the pre-trial surveys undertaken in March, June and October 2021, and the during-trial surveys undertaken in November and December 2022. Traffic on Redhill Street (north) (Site 1) decreased by 14% in the morning peak but increased slightly by 3% in the afternoon. Slightly larger reductions were seen on Redhill Street outside the school (Site 2) (-41% in the AM period and -23% in the PM period). Redhill Street (south) (Site 4) leading to Albany Street saw the biggest decrease during school street hours of -40% in the AM period and -45% in the PM period. However, traffic increased during both the AM and PM period and for the whole day average on Albany Street. No data was collected during the trial for the segment of Redhill Street leading to Cumberland Market.

2.6. It is important to note that absolute traffic volumes within hourly time windows were low to begin with on Redhill Street, meaning that small increases and decreases result in large percentage changes. Between the pre-trial and during trial surveys, there was an increase in average 24-hour weekday traffic on all sites monitored except Redhill Street (south) (Site 4) and Nash Street (Site 7). However, these increases were partially if not fully reversed, and an overall traffic flow decrease was observed across most sites by the end of the trial (see below).

Comparing Pre-trial counts to trial-end counts

2.7. Comparison of the pre-trial and trial-end surveys show a decrease in traffic at all sites surveyed except Albany Street during school street operating hours. Traffic decreased between 9% and 78%, with the highest decreases noted on the segment of Redhill Street leading to Cumberland Market (Site 3), -78% in the morning and -77% in the afternoon, and Redhill Street South (Site 4), -66% in both the morning and afternoon. This is reflected in the 24-hour weekday average data – which shows an overall reduction of 51% at Site 4 and 82% at Site 3.

2.8. These changes highlight that the at-all-times restriction at the Redhill Street / Cumberland Market junction has been successful in reducing through traffic, particularly during school street hours, when this traffic reduction measure supplemented by the timed restriction. The overall reduction in through traffic is also reflected in traffic decreases at Osnaburgh Street to the south of Cumberland Market, which saw an

average daily increase of 11%, along with peak hour decrease of 20% in the AM peak and 9% in the PM peak.

2.9. Redhill Street (north) (Site 1) saw an increase in daily average weekday traffic of 9% between pre-trial and trial-end surveys, while Site 2, outside Christ Church Primary School, saw an increase of 1%. However, in absolute terms, these percentages reflect changes in 10s of additional vehicles passing through daily. The increase is likely related to a significant increase in motorised traffic flows an Albany Street, which saw vehicle numbers increase in the 1000s between the pre-trial and trial-end surveys. Given that the change in volumes on Albany Street is significantly higher than that seen within the area covered by this scheme, it is unlikely that closures introduced as part of the trial will have contributed significantly to this increase.

2.10. Nash Street also saw a decrease in average weekday flows (-37%) with daily vehicle flows in the 10s, suggesting the 'except-for-access' restriction is working effectively to tackle previously reported rat-running on this street between Albany and Robert Street.

Summary

2.11. The data shows that the timed school street restrictions have reduced traffic around Christ Church Primary School at pick up and drop off times. It also shows that the at-all-times restriction at the Redhill Street / Cumberland Market junction and except-for-access restriction on Nash Street are successfully reducing through-traffic in the area.

2.12. Total figures show that when comparing pre- and post-trial figures, traffic has decreased significantly during the HSS operating hours across the scheme area (if Albany Street is excluded) (-50% in the morning and -48% in the afternoon). Likewise, overall traffic in an average 24-hour weekday period has also decreased, by 34%.

2.13. However, when Albany Street is included in the total, traffic volumes across the area only decreased by 5% in the morning peak and increased by 6% in the afternoon peak, while the 24-hour weekday average increased by 16%. Increases in average weekday traffic increases were recorded for Redhill Street (north) (Site 1) and Redhill Street (outside school) (Site 2). This draws attention to the need to further address traffic levels and safety issues on Albany Street going forward.

Total traffic data

2.14. It is recognised that the Covid-19 pandemic has had an impact on general traffic levels throughout London and in Camden. Traffic volumes fell significantly during 2020 and began to rise gradually again in 2021, plateauing at ~7% below 2019 levels in the 2022/23 period. The increases in average daily traffic volumes on Redhill Street (north) (Site 1) and outside Christ Church School (Site 2), as well as on Albany Street, may

reflect a rebound from 2020 traffic flow decreases, as pre-trial data for Sites 1 to 5 was collected in early 2021, when traffic volumes were still in the earlier stages of recovery post-pandemic.[1]

2.15. Data for Camden also shows that average daily traffic volumes were approximately 3% higher in July 2021 relative to October 2020 (excluding school holidays) based on data from Vehicle Activated Signs at 13 sites in Camden. Therefore, survey data collected from the during-trial period onwards should be representative of the 'normal' traffic levels in the area.

2.16. Thus, instances where traffic reductions have occurred may be reflective of traffic reductions that go significantly beyond pre-pandemic baselines, as pre-trial data was collected during a period where traffic was still recovering from the aftermath of the pandemic. The results indicate that the scheme has helped to reduce traffic on Redhill School Street during school start and end times, as well as through-traffic between Redhill Street (south) and Cumberland Market, as well as on Nash Street. These primary objectives of the scheme have been achieved despite simultaneous Borough and London wide increases in traffic flows resulting from pandemic recovery running in parallel to the trial period.

3. CYCLE DATA

Cycle data was collected during the ATC surveys listed for the different locations in the previous section and has been processed and analysed according to the process outlined in that section. The results are presented in
3.1. Table 3.

3.2. The cycle count data shows that most sites across the scheme area saw an increase in cyclists between the pre-trial and trial-end surveys, except Nash Street and Redhill Street (north). Results at individual sites involved low absolute counts (except on Albany Street), meaning that small changes can show as large percentage fluctuations. In addition, pre-trial and during-trial data for most sites was collected in colder months, while trial-end data was collected in July, when cycling is significantly more popular. Like motorists, pedal cyclists using the streets affected by the scheme have likely also been affected by road closures elsewhere in the Borough, such as on Hampstead Road. However, the upward trend persists when data for all monitoring sites is combined: overall there was a 143% increase in cycle counts, and a 60% increase when Albany Street is excluded. The increase in cyclists on Albany Street (180%) further highlights the need to introduce cycle safety improvements here in the future.

[1] Transport for London, 2022. Travel in London Report 15.

Table 3: Cycle counts

Location and ATC number	Weekday average pedal cycle counts				
	Pre-trial 2021/ 2022	During trial 2022	Trial-end 2023	% Change pre-trial/ during trial	% Change pre-trial / trial end
1. Redhill Street (north)	18	19	10	3%	-47%
2. Redhill Street (outside school)	18	13	28	-27%	56%
3. Redhill Street / Cumberland Market junction	29	0	56	0%	91%
4. Redhill Street (south)	24	26	29	5%	17%
5. Albany Street	151	421	489	180%	224%
6. Osnaburgh Street	36	24	94	-34%	165%
7. Nash Street	22	9	20	-59%	-9%
Totals / average	**298**	**512**	**725**	**72%**	**143%**
Totals / average (excluding Albany Street)	**147**	**90**	**236**	**-39%**	**60%**

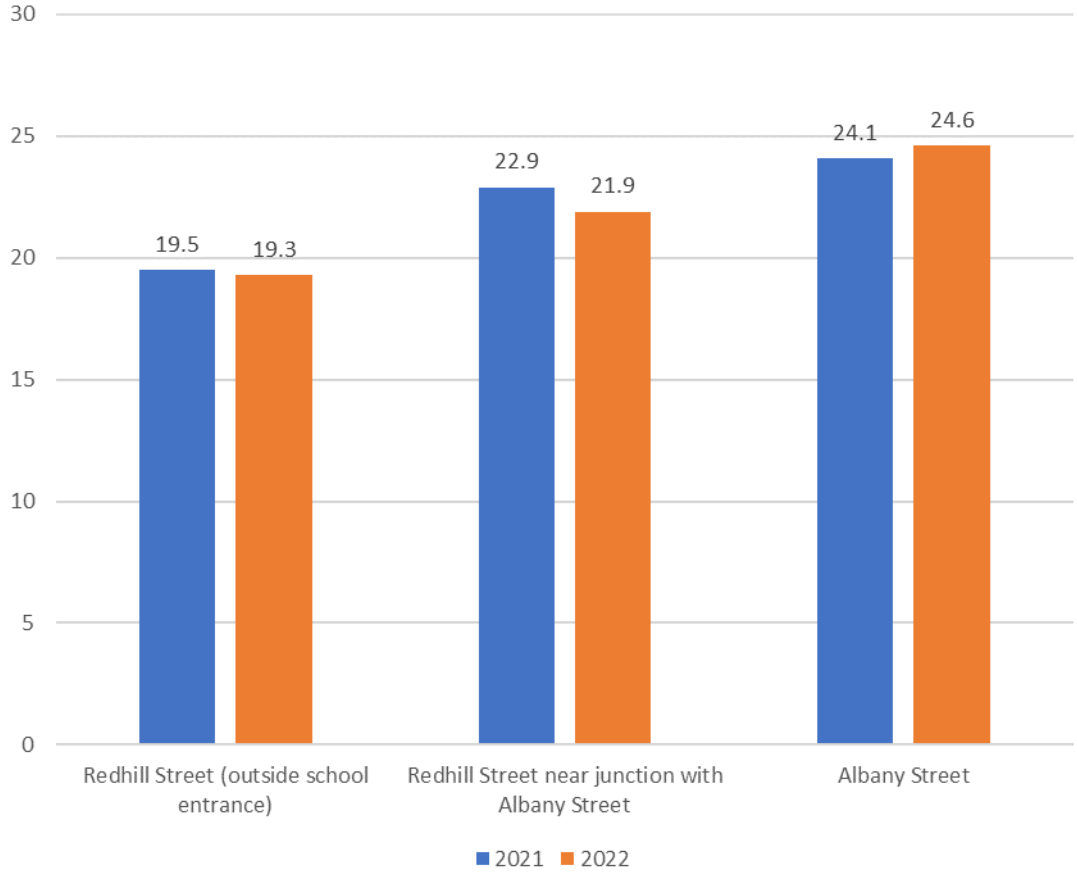
4. AIR QUALITY DATA

4.1. Camden monitors air quality across the borough. Air quality monitors called ‘diffusion tubes’ are in place in two locations on Redhill Street – on Redhill Street (south) near Albany Street and outside the main school entrance. Additionally, HS2 measures air quality at roadside locations in Camden including Albany Street.

4.2. The annual mean NO_2 concentration measurements at these sites are recorded in **Error! Reference source not found.**. This data has been ‘bias adjusted’ and annualised using the LLAQM.TG(19) methodology. The data covers 2021 and 2022. The scheme was only introduced in August 2022, meaning that the results are not fully representative of conditions under the scheme. However, as bias adjustment factors are not published until the April of the following year, we are not yet able to provide annual monitoring figures for 2023.

4.3. Overall, the figures show a slight decrease in NO_2 concentrations at both Redhill Street monitoring locations: -1% outside the school entrance and -4% on Redhill Street (south) near the junction with Albany Street. The latter reduction may be the result of the significant reduction in road traffic on this arm of Redhill Street noted in the traffic count section above. The HS2 monitoring on Albany Street shows a 2% increase in NO_2 concentration from 2021 to 2022.

Figure 2: Redhill Street and Albany Street bias-adjusted annual mean diffusion tube NO_2 data µg/m3



4.4. Additional analysis has been undertaken using individual month-average diffusion tube data available for 2023, comparing the average NO_2 concentration measured from January-July (post-scheme) to the same months in 2022 (pre-scheme).

4.5. This type of analysis can only be used to capture indicative changes in NO_2 concentrations at measurement locations, but it can help to monitor changes in air quality in advance of the publication of 'bias adjustment' factors for full-year analysis. Any commentary using this data is provisional.

4.6. Comparison of the 2022 and 2023 January-July data suggests that NO_2 concentrations are slightly higher on Redhill Street outside the school entrance (+1%), and slightly lower on Redhill Street and on Albany Street (-0.7% and -3% respectively).

4.7. Road transport is one of many sources of NO_2 air pollution in Camden and changes in NO_2 concentrations are likely to be due to a combination of factors and activities. These can include changes in road traffic as well as emissions from gas heating and power systems in buildings (which may vary from one year to the next depending upon building operations, weather and building occupancy or usage), construction machinery and diesel trains.

4.8. Considering these many potential sources of air pollution, it is not possible to draw a causal link between changes in NO_2 levels and changing traffic levels on the scheme area. However, since road transport is estimated to be the source of approximately half of both NO_2 and PM10 emissions in the borough, making the scheme permanent would support more widespread downward pressure on motor vehicle use, helping reduce air pollution from this source. This may help compensate for air pollution arising from other sources.

5. SCHOOL TRAVEL DATA

5.1. No “Hands Up” survey data on travel patterns to school was available for the preparation of this report. Subject to the school’s agreement going forwards, we will monitor this to understand the impact of the proposals (if approved).

6. COLLISION DATA

6.1. STATS19 collision data (collected by TfL) has been reviewed for the most recent period available, running from 1 January 2017 to 31st July 2023.

6.2. Two collisions have occurred within the scheme area during the time period, both before the scheme was introduced. One was a collision involving a car and cyclist near the entrance of Christ Church Primary School, classed as slight severity. The second was in 2017 involving a pedestrian at the junction of Redhill Street and Cumberland Market, of slight severity (details on the other party are unknown). In both cases, speeds were recorded as being equal to or below 20 MPH.

6.3. While some concern has been raised about potential road danger arising from children being dropped off for school on Albany Street as an alternative to Redhill Street during the trial, there have been no accidents on Albany Street during the trial period. However, Camden intends to bring forwards road safety interventions in the future to reduce risks for children on their way to school as well as for all other road users.

APPENDIX ENDS