Project Centre Proposal

Preston Park Area Healthy Neighbourhood – Monitoring Review

London Borough of Brent

Document Reference: 7425

Date: June 2021

Brent

PROJECT CENTRE

DOCUMENT CONTROL

Project Centre has prepared this report in accordance with the instructions from London Borough of Brent. Project Centre shall not be liable for the use of any information contained herein for any purpose other than the sole and specific use for which it was prepared.

Rev	V01	FINAL
Reason	First draft for client review	Final report text agreed with client.
Prepared by	Richard Cornell	Richard Cornell
Date	14 June 2021	14 December 2021
Reviewed by	Scott Lester	Scott Lester
Date	21 June 2021	15 December 2021
Authorised by	Scott Lester	Scott Lester
Date	22 June 2021	15 December 2021

Executive Summary

London Borough of Brent (LBB) introduced five Healthy Neighbourhoods (HNs) on a trial basis in August / September 2020. HNs comprise a group of residential streets where vehicle traffic that isn't local to the area is either discouraged or removed by introducing modal filters in the form of signs, barriers and planters. The aim is to tackle drivers using the street as a short cut, to make it safer and easier to walk and cycle, restore quieter streets and improve air quality.

The HNs introduced were at Preston Road, Dollis Hill, Olive Road, Stonebridge & Harlesden, and Wembley and LBB commissioned Project Centre to undertake a review each location to determine the effect each HN had on the surrounding local road network. This report will focus on the area of Preston Road.

The review consists of analysis of a series of traffic counts, bus journey time data, collision data, air quality monitoring and consultation responses. Traffic counts were conducted prior to the schemes being introduced and further counts undertaken after installation to determine any changes in traffic flows.

The traffic surveys conducted on boundary roads indicate a reduction in traffic volume on all three boundary roads (Carlton Avenue East, Preston Road and Woodcock Hill). Bus journey times show mixed results depending on the route. Two routes (79 and 204), which operate on Preston Road, show marginally slower journey times compared to the 233 service which has quicker times. Considering journey times from February 2020 and February 2021, thereby largely negating any seasonal issues, shows improvements on all three routes in all directions.

For the internal roads where surveys were conducted, some experienced reduced traffic flows (Grasmere Avenues east of Rydal Gardens, Thirlmere Avenue and Windermere Avenue) while others saw increases (Grasmere Avenue and Montpelier Avenue). Traffic speeds on those roads which saw reduced traffic volumes were seen to increase, and conversely those with increased traffic flows saw reduced speeds.

The air quality monitoring indicates improvements in NO2 at all three test locations both over the duration of the monitoring and compared to the 2016 baseline figures. The figures have not been adjusted and therefore can't be compared with UK limits.

Collision data indicates a small increase in the rate of collisions on the boundary roads while a small decrease was seen in the roads within the HN. However, the period looked at after introduction of the HN measures is considerably shorter than would normally be considered and therefore further analysis may be necessary in the future to identify trends.

Response to the consultation on the scheme, which included those living within the zone as well as outside, was predominantly not supportive of the HN measures. The proportion not supportive was typically around 90%, whether considering all the responses, just those within the HN or those from roads with modal filters.

Similar types of schemes have been introduced across many parts of London, particularly to provide safer conditions for increased levels of cycling and walking during recovery from the Covid19 pandemic. It is recommended that consideration is given to undertaking further engagement with residents on a scheme incorporating enforcement (ideally using CCTV camera enforcement) so that the anticipated lower traffic volumes can be realised, and more active travel options adopted by residents.

CONTENTS

1. INTRODUCTION

1.1 London Borough of Brent commissioned Project Centre Ltd to review a variety of data relating to the Preston Park area Healthy Neighbourhood (HN) and College Road School Street, which is situated within the HN.

1.2 The Preston HN comprises three modal filters which prohibit motor vehicles but allows pedestrians and cyclists to pass freely and include an exemption for emergency service vehicles and council vehicles undertaking works. There is no exemption for residents, Blue Badge holders or other groups. The HN covers a group of residential streets as shown in Fig 1.1 where traffic, which is not local to the area, is discouraged or removed, making it safer and easier to walk and cycle, as well as to improve air quality in the long-term. The area to the south of Carlton Avenue East, while within the area of the HN, has no measures or associated monitoring data and is therefore not part of this review.

1.3 The Preston Park HN became operational on 7 September 2020 and the three modal filters were located on Grasmere Avenue (west of Thirlmere Gardens – o/s 140 / 105), Glendale Gardens (at the junction with Longfield Avenue), and Thirlmere Gardens (at the junction with Windermere Avenue). The restrictions comprised a series of planters with signs depicting 'motorised vehicles prohibited' (Diag. 619 of the Traffic Signs Regulations and General Directions 2016 – TSRGD). The planters were positioned in such a way as to allow emergency service vehicles to pass through the restrictions. Unlike other similar schemes removable posts were not used at any of the filters in the Preston Road HN. Images of the measures installed at each of the HN modal filters is shown in Fig.1.1.

1.4 College Road has an existing one-way working restriction in place which operates northbound between Glendale Road and Thirlmere Avenue. The School Street scheme on College Road was initially proposed to cover that section between Glendale Road and Thirlmere Gardens (i.e. the one-way section), but was subsequently extended to include that section of College Road between Glendale Road and Carlton Avenue East. The restriction operates between 8.15 and 9.15am and 2.30 and 4pm, Monday to Friday with exemptions signed for Blue Badge holders, permit holders and loading by commercial vehicles. The scheme became operational on the return of pupils to Preston Park Primary School at the start of the summer term on 2 September 2020.

1.5 Both the HN and School Street were implemented under experimental traffic orders. Given the experimental nature of the schemes LB Brent proposed to undertake monitoring at several stages to measure the effectiveness of the schemes. This is the first such monitoring stage, undertaken after six months.

1.6 A series of traffic counts were undertaken to indicate changes to traffic volumes within the HN and on boundary roads to the HN, air quality monitoring diffusion tubes were deployed to measure air pollutants, and bus journey time data collected to identify any effects on bus services. Collision data for the three period between 18 June 2017 and 18 June 2020 has been collected from the Crashmap website which publishes road traffic collision information. Comments received in response to consultation are included in Section 6.

1.7 The analysis of these data sets is described in the following sections.

Fig 1.1: Preston Park Area Healthy Neighbourhood Modal Filters

2. TRAFFIC DATA ANALYSIS

2.1 In order to identify any changes to traffic flows on the roads within the HN and on the boundary roads a series of Automatic Traffic Counts (ATCs) were undertaken. In addition, two CCTV surveys were carried out (on Grasmere Avenue and Windermere Avenue) to collect numbers of pedestrians and cyclists.

2.2 The ATC surveys were carried out over a period of seven days commencing on the date set out in Table 2.1. The CCTV surveys were carried out between 7am and 7pm on the dates shown below (one day being a Tuesday and the other a Saturday).

	'Before' Survey	'After' Survey
HN Boundary Roads (ATCs)		
Preston Road	14 September 2020	06 February 2021
Carlton Road East	14 September 2020	06 February 2021
Woodcock Hill	14 September 2020	06 February 2021
HN Internal Roads (ATCs)		
Thirlmere Gardens	22 August 2020	06 February 2021
Windermere Avenue	22 August 2020	06 February 2021
Grasmere Avenue (east of Longfield Avenue)	22 August 2020	06 February 2021
Grasmere Avenue (East of Rydal Gardens)	22 August 2020	06 February 2021
Montpelier Rise (north of Carlton Avenue East)	22 August 2020	06 February 2021
Pedestrian & Cycle Surveys (CCTV)		
Grasmere Avenue (east of Longfield Avenue)	22 & 25 August 2020	N/A
Windermere Avenue (north of Thirlmere Gardens)	22 & 25 August 2020	N/A

Table 2.1: Traffic Survey Locations and Dates

2.3 It is recognised that traffic surveys conducted at various times during the Covid19 pandemic may not represent typical conditions due to restrictions about travel,

people avoiding public transport etc. According to the Department for Transport (DfT) data regarding travel modes during the Covid19 pandemic (Transport Use During the Coronavirus (COVID-19) Pandemic) indicates that traffic flows in August and September 2020 were at 91% and 94% respectively when compared to those recorded in the first week of February 2020. Traffic flows in February 2021 were shown at 55% of those in February 2020.

2.4 It must be emphasised that the figures quoted in 2.3 are national figures based on 275 ATCs around the UK road network, and also that over the course of a year, normal traffic can vary by +/– 20%. A further DfT publication on traffic volumes in 2020 (Road Traffic Estimates: Great Britain 2020) indicates that London experienced the lowest decrease in traffic over the year as a whole of -18.1% compared to the highest, Wales, of -23.4%.

2.5 The affect of seasonality should also be considered. The baseline before surveys were conducted in August / September 2020, typically among the highest three months for traffic flows (along with July). The monitoring surveys were undertaken in February 2021, typically among the lowest three months for traffic flows (along with December and January).

2.6 The traffic flows set out in the following analysis are relatively low, particularly on the roads within the HN where flows were between 360 and 1,800 vehicles per day and may therefore be sensitive to quite low changes, irrespective of Covid or seasonality.

2.7 For the purposes of this monitoring analysis, the traffic volumes reported consider two-way midweek flows for the morning peak (the combined total of the highest consecutive two-hour flow between 7 and 10am), the afternoon peak (the combined total of the highest consecutive two-hour flow between 3 and 7pm, 12-hour flow (7am to 7pm) and 24-hour flow. Speed data is taken from the corresponding periods as the traffic data.

2.8 **Preston Park Healthy Neighbourhood – Boundary Roads Traffic Data**

2.8.1 The before traffic surveys on boundary roads to the HN commenced on Monday 14 September 2020 at all three locations (Preston Road, Carlton Avenue East and Woodcock Hill) and continued for one week. The after surveys commenced on Saturday 6 February 2021 and also continued for one week.

2.8.2 With regard to speed data, the 85%ile speed has been used for the boundary roads. The 85%ile speed is that speed at which 85% of traffic is travelling at or below. It is unclear from the survey data whether the speeds collected allow for 'headway' (i.e. representing free-flow conditions) or all vehicle speeds recorded (i.e. periods of congestion may affect the overall speeds reported).

2.8.3 The locations of the boundary road traffic surveys and the associated two-way midweek flows are shown on Fig 2.1.

2.8.4 Windermere Avenue might also be considered as a boundary road and the 233 bus service runs along this road as it does along Carlton Avenue East. However, the traffic survey here commenced on 22 August 2020 along with the other HN 'internal' roads and Windermere Avenue has therefore been considered amongst those internal roads.

2.9 Preston Road Traffic Data Analysis

2.9.1 Preston Road runs approximately north / south and the section bounding the HN is situated between Carlton Avenue East to the south and Woodcock Hill to the north. Preston Road crosses the Metropolitan Line at Preston Road underground station and is one of the few roads locally connecting the areas to the north and south of the line. Three bus services operate on Preston Road, the 73, 204 and 233 with peak frequencies of around 7, 5 and 3 buses per hour respectively in each direction (analysis of bus journey times is discussed in section 3).

2.9.2 The results of the traffic survey on Preston Road are shown below in Table 2.2 and the location of the survey is shown on Fig 2.1.

2.9.3 Table 2.2 indicates a reduction in flows between the before and after surveys, ranging from -33% in the morning peak to -13% in the evening peak.

2.9.4 The speed limit on Preston Road is 30mph. 85%ile speeds indicate a small increase in the after surveys with the highest, +5% in the morning peak

	Volume			Speed (85%ile)		
	Before	After	% Change	Before	After	% Change
AM Peak	2406	1602	-33%	22.5	23.6	+5%
PM Peak	2368	2069	-13%	21.0	21.3	+1%
7am - 7pm	12672	10197	-20%	22.2	22.9	+3%
24 Hour	17120	13565	-21%	23.5	23.9	+1%

Table 2.2: Preston Road Traffic Survey Results

2.10. Carlton Avenue East Traffic Data Analysis

2.10.1 Carlton Avenue East runs approximately east / west between Preston Road to the east and Windermere Avenue to the west.

2.10.2 Carlton Avenue East is situated within the Windermere Road Area 20mph zone and has physical traffic calming measures (comprising raised tables and sets of speed cushions) along its length at approximately 70 to 80m spacing. The 233 bus service operates along Carlton Road East with a peak frequency of 3 buses per hour in each direction.

2.10.3 The results of the traffic survey on Carlton Avenue East are shown below in Table 2.3 and the location of the survey is shown on Fig 2.1.

2.10.4 The after survey indicates a reduction in traffic flows across all four periods ranging between -32% in the morning peak and -17% in the evening peak.

2.10.5 The speed limit on Carlton Avenue East is 20mph and speed survey results indicate a reduction in 85%ile speeds ranging between -7% and -4%.

	Volume			Speed (85%ile)		
	Before	After	% Change	Before	After	% Change
AM Peak	458	312	-32%	23.8	22.9	-4%
PM Peak	488	404	-17%	24.0	22.4	-6%
7am - 7pm	2421	1962	-19%	24.0	22.5	-6%
24 Hour	3243	2620	-19%	24.4	22.7	-7%

Table 2.3: Carlton Avenue East Traffic Survey Results

2.11 **Woodcock Hill Traffic Data Analysis**

2.11.1 Woodcock Hill is situated to the north of the Metropolitan line and runs approximately parallel to it (i.e. east / west). The section of Woodcock Hill considered as a boundary road to the Preston Park HN lies between Preston Road to the east and Windermere Road to the west (Windermere Avenue and Woodcock Hill are connected by a short section of Draycott Hill).

2.11.2 The results of the traffic survey on Woodcock Hill are shown below in Table 2.4 and the location of the survey is shown on Fig 2.1.

2.11.2 The after survey indicates a reduction in traffic flows of between -38% in the morning peak and -27% in the evening peak.

2.11.3 The speed limit on Woodcock Hill is 30mph and the speed survey results indicate a small increase in 85%ile speeds in the after survey ranging between +4% and +1%.

	Volume			Speed (85%ile)		
	Before	After	% Change	Before	After	% Change
AM Peak	1925	1195	-38%	31.2	32.5	+4%
PM Peak	2048	1494	-27%	31.7	32.0	+1%
7am - 7pm	10048	7013	-30%	32.4	32.6	+1%
24 Hour	12432	8644	-30%	33.0	33.3	+1%

Table 2.4: Woodcock Hill Traffic Survey Results

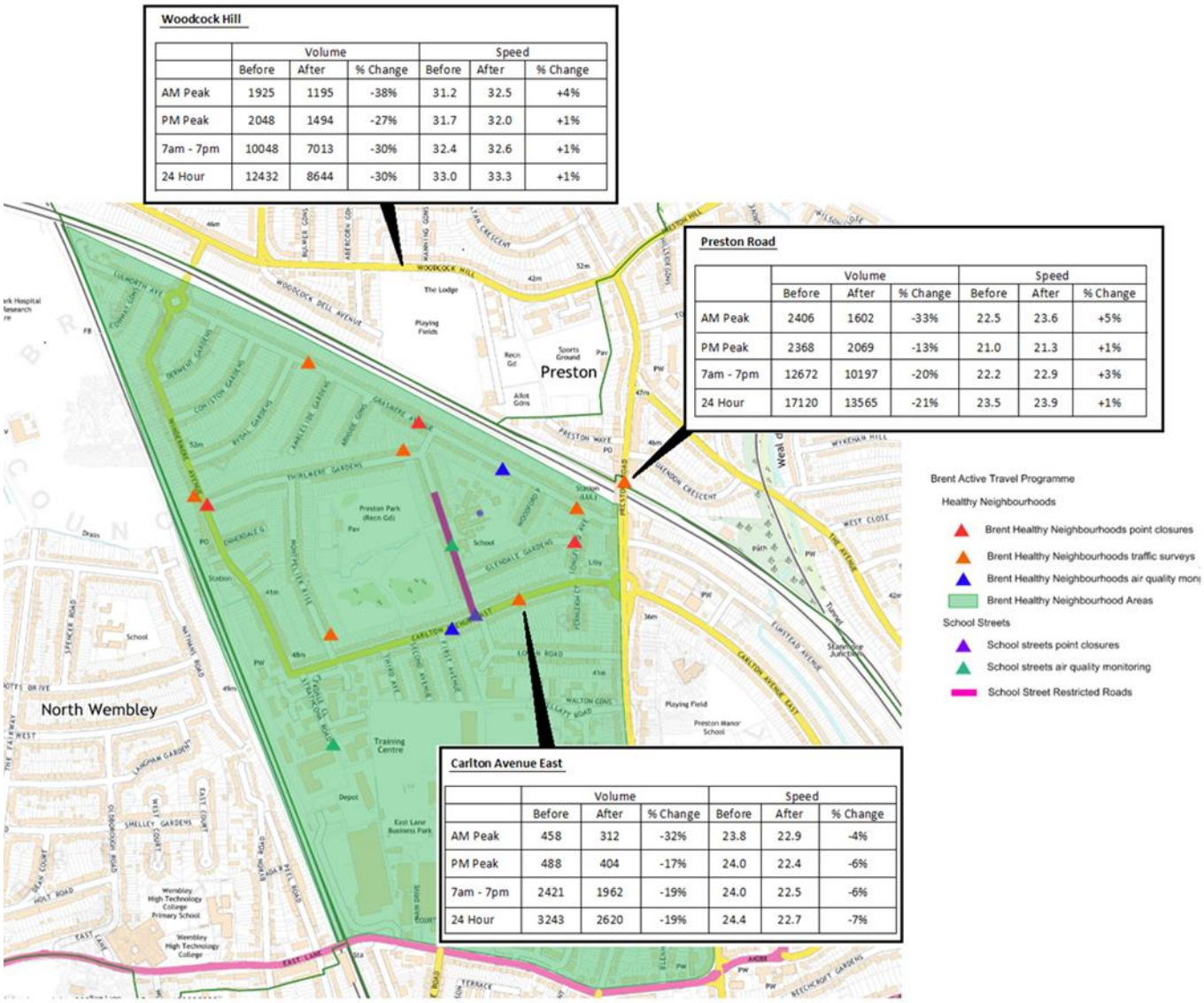


Fig 2.1: Boundary Road Traffic Survey Results and Locations

2.12 Preston Park Healthy Neighbourhood – Internal Roads Traffic Data

2.12.1 Five traffic counts were undertaken on roads within the LTN area. The roads were Grasmere Avenue (two traffic count locations), Montpelier Rise, Thirlmere Gardens and Windermere Avenue.

2.12.2 The 'before' counts commenced on 22 August 2020 for one week (i.e. 22/08/2020 to 28/08/2020) and the 'after' counts on the 6 February 2021, also for one week (i.e. 06/02/2021 to 12/02/2021).

2.12.3 The HN internal roads are also situated within the Windermere Avenue Area 20mph zone, introduced in July 2009.

2.12.4 Although 85%ile speed data is indicated in places within the before and after traffic counts for roads within the HN, there are many gaps, seemingly due to low flow volumes. Therefore, for those roads within the HN the mean speeds have been used for comparison. These are shown as the average of the two-hour morning and evening peak periods, the 07:00 to 19:00 period and 24-hour period. Where there is information available for 85%ile speeds the mean speed is typically around 4 to 7mph lower.

2.12.5 Details around the results of the counts for traffic volume and speed are set out below and shown on Fig 2.2.

2.13 Grasmere Avenue Traffic Data Analysis

2.13.1 Grasmere Road runs approximately east / west (parallel to the Metropolitan Line route) between Preston Road at its eastern end and Windermere Avenue at the western end. Two traffic surveys were undertaken on Grasmere Avenue, one on either side of the location of the HN modal filter on this road, located to the west of the junction with Thirlmere Gardens.

2.13.2 The results of the traffic survey to the east of Longfield Avenue are shown below in Table 2.5 and the CCTV survey in table 2.6. The results of the survey to the east of Rydal Rise are shown on Table 2.7. The locations of both the surveys are shown on Fig 2.2.

2.13.3 The results of the after survey to the east of Longfield Avenue show an increase in traffic compared to the before surveys, the highest increase in the morning peak of +25.1% although the actual number of vehicles totals around 30 over the two-hour period.

2.13.4 The coordinates of the after survey location (51.571583, -0.296308) appear to be to the west of the junction with Longfields Avenue whereas the before survey is shown to the east of the junction (51.571366, -0.295723) and confirmed with

photographs of the pneumatic tubes in situ. It is not clear whether changed traffic movements resulting from the local modal filters and the apparent difference in the location of the before and after surveys may have contributed to the difference in flows recorded.

2.13.5 The speed limit on Grasmere Avenue is 20mph. Traffic speeds recorded to the east of Longfields Avenue show a marginal reduction in mean speeds with a -7.7% reduction in the am peak period (equating to approx. 1mph). Although the speed limit on Grasmere Avenue is 20mph the mean speeds recorded at this location (ranging between 13.3 and 14.4mph) appear low, especially when compared to those recoded further to the west on Grasmere Avenue to the east of Rydal Rise which are between around 18 to 19mph.

	Volume			Speed (mean)		
	Before	After	% Change	Before	After	% Change
AM Peak	127	158	+25.1%	14.4	13.3	-7.7%
PM Peak	213	240	+12.7%	14.3	14.1	-1.3%
7am - 7pm	877	1021	+16.4%	14.1	13.7	-2.9%
24 Hour	1255	1382	+10.1%	14.1	13.8	-2.1%

Table 2.5: Grasmere Avenue (east of Longfield Avenue) Traffic Survey Results

2.13.6 A dedicated pedestrian and cycle count was also undertaken on Grasmere Avenue, also located to the east of Longfield Avenue to support the ATC classified count. This survey was conducted with CCTV equipment, rather than pneumatic tube equipment used in ATC surveys elsewhere (and which can show inaccuracies recording cycles when used in a mixed traffic environment). The CCTV survey was undertaken on Saturday 22 August and Tuesday 25 August 2020 between 7am and 7pm. Only results for a before CCTV survey have been provided so, for the purposes of this analysis, cycle flows from the classified ATC count have been used for the after survey. The before ATC cycle figure is also shown for comparison. The results of the cycle survey are shown in Table 2.6.

2.13.7 The results of the CCTV survey indicate a marked difference to that recorded by the before ATC survey and the CCTV figures are 113.3% and 136.8% higher on the Tuesday and Saturday respectively. Clearly, this has a significant impact on the percentage change and also casts doubt on the accuracy of the cycle figures from the after surveys which were taken from the classified ATC count. The percentage changes shown in Table 2.6 are between the after ATC survey and the CCTV figures. The figures in brackets are the difference between the before and after ATC figures.

2.13.8 Given the lack of an after CCTV survey and the wide variation in results compared to the ATC counts it is not possible to derive a result about the effect of the HN on cycling levels.

	Before (CCTV)	*Before (ATC)*	After (ATC)	% Change
Midweek	32	*15*	29	-9.4% *(+93.3%)*
Weekend	45	*19*	34	-24.4% *(+78.9%)*

Table 2.6: Grasmere Avenue (east of Longfield Avenue) Cycling Flows

2.13.9 The results of the after survey to the east of Rydal Gardens are shown in Table 2.7 and indicate a reduction in traffic compared to the before surveys across all four periods, the highest reduction in the evening peak of -27.6% in the evening peak.

2.13.10 Traffic speeds on Grasmere Avenue at the survey conducted to the east of Rydal Gardens show an increase in mean speed across all four periods with increases ranging between 3.2 and 8.1%.

	Volume			Speed (mean)		
	Before	After	% Change	Before	After	% Change
AM Peak	126	95	-24.4%	17.7	18.3	+3.2%
PM Peak	229	166	-27.6%	17.6	19.0	+7.8%
7am - 7pm	856	671	-21.7%	17.8	19.3	+8.1%
24 Hour	1185	882	-25.5%	17.7	19.0	+7.2%

Table 2.7: Grasmere Avenue (east of Rydal Gardens) Traffic Survey Results

2.14 Montpelier Rise Traffic Data Analysis

2.14.1 Montpelier Rise runs approximately north / south between Carlton Avenue East to the south and Thirlmere Gardens to the north.

2.14.2 The results of the traffic survey on Montpelier Rise are shown below in Table 2.8 and the location of the survey is shown on Fig 2.2.

2.14.3 Traffic flows on Montpelier Rise are low and the before and after counts only show midweek 24-hour flows of 366 and 408 vehicles per day respectively. The surveys indicate increases in traffic flows in the after period with 43% increase in the morning peak and 28% in the 7am to 7pm period. It is unclear whether this may be vehicles displaced from Thirlmere Avenue, where there is an LTN closure point at the western end, seeking an alternative route. However, the before flows are relatively low and therefore sensitive to relatively small fluctuations.

2.14.4 The speed limit on Montpelier Rise is 20mph. Mean speeds in the before surveys are around 17mph. However, the after survey results, range between 13 and 13.7mph for the four periods shown and seem low and, given the low volumes, traffic is likely to be under free-flow conditions and where one might expect to find higher speeds. Furthermore, other counts elsewhere in the HN indicate mean speeds of around 18 / 19mph which seem more typical of a 20mph zone in this kind of environment. The coordinates of the before survey (51.569120, -0.304206) shows it situated approx. 30m from the junction with Carlton Avenue East. The coordinates provided for the location of the after survey (51.569094, -0.304423) appear to show it slightly further north along Montpelier Rise, approximately 60m from the junction with Carlton Avenue East. Google Streetview (dated December 2020) shows a round topped road hump close to this location which may be affecting vehicle speeds on the after survey and may account for the low mean speeds that have been recorded for the after survey.

	Volume			Speed (mean)		
	Before	After	% Change	Before	After	% Change
AM Peak	46	66	+43.0%	17.2	13.0	-24.6%
PM Peak	66	77	+16.4%	16.7	13.7	-17.8%
7am - 7pm	263	336	+28.0%	16.8	13.7	-18.8%
24 Hour	366	408	+11.4%	16.8	13.6	-19.1%

Table 2.8: Montpelier Rise Traffic Survey Results

2.15 Thirlmere Gardens Traffic Data Analysis

2.15.1 Thirlmere Gardens runs approximately east west between Windermere Avenue to the west and Grasmere Avenue to the east. One of the three LTN modal filters is situated at the western end.

2.15.2 The results of the traffic surveys are shown below in Table 2.9 and the location of the survey on Fig 2.2.

2.15.3 Traffic flows on both the before and after surveys are low with total midweek 24-hour flows of 369 and 267 vehicles per day respectively. The after survey shows reduction in flows for all four periods ranging between -17.6% and -27.7% although given the low before flows they will be sensitive so small variations in traffic movements.

2.15.4 The speed limit on Thirlmere Gardens is 20mph. Mean speeds show an increase in the after surveys of up to 5.5% in three of the four periods with a small reduction (-0.4%) in the morning peak.

	Volume			Speed (mean)		
	Before	After	% Change	Before	After	% Change
AM Peak	46	36	-20.5%	16.4	16.3	-0.4%
PM Peak	66	54	-17.6%	16.6	17.0	+2.0%
7am - 7pm	270	212	-21.2%	16.1	17.0	+5.1%
24 Hour	369	267	-27.7%	16.2	17.1	+5.5%

Table 2.9: Thirlmere Gardens Traffic Survey Results

2.16 Windermere Avenue Traffic Data Analysis

2.16.1 Windermere Avenue runs approximately north to south between Carlton Avenue East to the south and Woodcock Hill to the north. The northern end of Windermere Avenue passes beneath the local Metropolitan Line and forms one of the few roads locally to connect the areas north and south of the Metropolitan Line.

2.16.2 Windermere Avenue forms part of the network of roads used by local bus services and the 223 operates here, typically with three services per hour in each direction (i.e. approx. every 20 minutes).

2.16.3 The results of the traffic surveys are shown below in Table 2.10 and the survey location on Fig 2.2.

2.16.4 Traffic flows in the after surveys are indicated as having reduced in all four periods ranging between -19.4% in the evening peak and -7.1% for the 7am to 7pm period.

2.16.5 The speed limit on Windermere Avenue is 20mph. Mean speeds show an increase across all four periods in the after surveys of around +3%.

2.16.6 The number of cyclists in the after survey is shown as reducing slightly in the after survey, although both sets of figures are low. The after surveys, being carried out in February 2021, may be affected by the restrictions imposed by the third lockdown and also by the normal seasonal variations where numbers are typically lower in winter months.

	Volume			Speed (mean)		
	Before	After	% Change	Before	After	% Change
AM Peak	217	197	-9.5%	18.3	18.8	+3.0%
PM Peak	330	266	-19.4%	18.1	18.7	+3.1%
7am - 7pm	1396	1296	-7.1%	18.4	19.0	+2.9%
24 Hour	1831	1631	-10.9%	18.5	19.1	+3.0%

Table 2.10: Windermere Avenue Traffic Survey Results

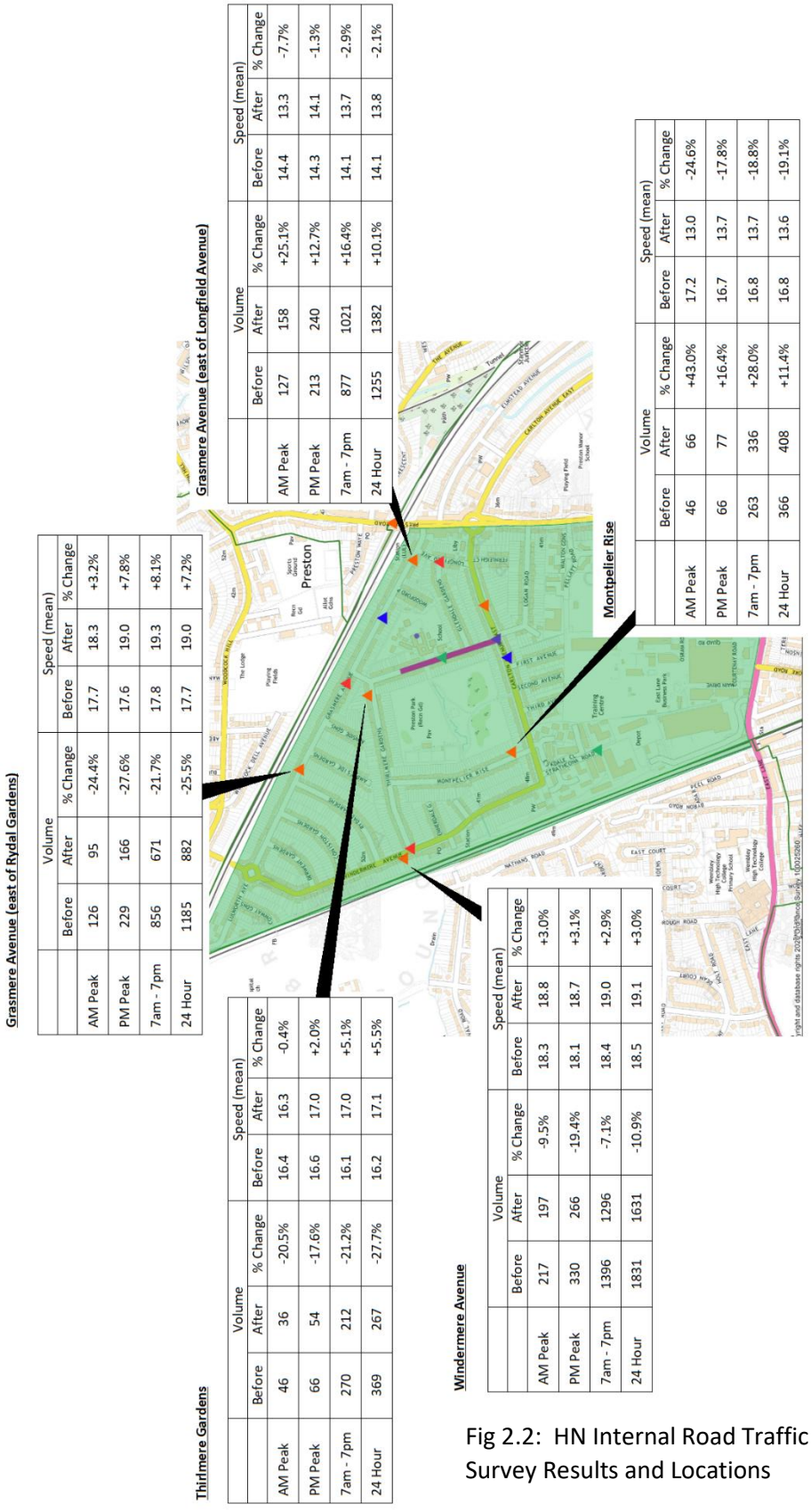
2.16.7 A dedicated pedestrian and cycle count was also undertaken on Windermere Avenue, located between Thirlmere Gardens and Rydal Gardens to support the ATC classified count. This survey was conducted with CCTV equipment, rather than pneumatic tube equipment used in ATC surveys (and which can show inaccuracies recording cycles when used in a mixed traffic environment). The CCTV survey was undertaken on Saturday 22 August and Tuesday 25 August 2020 between 7am and 7pm. Only results for a before CCTV survey have been provided so, for the purposes of this analysis, cycle flows from the classified ATC count have been used for the after survey. The before ATC cycle figure is also shown for comparison. The results of the cycle survey are shown in Table 2.11.

2.16.8 As with the differences between cyclists on the CCTV survey and before ATC survey results on Grasmere Avenue described in 2.13.7 there are similar issues here. The percentage changes shown in Table 2.6 are between the after ATC survey and the CCTV figures. The figures in brackets are the difference between both ATC figures.

2.16.9 Given the lack of an after CCTV survey and the wide variation in results compared to the ATC counts it is not possible to derive a result about the effect of the HN on cycling levels.

	Before (CCTV)	*Before (ATC)*	After (ATC)	% Change
Midweek	23	13	18	-21.7% *(+38.5%)*
Weekend	44	15	26	-40.9% *(+73.3%)*

Table 2.11: Windermere Avenue Cycling Flows



Grasmere Avenue (east of Rydal Gardens)

	Volume			Speed (mean)		
	Before	After	% Change	Before	After	% Change
AM Peak	126	95	-24.4%	17.7	18.3	+3.2%
PM Peak	229	166	-27.6%	17.6	19.0	+7.8%
7am - 7pm	856	671	-21.7%	17.8	19.3	+8.1%
24 Hour	1185	882	-25.5%	17.7	19.0	+7.2%

Grasmere Avenue (east of Longfield Avenue)

	Volume			Speed (mean)		
	Before	After	% Change	Before	After	% Change
AM Peak	127	158	+25.1%	14.4	13.3	-7.7%
PM Peak	213	240	+12.7%	14.3	14.1	-1.3%
7am - 7pm	877	1021	+16.4%	14.1	13.7	-2.9%
24 Hour	1255	1382	+10.1%	14.1	13.8	-2.1%

Montpelier Rise

	Volume			Speed (mean)		
	Before	After	% Change	Before	After	% Change
AM Peak	46	66	+43.0%	17.2	13.0	-24.6%
PM Peak	66	77	+16.4%	16.7	13.7	-17.8%
7am - 7pm	263	336	+28.0%	16.8	13.7	-18.8%
24 Hour	366	408	+11.4%	16.8	13.6	-19.1%

Thirlmere Gardens

	Volume			Speed (mean)		
	Before	After	% Change	Before	After	% Change
AM Peak	46	36	-20.5%	16.4	16.3	-0.4%
PM Peak	66	54	-17.6%	16.6	17.0	+2.0%
7am - 7pm	270	212	-21.2%	16.1	17.0	+5.1%
24 Hour	369	267	-27.7%	16.2	17.1	+5.5%

Windermere Avenue

	Volume			Speed (mean)		
	Before	After	% Change	Before	After	% Change
AM Peak	217	197	-9.5%	18.3	18.8	+3.0%
PM Peak	330	266	-19.4%	18.1	18.7	+3.1%
7am - 7pm	1396	1296	-7.1%	18.4	19.0	+2.9%
24 Hour	1831	1631	-10.9%	18.5	19.1	+3.0%

Fig 2.2: HN Internal Road Traffic Survey Results and Locations

3. BUS JOURNEY TIME ANALYSIS

3.1 In order to determine whether any changes to traffic movements have been experienced following introduction of the HN measures bus journey times have been examined using iBus data from TfL. There are three services which operate on roads around the HN (79, 204 and 233). Details of the routes are shown in Figs 3.1 and 3.2.

3.2 iBus data is collected via GPS technology to track bus movements and is reliant on a GPS fix between the bus stop and the London bus. The data is collected from one bus stop to another including dwell times, for each bus journey and used to indicate average bus journey runtimes.

3.3 The journey times represent the times taken between the following stops:

Routes 79 & 203: East Lane / Beechcroft Avenue & John Perrin Place (Fig. 3.1)

Route 233: Sedgecroft Avenue & Ravenscroft Avenue (Fig 3.2)

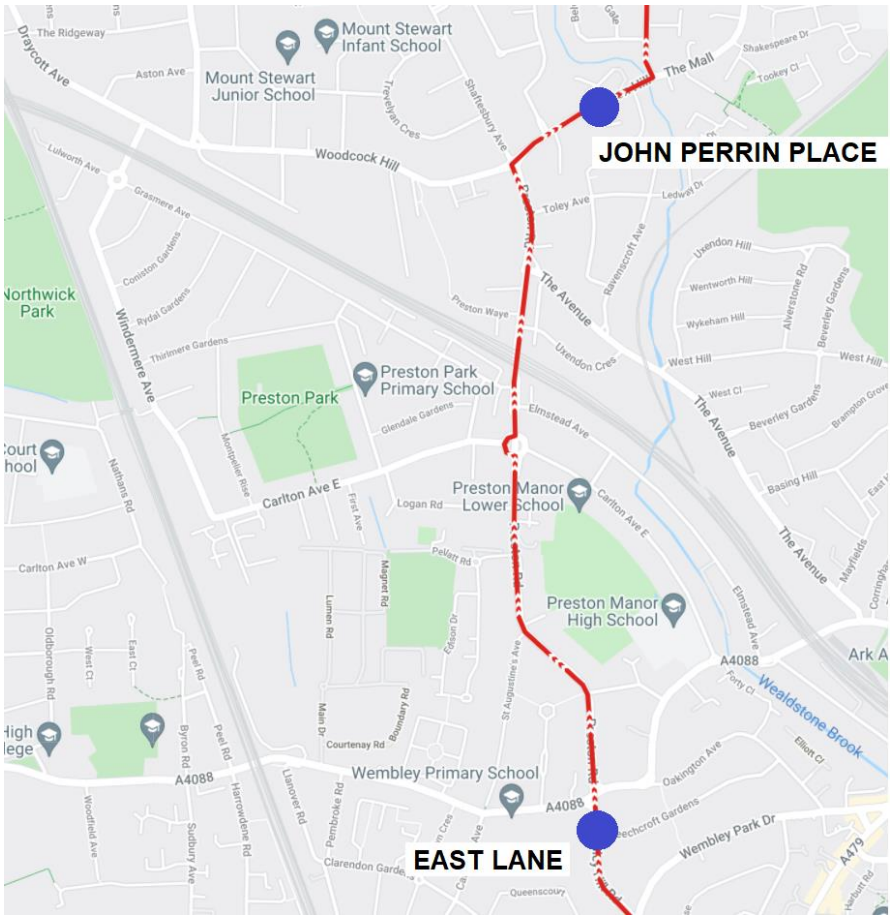


Fig 3.1: Routes 79 & 203 Bus Journey Times Start / End Points

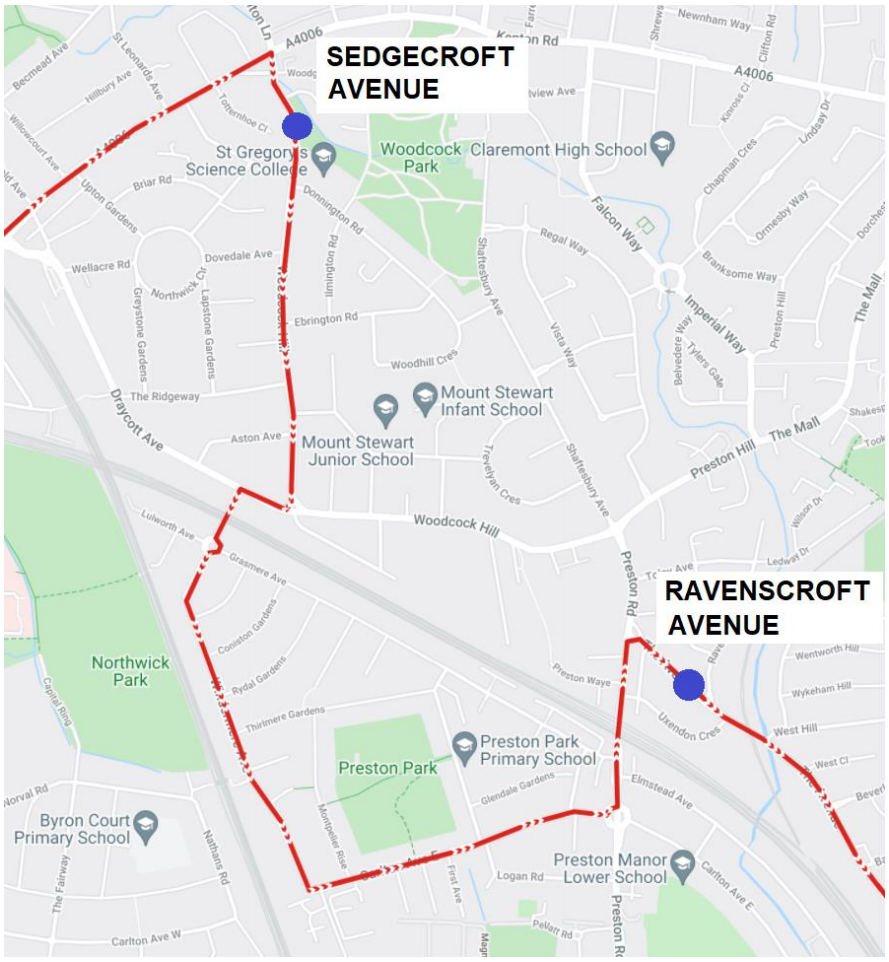


Fig 3.2: Route 233 Bus Journey Time Start / End Points

3.4 Journey times have been taken for periods corresponding to when the three sets of traffic data were collected i.e. August and September 2020 and February 2021. To give baseline periods for before the measures were implemented and pre-Covid effects on traffic flows, journey time data has also been extracted for August and September 2019 and February 2020. Journey times have been considered comparing similar months (to account for seasonal differences in traffic flows) for the mid-week morning peak period between 7 and 10am. The results are set out in Table 3.1 below (journey times are represented as decimals minutes - i.e. a journey time of 5.8 minutes equates to 5 minutes and 48 seconds).

Route	Direction	Journey Times								
		August			September			February		
		2019	2020	% change	2019	2020	% change	2020	2021	% change
79	Northbound	6.97	6.20	-11.0%	8.08	6.73	-16.7%	8.19	6.96	-15.0%
	Southbound	6.46	6.79	+5.1%	8.41	7.35	-12.6%	7.70	7.01	-9.0%
204	Northbound	8.28	7.28	-12.1%	7.95	7.63	-4.0%	8.66	7.77	-10.3%
	Southbound	7.60	7.63	+0.4%	7.70	7.72	+0.3%	7.80	7.66	-1.8%
223	eastbound	13.11	12.65	-3.5%	13.78	13.33	-3.3%	14.42	12.34	-14.4%
	Westbound	14.63	14.77	+1.0%	14.92	14.29	-4.2%	14.77	14.40	-2.5%

Table 3.1: Bus Journey Times Results

3.6 Fig 3.3 and 3.4 show average journey times for routes 79 and 204 for northbound and southbound respectively between August 2019 and February 2021.

3.7 For the northbound direction, as the services are following the same routes (between the start and end points being considered) the profile of the graphs are fairly similar, particularly between August 2020 and February. Overall the 79 service in February 2012 was the same as in August 2019 while the 204 was approximately 0.5 minutes quicker (i.e. 30 seconds). However, both services in this direction are showing slower journey times between August 2020 and February 2021 (i.e. after the measures were implemented) and show slower journey times for the 79 and 203 of approximately 0.5 and 0.7 minutes (i.e. approx. 30 and 45 seconds) respectively.

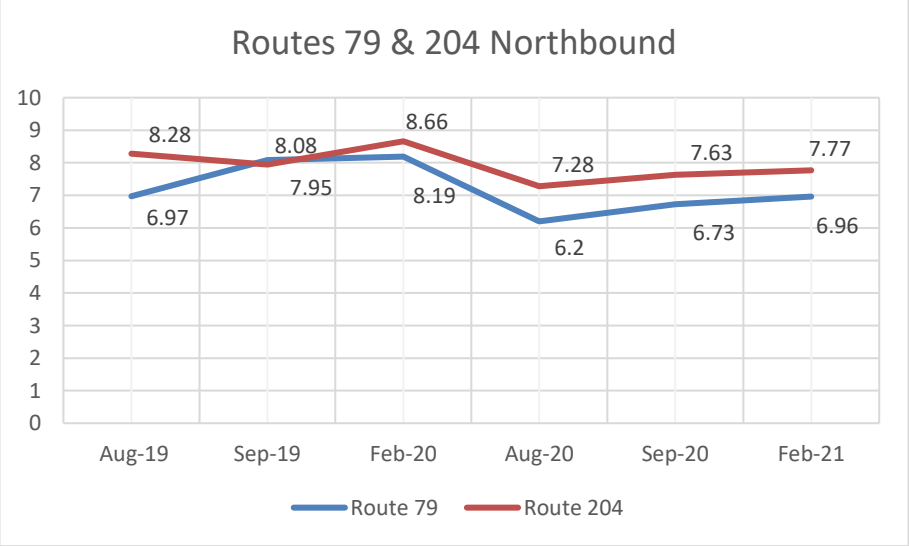


Fig 3.3: Routes 79 & 204 Average Journey Times - Northbound

3.8 For the southbound direction for the 79 and 203 services indicates the 79 service journey times as being approx. 0.55 minutes slower in February 2021 compared to August 2019, although faster journey times than the September 2020 times of around 0.34 minutes (approx. 20 seconds). The 204 shows a broadly similar average journey time throughout with a nominal reduction of journey times between September 2020 and February 2021.

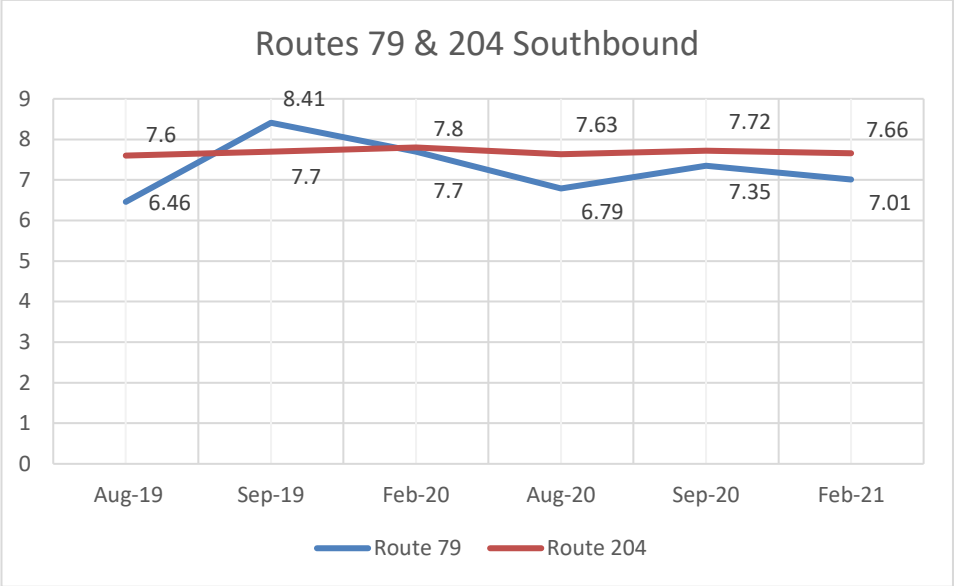


Fig 3.4: Routes 79 & 204 Average Journey Times – Southbound

3.9 Figs. 3.5 and 3.6 show the average journey times for the 233 service for eastbound and westbound respectively. The eastbound journey times have fluctuated over the period considered although there has been a reduction in time of approx. 0.8 minutes (approx. 46 seconds) between August 2019 and February 2021. Between September 2020 and February 2021 there has been a greater drop of almost 1 minute.

3.10 The westbound journey times for route 233 indicates an overall reduction of 0.2 minutes (12 seconds) with a nominal increase between September 2020 and February 2021 of 0.1 minutes (6 seconds).

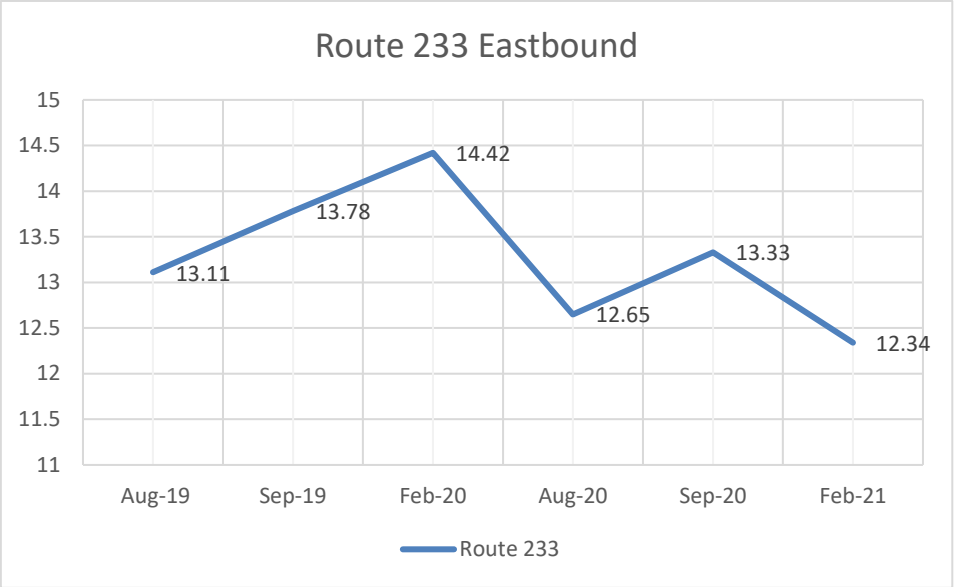


Fig 3.5: Route 233 Average Journey Times – Eastbound

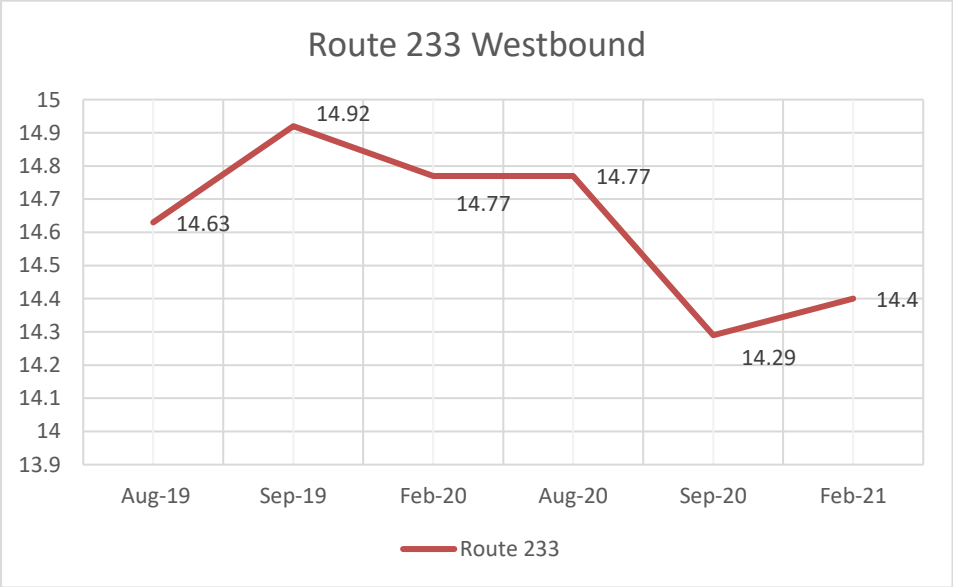


Fig 3.6: Route 233 Average Journey Times – Westbound

3.11 In summary, comparing the latest of February 2012 to February 2020, bus journey times for all three services have improved with a greater reduction on the northbound routes for the 79 and 204 routes, and eastbound for the 233. Comparing the times for August 2020 and February 2021 show increases for northbound routes for the 79 and 204 services of 45 seconds and 30 seconds respectively. The southbound times also show increases for both services although

smaller (12 seconds and 2 seconds respectively). Taking the 33% reduction on Preston Road in the morning peak (Table 2.2) these increases may be from other parts of the route.

3.12 The journey times for the 233 service show reduced times between August 2020 and February 2021 of around 20 seconds.

4. COLLISION DATA ANALYSIS

4.1 Collision data has been gathered from Crashmap for the latest available three year period (18/06/2017 to 18/06/2020) for the HN boundary and internal roads.

4.2 During this period a total of 34 collisions were recorded, six as serious and 28 slight, resulting in 46 personal injuries being sustained (Crashmap only indicates each collision based on the most severe injury sustained, and doesn't give a breakdown where incidents result in multiple casualties).

4.3 The majority of the collisions, 22 (65%), occurred on Preston Road (between its junctions with Carlton Avenue East and Woodcock Hill, four recorded as serious and 18 as slight. These resulted 29 personal injuries.

4.4 Table 4.1 details the collisions recorded on each road and the monthly collision rates (i.e. the total number of collisions divided by the 36 months).

	Killed / Serious	Slight	Total	Personal Injuries	Collision Rate (collisions / month)
HN Boundary Roads (ATCs)					
Preston Road	4	18	22	29	0.611
Carlton Road East	0	2	2	6	0.056
Woodcock Hill	0	4	4	5	0.111
HN Internal Roads					
Windermere Avenue	0	2	2	2	0.056
Grasmere Avenue	2	1	3	3	0.083
Ambleside Gardens	0	1	1	1	0.028

Table 4.1: Collision Data (18/06/2017 to 18/06/2020)

4.5 The latest available collision data on Crashmap and TfL's Road Danger Reduction Dashboard extends up to 31st March 2021, i.e. nine months after the scheme was introduced. The collisions recorded are shown below. These figures show an improved collision ratio on Preston Road while the figures on Carlton Avenue East and Woodcock Hill show a worsened situation. No collisions are recorded on roads within the HN. The 'after' figures are taken over a relatively short period, and some of the data are still provisional, and therefore difficult to identify trends.

	Killed / Serious	Slight	Total	Personal Injuries	Collision Rate (collisions / month)
HN Boundary Roads (ATCs)					
Preston Road	0	3	3	3	0.333
Carlton Avenue East	0	1	1	1	0.111
Woodcock Hill	1	2	3	3	0.333
HN Internal Roads					
None	Nil	Nil	Nil	Nil	

Table 4.1: Collision Data (19/06/2017 to 31/03/2021)

5. AIR QUALITY MONITORING

5.1 As part of the monitoring of the Preston Road HN and School Street schemes air quality tests were undertaken at three locations using diffusion tubes to measure nitrogen dioxide (NO2). These sites were on Grasmere Avenue (approximately mid-way between the junctions with Longfield Avenue and Thirlmere Gardens), Carlton Avenue East (to the west of the junction with College Road) and on Preston Road, although the location of the test site on Preston Road has not been indicated on the information provided. The plan provided indicating the locations of the HN modal filters, survey locations etc. also indicate an air quality test site on College Road relating to the School Street but no details have been provided for this. It is understood that testing commenced in November 2020.

5.2 The Department for Environment Food and Rural Affairs (DEFRA) state that diffusion tubes are a useful low-cost method for indicative monitoring of ambient NO2 concentrations, but they are affected by several sources of interference, such as weather changes and fluctuations in background pollution, which can cause substantial under or overestimation (often referred to as "bias").

5.3 Any such bias is a problem in any situation where diffusion tube results are to be compared with air quality objectives. As a result, local authorities using NO2 diffusion tubes are required to quantify the bias of their diffusion tube measurements and apply an appropriate bias adjustment factor to the annual mean as necessary.

5.4 Once the results have been subject to this process that they can then be compared to UK national air quality objectives of the annual mean concentration of NO2 not exceeding 40 µg m-3, and the 1-hour mean to not exceeding 200 µg m-3.

5.5 The data supplied for the review of the HN monitoring, which covers the period between November 2020 and March 2021, indicates that the diffusion tube results have not been adjusted at this stage. Nonetheless, while the results might not be comparable with air quality objectives, they may give an indication of local trends over the course of the monitoring period.

5.6 Levels of NO2 before the HN was introduced are shown on the LB Brent's website regarding the Preston Park scheme and are included in Table 5.1. These 'before' figures are taken from the London Atmospheric Emissions Inventory 2016 which provides modelled annual mean concentrations for NO2. 2016 is the most recent year for which this data is available.

5.7 The results of the air quality testing at the three sites mentioned above are shown in Table 5.1 below. To repeat the statement above, it must be stressed that these are the 'raw' unadjusted figures.

5.8 The results indicate that while levels have fluctuated over the five months there appears to have been an overall reduction in the levels of NO2 recorded at each of the locations. The higher NO2 levels measured on Preston Road may indicate the higher traffic flows on this road (17,120 vehicles per day on Preston Road compared to 3,243 and 1,255 on Carlton Avenue East and Grasmere Avenue respectively).

	Monthly Nitrogen Dioxide Diffusion Tube results RAW DATA (µg/m3)					
Air Pollution Test Location	**'before' (2016)**	**Nov 20**	**Dec 20**	**Jan 21**	**Feb 21**	**Mar 21**
Carlton Avenue East	32.88	38.94	31.20	35.56	31.74	29.35
Grasmere Avenue	32.81	37.04	30.54	31.97	27.55	22.86
Preston Road	42.17	47.98	38.21	44.25	37.97	38.59

Table 5.1: NO2 Monitoring Results (Unadjusted)

6. CONSULTATION SUMMARY

6.1 An online consultation exercise was undertaken between 25/08/2020 and 28/02/2021 for residents both within and outside of the zone to submit their comments about the scheme and to indicate whether they supported the restrictions or not. In total (i.e. from residents inside and outside the HN) 159 responses were received, of which 16 (10.1%) indicated support for the scheme and 143 (89.9%) did not support the scheme.

6.2 The consultation material was delivered to the 3,317 properties within the HN and 125 (4%) responses were received. Of these 11 (9%) supported the proposal and 114 (91%) did not. Responses from roads where modal filters were installed (Glendale Gardens, Grasmere Avenue and Thirlmere Gardens) a total of 57 responses were received. Of these 4 (7%) supported the scheme and 53 (93%) did not. Tables 6.1, 6.2 and 6.3 below shows these response rates on a 'road by road' basis.

6.3 The details provided on the Common Place survey comprised 25 responses. Based on the coordinates respondents used to indicate the location of their comments, 11 of the responses relate to issues within the area of the HN, 14 relate to roads outside the zone (albeit in the wider Preston Park area). As this review is focussed on the HN the comments below are limited to those 11 relating to the HN.

6.4 The consultation asked respondent to indicate their support for the scheme ('average respondent sentiment') using 'positive,' 'mostly positive,' negative, 'mostly negative' etc. Of the 11 responses being considered 9 indicated 'negative' and two 'mostly negative.'

6.5 The consultation asked respondents to indicate what problems they perceived and gave a series of potential examples with an option to add specific ones ('other'). Those most relevant to the HN scheme are shown below:

What is the problem you have identified at this location?

- Motorists using side roads as a shortcut: nil
- Pavement parking: 2
- High vehicle speeds: 4
- Lack of safe cycling facilities: 2

- Other (i): *"Too many vehicles parked around roundabout of Windermere Avenue / Grasmere Avenue."*

- Other (ii): *"Construction of No Entry at junction of Longfield Avenue and Glendale Gardens is a Health & Safety Risk to vehicles striking pedestrians and cause damage to pavement and property. The road is too narrow and*

no consideration has been made to this as well as delivery vehicles or Social Care Vehicles that use the road for residents as well as the elderly."

- Other (iii): *"Insufficient road width for residents in road to safely turn vehicles around without risk to health & safety of persons/children walking along the road. Scheme has not been properly thought out by the Council."*

- Other (iv): *"As resident of College Road we now have cones restricting entry from 2.30 to 4 pm because of school. When approaching College Road from Carlton Ave where can I put my car when moving the cones to enter my road. I obviously can't just leave my car in the middle of the road but can't turn into College road because of the cones. I have to try and move the cones and then get out my car again to put the cones back and then there are another set of cones just after Glendale which have to be moved and put back."*

6.6 The consultation progressed to ask respondents to indicate what could be done to resolve issues identified with an option to add specific ones ('other'). Those most relevant to the HN scheme are shown below:

How could we make it better?

- Reduce through traffic on this road: 4
- Reduce speed limit: 3
- Limit parking: 3
- New / improved cycle lanes: 2

- Other (i): "*Make Glendale Gardens One-Way in the direction from College Road to Longfield Avenue."*

6.7 The consultation progressed to ask respondents to indicate whether they would like to see the Covid19 Safe Travel measures made permanent. Of the 11 responses ten indicated yes, they would like them made permanent and one indicated no.

6.8 Following introduction of the HN and School Street measures a petition was presented to the Council requesting removal of the School Street on College Road and was heard at an extraordinary Council Meeting on 16 October 2020. The petition raised numerous concerns about the scheme. Primarily these were that no one was manning the barriers at the School Street closure, displacement of congestion to other roads, worsened air pollution, inconvenience to visitors and carers and impact on deliveries. It may be the case that the scheme is enforced using CCTV cameras which will largely alleviate these issues.

Road Name	Yes	No	% Yes	% No
Abercorn Gardens	0	1	0	100
Allonby Gardens	0	1	0	100
Ambleside Gardens	3	3	50	50
Arnside Gardens	0	1	0	100
Aston Avenue	0	1	0	100
Barn Way	0	1	0	100
Campden Crescent	1	0	100	0
Carlton Avenue East	0	7	0	100
Chamberlayne Ave	0	1	0	100
Charterhouse Ave	0	1	0	100
Church End	0	1	0	100
Clarendon Gardens	0	1	0	100
College Road	0	4	0	100
Coniston Gardens	0	10	0	100
Conway Gardens	0	1	0	100
Corringham Road	0	1	0	100
Cypress Rd	0	1	0	100
Derwent Gardens	0	3	0	100
Dorchester Way	0	2	0	100
Elvin Gardens	1	0	100	0
Fernleigh Court	0	1	0	100
First Avenue	0	1	0	100
Fleetwood Road	0	1	0	100
Forty Avenue	0	1	0	100
Gay Close	1	0	100	0
Glendale Gardens	1	13	7	93
Grasmere Avenue	2	9	18	82
Harwood Road	0	1	0	100
Ilmington Road	0	1	0	100
Ledway Drive	0	2	0	100
Longfield Avenue	0	1	0	100
Lulworth Avenue	1	0	100	0
Malvern Road	0	1	0	100
mason close	0	1	0	100
Montpelier Rise	1	10	9	91
Moulin Terrace	0	1	0	100
Northwick Avenue	1	1	50	50
Ravenscroft Avenue	0	1	0	100
Redfern Road	0	1	0	100
Rose Bates Drive	0	1	0	100
Rydal Gardens	1	9	10	90
Spencer Road	1	0	100	0
Stanley Avenue	0	1	0	100
Thirlmere Gardens	1	31	0	100
Uxendon Hill	0	1	0	100
Watford Road	0	1	0	100
Wentworth Hill	0	1	0	100
Windermere Avenue	1	4	25	75
Woodcock Hill	0	1	0	100
Woodford	0	1	0	100
Woodford Place	0	3	0	100
No Address Given	0	1	0	100
	16	143	10%	90%

Table 6.1: Consultation Responses by Road – ALL RESPONSES

Road Name	Yes	No	% Yes	% No
Allonby Gardens	0	1	0	100
Ambleside Gardens	3	3	50	50
Arnside Gardens	0	1	0	100
Carlton Avenue East	0	7	0	100
Chamberlayne Ave	0	1	0	100
College Road	0	4	0	100
Coniston Gardens	0	10	0	100
Conway Gardens	0	1	0	100
Derwent Gardens	0	3	0	100

Fernleigh Court	0	1	0	100
First Avenue	0	1	0	100
Glendale Gardens	1	13	7	93
Grasmere Avenue	2	9	18	82
Longfield Avenue	0	1	0	100
Lulworth Avenue	1	0	100	0
Montpelier Rise	1	10	9	91
Rydal Gardens	1	9	10	90
Thirlmere Gardens	1	31	0	100
Windermere Avenue	1	4	25	75
Woodford	0	1	0	100
Woodford Place	0	3	0	100
Total	11	114	9%	91%

Table 6.2: Consultation Responses by Road – ROADS WITHIN HN

Road Name	Yes	No	% Yes	% No
Glendale Gardens	1	13	7.1%	92.9%
Grasmere Avenue	2	9	18.2%	81.8%
Thirlmere Gardens	1	31	3.1%	96.9%
Total	4	53	7.0%%	93.0%

Table 6.3: Consultation Responses by Road – ROADS WITH MODAL FILTERS

7. EQUALITIES MONITORING

7.1 Respondents to the online consultation were invited to answer a series of equalities questions to indicate whether the responses were typically representative of the local community.

7.2 In relation to the Preston Road area the responses were broadly representative of the local community. The results are included in Appendix A.

8. BENCHMARKING OTHER LONDON BOROUGHS' SCHEME MONITORING

8.1 Sustrans, the UK charity organisation promoting walking and cycling, publish guidance around LTNs titled 'An Introductory Guide to Low Traffic Neighbourhood Design.' The document provides information around the benefits of LTNs, their design, prioritisation etc. The publication also includes in chapter 5 sources of evidence around the effects of LTNs. The following examples are included in SUSTRANS' list of evidence.

8.2 LB Islington – St Peter's People-Friendly Streets (PFS) Trial

8.2.1 The St Peter's PFS trial was implemented in July 2020 as part of LB Islington's urgent Covid-19 response. The trial was implemented to make walking and cycling easier and safer as alternatives to public transport and prevent a car-based recovery. St Peter's was introduced shortly before two bordering LTNs (Canonbury East and Hoxton in LB Hackney) were also introduced.

8.2.2 Baseline counts were undertaken in June 2020 and the six-month monitoring counts in November 2020. LB Islington's report states that the results of the traffic counts were 'normalised' to take into account the effects of Covid19 on traffic volumes so they can be better compared.

8.2.3 The monitoring indicates that after six months there was an overall reduction of traffic within the St Peter's PFS of 57%. The figures for those boundary roads around the PFS saw a negligible change (down by 2%) although one of the boundary roads (A1200 New North Road) saw an increase of 32%. The monitoring report suggests this may not be solely attributable to the St Peter's PFS as there were two other similar zones implemented shortly after St Peter's as well as the removal of the Old Street roundabout (at the northern end of New North Road) which is a major transport infrastructure project.

8.2.4 Cycling was seen to have increased on 43% of roads within the PFS and one road (Wharf Road) saw an increase of 51%. Instances of vehicles speeding on roads within the PFS fell by 65%.

8.2.5 With regard to air quality the monitoring indicated that there has been a decrease in pollution at all monitoring sites when the post-implementation period is compared with the same period the year before, and similarly with the average for the whole year before. Air quality data from within the St Peter's area, including on boundary roads, shows that nitrogen dioxide levels have fallen in line with borough trends. The report notes that comparing the baseline air quality readings (June 2020) with the six-month monitoring figures (November 2020) shows an increase as air pollutants rose after the initial significant drops following the initial lockdown in March 2020.

8.2.6 The report also acknowledges that the six-month period was only a relatively short time between the baseline measurements and the subsequent ones and future monitoring may give a more accurate picture to account for seasonal variations etc.

8.3 **LB Islington – Canonbury East People-Friendly Streets (PFS) Trial**

8.3.1 The Canonbury East PFS was implemented in August 2020, shortly after the St Peter's PFS. A similar six-month monitoring exercise was carried out in February 2021. The collected data has been normalised using appropriate factors for the months the surveys were undertaken.

8.3.2 The monitoring indicates that after six months there had been an overall reduction of traffic within the Canonbury East PFS of 78% and the figures for those boundary roads around the PFS saw a reduction of 10%.

8.3.3 Cycling was seen to have decreased on 28% on roads within the PFS. This is possibly attributable to the lockdown restrictions in February as well as a seasonal factor. Similar comments are made to air quality as for the St Peter's PFS.

8.4 **LB Hackney - London Fields Low Traffic Neighbourhood**

8.4.1 London Fields is the largest single LTN in Hackney and was introduced in July-September 2020. Baseline counts were taken before the scheme was implemented and these were repeated in late November / early December to provide comparison.

8.4.2 The monitoring indicates that there was reduction on all boundary roads of between -14 and -44% with an overall average of -21.3%. For roads within the LTN some had a reduction of around -90% while two (Forest Road and Middleton Road) these was an increase of around +35%. Overall, there was an average reduction of -44%. Where there have been increases the report advises that these roads will continue to be monitored.

8.4.3 The report does not refer to air quality or cycling use.

8.5 **LB Lambeth – Railton Low Traffic Neighbourhood**

8.5.1 Railton LTN is part of the wider Brixton Liveable Neighbourhood project and was implemented in June 2020. Monitoring traffic counts were conducted in September 2020.

8.5.2 The monitoring indicates that on the boundary roads to the LTN traffic flows were generally down with the number of cars and goods vehicles reduced by -11% and -6% respectively and cycling was seen to increase by +31%. However, some boundary roads saw increases and one, Rattray Road, saw extremely large increases with car and goods vehicle numbers up by around 100%, although the report acknowledges that daily flows at this site are relatively low here (from around 650 vehicles per day to around 1,300). The monitoring report indicates these hourly volumes are considered acceptable under Healthy Routes guidance for mixing cycles and cars.

8.5.3 Roads within the LTN saw the numbers of car and goods vehicles reduce by 58% and 43% respectively and cycling increase by +51%.

8.5.4 The report does not refer to air quality.

8.6 **LB Lambeth – Oval Low Traffic Neighbourhood**

8.6.1 Oval LTN was implemented in June 2020 and monitoring traffic counts were conducted in December 2020.

8.6.2 The monitoring indicates that on the boundary roads to the LTN traffic flows were generally increased with the number of cars and goods vehicles up by +10% and +13% respectively and cycling was seen to increase by +19%. Roads within the LTN saw the numbers of cars and goods vehicles reduce by -17% and -3% respectively and cycling increase by +10%.

8.6.3 The report does not refer to air quality.

8.7 <u>LB Lambeth – Tulse Hill Low Traffic Neighbourhood</u>

8.7.1 Tulse Hill LTN was implemented in September 2020 and monitoring traffic counts were conducted in November 2020.

8.7.2 The monitoring indicates that on the boundary roads to the LTN traffic flows were generally increased with the number of cars and goods vehicles up by +7% and +15% respectively and cycling was seen to increase by +43%. Roads within the LTN saw the numbers of cars and goods vehicles reduce by -35% and -17% respectively and cycling increase by +69%.

8.7.3 The report does not refer to air quality.

9. SUMMARY AND CONCLUSION

9.1 The traffic surveys indicate reductions in traffic volumes on all three boundary roads of between 13% and 38%. With regard to the roads within the HN, some roads experienced reduced flows (Grasmere Avenues east of Rydal Gardens, Thirlmere Avenue and Windermere Avenue) while others saw increases (Grasmere Avenue east of Longfield Avenue and Montpelier Avenue). With regard to traffic speeds those roads which saw reduced traffic experienced higher speeds and vice versa.

9.2 The possible effect of supressed flows due to Covid restrictions in February 2021 should be taken into account, albeit these are unquantifiable based on the data provided. Also, the typical reduced flows seen in February may have some effect on the figures recorded. Further investigation may be required to identify the effect of Covid restrictions on traffic flows at the various times in order to identify any changes due to the HN measures.

9.3 There are also some questions regarding the output of some surveys results, possibly due to the location not seemingly matching that of earlier surveys in some cases.

9.4 Bus journey times show mixed results depending on the route. The 79 and 204 which share a route on the main boundary road, Preston Road, show marginally longer journey times compared to the 233 which has shorter times in both directions. Considering February 2020 and February 2021, thereby negating any seasonal issues, shows improvements on all three routes in all directions.

9.5 With regard to collision data, the latest available data (up to 31st March 2021) show there were no collisions recorded on roads within the HN in the 'after' period. On the boundary roads the collision rate was reduced on Preston Road but increased on Carlton Avenue East and Woodcock Hill. The relatively short period of time (nine months) may make it difficult to accurately identify any trends.

9.6 The air quality monitoring indicates improvements in NO2 at all three test locations both over the duration of the monitoring and compared to the 2016 baseline figures. The figures have not been adjusted and therefore can't be compared with UK limits.

9.7 As can be seen from the information regarding similar schemes in other boroughs there have been similar results experienced to those seen for the Preston park HN, albeit some have indicated their traffic figures have been 'normalised' to take into account effects of Covid restrictions on traffic movements. It is to be expected that residents have concerns about these types of schemes being introduced and may be resistant to them, particularly where physical measures are used. Based on the information provided for review it seems there is little support for the schemes

locally. However, some of the concerns, particularly around the College Road School Street may be alleviated should CCTV enforcement be introduced which has been used elsewhere.

APPENDIX A: EQUALITIES MONITORING RESPONSES

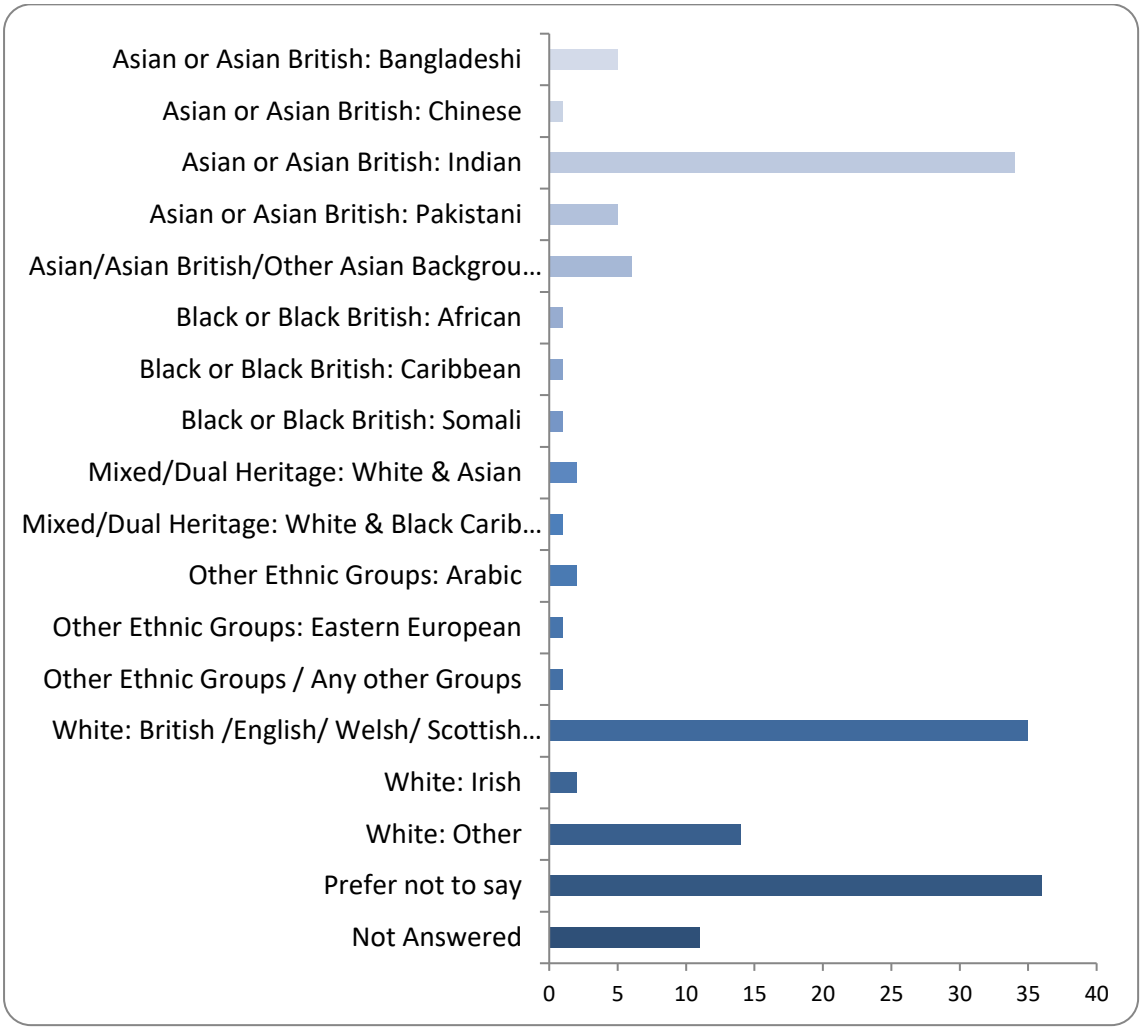
Preston Area - Healthy Neighbourhood

Responses to this survey: **159**

7: Please state your ethnicity:

Ethnicity

There were 148 responses to this part of the question.



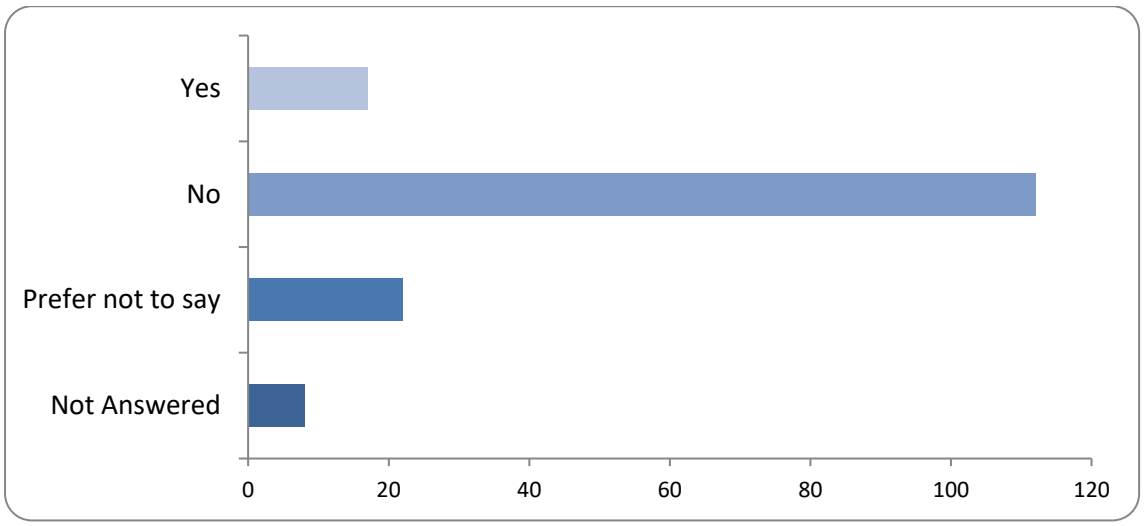
Option	Total	Percent
Asian or Asian British: Bangladeshi	5	3.14%
Asian or Asian British: Chinese	1	0.63%
Asian or Asian British: Indian	34	21.38%
Asian or Asian British: Pakistani	5	3.14%
Asian/Asian British/Other Asian Background	6	3.77%
Black or Black British: African	1	0.63%
Black or Black British: Caribbean	1	0.63%

Black or Black British: Somali	1	0.63%
Black/Black British/ Other Black Background	0	0.00%
Mixed/Dual Heritage: White & Asian	2	1.26%
Mixed/Dual Heritage: White & Black African	0	0.00%
Mixed/Dual Heritage: White & Black Caribbean	1	0.63%
Mixed/Dual Heritage: Any Other Mixed Background	0	0.00%
Other Ethnic Groups: Afghan	0	0.00%
Other Ethnic Groups: Arabic	2	1.26%
Other Ethnic Groups: Turkish	0	0.00%
Other Ethnic Groups: Eastern European	1	0.63%
Other Ethnic Groups / Any other Groups	1	0.63%
White: British /English/ Welsh/ Scottish/ Northern Irish	35	22.01%
White: Irish	2	1.26%
White: Traveller of Irish Heritage	0	0.00%
White: Gypsy/Roma	0	0.00%
White: Other	14	8.81%
Prefer not to say	36	22.64%
Not Answered	11	6.92%

8: Do you consider yourself to have a disability?

Disability

There were 151 responses to this part of the question.



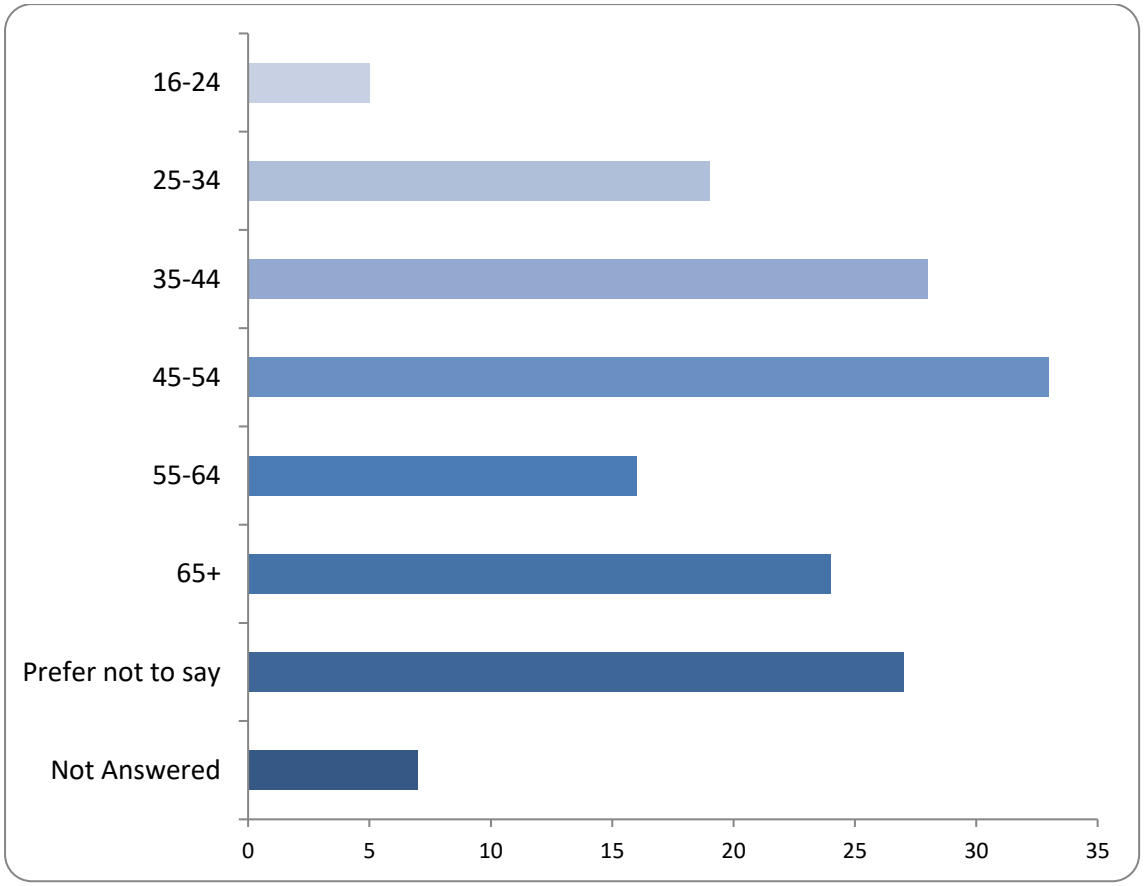
Option	Total	Percent
Yes	17	10.69%

No	112	70.44%
Prefer not to say	22	13.84%
Not Answered	8	5.03%

9: What is your age?

Age

There were 152 responses to this part of the question.



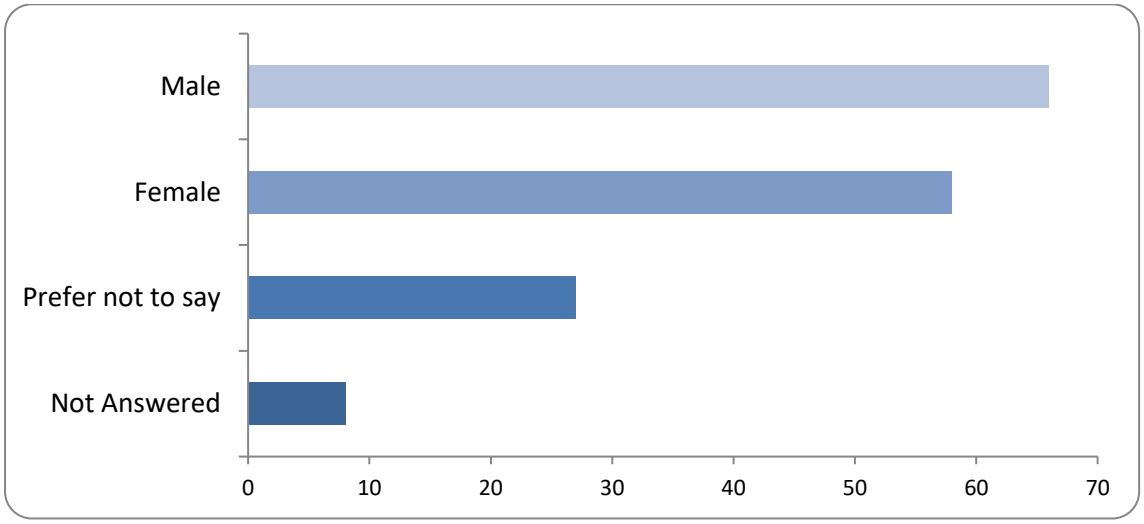
Option	Total	Percent
0-15	0	0.00%
16-24	5	3.14%
25-34	19	11.95%
35-44	28	17.61%
45-54	33	20.75%
55-64	16	10.06%
65+	24	15.09%
Prefer not to say	27	16.98%

Not Answered	7	4.40%

10: Please indicate your sex:

Gender

There were 151 responses to this part of the question.

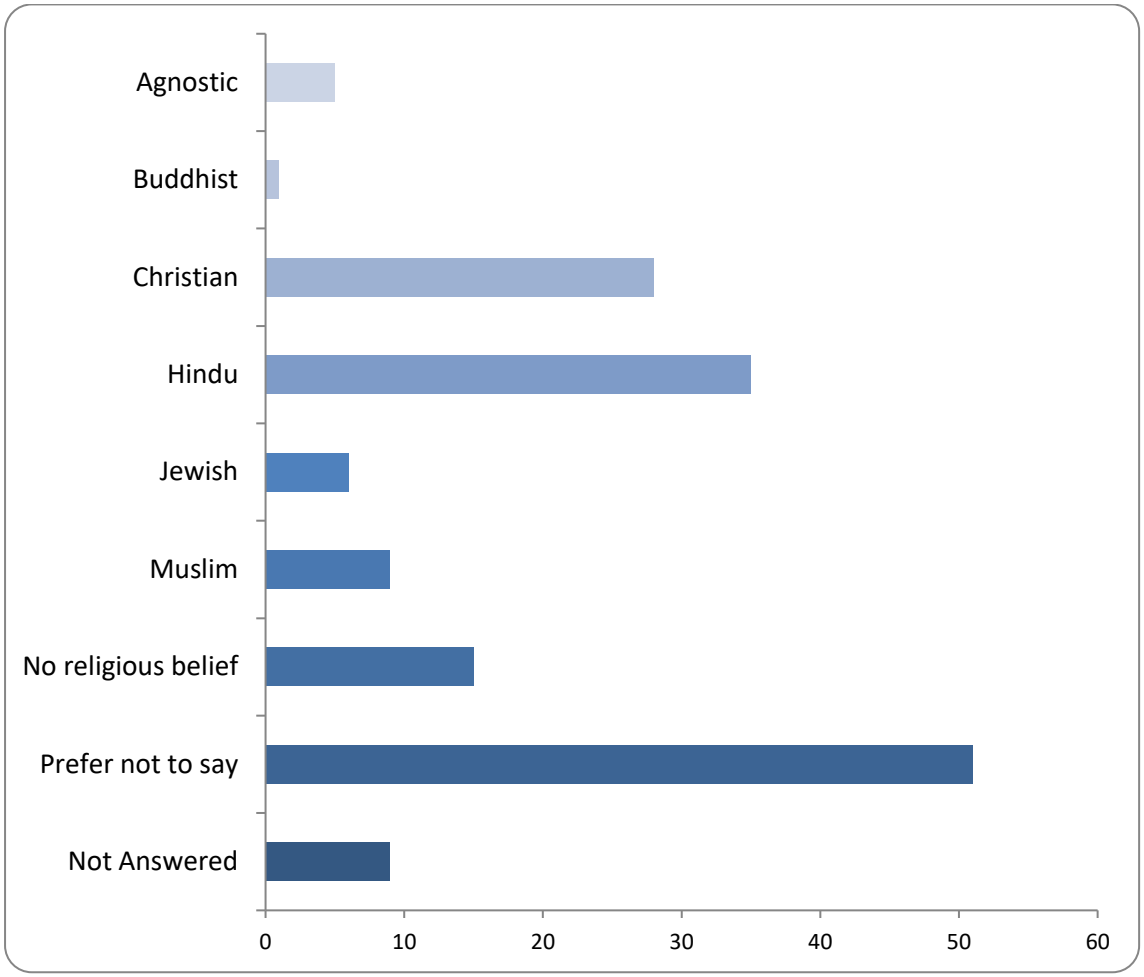


Option	Total	Percent
Male	66	41.51%
Female	58	36.48%
Prefer not to say	27	16.98%
Not Answered	8	5.03%

11: What is your religion/belief?

Religion

There were 150 responses to this part of the question.

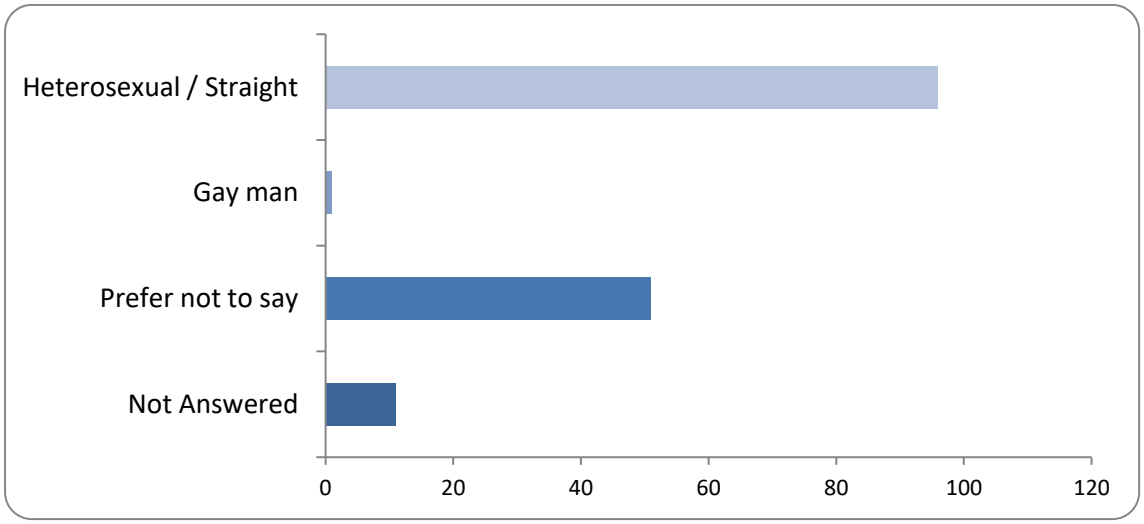


Option	Total	Percent
Agnostic	5	3.14%
Buddhist	1	0.63%
Christian	28	17.61%
Hindu	35	22.01%
Humanist	0	0.00%
Jewish	6	3.77%
Muslim	9	5.66%
Sikh	0	0.00%
No religious belief	15	9.43%
Prefer not to say	51	32.08%
Not Answered	9	5.66%

12: What is your sexual orientation?

Sexuality

There were 148 responses to this part of the question.



Option	Total	Percent
Heterosexual / Straight	96	60.38%
Bisexual (an attraction to both men and women)	0	0.00%
Gay man	1	0.63%
Gay woman/Lesbian	0	0.00%
Prefer not to say	51	32.08%
Not Answered	11	6.92%

Award Winning

national transport awards

LTA LONDON TRANSPORT AWARDS

british parking awards 2018 WINNER

CIHT AWARDS 2015

HEALTHY STREETS 2017

LONDON PLANNING AWARDS 2015/16

Accreditations

CIHT Diversity & Inclusion Charter

POSITIVE ABOUT DISABLED PEOPLE

INVESTORS IN PEOPLE | Platinum

100

constructionline

Memberships

CIHT Corporate Partner

ice

nec

RoSPA Member

Landscape Institute Registered practice

BPA MEMBER OF THE BRITISH PARKING ASSOCIATION

Contact

London Office

Unit 2 Holford Yard
London
WC1X 9HD
tel: 0330 008 0855

Brighton Office

38 Foundry Street
Brighton
BN1 4AT
tel: 01273 627 183

Slough Office

Fourth Floor
The Urban Building
3-9 Albert Street
Slough, SL1 2BE
tel: 0330 008 8447

info@projectcentre.co.uk • www.projectcentre.co.uk