
Feasibility study: Netherhall Gardens and College Crescent

Introduction

1. The London Borough of Camden was awarded 'Neighbourhoods of the Future' funding from the Mayor of London in March 2018 to improve London's air quality. Camden successfully bid for £359,500, which has been match funded, to help fund a minimum of three Healthy School Streets in the Frognal and Fitzjohn's area. To support the delivery of the project Camden commissioned the transport consultancy Steer to undertake this feasibility study.

The feasibility study is structured by the following sections:

- Background
- Aim of study
 - Existing situation: data analysis
- Feasibility of possible options
- Summary of stakeholder questions and responses
- Recommendations

Background

2. Within the Frognal and Fitzjohn's Ward there are 23 schools with over 8,500 pupils. Due to the sheer number of pupils and the high proportion of pupils that are driven to school there is a prolific issue with congestion during school pick-up and drop-off times. The proposals within this report are measures to tackle congestion, decrease car use and improve air quality; and will complement initiatives already taking place within the Ward including:

TfL's STARS Programme

3. Twelve of the schools within Frognal and Fitzjohn's are engaged with TfL's STARS accreditation programme which encourages pupils to travel to school sustainably, actively, responsibly and safely by championing walking, scooting and cycling. There are three levels of accreditation: gold, silver and bronze. The level awarded to the school depends on how successful the school has been in reducing car use and increasing sustainable travel. To be awarded gold accreditation the school is amongst the top 10% of London schools, setting high standards to inspire others to transform travel habits, fully engage the wider community to promote best practices, and see a measurable reduction in the number of journeys made by car every day.

NW3 School Run Group

4. Parents of children at private schools in Hampstead and the surrounding area have formed the NW3 School Run Group to find practical solutions to overcome the issues of congestion and air pollution in the area that affect the health and wellbeing of children. As part of a range of measures the NW3 School Run Group are exploring is piloting private buses between areas such as St John's Wood, Islington and

Hampstead using a private company called Zeelo. The Group want to encourage private schools to take tougher action and for the council to expand Healthy School Streets to limit traffic access. In March 2019 the NW3 Green School Runs group met with 11 local schools, Camden Council and stakeholders including Public Health England to explore options for transforming how children get to school in the area.

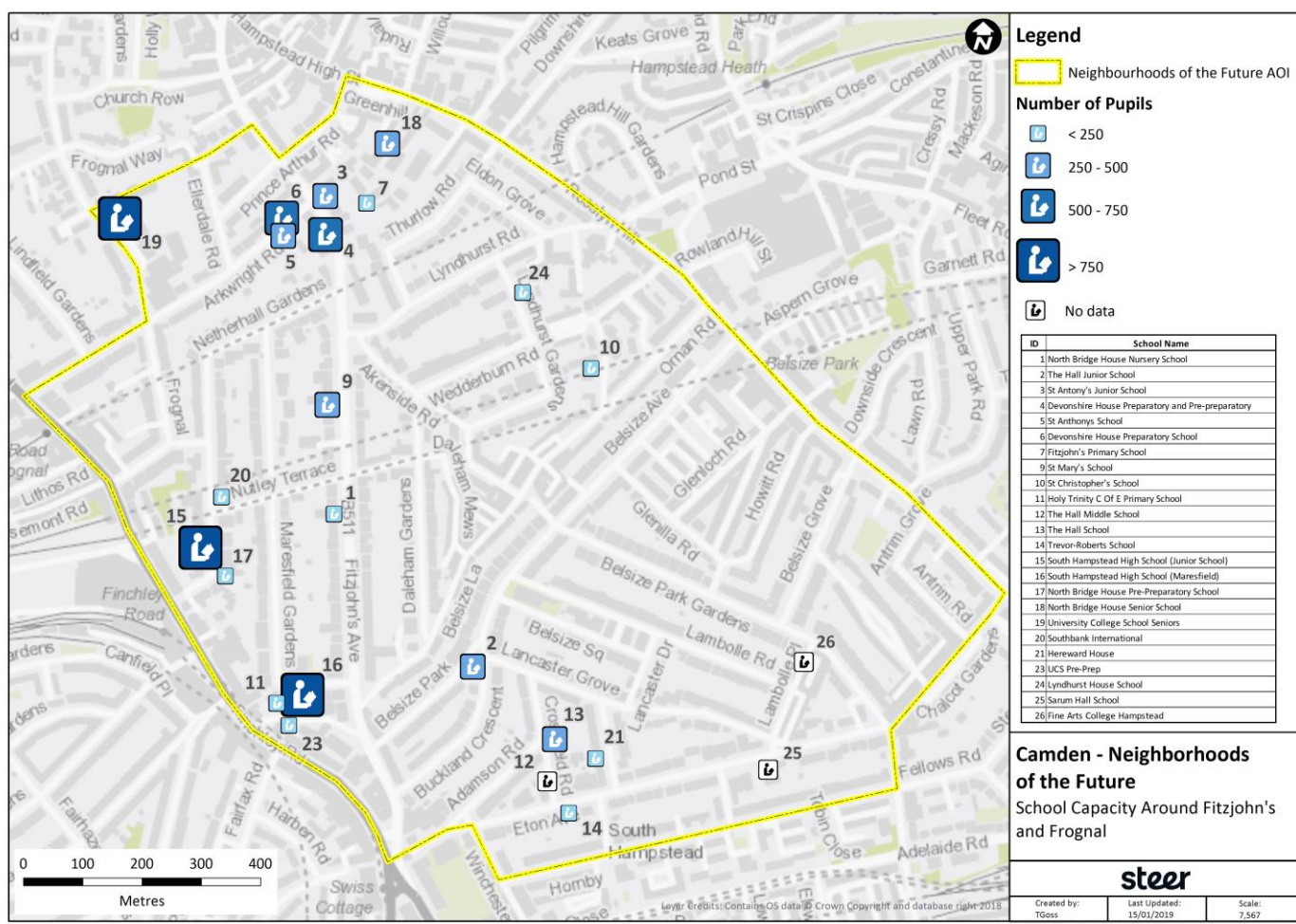
HomeRun

5. HomeRun is a mobile application to promote sustainable school journeys and enable alternatives to car use such as journey sharing and travel buddies. In May 2018, HomeRun was launched across two schools in Hampstead and since then has over 85% of all parents signed up and active on the platform. HomeRun states it has reduced 78 cars from the two Hampstead schools, equating to a total reduction of 31%. It reports that this has resulted in an 18% modal shift from driving to walking, cycling and public transport.

Healthy School Streets

6. All schools within Frognal and Fitzjohn's were informed of the Neighbourhoods of the Future (NoF) programme and encouraged to share concerns of congestion and air pollution that could be tackled using the funding. As a result, University College School Pre-Prep and South Hampstead Junior School requested the surrounding area - Netherhall Gardens and College Crescent – to be focused on as a Healthy School Street zone. This area has been identified as a problem area which incorporates four schools and over 1,500 pupils. There are practical reasons why this area is suitable for potential implementation of Healthy School Streets, given that it excludes the key north-south and east-west routes through the area of Fitzjohn's Avenue and Arkwright Road. Residents on Arkwright Road have requested that the road be included in the Healthy School Streets zone but due to a lack of alternative east-west routes in the area it is not feasible to close or restrict through traffic using the road.
7. The defined study area is within 'CA-B Belsize' Controlled Parking Zone which is enforced Monday – Friday 9:00 – 18:30 and Saturday 9:30 – 13:30. Netherhall Gardens has vehicular access from Fitzjohn's Avenue and Nutley Terrace. The exits on to Frognal and Finchley Road are pedestrian only. The western section of College Crescent is a one-way road, accessed from Finchley Road (A41) and exiting on to the southern end of Fitzjohn's Avenue.

Figure 1: Schools within Froggnal and Fitzjohn's



8. On Netherhall Gardens there are four schools with five sites:
 - i. Southbank International South Hampstead Campus – a private school with 207 pupils, aged between 3 and 11. The school day starts at 8:20 and finishes at 15:20. The school is engaged in TfL’s STARS programme and hoping to achieve Bronze accreditation this year;
 - ii. South Hampstead High School (Juniors) – a private school for girls with 275 pupils, from ages 4 to 11. The school has two sites on opposite sides of Netherhall Gardens. The school day starts at 8:30 and finishes at 16:00. The school is engaged with the TfL STARS programme and has a bronze award.
 - iii. North Bridge House Pre-Preparatory School – a private school with 148 pupils, aged between 5 and 7. The school day starts at 8:50 and finishes at 15:30. The school is not engaged in TfL’s STARS programme.
 - iv. South Hampstead High School (Seniors) – a private school for girls with 892 pupils, from ages 11 to 18. The school day starts at 8:30 and finishes at 16:00. The school is not engaged in TfL’s STARS programme.

9. On College Crescent there is one school (although South Hampstead High School Senior Branch on Maresfield Gardens backs onto College Crescent there is currently no access to the site from College Crescent):

- i. University College School Pre-Prep – is a private school for boys with 123 pupils, aged between 4 and 7. The school day starts at 8:00 and finishes at 16:00. The school is engaged with the TfL STARS programme and has a silver award.
10. Table 1 records the latest ‘Hands-up’ data collected from the schools within the study area as part of the STARS programme. Analysing the results of pupils travelling to school by motorised transport there is a disparity between the schools in the study area; in particular it highlights that Southbank International pupils travel to school using more active modes than the other schools. Southbank International has a high percentage of pupils that travel by school bus and has made provision for scooter parking.
11. Postcode data of pupils attending UCS Pre-Prep has been mapped and included in Appendix A. It indicates 60% of pupils (74) live over 1.5km radius of the school and therefore suggests the higher rate of car use.
12. We have not been able to obtain postcode data from any of the other school sites.

Table 1: TfL STARS Hands-up Survey Data

School name	Mth/ Yr	Reply rate	Walk	Scoot	Cycle	Rail	Tube	Public Bus	School Bus/ Taxi	Car/ motor bike	Car share	Park & Stride	All car
Southbank Int.	Jan 2018	97%	36%	13%	0%	3%	5%	4%	28%	8%	3%	0%	11% (22)
South Hampstead (Jr)	June 2018	98%	28%	6%	1%	0%	11%	19%	0%	38%	0%	6%	44% (114)
Northbridge House Pre-Prep	June 2016	100%	16%	6%	0%	3%	8%	14%	9%	33%	0%	12%	45% (65)
UCS Pre-Prep	Nov 2017	100%	16%	8%	4%	4%	3%	9%	1%	52%	2%	0%	54% (52)

13. There has been concern over recent years regarding congestion around the schools during drop off and pick up and the impact on air quality in the area. The project team has observed unsafe parking by pupils’ guardians at drop off and pick up times and significant congestion in the surrounding streets thought to be related to school traffic. The four schools have also reported concerns regarding the speed of drivers, poor parking and high levels of pollution.
14. Consequently, we have assessed options for a scheme to address these problems in order to provide a safer and more welcoming environment for school pupils and staff. This study, and potential measures, are funded by Camden under the “Healthy School Streets” initiative using Neighbourhoods of the Future funding. There are three Healthy School Streets that have already been implemented with timed road closures in the borough between 2017 - 2019:
 - St. Joseph’s School (Macklin Street WC1) using collapsible bollards to enforce the closure between 8:30-9:15 and 15:15-16:00
 - Acland Burghley Secondary School (Burghley Road NW5) using Automatic Number Plate Recognition (ANPR) cameras to enforce the closure between 8:00-9:00 and 15:00-16:00
 - Gospel Oak Primary School (Savernake Road NW3) using ANPR cameras to enforce the closure between 8:30-9:30 and 15:00-16:00

Aim of study

15. The aim of this study is to explore the potential to improve the environment surrounding the schools for the school and wider community, encourage active travel of pupils and improve safety. The proposals explored in the study will also have the potential to reduce pollution in the area through discouraging the total number of car trips undertaken associated with the school run.

Existing situation: data analysis

Air quality

16. London Borough of Camden had existing air quality data from two diffusion tubes placed at:
 - 47 Fitzjohn's Avenue, outside St. Mary's School - 67.0µg/m³ annual mean NO₂ concentration 2017
 - Finchley Road, at the junction with College Crescent. - 73.8µg/m³ annual mean NO₂ concentration 2017
17. In January 2019 three diffusion tubes were also placed at each of the following locations, data from these will be reported after 12 months:
 - Netherhall Gardens, outside of South Hampstead High School (Junior);
 - Arkwright Road, outside Devonshire House Preparatory School; and
 - Frognal, outside University College School Senior School.
18. The London Atmospheric Emissions Inventory (LAEI) models air quality data throughout London, based upon 2013 data. The methodology is being revised but it highlights potential areas of higher NO₂ and PM concentrations. This LAEI 2013 data was used by the Greater London Authority to produce a list of modelled annual mean NO₂ concentrations at all London schools. Table 2 shows the NO₂ for the schools in the study area, all are recorded as above the national average of 40µg/m³. Data for South Hampstead High School (Juniors) was not available.

Table 2: NO₂ levels for schools in the study area

Location	NO ₂ Concentration
Southbank International	41.4µg/m ³
Northbridge House Senior School	40.6µg/m ³
Northbridge House School	42.7µg/m ³
Northbridge House School	46.5µg/m ³
University College School (pre-prep)	55.1µg/m ³

Collisions

19. The following data shows that there have been eight collisions in the area impacting road safety in the last two years:

Table 3: Collision data

Area	Month/Year	Pedal Cycle (slight)	Car (slight)	Powered 2-wheeler (slight)	Powered 2-wheeler (serious)	Grand total
Netherhall Gardens	May 2017			1		1
Netherhall Gardens	Aug 2017		1			1
Netherhall Gardens	March 2018	1	1			2
College Crescent	March 2017	1				1
College Crescent	Sept 2017				1	1
College Crescent	Oct 2017		1			1
College Crescent	Feb 2018		1			1
Total	-	2	4	1	1	8

Traffic data survey locations

- Traffic surveys have been conducted around Netherhall Gardens / College Crescent to record pedestrian and vehicular movements at the locations shown in Figure 2 and Figure 3. The traffic surveys were conducted to better understand the traffic levels in the area throughout the day and highlight the potential impact on surrounding streets should mitigating measures be taken forward.

Figure 2: Traffic survey: Netherhall Gardens

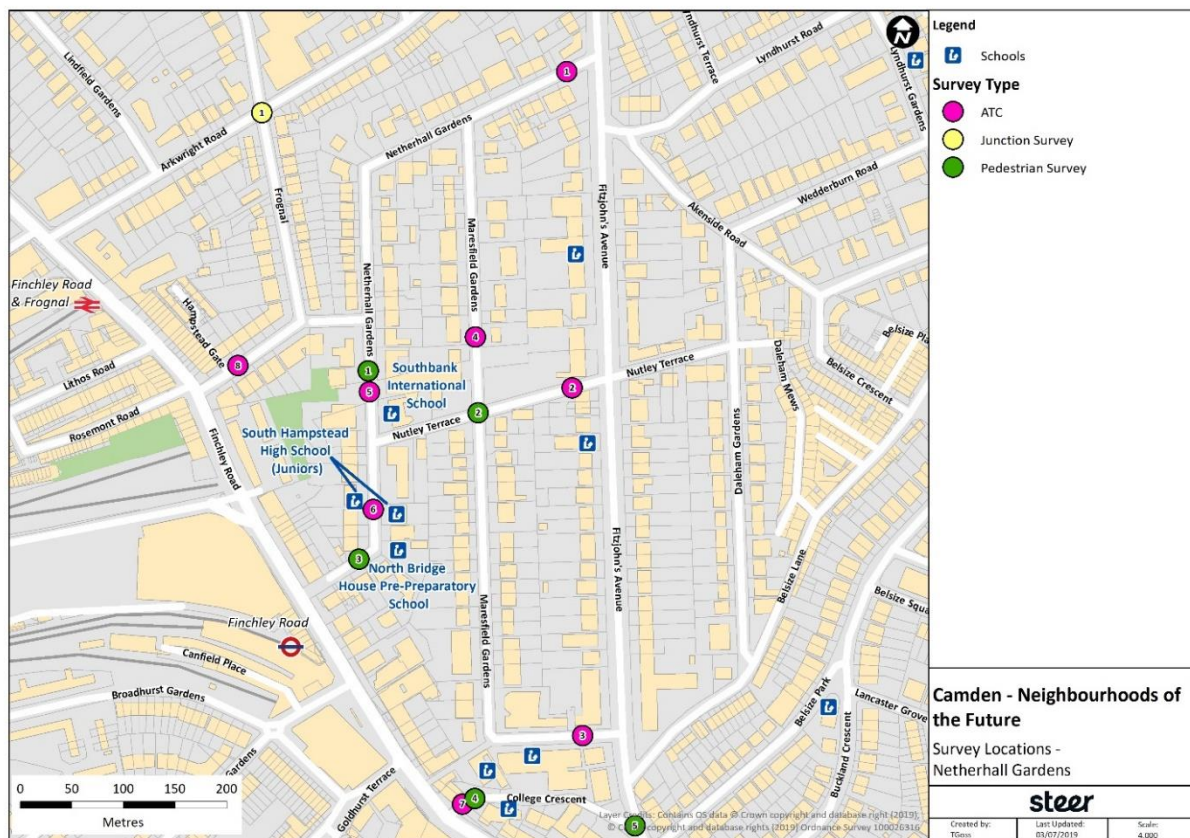
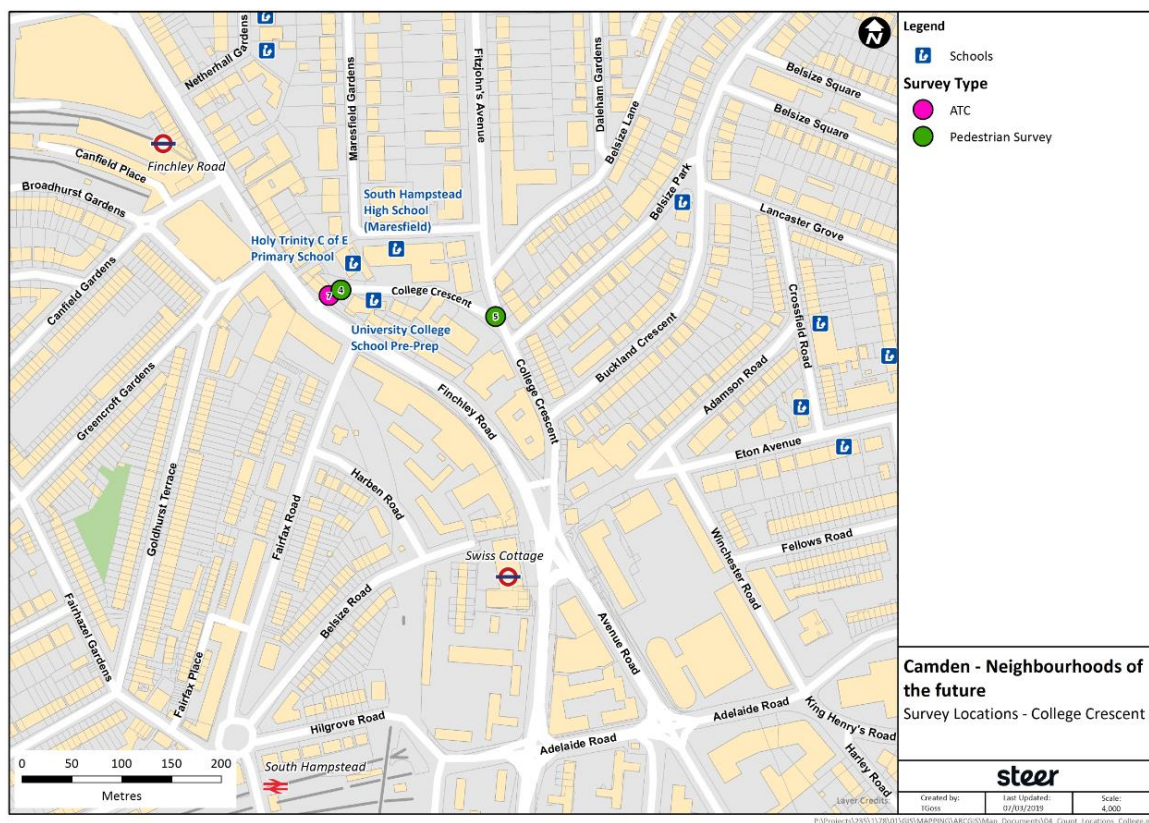


Figure 3: Traffic survey: College Crescent



21. Counts were carried out over a one-week period during school term time from 11th – 17th February 2019. As shown in Figure 2 and Figure 3, pedestrian counts were conducted on:
 - Netherhall Gardens, north of Nutley Terrace;
 - At the junction of Nutley Terrace and Maresfield Gardens;
 - Netherhall Gardens, south of Nutley Terrace;
 - College Crescent, east of Finchley Road; and
 - At the junction of College Crescent and College Crescent/Fitzjohn's Avenue.
22. During this week, automated traffic counts (ATC) were also conducted on:
 - Netherhall Gardens, at its junction with Fitzjohn's Avenue;
 - Nutley Terrace, at its junction with Fitzjohn's Avenue;
 - Maresfield Gardens, at its junction with Fitzjohn's Avenue;
 - Maresfield Gardens, north of Nutley Terrace;
 - Netherhall Gardens, north of Nutley Terrace;
 - Netherhall Gardens, south of Nutley Terrace; and
 - College Crescent, east of Finchley Road.
23. Additional ATC and junction surveys were also commissioned and undertaken between 29th April and 5th May 2019, due to the scope of the feasibility study expanding:
 - Frogna, east of Finchley Road (ATC survey number 8 in Figure 2);
 - Frogna / Arkwright Road (junction survey);
24. Parking bay occupancy surveys were also commissioned and undertaken in May 2019:
 - Arkwright Road;
 - Frogna; and
 - Fitzjohn's Avenue/ College Crescent.

Traffic survey analysis

ATC Traffic Counts

Table 4: Netherhall Gardens - Weekday (Tuesday) school AM, PM and Interpeak flows

Site	Date of Survey	Direction	Name	AM (08:00 – 09:30)	Interpeak (11:45 – 13:15)	PM (14:45 – 16:15)
1	13 th Feb	East bound	Netherhall Gardens, 20m west of B511 Fitzjohn's Avenue	125	34	110
1	13 th Feb	West bound	Netherhall Gardens, 20m west of B511 Fitzjohn's Avenue	98	32	67
2	13 th Feb	East bound	Nutley Terrace, 20m west of B511 Fitzjohn's Avenue	30	39	37
2	13 th Feb	West bound	Nutley Terrace, 20m west of B511 Fitzjohn's Avenue	291	90	277
3	13 th Feb	East bound	Maresfield Gardens, 20m west of B511 Fitzjohn's Avenue	136	54	108
4	13 th Feb	North bound	Maresfield Gardens, 70m north of Nutley Terrace	54	19	123
4	13 th Feb	South bound	Maresfield Gardens, 70m north of Nutley Terrace	75	19	45
5	13 th Feb	North bound	Netherhall Gardens, 40m north of Nutley Terrace	78	27	62
5	13 th Feb	South bound	Netherhall Gardens, 40m north of Nutley Terrace	35	21	31
6	13 th Feb	North bound	Netherhall Gardens, 75m south of Nutley Terrace	31	10	25
6	13 th Feb	South bound	Netherhall Gardens, 75m south of Nutley Terrace	43	9	24
8	30 th Apr	East Bound	Frognal, 40m east of Finchley Road	23	72	65
8	30 th Apr	West Bound	Frognal, 40m east of Finchley Road	505	257	226

25. Table 4 shows weekday (Tuesday) traffic counts on the road network around the schools on Netherhall Gardens.
26. In the AM peak Frognal (Westbound) shows the highest volume of traffic (505 vehicles). A large portion of this is likely commuting traffic joining Finchley Road to travel south trying to avoid the Arkwright Road / Finchley Road junction which is traffic light controlled. In comparison the Frognal / Finchley Road junction is not traffic light controlled.
27. During the interpeak traffic flows are more evenly distributed. The exception to this is the largest flow on Frognal – Westbound (257 vehicles). This traffic is likely unrelated to schools and represents normal midday traffic (similar traffic numbers can be seen on the other days of the survey at identical times).

With the exception of Frognal, traffic flow patterns in the PM peak echo those in the AM peak. Frognal Eastbound traffic in the PM is tripled (from 23 to 65) while Frognal Westbound traffic is reduced by half (505 to 226). There is a high westbound flow along Nutley Terrace with traffic exiting along Netherhall Gardens and Maresfield Gardens. There is higher flow than the AM peak along Maresfield Gardens (Northbound) north of Nutley Terrace suggesting that pupils might be being collected between Nutley Terrace/Maresfield Gardens.

Table 5: Netherhall Gardens - Weekend (Saturday) AM, PM and Interpeak flows

Site	Date of Survey	Direction	Name	AM (08:00 - 09:30)	Interpeak (11:45 - 13:15)	PM (14:45 - 16:15)
1	16 th Feb	East bound	Netherhall Gardens, 20m west of B511 Fitzjohn's Avenue	26	35	38
1	16 th Feb	West bound	Netherhall Gardens, 20m west of B511 Fitzjohn's Avenue	19	45	25
2	16 th Feb	East bound	Nutley Terrace, 20m west of B511 Fitzjohn's Avenue	20	35	25
2	16 th Feb	West bound	Nutley Terrace, 20m west of B511 Fitzjohn's Avenue	43	94	68
3	16 th Feb	East bound	Maresfield Gardens, 20m west of B511 Fitzjohn's Avenue	29	54	34
4	16 th Feb	North bound	Maresfield Gardens, 70m north of Nutley Terrace	4	14	11
4	16 th Feb	South bound	Maresfield Gardens, 70m north of Nutley Terrace	15	15	7
5	16 th Feb	North bound	Netherhall Gardens, 40m north of Nutley Terrace	9	24	21
5	16 th Feb	South bound	Netherhall Gardens, 40m north of Nutley Terrace	11	18	12
6	16 th Feb	North bound	Netherhall Gardens, 75m south of Nutley Terrace	4	11	11
6	16 th Feb	South bound	Netherhall Gardens, 75m south of Nutley Terrace	10	10	6
8	4 th May	East bound	Frognal, 40m east of Finchley Road	25	64	44
8	4 th May	West bound	Frognal, 40m east of Finchley Road	121	273	257

28. Table 5 shows weekend (Saturday) traffic counts on the road network around the schools on Netherhall Gardens. Frognal Westbound is the highest flow – 121 vehicles, otherwise flows are very low. Indeed, at all locations, including Frognal, Saturday travel in the AM peak is a fraction of its weekday equivalent. The same can be said of PM flows with the exception of Frognal Westbound which shows a similar traffic flow (257) to the weekday (226).
29. Interpeak travel at the weekends is greater than the AM and PM peaks (opposite to the weekday pattern). The highest flow is still along Frognal – Westbound by a significant margin.

Table 6: College Crescent - Weekday (Tuesday) school AM, PM and Interpeak flows

Site	Date of Survey	Direction	Name	AM (08:00 - 09:30)	Interpeak (11:45 - 13:15)	PM (14:45 - 16:15)
7	13 th Feb	East bound	College Crescent, 15m east of A41 Finchley Road	349	203	310

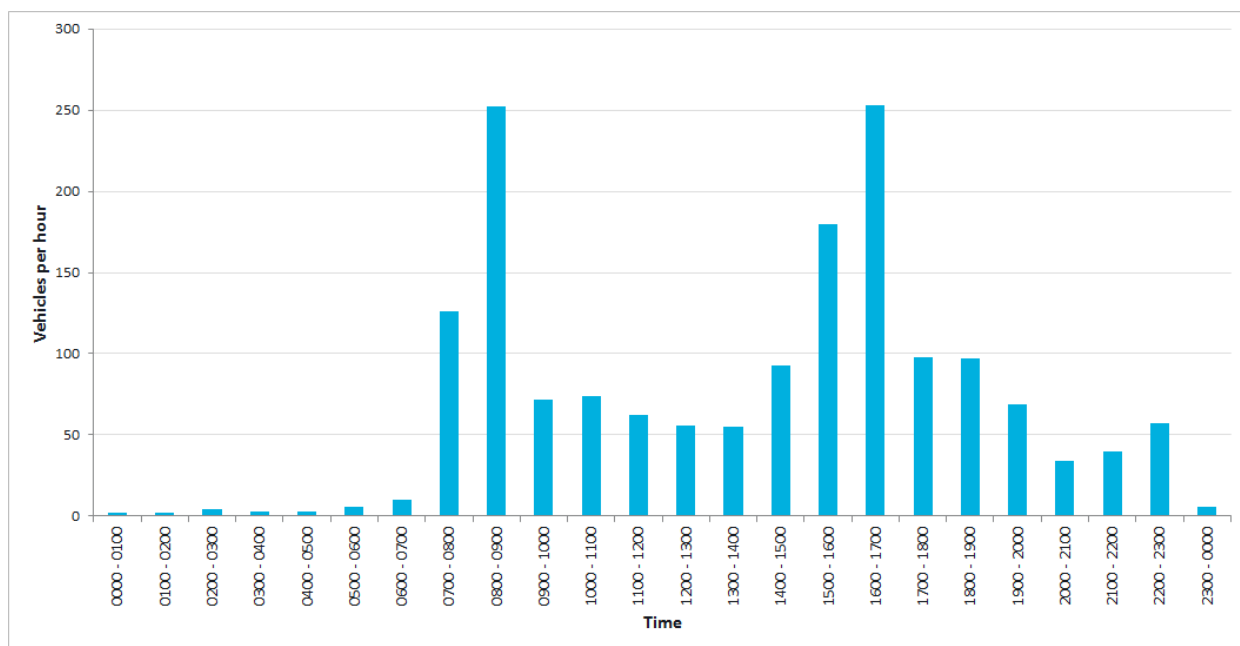
Table 7: College Crescent - Weekend (Saturday) AM, PM and Interpeak flows

Site	Date of Survey	Direction	Name	AM (08:00 - 09:30)	Interpeak (11:45 - 13:15)	PM (14:45 - 16:15)
7	16 th Feb	East bound	College Crescent, 15m east of A41 Finchley Road	105	240	215

- 30. Tables 6 and 7 show weekday and weekend traffic counts along College Crescent.
- 31. During the week AM and PM school periods are busiest, while during the weekend Interpeak and PM periods are the busiest. This suggests school run is an issue and there are increased traffic levels on College Crescent during the week, especially in the AM peak, although the additional traffic is likely to include general commuter traffic.

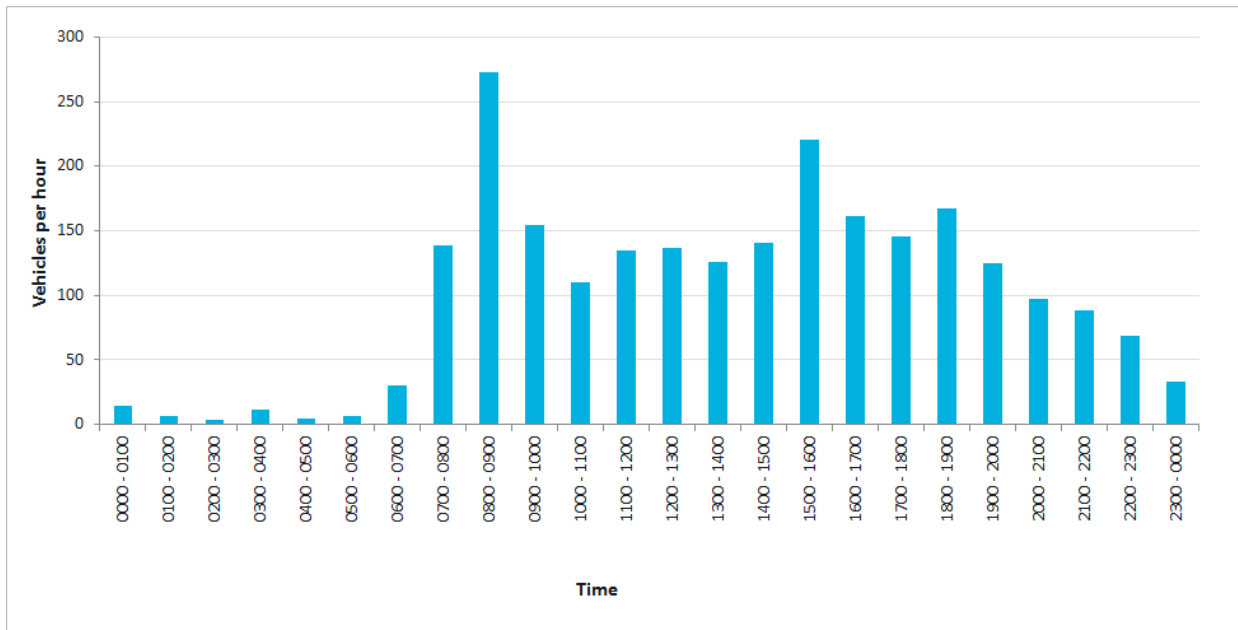
Example 24-hour Vehicle Flows

Figure 4: Netherhall Road - Site 2 Westbound 24-hour traffic



- 32. Figure 4 shows the traffic flow at ATC Site 2 - Westbound over a 24-hour period.
- 33. Two similar peaks can clearly be seen at 0900 and 1700. The peaks also cover the time periods of 0800-0900 and at 1500-1800. The PM peak appears to cover a larger time period, this corresponds with school collection times.

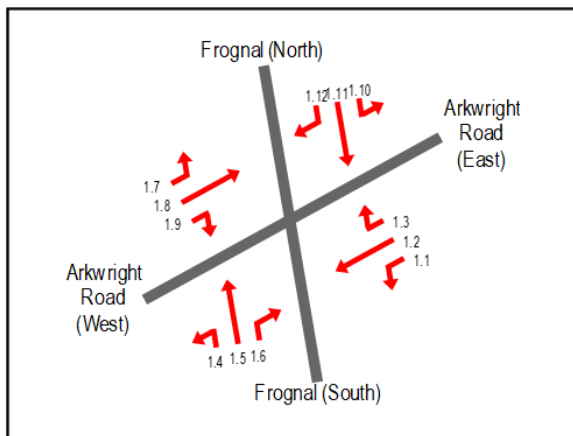
Figure 5: College Crescent – Site 7 Eastbound 24-hour traffic



- 34. Figure 5 shows traffic flow at ATC Site 7 – Eastbound over a 24-hour period.
- 35. One clear peak can be seen at the morning at 0900 with a slightly smaller peak at around 1600. The peaks also cover the time periods of 0800-1000 and at 1500-1700. The traffic at the PM peak on College Crescent seems to be aligned with school collection times opposed to commuting times.

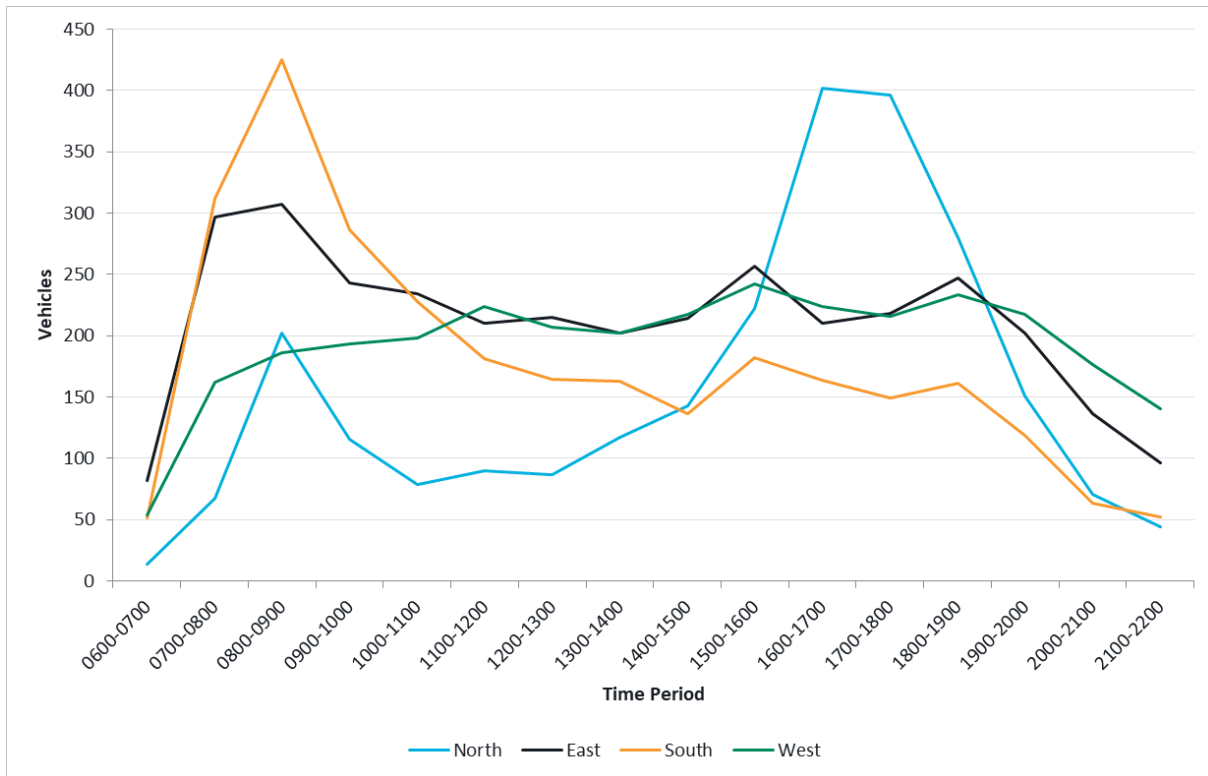
Junction Count Survey Analysis

Figure 6: Frognal / Arkwright Junction Flows



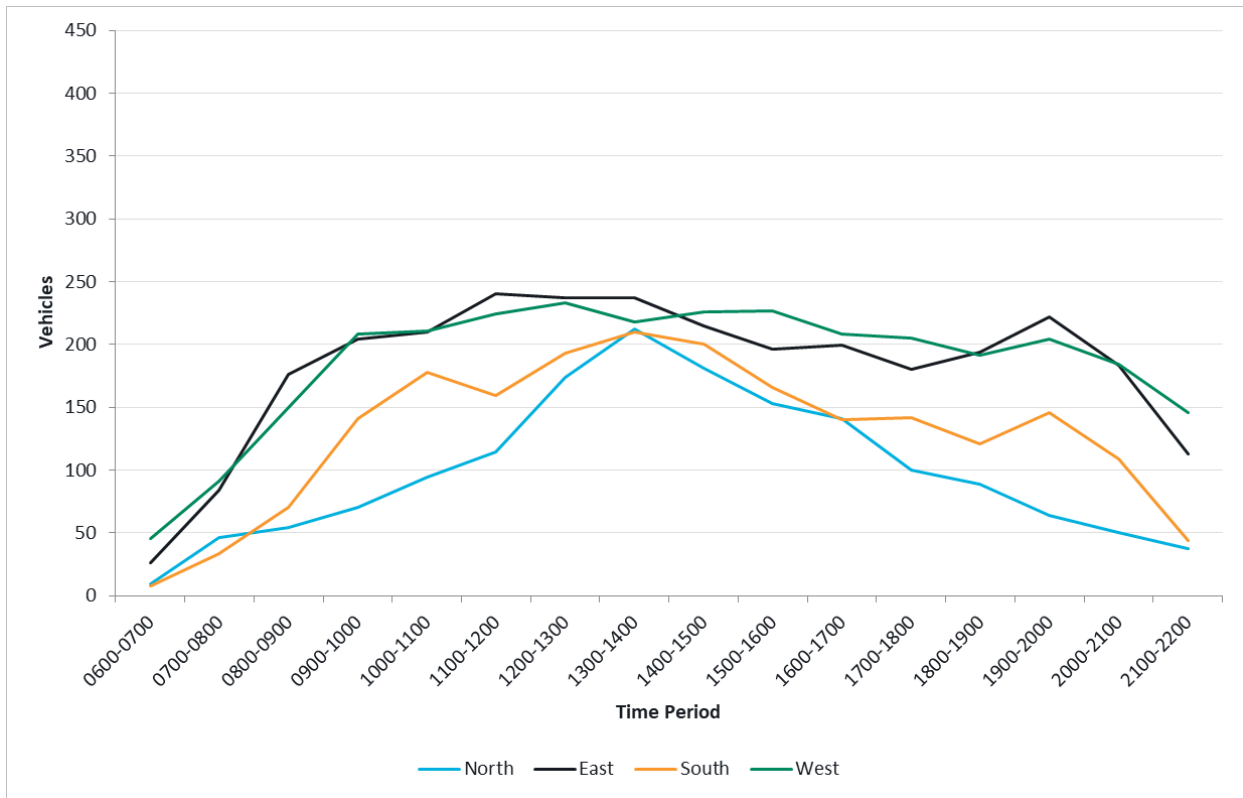
- 36. A classified junction count survey was carried out on the Frognal / Arkwright Road junction on Tuesday 30th April, Thursday 2nd May and Saturday 4th May. The surveys were undertaken between 06:00 in the morning and 22:00 in the evening. Figure 6 shows the movement flows which were assessed. In the figures below the data has been condensed into flow direction – for example flows 1.1, 1.9, and 1.11 have been combined into the “South” flow.

Figure 7: Frognal / Arkwright Road: Direction of Travel Junction Count (Weekday)



37. Figure 7 shows average weekday junction count results. It can be clearly seen that the largest peaks at this junction are between 0800 – 0900 Southbound (425 vehicles in the peak hour) and between 1600 – 1800 (400 vehicles) Northbound. This supports Frognal ATC analysis which says that more traffic travels south during the morning peak. Throughout the whole day, the highest flow to the south is from flow 1.11 (Frognal - North), and the highest flow to the north is from flow 1.3 (Arkwright Road – East).
38. While the largest hourly volumes of traffic are seen on the Northbound and Southbound flows, the Eastbound and Westbound flows see the most traffic over the whole day (Northbound: 2,481, Southbound: 2,839, Eastbound: 3,372, Westbound: 3,095). Figure 7 shows low traffic numbers for Eastbound and Westbound flows before their respective peak periods varying while Eastbound and Westbound flows are relatively consistent at around 200 vehicles (the exception is a small peak during the morning rush hour for Eastbound flows). A likely reason for the consistent Eastbound and Westbound traffic is that Arkwright Road is the main direct connector for Hampstead and West Hampstead.

Figure 8: Frogna / Arkwright Road: Direction of Travel Junction Count (Weekend)



39. Figure 8 shows Saturday junction count results. In comparison to Figure 7, Northbound and Southbound traffic flows are greatly reduced. In contrast Eastbound and Westbound traffic is similar to that observed during the week (200 vehicles / hour) with the exception of the Eastbound AM peak. Again, Arkwright Road as the main connector between Hampstead and West Hampstead Easterly and Westerly traffic flows is likely responsible for this. Lower AM and PM Northbound and Southbound flows can likely be attributed to the lack of commuting traffic at the weekend. Increases in afternoon traffic on the Northbound and Southbound flows can possibly be attributed to traffic attempting to avoid central Hampstead during the busy weekend lunch time.

Pedestrian Survey Counts

Table 8: Netherhall Gardens – Weekday (Tuesday) AM, PM and Interpeak pedestrian counts – [#] represents side of junction

Site	Date of Survey	Direction	Name	AM (08:00 - 09:30)	Interpeak (11:45 - 13:15)	PM (14:45 - 16:15)
1	12 th Feb	North bound	Netherhall Gardens [1]	117	30	203
1	12 th Feb	South bound	Netherhall Gardens [1]	344	39	128
2	12 th Feb	North bound [N]	Maresfield Gardens/Nutley Terrace Junction	73	17	92
2	12 th Feb	North bound [S]	Maresfield Gardens/Nutley Terrace Junction	171	45	78
2	12 th Feb	South bound [N]	Maresfield Gardens/Nutley Terrace Junction	125	19	68
2	12 th Feb	South bound [S]	Maresfield Gardens/Nutley Terrace Junction	97	33	103
2	12 th Feb	East bound [E]	Maresfield Gardens/Nutley Terrace Junction	333	33	262
2	12 th Feb	East bound [W]	Maresfield Gardens/Nutley Terrace Junction	470	33	358
2	12 th Feb	West bound [E]	Maresfield Gardens/Nutley Terrace Junction	406	38	280
2	12 th Feb	West bound [W]	Maresfield Gardens/Nutley Terrace Junction	563	61	299
3	12 th Feb	East bound	Netherhall Gardens [2]	487	131	310
3	12 th Feb	West bound	Netherhall Gardens [2]	583	121	498

40. Table 8 shows weekday (Tuesday) pedestrian counts along the road network around the schools on Netherhall Gardens.
41. Site 3 shows the highest AM flows of pedestrian traffic (both Eastbound and Westbound). It is also located closest to most of the schools in the study area. The next highest flow of pedestrians is located East and West along Nutley Terrace.
42. Interpeak pedestrian flows are considerably lower than those at the AM peak. The highest flows are still seen at Site 3. Lowest pedestrian flows are seen at Site 2 (Northbound and Southbound on the North side of Maresfield Gardens).
43. PM peak pedestrian travel is lower on the whole than the AM peak, but greater than the interpeak flows. There are three exceptions to this, Northbound flow at Site 1, Northbound [N] flow at Site 2 and Southbound [S] at Site 2.

Table 9: Netherhall Gardens – Weekend (Saturday) AM, PM and Interpeak pedestrian counts

Site	Date of Survey	Direction	Name	AM (08:00 - 09:30)	Interpeak (11:45 - 13:15)	PM (14:45 - 16:15)
1	16 th Feb	North bound	Netherhall Gardens	13	49	33
1	16 th Feb	South bound	Netherhall Gardens	26	62	49
2	16 th Feb	North bound [N]	Maresfield Gardens/Nutley Terrace Junction	20	25	29
2	16 th Feb	North bound [S]	Maresfield Gardens/Nutley Terrace Junction	21	65	67
2	16 th Feb	South bound [N]	Maresfield Gardens/Nutley Terrace Junction	31	28	53
2	16 th Feb	South bound [S]	Maresfield Gardens/Nutley Terrace Junction	31	73	65
2	16 th Feb	East bound [E]	Maresfield Gardens/Nutley Terrace Junction	37	80	61
2	16 th Feb	East bound [W]	Maresfield Gardens/Nutley Terrace Junction	41	92	92
2	16 th Feb	West bound [E]	Maresfield Gardens/Nutley Terrace Junction	36	93	57
2	16 th Feb	West bound [W]	Maresfield Gardens/Nutley Terrace Junction	48	118	99
3	16 th Feb	East bound	Netherhall Gardens	60	92	121
3	16 th Feb	West bound	Netherhall Gardens	77	157	155

44. Table 9 shows weekend (Saturday) pedestrian counts along the road network around the schools on Netherhall Gardens.
45. The highest pedestrian flows at the AM peak are located at Site 3 along Netherhall Gardens (60 EB, 77 WB). The lowest pedestrian flow is seen Northbound at Site 1 Netherhall Gardens (13 NB).
46. During the interpeak pedestrian traffic levels are higher than those observed during the AM. The highest levels of pedestrian traffic are observed Westbound at Site 2 western side (118) and westbound at Site 3 (157). Lowest levels of pedestrian activity were observed in the Northern section of the Maresfield Gardens/Nutley Terrace Junction.
47. In the PM peak similar volumes of pedestrian traffic were seen when compared to the interpeak. During this period the largest pedestrian volumes were noted at Site 3 (121 EB and 155 WB), while the lowest volumes were noted at Site 1 northbound (33) and Site 2 Northbound (northern section of junction).

Table 10: College Crescent – Weekday (Tuesday) AM, PM and Interpeak pedestrian counts

Site	Date of Survey	Direction	Name	AM (08:00 - 09:30)	Interpeak (11:45 - 13:15)	PM (14:45 - 16:15)
4	12 th Feb	East bound	College Crescent	105	68	138
4	12 th Feb	West bound	College Crescent	134	107	156
5	12 th Feb	East bound [CC]	B511/College Crescent Junction	120	46	144
5	12 th Feb	West bound [CC]	B511/College Crescent Junction	122	61	129
5	12 th Feb	North bound [N]	B511/College Crescent Junction	440	67	258
5	12 th Feb	North bound [S]	B511/College Crescent Junction	536	103	332
5	12 th Feb	South bound [N]	B511/College Crescent Junction	350	113	373
5	12 th Feb	South bound [S]	B511/College Crescent Junction	463	143	432

48. Table 10 shows weekday pedestrian flows around the schools by College Crescent.
49. During the AM peak the highest pedestrian traffic (536) can be seen in a Northbound direction on the south side of Site 5. The lowest pedestrian traffic levels can be seen heading into College Crescent at Site 4 and Site 5. These flows are less than half of those seen heading along the B511.
50. During the interpeak period pedestrian flows are at a greatly decreased level when compared to the AM flows. The highest flows are seen Southbound along the B511. In contrary to the AM peak, there can be seen comparatively high (in comparison to interpeak) levels of pedestrian traffic exiting College Crescent to the west.
51. During the PM peak levels are lower at most sites. Exceptions to this are the flows along College Crescent in Easterly and Westerly directions where the pedestrian traffic levels are somewhat higher. The highest levels of pedestrian traffic can be seen in a southbound direction south of the B511/ College Crescent junction.

Table 11: College Crescent – Weekend (Saturday) AM, PM and Interpeak pedestrian counts

Site	Date of Survey	Direction	Name	AM (08:00 - 09:30)	Interpeak (11:45 - 13:15)	PM (14:45 - 16:15)
4	16 th Feb	East bound	College Crescent	33	88	125
4	16 th Feb	West bound	College Crescent	47	105	109
5	16 th Feb	East bound [CC]	B511/College Crescent Junction	38	92	134
5	16 th Feb	West bound [CC]	B511/College Crescent Junction	47	104	117
5	16 th Feb	North bound [N]	B511/College Crescent Junction	80	141	115
5	16 th Feb	North bound [S]	B511/College Crescent Junction	121	222	202
5	16 th Feb	South bound [N]	B511/College Crescent Junction	73	159	150
5	16 th Feb	South bound [S]	B511/College Crescent Junction	135	248	244

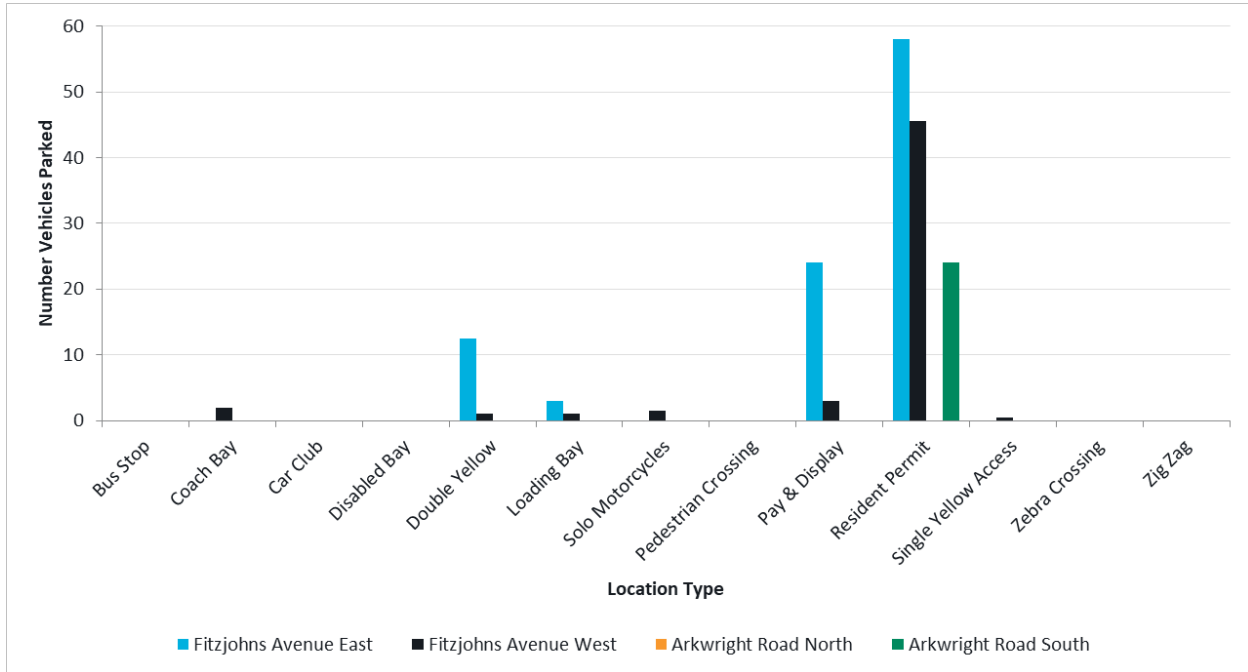
52. Table 11 shows weekday pedestrian flows around the schools by College Crescent.
53. In comparison to the weekday, the AM and PM flows observed at the weekend are generally lower while the interpeak flows are generally higher. During the AM peak, pedestrian observations in the southern section of Site 5 were recorded as the highest (121 NB, 135 SB). In comparison flows in and out of College Crescent were roughly one quarter the size of the highest observed.
54. Similar sized pedestrian flows were observed in the interpeak and PM peak. In all cases the flows measured at these times were larger than those observed at the AM peak. Minor exceptions to this were the eastbound flows along College crescent for Sites 4 and 5.

Parking data analysis

Parking beat survey: Fitzjohn's Avenue and Arkwright Road

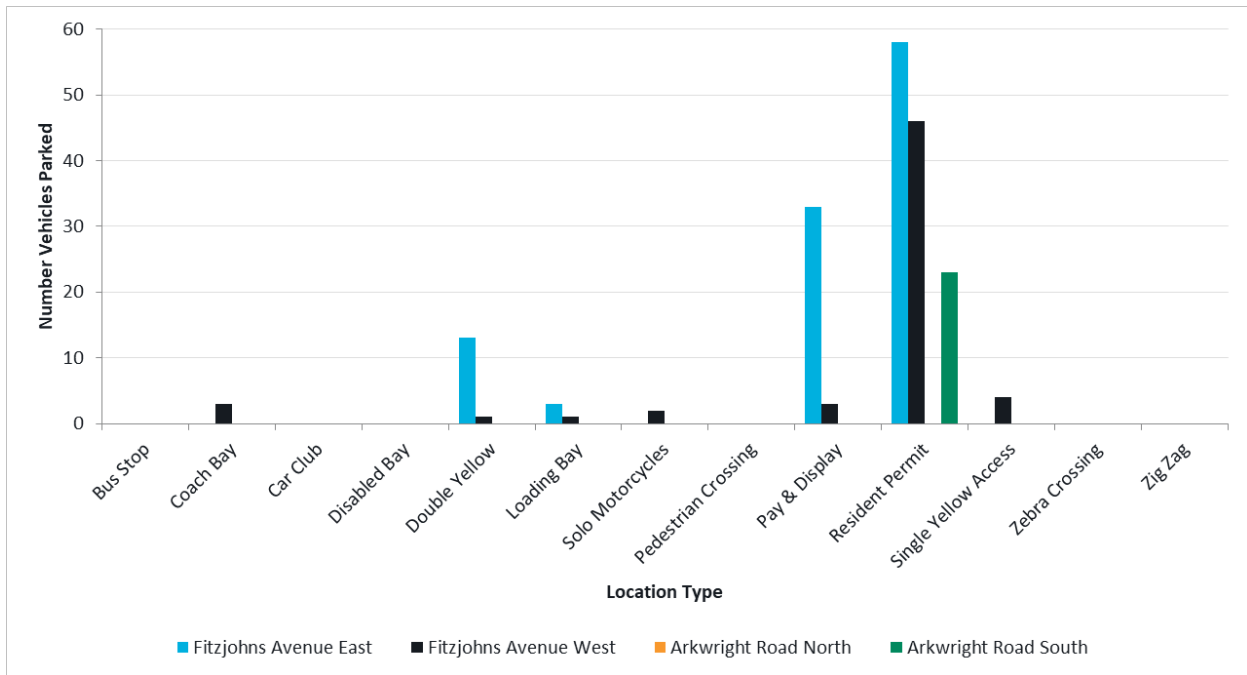
55. Parking beat surveys were carried out along Fitzjohn's Avenue (from Hampstead until College Crescent) and Arkwright Road (between Fitzjohn's Avenue and Finchley Road) on the Tuesday 20th, Thursday 22nd, and Saturday 24th February 2018. These surveys were carried out between 2000-2100 and 2100-2200.

Figure 9: Parked Vehicles by Location Type for the Average Weekday



56. Figure 9 shows parking locations and number of vehicles parked for the average weekday along Fitzjohn's Avenue and Arkwright Road between 2000-2100. The majority of vehicles parked are within Resident Permit locations (Fitzjohn's: 104, Arkwright: 24). There are also on average 14 parking events on Double Yellow lines along Fitzjohn's while there are none along Arkwright Road. Pay and display events only occur on Fitzjohn's Avenue due to a lack of Pay and Display locations along Arkwright Road. Interestingly, Resident Parking along Fitzjohn's Avenue is relatively evenly split between East and West sides of the road, while Double Yellow Pay and Display parking is concentrated on the east of Fitzjohn's Avenue.

Figure 10: Parked Vehicles by Location Type for the Average Weekend

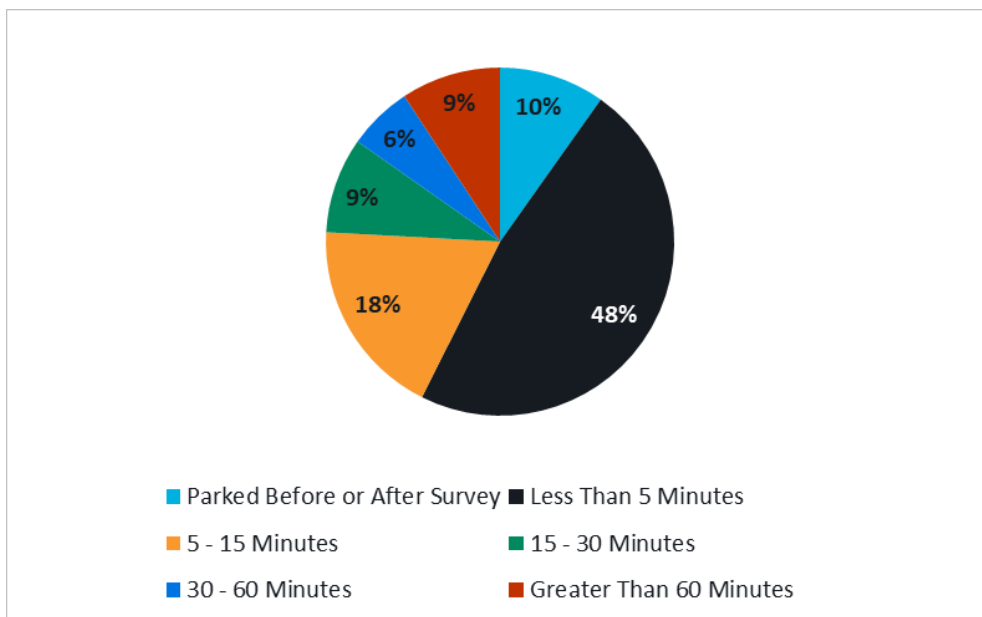


57. Figure 10 shows vehicles parked for the average weekend along Fitzjohn’s Avenue and Arkwright Road between 2000-2100. The findings are almost identical to the weekday pattern. Some minor exceptions are an increase in Pay and Display events along Fitzjohn’s (potentially due to an increase in weekend leisure visitors), and an increase in parking events at Single Yellow Access locations.

Parking activity survey: Fitzjohn’s Avenue and Arkwright Road

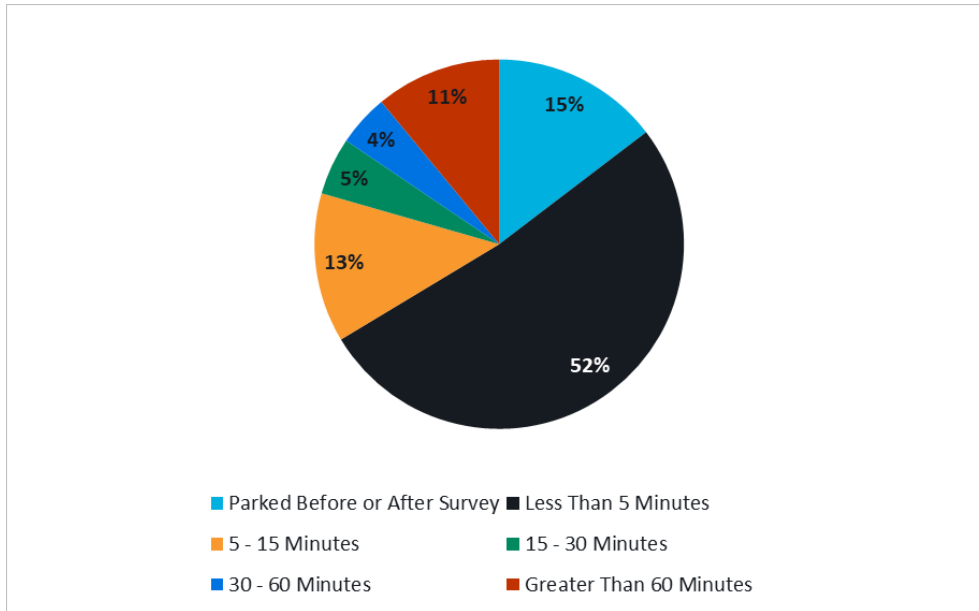
58. Parking Activity surveys were also carried out along Fitzjohn’s Avenue (from Hampstead until College Crescent) and Arkwright Road (Between Fitzjohn’s Avenue and Finchley Road) on the Tuesday 30th January, Thursday 1st, and Saturday 3rd February 2018. These surveys were carried out between 0600-2000.

Figure 11: Average Parking Stay for Average Weekday



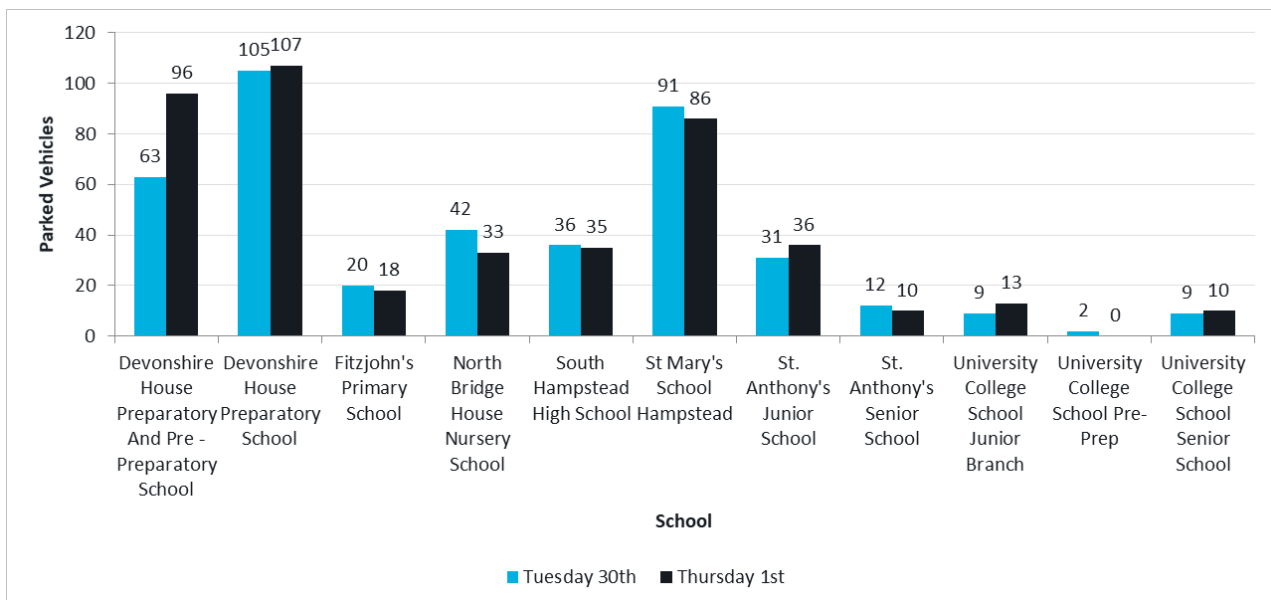
59. Figure 11 shows average stay for parking events in the survey period on an average weekday. It can be clearly seen that just under half of parking events occur for Less Than 5 minutes – many of these are likely school or commuting drop offs. The 5 – 15 Minutes category was the second highest occurrence (18%). Parked Before or After Survey (Vehicles parked before the survey began or were in place when the survey finished, parked for an indeterminate period) were the third most common (10%). The other three categories (15 – 30, 30 – 60, and Greater Than 60) made up the remaining 24% of parked vehicles.

Figure 12: Average Parking Stay for Weekend



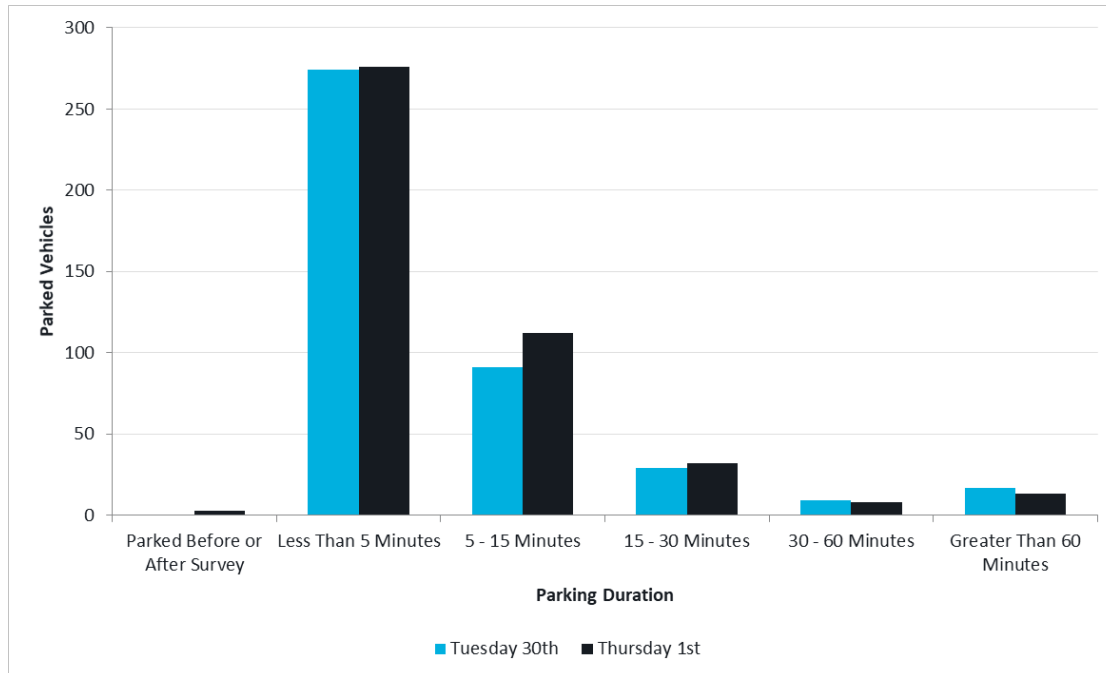
60. Figure 12 shows average stay for parking events in the survey period on a weekend. There are more very short stays and also more vehicles not being used at the weekend. Short stays of Less Than 5 Minutes comprise of more than half of parking events – 4% increase more than weekdays. Parked before or after survey events were the next most common with 15% - also 5% more than weekdays.

Figure 13: Distribution of Parking Events by School



61. Over both weekday surveys there were 5,207 parking events recorded and 864 (16.5%) of these events could be attributed to a local school. Figure 13 shows the destinations for all parking events in the survey area which resulted in a trip to a school. All schools bar one (Devonshire House Preparatory and Pre-Preparatory School) show relatively equal numbers on both survey days. The majority of parking events which resulted in a trip to a school occurred at either Devonshire House Pre-Prep (63-96), Devonshire House Prep School (105 – 107) and St Marys School Hampstead (91 – 86). University College School Pre-Prep only had 2 related parking events. This school is quite small and could therefore be a contributing factor to the low number of associated events.

Figure 14: Duration of Parking Events Associated with a School



62. Figure 14 shows the duration of parking events associated with a school within the study area. An overwhelming majority of these events last Less than 5 Minutes – assuming quick drop-off of children. Interestingly there are several events which lasted for Greater Than 60 Minutes (Tuesday: 17 and Thursday: 13) some of which lasted over 11 hours.
63. Mode share of the school related parking events was dominated by Car (96%), followed by Taxi (3.5%), and then Motorcycle, Coach, and LGV comprised the final 0.5%.

Parking beat survey: Frognal (Arkwright Road to Finchley Road)

64. A parking beat survey was carried out along Frognal on Tuesday 30th April, Thursday 2nd May and, Saturday 4th May. The study area was between the Frognal / Arkwright Road junction and the Frognal / Finchley Road junction.

Figure 15: Average weekday parking events and bay classification

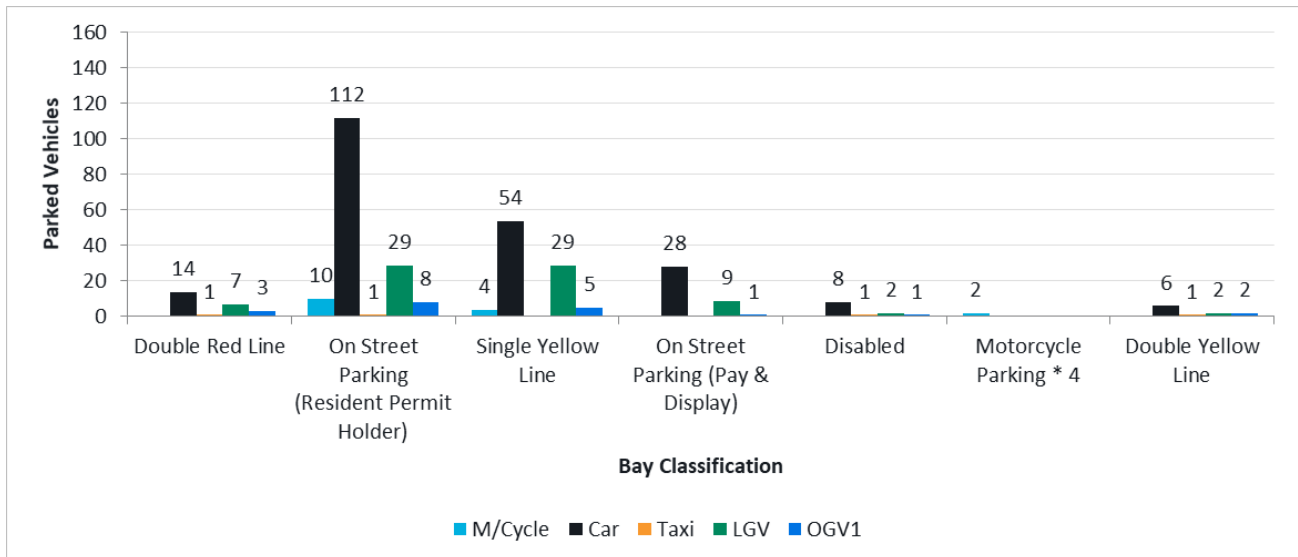
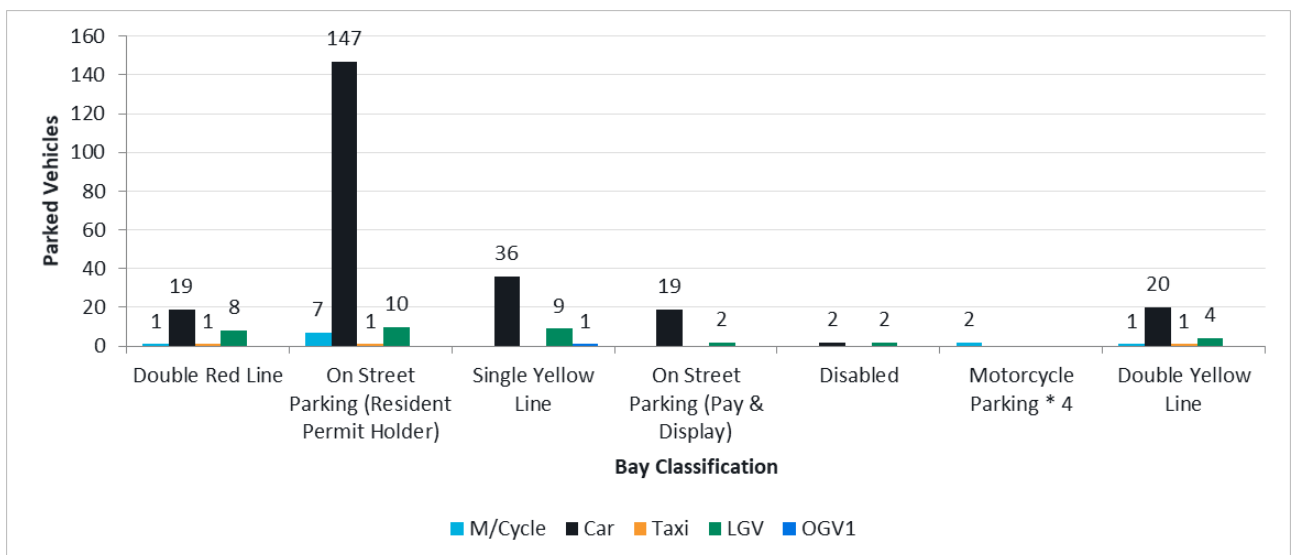


Figure 16: Weekend parking events and bay classification



65. Figure 15 and Figure 16 show parking events and bay classification for the weekday average and the weekend average. Very similar patterns can be seen on both. Weekends have the highest number of parking events for on-street Resident Parking, a likely cause is the reduction of commuter trips on weekends. Weekends also see a higher number of parking events on Double Yellow Lines. Of these events, just under 50% are under 1 minute 30 seconds in duration. This could indicate quick drop offs or pickups for visits or departures from the shops and services along Finchley Road. Figure 15 and Figure 16 also show more parking events for LGVs and OGV1s during the week. Unsurprisingly on-street parking events are dominated by car (77%). Parking events on Double Red lines are also predominantly undertaken by cars equally on weekdays and weekends.

Summary

66. In conclusion the traffic and pedestrian counts highlight the challenge caused by the concentration of school related traffic and give justification to explore interventions, based on the following:
- The highest volume of traffic was recorded westbound on Frognal during school drop-off times. Westbound traffic on Frognal on the weekend during the AM peak was 24% of the weekday flow (121 compared to 505).
 - High volumes of traffic were also recorded during the week on Nutley Terrace, Netherhall Gardens and College Crescent at school drop-off and pick-up times. Nutley Terrace westbound traffic during school pickup times (PM peak) was larger than that observed on Frognal at the same time.
 - Surrounding Netherhall Gardens during drop-off and pick-up times, traffic was focused on one entry point on Nutley Terrace between Netherhall Gardens and Maresfield Gardens.
 - During the school day and at weekends there is a lower volume of traffic around Netherhall Gardens and College Crescent, and at Netherhall Gardens the traffic is more evenly distributed across the surrounding roads. Both these factors suggest the traffic is generated by pupils getting to and from school.
 - During the week the number of pedestrians tends to be higher in the morning, compared to the afternoon.
 - Along Fitzjohn's Avenue, during the week and the weekend, the majority of parking events lasted less than 5 minutes. The length of these events suggests many were associated with drop-offs or pickups.
 - Along Frognal most parking events on weekdays and weekends occur within Resident Only marked bays.

Feasibility of possible options

67. The current proposals for Netherhall Gardens are using ANPR cameras, (exact times of restricted access are to be discussed with schools, but likely to be between 8:00-9:00 and 15:15-16:15). If a scheme is implemented further details of how to apply for exemptions will be sent to residents in the area (example in Appendix B). The following exemptions will apply but will not be automatic and may require application using an online e-form:
- i. Residents of the affected roads, including those with driveways;
 - ii. Businesses with valid parking permit registered to an address in the Healthy School Street zone
 - iii. Blue badge holders who need to visit a residential or business address in the Healthy School Street zone. Blue badge holders cannot be given an exemption simply to drive through the Healthy School Street zone on their journey from A to B;
 - iv. Carers who need to visit an address in the Healthy School Street zone as a carer for a resident
 - v. Vehicles providing transport to Special Educational Needs and Disabilities (SEND) schools in the borough or delivering SEND pupils to those schools in the Healthy School Street zone;
 - vi. School coaches and/or private minibuses (e.g. those funded by NW3 School Run Group) providing transport to pupils attending schools in the Healthy School Street zone;
 - vii. Pure electric vehicles (0g/km CO₂)¹; and
 - viii. Refuse vehicles.
68. All other vehicles are not entitled to apply for an exemption including; delivery drivers, visitors, parents, school staff, Council vehicles and community health workers.

¹ Options for taxi and private hire vehicles are considered in the consultation documents.

- **Option 1** – Create a timed road closure (incorporating South Hampstead High School (Juniors) and North Bridge House Pre-Preparatory School, during pick up and drop off times) on Netherhall Gardens south of the junction with Nutley Terrace, using ANPR cameras to enforce the closure.

Figure 17: Netherhall Gardens, Option 1



- **Option 2** – Create a timed road closure (incorporating the three schools) on Nutley Terrace west of Maresfield Gardens and make Nutley Terrace exit only on to Fitzjohn’s Avenue (at all times). Also create a timed road closure on Netherhall Gardens west of Maresfield gardens.

Figure 18: Netherhall Gardens, Option 2



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- **Option 3a** – Using ANPR to create timed road closures (incorporating four schools, including South Hampstead High School) on Netherhall Gardens and Nutley Terrace from Fitzjohn’s Avenue.

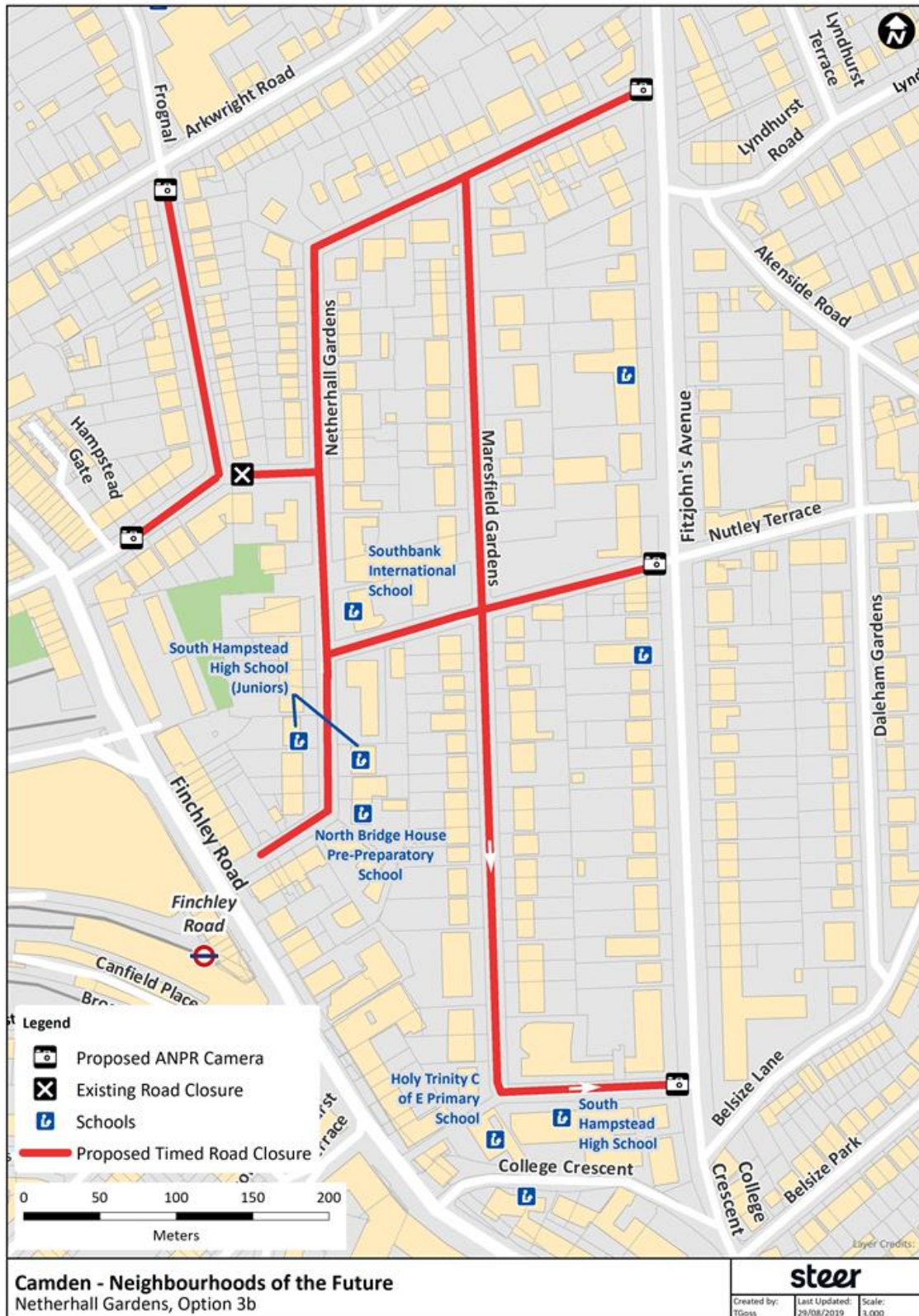
Figure 19: Netherhall Gardens, Option 3a



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- **Option 3b** – Extending the zone (and Option 3a) to incorporate Frognal and Hampstead Gate, between Finchley Road and Arkwright. Using ANPR to create timed road closures on Frognal, Netherhall Gardens and Nutley Terrace from Fitzjohn’s Avenue.

Figure 20: Netherhall Gardens, Option 3b



- **Option 3c** – In addition to Option 3a, enforcing a one-way system on Froggnal between Finchley Road and Arkwright at all times. Using ANPR to create timed road closures on Netherhall Gardens and Nutley Terrace from Fitzjohn’s Avenue.

Figure 21: Netherhall Gardens, Option 3c



- **Option 4** – no action

Table 12: Review of possible options for Netherhall Gardens

Option	Information	Advantages	Disadvantages	Recommendation
<p>Option 1</p> <p>Timed road closure on Netherhall Gardens from the junction with Nutley Terrace, using ANPR.</p>	<p>This option proposes installing ANPR cameras to enforce a timed road closure on Netherhall Gardens, south of the junction with Nutley Terrace.</p> <p>Exemptions apply (see pg. 15 point 50).</p> <p>Signage would be installed to warn vehicles of the closure.</p> <p>Traffic counts would be performed during the timed closure to allow for before and after data analysis.</p> <p>Air Quality monitors will be installed in the appropriate locations during the early stages of the project, so ‘before’ and ‘after’ data can be collected.</p> <p>Cost estimate = £20,000</p>	<p>This option would potentially solve parking issues and congestion created by parents picking up/ dropping off at South Hampstead High School (Juniors) and North Bridge House Pre-Prep School.</p> <p>Reducing the number of cars picking up and dropping off children will improve air quality & road safety.</p>	<p>It may displace congestion and parking to surrounding roads i.e. Nutley Terrace or Maresfield Gardens.</p> <p>This option would not benefit Southbank International school – if anything it might make the congestion worse in front of that school.</p> <p>Visitors and deliveries to businesses on Netherhall Gardens would be restricted access.</p> <p>Some traffic would still enter the study area during restricted hours for convenience and accept the fine.</p>	<p>Reject pursuing this option further as a single measure as it will not address the challenges of the area and will not provide benefits to wider area.</p>
<p>Option 2</p> <p>Create a timed road closure on Nutley Terrace west of Maresfield Gardens, using ANPR and make Nutley Terrace exit only on to Fitzjohn’s Avenue (at all times).</p>	<p>This option will use ANPR to enforce a timed closure on Nutley Terrace and Netherhall Gardens, west of Maresfield Gardens. Enforce that Nutley Terrace is exit only on to Fitzjohn’s Avenue, at all times.</p>	<p>This may deter school traffic for the three schools as it creates a restricted zone for drivers and therefore may encourage more active travel.</p>	<p>Some traffic would still enter the study area during restricted hours for convenience and accept the fine.</p> <p>Traffic and school run parking drop off and pick up could largely be displaced to Maresfield Gardens.</p>	<p>Reject pursuing this option further as it is likely to exacerbate existing congestion on Maresfield Gardens and Nutley Terrace.</p>

Option	Information	Advantages	Disadvantages	Recommendation
<p>Create a timed road closure on Netherhall Gardens west of Maresfield gardens, using ANPR.</p>	<p>This will formalise a circulation loop (which currently occurs naturally) entering Netherhall Gardens and forcing vehicles to exit either on Nutley Terrace or Maresfield Gardens to Fitzjohn's Avenue.</p> <p>This would prevent all (non-exempt) vehicles from entering Nutley Terrace and Netherhall Gardens (beyond Maresfield Gardens) during restricted times.</p> <p>Exemptions apply (see pg. 15 point 50).</p> <p>Signage would be installed to notify drivers of the timed closure.</p> <p>Hours of restriction are to be confirmed with the schools but approximately an hour to an hour and a half in the morning and afternoon.</p> <p>Air Quality monitors will be installed in the appropriate locations during the early stages of the project, so 'before' and 'after' data can be collected.</p> <p>Cost estimate = £40,000</p>		<p>Parents may drop off and/or pick up on Fitzjohn's Avenue.</p> <p>This option would not benefit Southbank International school – if anything it might make the congestion worse in front of that school.</p> <p>Visitors and deliveries to businesses in the scheme area would be restricted access.</p>	

Option	Information	Advantages	Disadvantages	Recommendation
<p>Option 3a</p> <p>Create timed road closures of Netherhall Gardens and Nutley Terrace from Fitzjohn's Avenue.</p>	<p>This option will use ANPR to enforce a timed closure on Netherhall Gardens and Nutley Terrace between Fitzjohn's Avenue and Maresfield Gardens. Although Maresfield Gardens is one way, we have proposed placing a camera at the Maresfield Gardens/Fitzjohns Avenue junction in order to stop vehicles driving through the prohibition.</p> <p>This would prevent all (non-exempt) vehicles from entering Netherhall Gardens, Nutley Terrace and Maresfield Gardens during restricted times.</p> <p>Exemptions apply (see pg. 15 point 50).</p> <p>Signage would be installed to notify drivers of the timed closure</p> <p>Air Quality monitors will be installed in the appropriate locations during the early stages of the project, so 'before' and 'after' data can be collected.</p> <p>Cost estimate = £40,000</p>	<p>This option goes further in addressing school traffic and would make the wider area safer and likely improve air quality.</p> <p>This option would provide a benefit to all four schools in the zone.</p> <p>This may deter school traffic for the four schools as it creates a restricted zone for drivers and therefore may encourage more active travel.</p>	<p>The study area is mainly comprised of residential properties so there may still be some vehicles travelling in and out of the zone, as resident vehicles would be exempt.</p> <p>Some traffic would still enter the study area during restricted access for convenience and accept the fine.</p> <p>Traffic could be displaced to the east of the study area, on the other side of Fitzjohn's Avenue or to the west onto Froggnal.</p> <p>Parents may drop off and/or pick up on Fitzjohn's Avenue.</p> <p>Visitors and deliveries to businesses in the scheme area would be restricted access.</p>	<p>This option addresses the challenge surrounding the schools. Monitor the scheme extensively during the study period, including repeating traffic surveys, to assess impacts and any amendments prior to consulting on potentially making the scheme permanent.</p>
<p>Option 3b</p>	<p>This option will use ANPR to enforce a timed closure on</p>	<p>During school drop off times Froggnal gets very congested,</p>	<p>The study area is mainly comprised of residential</p>	<p>This option addresses the challenge surrounding the</p>

Option	Information	Advantages	Disadvantages	Recommendation
Extension of Option 3 to include a timed road closure on Frognal and Hampstead Gate, between Finchley Road and Arkwright.	<p>Frognal and Hampstead Gate, as well as Netherhall Gardens and Nutley Terrace between Fitzjohn's Avenue and Maresfield Gardens. Although Maresfield Gardens is one way, we have proposed placing a camera at the Maresfield Gardens/Fitzjohns Avenue junction in order to stop vehicles driving through the prohibition.</p> <p>This would prevent all (non-exempt) vehicles from entering Frognal, Netherhall Gardens, Nutley Terrace and Maresfield Gardens during restricted times.</p> <p>Exemptions apply (see pg. 15 point 50).</p> <p>Signage would be installed to notify drivers of the timed closure.</p> <p>Air Quality monitors will be installed in the appropriate locations during the early stages of the project, so 'before' and 'after' data can be collected.</p> <p>Cost estimate = £80,000</p>	<p>particularly the section between Arkwright and Finchley Road in a Southerly direction.</p> <p>This option extends the zone to further address congestion in the area from school traffic at peak times and would make the wider area safer and likely improve air quality.</p> <p>This option would provide a benefit to all four schools in the zone.</p> <p>This may deter school traffic for the four schools as it creates a restricted zone for drivers and therefore may encourage more active travel.</p>	<p>properties so there may still be lots of vehicles travelling in and out of the zone, as resident vehicles would be exempt.</p> <p>Some traffic would still enter the study area during restricted access for convenience and accept the fine.</p> <p>Traffic previously using Frognal may be displaced to the western-most section of Arkwright Road. Traffic could be displaced to the east of the study area, on the other side of Fitzjohn's Avenue</p> <p>Parents may drop off and/or pick up on Fitzjohn's Avenue.</p> <p>Visitors and deliveries to businesses in the scheme area would be restricted access.</p>	<p>schools. Monitor the scheme extensively during the study period, including repeating traffic surveys, to assess impacts and any amendments prior to consulting on potentially making the scheme permanent.</p>
Option 3c	<p>This option will enforce a north-bound one-way system on Frognal between Finchley Road</p>	<p>During school drop off times Frognal gets very congested, particularly the section between</p>	<p>The study area is mainly comprised of residential properties so there may still be</p>	<p>Reject pursuing this option further as it is likely to</p>

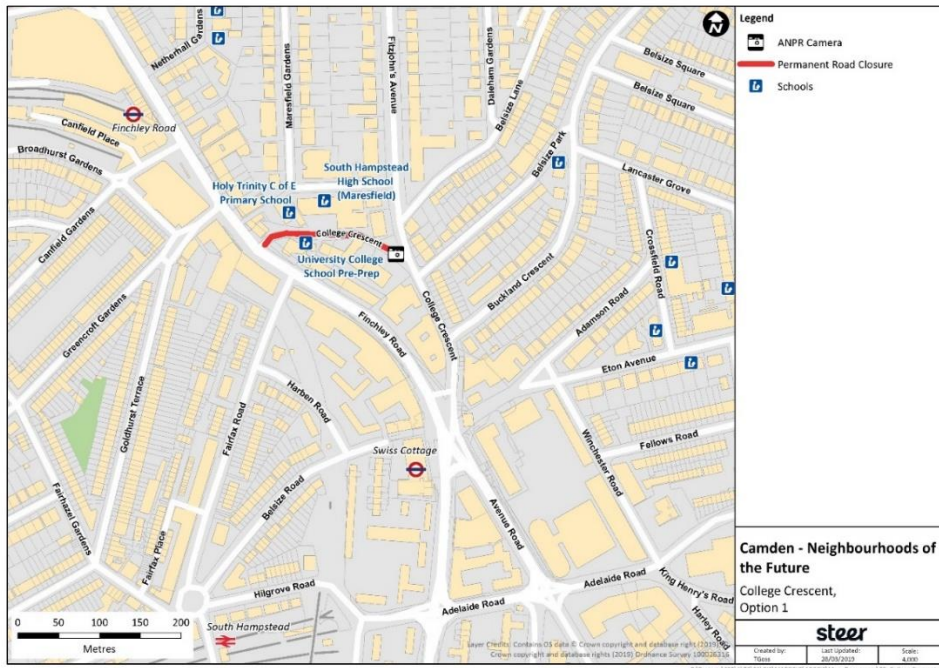
Option	Information	Advantages	Disadvantages	Recommendation
<p>Extension of Option 3 by enforcing a one-way system on Frognal between Finchley Road and Arkwright, at all times.</p>	<p>and Arkwright Road, as well as using time road closures on Netherhall Gardens and Nutley Terrace between Fitzjohn's Avenue and Maresfield Gardens. Although Maresfield Gardens is one way, we have proposed placing a camera at the Maresfield Gardens/Fitzjohns Avenue junction in order to stop vehicles driving through the prohibition.</p> <p>This would prevent vehicles travelling South from Frognal or Arkwright Road entering this section of road and forcing vehicles exiting Hampstead Gate to travel North. As well as preventing all (non-exempt) vehicles from entering Netherhall Gardens, Nutley Terrace and Maresfield Gardens during restricted times.</p> <p>Exemptions apply (see pg. 15 point 50).</p> <p>Signage would be installed to notify drivers of the timed closure.</p> <p>Air Quality monitors will be installed in the appropriate locations during the early stages</p>	<p>Arkwright and Finchley Road in a Southerly direction.</p> <p>This option would prevent the congestion caused by vehicles using Frognal to join Finchley Road. It extends the zone to further address congestion in the area from school traffic at peak times and would make the wider area safer and likely improve air quality.</p> <p>This option would provide a benefit to all four schools in the zone.</p> <p>This may deter school traffic for the four schools as it creates a restricted zone for drivers and therefore may encourage more active travel.</p>	<p>lots of vehicles travelling in and out of the zone, as resident vehicles would be exempt.</p> <p>Some traffic would still enter the study area during restricted access for convenience and accept the fine.</p> <p>Traffic previously using Frognal may be displaced to the western-most section of Arkwright Road. Traffic could be displaced to the east of the study area, on the other side of Fitzjohn's Avenue</p> <p>Parents may drop off and/or pick up on Fitzjohn's Avenue.</p> <p>Visitors and deliveries to businesses in the scheme area would be restricted access.</p> <p>Inconvenience for residents of one-way system on Frognal operating at all times.</p>	<p>exacerbate existing congestion on Arkwright Road.</p>

Option	Information	Advantages	Disadvantages	Recommendation
	<p>of the project, so 'before' and 'after' data can be collected.</p> <p>Cost estimate = £tbc</p>			
<p>Option 4</p> <p>No action</p>	<p>If during the consultation process, the options discussed above are deemed to be inappropriate we can do nothing.</p> <p>Cost estimate = £0</p>	<p>The allocated budget for this scheme could be spent elsewhere</p>	<p>The issues discussed would not be resolved</p>	<p>Consult on all recommended options; however, retain this option as a possibility following consultation.</p>

69. The current proposals for College Crescent are:

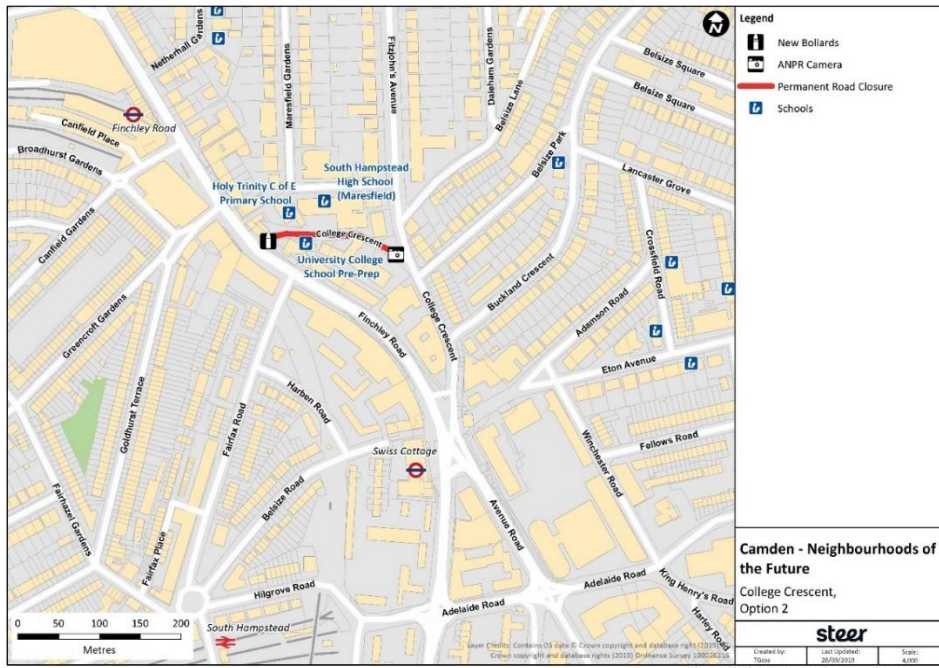
- **Option 1** – Create a timed road closure (during University College School Pre-Prep opening and closing times) on the western part of College Crescent from Finchley Road (A41) to its junction with Fitzjohn’s Avenue, by using ANPR.

Figure 22: College Crescent, Option 1



- **Option 2** – Close College Crescent (between Finchley Road (A41) and Fitzjohn’s Avenue/College Crescent) permanently, using bollards at the junction with Finchley Road and ANPR at the junction with College Crescent/Fitzjohn’s Avenue.

Figure 23: College Crescent, Option 2



- **Option 3** – No action

Table 13: Review of possible options for College Crescent

Option	Information	Advantages	Disadvantages	Recommendation
<p>Option 1</p> <p>Timed road closure on College Crescent from Finchley Road, using ANPR.</p>	<p>This option proposes installing 1 ANPR camera to enforce a timed road closure on College Crescent from Finchley Road.</p> <p>This would prevent all (non-exempt) vehicles from entering College Crescent as the section between Finchley Road and Fitzjohn’s Avenue/College Crescent is one way.</p> <p>Exemptions apply (see pg. 15 point 50).</p> <p>Signage would be installed to notify drivers of the timed closure</p> <p>Traffic counts would be performed during the timed closure to allow for before and after data analysis.</p> <p>Air Quality monitors will be installed in the appropriate locations during the early stages of the project, so ‘before’ and ‘after’ data can be collected.</p> <p>Cost estimate = £20,000</p>	<p>This option would potentially solve congestion created by parents picking up/ dropping off UCS Pre-Prep, and other drivers using it as a ‘rat run’.</p> <p>Reducing the number of cars picking up and dropping off children will improve air quality & road safety.</p> <p>Parents / guardians can still access and drop off on eastern section of College Crescent (Finchley Road is a red route).</p>	<p>Drivers wanting to enter College Crescent from Finchley Road (A41) may not be aware of the timed road closure on approach and cause incidents at the junction. This is a relative fast road and there is already considerable signage ‘clutter’ at the entrance to College Crescent.</p> <p>Visitors and deliveries to businesses on the section of College Crescent would be restricted from driving into the closure area during hours of operation.</p> <p>It may displace congestion and parking to Belsize Lane, Belsize Park or Buckland Crescent.</p> <p>Some traffic would still enter College Crescent during restricted hours for convenience and accept the fine.</p>	<p>Reject pursuing this option further due to lack of public support.</p>

Option	Information	Advantages	Disadvantages	Recommendation
<p>Option 2</p> <p>Close College Crescent permanently, using bollards and ANPR.</p>	<p>This option proposes to close College Crescent permanently. Bollards would be installed at the junction with Finchley Road, and ANPR installed at the junction with College Crescent/Fitzjohn's Road. This would stop College Crescent being used as a 'rat run'.</p> <p>Exemptions apply (see pg. 15 point 50).</p> <p>Signage would be installed to notify drivers of the permanent road closure.</p> <p>Air Quality monitors will be installed in the appropriate locations during the early stages of the project, so 'before' and 'after' data can be collected.</p> <p>Cost estimate = £8,000</p>	<p>This option would remove congestion created by parents picking up/ dropping off UCS Pre-Prep, and other drivers using it as a 'rat run'.</p> <p>Prohibiting cars picking up and dropping off children will improve air quality & road safety.</p> <p>Parents / guardians could drop off on eastern entrance of College Crescent.</p> <p>South Hampstead High School could add a back exit to the school on to College Crescent.</p>	<p>Drivers wanting to enter College Crescent from Finchley Road (A41) may not be aware of the road closure on approach and cause incidents at the junction.</p> <p>Visitors and deliveries to businesses would be restricted from using the road at all times.</p> <p>It may displace congestion, parking and school pick up and drop off to Belsize Lane, Belsize Park or Buckland Crescent.</p>	<p>Reject pursuing this option further due to lack of public support.</p>
<p>Option 3</p> <p>No action</p>	<p>If during the consultation process, Option 1 and 2 above are deemed to be inappropriate we can do nothing.</p> <p>Cost estimate = £0</p>	<p>The allocated budget for this scheme could be spent elsewhere.</p>	<p>The issues discussed would not be resolved.</p>	<p>Maintain this option further due to lack of public support for other options.</p>

Summary of stakeholder queries and responses

70. Camden Council shared information about the proposals with stakeholders and the public at a meeting held on 19th June 2019 with approximately 30 attendees. At the meeting, officers fielded questions, understood any issues, concerns and objections and allowed attendants to make suggestions about the proposals.
71. Following this meeting, various representatives from stakeholder groups and individuals also sent their queries and concerns via email.
72. This section provides a summary of the feedback and the general sentiment from stakeholders as well as the request for consideration of further issues.

Stakeholder	General support	General Oppose	Reasons given/Additional considerations being requested
Netherhall Neighbourhood Association (NNA)	Support option 3, but request further consideration of some issues		<p>Road congestion</p> <ul style="list-style-type: none"> • Concern proposals for Frognal will worsen congestion in neighbouring roads. • Concern about existing rat-running on Maresfield Gardens. • Concern about current behaviour of school bus drivers. • Suggest further restrictions to school buses (reducing number of coaches). • Suggest improved enforcement to parking restrictions and traffic regulations (for school buses). • Concern restrictions on College Crescent will worsen congestion in other roads (Arkwright Road and Swiss Cottage). <p>Accessibility</p> <ul style="list-style-type: none"> • Concern that scheme will reduce access for people with disabilities and reduced mobility. • Suggest access for taxi and private hire is kept. • Concern that there is no consideration of construction traffic due to new developments (CMPs). <p>General</p> <ul style="list-style-type: none"> • Suggest coordination between school travel plans.
NW3 Green School Runs	Support option 3b and College Crescent Closure		<p>General</p> <ul style="list-style-type: none"> • Suggest zebra crossing on Frognal. • Suggest new road markings on Arkwright Road, near St Anthony's Senior School and Devonshire House. • Suggest installation of anti-idling signage. • Suggest more traffic wardens.
British College of Osteopathic Medicine	Support proposals but suggest further consideration of some issues		<p>Accessibility</p> <ul style="list-style-type: none"> • Concern that restrictions in access will affect patients of the organisation (many of whom are disabled). • Concern about access to private off-street parking at the lower end of Netherhall Gardens (parking for patients).

Responses to issues raised by stakeholders and the public.

The full set of issues raised by stakeholders and additional concerns from the general public have been carefully considered. Responses to main issues are set out below:

1. Road Congestion

- 1.1. Concern – Proposals for Frogнал will result in increased congestion /congestion relocated to surrounding streets.

Currently Frogнал is used as a shortcut for traffic travelling south in the AM peak, avoiding the Arkwright Road/Finchley Road traffic light and as a result is heavily congested at this time. Options 3b and 3c remove this shortcut, to reduce the potential displacement of school drop off traffic to Frogнал. We suggest testing Option 3a and 3b in a public consultation, to understand wider public support for restricting access to Frogнал at school drop-off and pick-up times.

- 1.2. Concern – existing rat-running in Maresfield Gardens is not being addressed.

Traffic on Maresfield Gardens has been fully considered in our proposals (Options 3a, 3b and 3c); however, at the moment, the proposals are only to restrict such traffic at school-run opening/closing times during school term time only. If any of the proposals proceeded to implementation after the consultation and decision-making processes, this issue of traffic outside school run times could be monitored during any trial scheme and representations could be made if residents felt that the hours of such restrictions were insufficient.

- 1.3. Suggest – further restrictions to school buses /reducing congestion from school buses and managing driver behaviour.

The scheme is looking at easing congestion and freeing up space being taken by private vehicles. It is expected that this improvement is reflected in the operations of buses in the area. Additional issues related to school driver's behaviour can be monitored during any trial.

- 1.4. Request – sharing traffic data for Fitzjohn's Avenue.

Traffic data can be made available by Camden Council on request.

- 1.5. Concern restrictions on College Crescent will worsen congestion in other roads (Arkwright Road and Swiss Cottage).

Further to a lack of support from residents and stakeholder groups it has been decided not to pursue the College Crescent Healthy School Street option.

2. Accessibility

- 2.1. Concern – Reduced access for people with disabilities and reduced mobility.

The scheme has carefully considered the needs of people with reduced mobility or disabilities. To address this, the following exemptions are proposed:

- Blue badge holders who need to visit a residential or business address in the Healthy School Street Zone; however, Blue Badge holders cannot be given an exemption simply to drive through the HSS zone on their journey from A to B;
- Carers who need to visit an address in the HSS zone as a carer for a resident;
- Vehicles providing transport to Special Educational Needs and Disabilities (SEND) schools in the borough or delivering SEND pupils to those schools in the Healthy School Street zone.

2.2. Suggest - Access for taxi and private hire is kept.

We have explored the potential options of taxi and private hire access in a separate paper. This information will be made available in the consultation materials. If a scheme goes ahead, residents will be sent details regarding exemptions and taxi use.

2.3. Concern – Reduced access for residents

Residents vehicles with valid parking permits, and those with driveways are exempted from restrictions.

2.4. Concern – Reduced access for local businesses (visitors)

Business vehicles with valid parking permits within the Healthy School Street zone are exempted from restrictions.

The proposals are only to restrict access from visitors at school-run opening/closing times; therefore, we expect a minimum impact in business' operations hours.

2.5. Concern – reduced access for construction traffic

For many sites we require a Construction Management Plan (CMP), which often puts in place restrictions of deliveries during school times. In this case we do not plan to exempt such construction delivery vehicles from the restrictions, especially if already conditioned through a CMP – this scheme would help enforce those existing restrictions.

2.6. Concern- reduced access for deliveries and traders

The proposals are only to restrict such traffic at school-run opening/closing times; therefore, we expect a minimum impact in the operations of delivery and trader's vehicles.

3. General

3.1. Suggest – More co-ordination between school travel plans

Twelve of the schools within Frognal and Fitzjohn's ward are engaged with TfL's STARS accreditation programme which encourages pupils to travel to school sustainably, actively, responsibly and safely by championing walking, scooting and cycling. The council's School Travel plan Officer will continue to work with all schools in Camden to encourage them to participate the STARS programme, but this is not a compulsory requirement for schools.

3.2. Suggest – Improving road safety measures for children travelling to school

Suggestions for installation of zebra crossings on Frognal have been considered; however, a new zebra crossing as suggested would not be permissible under legislation due to minimum (legal) distances of such a facility from a signalised crossing (at the Fitzjohn's junction).

3.3. Suggest – Installing anti-idling signage and more traffic wardens

Camden Council will support NW3 with the installation of anti-idling signage and will evaluate how to further support NW3's initiatives.

3.4. Concern – Increased pollution

Our scheme forms part of the Neighbourhoods of the Future' funding from the Mayor of London to improve London's air quality. Any changes proposed aim to improve air quality, road safety and enable more children to walk, cycle and use public transport on their way to school.

Any changes to Netherhall Gardens and College Crescent aim to help support an improvement in air quality and we do not anticipate an increase in pollution as a result of these changes. We also do not anticipate an increase in pollution in local borough roads caused by displaced traffic. If any of the proposals proceeded to implementation after consultation and decision-making processes, levels of NO₂ will be monitored in surrounding streets to understand variation in pollution levels.

Recommendations

73. Based on the existing challenges, analysis of traffic data and consideration for the potential and limitations of each scheme, we recommend developing the following options for public consultation under an experimental traffic order for a year:

Netherhall Gardens:

- Option 3a; and
- Option 3b.

College Crescent:

- Option 3 – No action.

74. Following consultation, the responses will be analysed and an option for Netherhall Gardens will be taken forward for trial subject to that consultation. During the trial ongoing monitoring of traffic counts, traffic displacement, air quality data and school drop off behaviour will be undertaken to help inform a further consultation on any permanent arrangement.

Extenuating measures

Mitigations

75. Alongside the outcome of the consultation there are certain mitigating measures being employed in the area to reduce car use, encourage modal shift to sustainable transport options and provide alternative facilities to accommodate necessary car travel. Table 14 below presents the measures that will complement Healthy School Streets.

Table 14: Mitigating initiatives

Reduce	Re-mode	Relocate
TfL STARS	Public transport	O2 Centre park and stride
Homerun App	NW3 School Run bus	

Monitoring

76. Subject to consultation of the options proposed in the feasibility study, two trial Healthy School Streets or one wider zone, would be implemented for 12 months at; (i) Netherhall Gardens and (ii) College Crescent. We have proposed a series of Key Performance Indicators (KPIs) (Table 16) to be measured during this 12-month period to assess the impacts and benefits of the trial.
77. A number of surveys (see Table 15) have been undertaken across the area providing a good benchmark of the current situation. In order to monitor the impact of the schemes the following data will also be collected after 6 months and 12 months of implementation:

Table 15: Data collection

Benchmark	Traffic survey	Air quality	Collisions	Hands-up surveys
Existing data, to be recollected	<p>Pedestrian counts:</p> <ol style="list-style-type: none"> Netherhall Gardens, north of Nutley Terrace At the junction of Nutley Terrace and Maresfield Gardens Netherhall Gardens, south of Nutley Terrace College Crescent, east of Finchley Road At the junction of College Crescent and College Crescent/Fitzjohn's Avenue 	47 Fitzjohn's Avenue, outside St. Mary's School	Netherhall Gardens	Southbank Int.
	<p>Traffic counts:</p> <ol style="list-style-type: none"> Netherhall Gardens, at its junction with Fitzjohn's Avenue Nutley Terrace, at its junction with Fitzjohn's Avenue Maresfield Gardens, at its junction with Fitzjohn's Avenue Maresfield Gardens, north of Nutley Terrace Netherhall Gardens, north of Nutley Terrace Netherhall Gardens, south of Nutley Terrace College Crescent, east of Finchley Road 	Finchley Road, at the junction with College Crescent	College Crescent	South Hampstead (Juniors)
	<p>Parking bay occupancy: (<i>pending</i>)</p> <ol style="list-style-type: none"> Arkwright Frogna1 Fitzjohn's / College Crescent 	Netherhall Gardens, outside of South Hampstead High School (Junior)		North Bridge House Pre-prep
		Arkwright Road, outside Devonshire House Preparatory School		University College School Pre-prep
		<p>Frogna1, outside University College School Senior School</p> <p>Southbank International (LAEI)</p> <p>North Bridge House School (LAEI)</p> <p>University College School (pre-prep) (LAEI)</p>		
New data collection	Monitor traffic displacement on surrounding roads e.g. Belsize Park, Belsize Lane, Daleham Gardens, Arkwright Road and Fitzjohn's Avenue.	South Hampstead High School (Seniors)	Frogna1	South Hampstead High School (Seniors)

Benchmark	Traffic survey	Air quality	Collisions	Hands-up surveys
			College Crescent / Finchley Road	

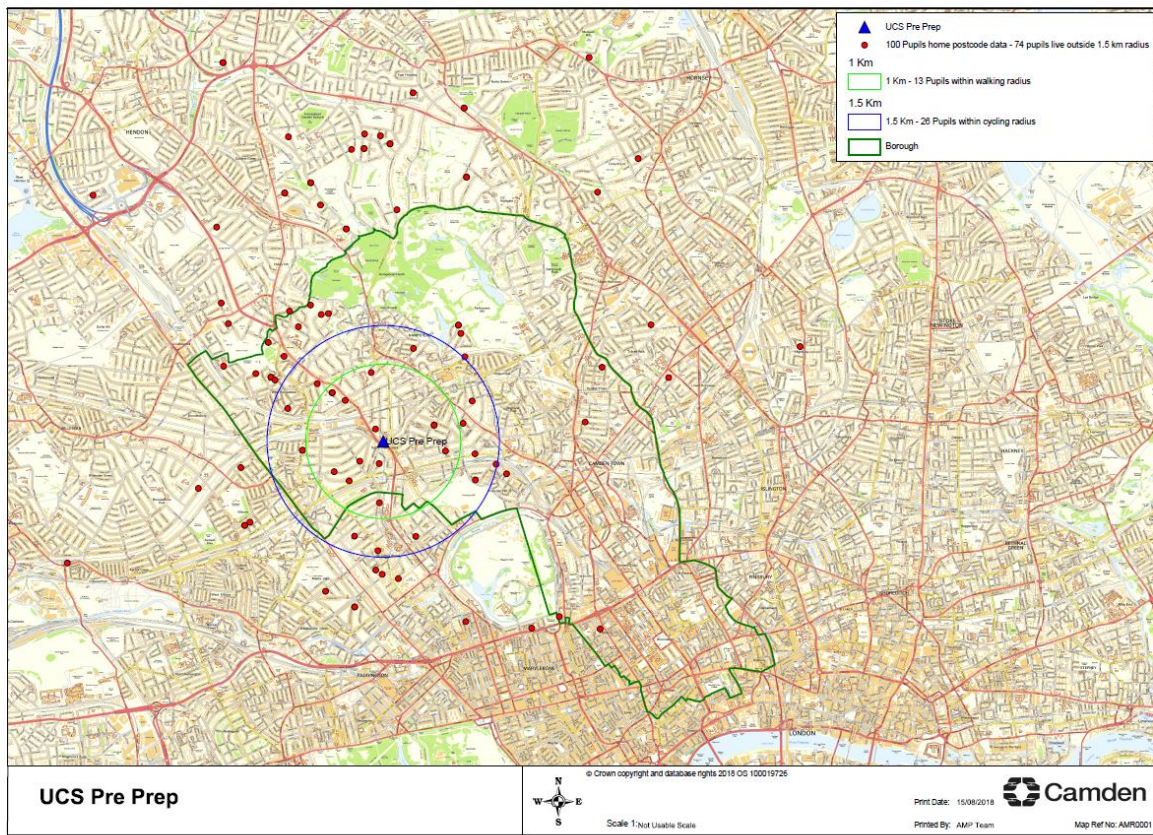
78. The objective of Healthy School Streets is to make streets outside schools safer, discourage car journeys to schools, improve air quality and reduce vehicle traffic. Therefore, monitoring the change across the four data types (Traffic surveys, Air quality, Collisions, Hands-up surveys) in the area will indicate the level of success of the scheme; Table 2 provides the KPIs that will be used to determine this.

Table 16: KPI measure

Data type	Survey	KPI – collective change on 2018 data	Data area
Traffic survey	Pedestrian count	An increase in pedestrian counts during timed road closures	Within zone
	Traffic count	A decrease in traffic during timed road closures	Within zone
	Parking bay occupancy	Maintain or minor increase only in parking bay occupancy	Outside zone
	Traffic displacement	Maintain or minor increase in traffic on surrounding roads	Outside zone
Air quality		Reduction in $0\mu\text{g}/\text{m}^3$ NO_2 concentration	Within zone
Collision		Reduction in reported traffic incidents (Killed, seriously injured or slight)	Within zone
Hands-up		Increase in children travelling to school by non-car modes/electric vehicles across all schools	Within zone
		Increase in children cycling or scooting to school	Within zone

Appendix

A – University College School Pre-Prep postcode data



B – School Street permit exemption online e-form example (London Borough of Hackney)

Application for school streets exemption

Part 1 - Please tell us what you wish to do

I am applying:
As a resident/local business of:

For an exemption for a vehicle on special grounds e.g blue badge holder Yes

Part 2 Your details

Title *

First name *

Surname *

Postcode (e.g E8 1EA) *

Full Address

Tel number *

Email

Part 3 Your vehicle(s)

This vehicle should be registered to your home/business address

Registration Number

Vehicle 1 *

Vehicle 2

Part 5 - Declaration

I declare that the information provided on this form is correct.

Signed *

Date *

Source: https://webforms.hackney.gov.uk/ufs/ufsmain?formid=SCHOOL_STREETS_EXEMPTION