



Civic Engineers

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### Car Park Survey

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## 1. Introduction

### 1.1 Site Location

The survey was undertaken at Finchley Central station car park, Church End, Barnet, N3 2RY

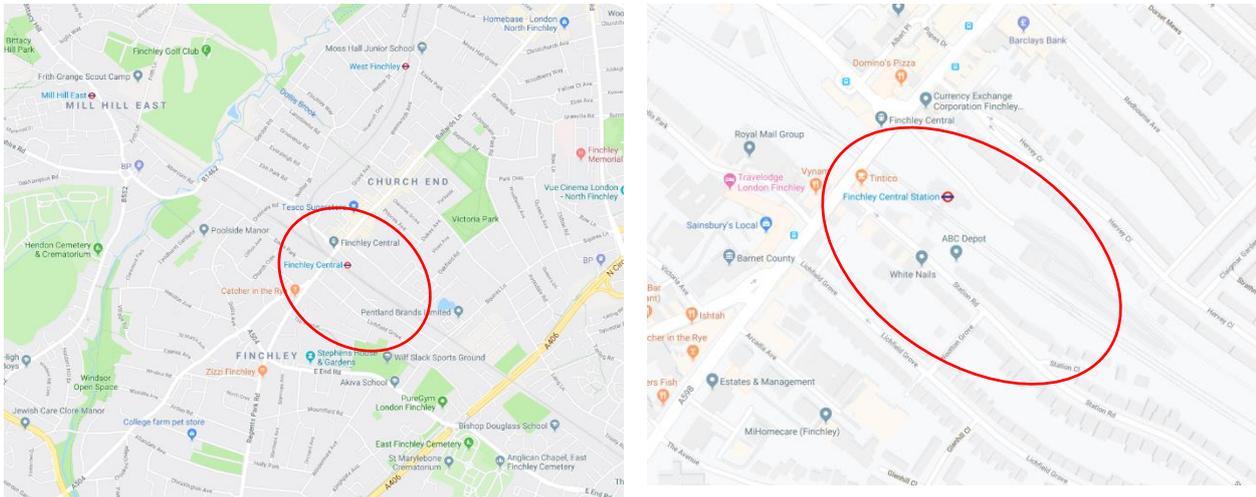


Figure 1: Site Location

### 1.2 Rationale

Surveys were commissioned for the car parks at Finchley Central underground station in the form of a questionnaire and an ANPR study. Previously, a questionnaire survey was commissioned by TfL and carried out by Tracsis in 2017, and thus a new survey was required to provide more up-to-date data.

The main aims of the questionnaire were to establish the following details:

- People's motivations for using the car park
- Where car park users are coming from and where they are going to
- Attitudes towards alternative methods of travel to access Finchley Central

Meanwhile, the ANPR was intended to supplement the questionnaire and help to cross-reference various questionnaire results by providing accurate data on parameters:

- Entry/exit time
- Occupancy rates
- Duration of stay
- Number of users
- Emissions data for future air quality analysis

## 2. Survey

### 2.1 Survey details

Traffic Watch UK was commissioned on 26<sup>th</sup> April 2019 to carry out the survey, having been selected from a shortlist of five traffic survey companies.

The questionnaire was written by Civic Engineers with input from the client team with additional input from Traffic Watch UK which streamlines the questionnaire. The questions were based on the previous questionnaire, modifying and adding questions where gaps in information, such as attitudes towards alternative methods of travel were identified.

The survey was carried out between Wednesday 8<sup>th</sup> May – Tuesday 14<sup>th</sup> May, with the ANPR survey taking place over 24 hours a day for 7 days, and the questionnaire over 4 days from Wednesday 8<sup>th</sup> May – Saturday 11<sup>th</sup> May (3 weekdays and 1 weekend day) between 07:00-19:00. The dates were the most immediate available dates before the upcoming school holidays.

The questionnaire had a total of 226 responses. The daily breakdown is shown in Table 1. It was noted that there was rain on Wednesday 8<sup>th</sup> May, with enumerators stating that this may have had an impact on the number of people willing to answer the questionnaire and the time spent answering questions.

*Table 1: No. of Questionnaire Respondents*

Date of Survey	No. of Respondents
08/05/2019	50
09/05/2019	62
10/05/2019	68
11/05/2019	46
Total	226

## 2.2 Results

The data was compiled by Traffic Watch and sent back in raw format in excel, requiring further analysis and interpretation. The data was processed in two ways:

### Statistical Analysis:

Data was split into weekday and weekend groupings, and key statistics such as proportions and averages were calculated such that trends could be identified and represented in tables and graphs.

### Geographical Analysis and Representation:

A key piece of further analysis was the plotting of origin postcodes, which was achieved by importing the postcodes from excel into mapping software. Plotting these locations enabled geographical analysis and representation of where respondents were coming from in relation to Finchley Central, existing public transport networks and isochrones/isodistances.

## 2.3 Questionnaire Results

The key trends found in the questionnaire results were as follows:

- The car park is predominantly a commuter car park
- 67% of weekday respondents are commuters
- On weekends, 72% of journeys are leisure trips with a further 7% for shopping

*Table 2: Journey Purpose*

	Daily Commute	Leisure Trips	Shopping	Other
<i>Weekday</i>	67%	16%	7%	10%
<i>Weekend</i>	10%	72%	7%	11%

### Most respondents park to use the underground

- 95% of weekday respondents and 96% of weekend respondents stated that they park to use the underground

### Car park stays are predominantly long stays

- 50% of weekday respondents and 44% of weekend respondents park for longer than 8 hours, compared with 15% of weekday and weekend respondents who park for less than 4 hours.

The long stay nature of the station car park, which is operated by NCP on behalf of TfL is reflected in the pricing structure which is geared towards commuters with a flat fee of £6.50 for the day. Tesco in Church End which has approximately 100 spaces offers free parking for 2 hours, Pay By Phone parking is available for short stay on Station Road (21 spaces) and on Ballard's Lane. Alternatively, parking can take place in Church End CPZs outside of controlled times which generally operate from 2pm-3pm on weekdays.

Table 3: Estimated Duration of Stay

	< 4 hours	4-8 hours	> 8 hours
Weekday	15%	36%	50%
Weekend	15%	41%	44%

### Car park users are mostly local and from within LBB

Analysis of all given postcodes indicates that 70% of weekday respondents and 54% of weekend respondents come from within the London Borough of Barnet:

- Overall (including weekdays and weekend), the three main origin locations are
- Mill Hill (NW7) – 18%
- Church End (N3) – 16%
- North Finchley (N12) – 6%

To the question “How long does your journey take to this location” 50% of weekday respondents and 52% of weekend respondents stated that they are within approximately a 10-minute drive from the station.

Table 4: Journey Time from origin to postcode

2019	5 mins	10 mins	15 mins	20 mins	30 mins	45 mins	60 mins	60 mins +
Weekday	18%	32%	17%	7%	10%	3%	4%	9%
Weekend	28%	24%	4%	2%	7%	7%	7%	22%

- Of all the full postcodes provided, 36% are within 2km and 55% are within 5km of Finchley Central station, whilst 73% are from within the borough.

### Proximity to home is the leading reason for using the car park

- 37% of weekday respondents and 30% of weekend respondents stated that they used the car park as it was the nearest one to their home
- The other main reasons were "direct route to destination" (21% of weekday respondents and 22% of weekend respondents) and availability of spaces (21% of weekday respondents and 22% of weekend respondents)

Table 5: Reason for Using this Car Park

	Nearest to Home	Because I can park	Cost of parking	Direct route to end destination	Other ("Convenient")	All Other
Weekday	37%	21%	3%	21%	11%	13%
Weekend	30%	22%	2%	22%	22%	6%

### A fifth of respondents stated that they would consider an alternative method of travel to reach the station and/or their destination

- 19% of weekday respondents would consider walking to the station if the local public realm and crossing facilities were improved; 16% would consider taking the bus if routes were improved and 9% would consider cycling if infrastructure was improved
- Plotting origin locations together with TFL-recommended isodistances of 400m from bus stops and 1km from underground/train stations indicates that most respondents live within proximity to public transport networks

Table 6: Alternative methods to driving and parking

2019	Yes (Bus - if routes are improved)	Yes (Cycling - if infrastructure is improved)	Yes (Walking - if public realm and crossings is improved)
Weekday	16%	9%	19%
Weekend	2%	2%	2%

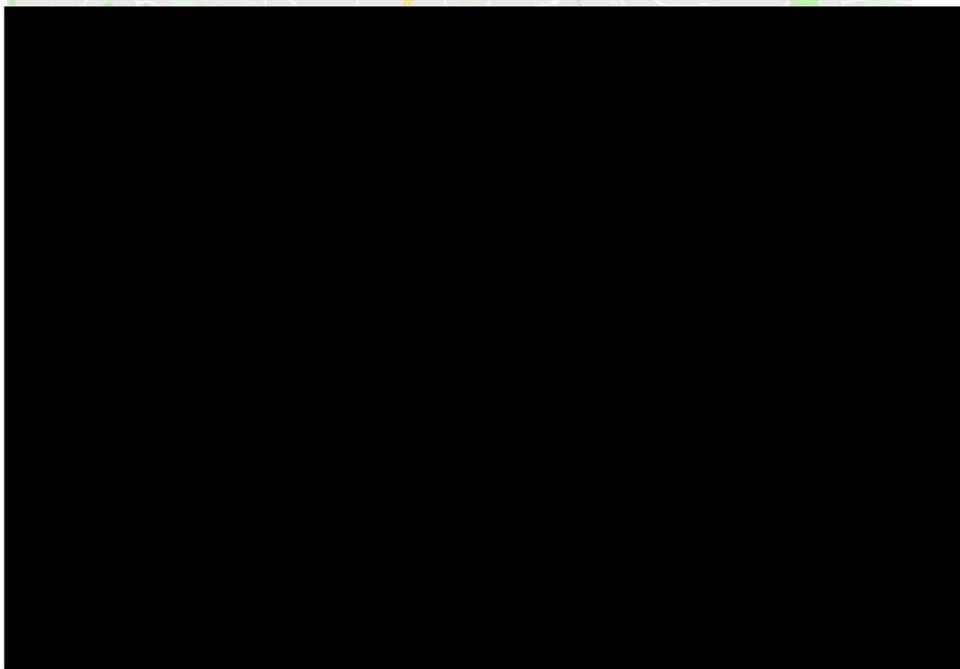
### 2.3.1 Postcode Analysis

Of all the full postcodes provided, 36% are within 2km and 55% are within 5km of Finchley Central station, whilst 73% are from within the borough

Provided postcodes were plotted and a 2km isodistance and a 5km isodistance from Finchley Central Station were created to understand the location and numbers of provided postcodes within those catchment areas.

Of all the full postcodes provided 36% are within 2km and 55% are within 5km of Finchley Central station, whilst 73% are Barnet postcodes.

Figure 2 indicates the plotted postcodes in relation to a 2km isodistance and a 5km isodistance from Finchley Central Station indicating proximity of provided postcodes to Finchley Central.



*Figure 2: Origin Postcodes with 2km and 5km isodistances from Finchley Central Station and Borough Outline*

### 2.3.2 Postcode Analysis: Proximity to Bus Stops and Train/Underground Stations

To understand the distances of provided postcodes from public transport, bus stops and rail/Underground stations were mapped. Using TfL-recommended distance that people are willing to walk to access bus stops a 400m isodistance was plotted for each identified bus stop in southern Barnet. Considering that people are willing to walk longer to access train/tube services a 1km, isodistances was plotted from each station. The provided postcodes were plotted and overlaid on the station and bus stop isodistances (see Figure 3).

The mapping indicates that majority of respondents at Finchley Central who provided a Barnet postcode are within either 400m of a bus stop or 1km of a station suggesting that there is a public transport service option for the majority of provided full postcodes. It must be noted that for Finchley Central there was a much higher proportion of part postcodes provided. The part postcode point on the map appears as one location on the map indicating the central location of the postcode area so does not provides an approximation of the postcode location. This exercise is for illustrative purposes, however it does correlate with the question 'how far have you travelled' where 67% of respondents said that they had travelled 15 minutes to reach the station.



Figure 3: Plotted origin postcodes in relation to plotted public transport nodes



Figure 4: Origin Postcodes with Cycling Isochrones (10-20-30 minutes) and Borough Boundary based on a 16kmph speed

#### The key findings:

- The majority of provided postcodes within the Borough are a within a 20 minute cycle from Finchley Central Station.

#### Barriers to cycling

- 2011 Census data indicates that only 1.4% cycle to work in LBB
- There is a lack of cycle infrastructure to meet demand
- Topography can be a barrier to cycling uptake.

#### Potential Growth

- 9% of weekday and 2% of respondents stated they would consider cycling if infrastructure was improved.
- TfL have identified a high cycling potential in on Regents park Road/Ballard's Lane

## 2.4 ANPR Results

The purpose of the ANPR survey delivered an accurate set of data for all car park users during the 7-day period for all car park users. The complete survey results are in Appendix A and key results are shown in 7.

The ANPR results supplement the questionnaire results, providing a greater understanding of car park use and allowing cross-referencing of some specific questionnaire data:

*Table 7: ANPR Results*

Measure	2019 survey analysis
# spaces (asset register)	269 (12 disabled)
Average Occupancy rates 0700-1900 M-F	74%
Average Occupancy rates 0700-1900 Weekends	27%
% of station respondents who travel by car Weekday	2.4%
% of station respondents who travel by car Weekend	2.9%
Average Daily Car Park Entry/Exits M-F	592
Average Daily Car Park Entry/Exits Weekend	256
AM peak entry time (M-F)	08:00
PM peak exit time (M-F)	17:30
Average duration time M-F	9hrs 40mins
Average duration time weekend	6hrs 47mins

### **The car park is predominantly used by weekday commuters**

- The ANPR questionnaire shows that occupancy rates are higher during weekdays (74%) than on weekends (27%), due to far larger numbers of commuters utilising the car park on weekdays.
- The peak weekday entry time is 08:00 and peak exit time is 17:30, corresponding with working hours of around 8.30-17.00.
- Although the questionnaire had a higher response rate on the Saturday than on the weekdays, this is not reflective of higher weekend use but most likely of greater willingness to answer the questionnaire on the weekend due to journeys being less urgent.

### **Most users have a long duration of stay 9+hours**

- The average duration of stay is 9hrs 40 mins on weekdays and 6hrs 47 mins on weekends, correlating with the duration of stay questionnaire results.
- For weekdays, this corresponds with the difference between the peak entry and exit time of approximately 9hr 30mins and with the length of a working day plus travel to and from the car park.

## 2.5 Station Use

Up to 2016, TfL provided Rolling Origin & Destination (RODS) which indicated the percentage of station users who arrived by different modes including by car. This information is no longer provided by TfL.

An approximation can be estimated by accounting for the average number of vehicle arrivals/departures from the ANPR results, average number of people per vehicle (driver & passengers) from the questionnaire results and the total average station entries/exits. The derived values should only be considered a rough estimate, given that it uses three data sets of varying reliability and of which the latest RODS data is from 2017. Furthermore, it fails to account for drivers who use the station but park elsewhere, amongst other unknown variables. Ser

*Table 4: Station Use Figures*

Station Data	Totals
Weekday Station Entry/Exit Total	23,704
Saturday Station Entry/Exit Total	13,639
Sunday Station Entry/Exit Total	8,384
Yearly Station Entry/Exit Total	7.20m
% station users who arrive by car (weekday)	2%
% station users who arrive by car (weekend)	3%

### 3. Summary

A summary of the questionnaire responses, ANPR survey and station use data is in Appendix B

The key findings of the Finchley Central are set out below:

- Majority of car park users (90%+) park to use the underground to access inner London. The pricing structure of the car park is geared towards commuters offering only a day rate
- The main journey purpose for using the station on weekdays is commuting to work and on weekends is for leisure trips
- 95% of weekday respondents and 96% of weekend respondents stated that they park to use the Underground
- The car park has much lower utilisation rates on weekends which is typical of a commuter car park
- Majority of car park users (50%) are locally based within a 10-minute drive of Finchley Central
- Of all the full postcodes provided, 36% are within 2km and 55% are within 5km of Finchley Central station, whilst 73% are from within the borough
- The majority of provided postcodes within the borough when plotted on a map are within access to public transport
- Those who drive to use the station form a small proportion (2% -3%) of overall station users

Appendix A

Appendix B



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