



TPS Transport Consultants Ltd

Technical Note

Client	Mr James Barnes and Mr Amir Ali
Project	Church Road, Hayes
TPS Reference	P1862
Date Prepared	28/11/22
Prepared By	JT
Checked By	GS

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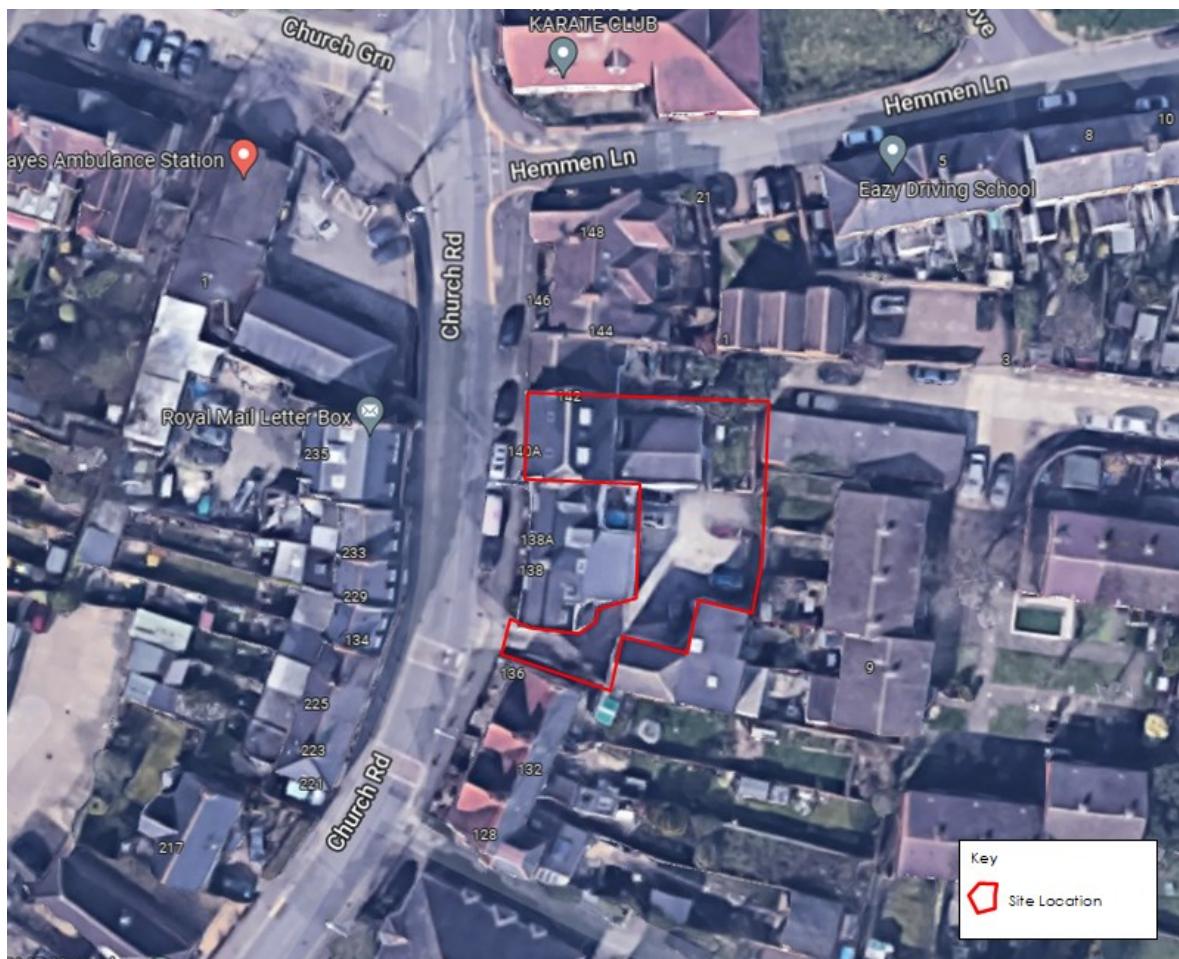
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1. INTRODUCTION

Introduction

- 1.1 This Technical Note has been prepared by TPS Transport Consultants Ltd. (TPS) on behalf of Mr James Barnes and Mr Amir Ali, in respect of a planning application for a change of use from Class E to a 3 bedroom self-contained flat, with an associated parking space, at 140 Church Road, Hayes.
- 1.2 The location of the proposed development can be seen in **Figure 1.1** below; the proposed site layout plan is provided at **Appendix A**.

Figure 1.1: Indicative Site Location



- 1.3 The site is located approximately 1.4km east of Hayes and 1.3km north of Hayes Town. It is bound to the west by Church Road, from which it takes access and to the north, south and east by existing residential dwellings.

- 1.4 The site is currently occupied by a three-storey terraced dwelling with non-residential institutions use (training centre) on the ground floor and two residential flats on the upper floors. Vehicular access to the building is provided via an existing access, between 140 and 142 Church Road.
- 1.5 A parking area is provided to the rear of the building, which currently has 4 parking spaces, for use by no. 136, as agreed as part of the appeal decision for no.136. The existing parking layout, which was included in planning application ref: 11004/APP/2016/3315, can be seen in **Appendix A**. To facilitate the development proposals, a further space will be created to the rear of the property for use by residents of 140 Church Road. This will result in 5 parking spaces, one for use by no. 140 Church Road, and four for the use of no. 136 (as existing and as agreed as part of the appeal for no. 136).

Planning History

- 1.6 An application for the redevelopment of the site was submitted in August 2018 (ref: 73775/APP/2018/2877) and subsequently refused in December 2018 on the following highways grounds:

"The proposal fails to demonstrate it will provide sufficient parking provision for the proposed development and would, therefore, result in an increase in on-street car parking in an area where parking demand already exceeds supply, thereby leading to conditions which would be prejudicial to the operation of the highway network and pedestrian and highway safety. The proposal is therefore contrary to Policies AM7 and AM14 of the Hillingdon Local Plan: Part Two - Saved UDP Policies (November 2012), to Hillingdon's Adopted Parking Standards as set out in the Hillingdon Local Plan: Part Two - Unitary Development Plan Saved Policies (November 2012) and the adopted Supplementary Planning Document HDAS: Residential Layouts."
- 1.7 A further application was subsequently submitted and withdrawn, in light of comments received from the Local Planning Authority, suggesting that the level of parking to be provided for the two dwellings was not sufficient. The proposed scheme has since been amended and is to be resubmitted to provide 1no. 3-bed dwelling instead of the previously proposed two.
- 1.8 This Technical Note will address the grounds for refusal; demonstrating that the level of parking provision is adequate for the development proposals and will not result in overspill parking on the public highway.

2. EXISTING ACCESSIBILITY

2.1 In order to understand the location of the proposed development, in the context of public transport opportunities and local facilities, a review has been undertaken of the facilities in the vicinity of the site. This helps to demonstrate that residents of the proposed development will not need to rely on access to a private car to access facilities and employment opportunities.

Sustainable Transport - Bus

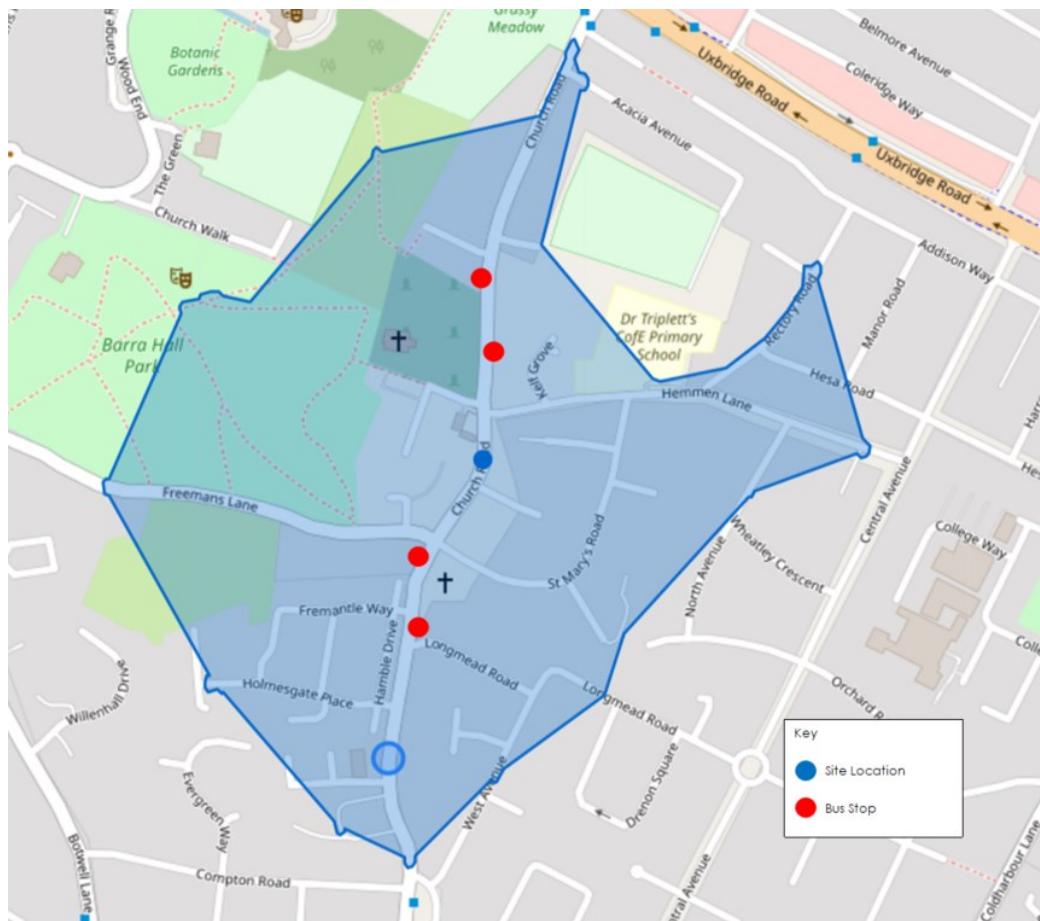
2.2 IHT's 'Planning for Public Transport in Developments' report sets out that the distance that an individual might walk to access a bus service is dependent upon the frequency and level of service available. It is suggested that 500m is the maximum distance residents might walk to access a bus service on a high frequency corridor, whereas in a town or city centre the maximum walking distance would be just 250m. **Table 1** shows the IHT guidelines for the recommended maximum walking distances to bus stops.

Table 1: Recommended maximum walking distances to bus stops

Situation	Maximum Walking Distance
Core bus corridors with high-frequency services	500 metres
Single high-frequency routes	400 metres
Less frequent routes	300 metres
Town/city centres	250 metres

2.3 The proposed development is in accordance with IHT guidelines regarding accessibility to public transport. The nearest bus stops to the site (with frequent and regular services) are located on Church Road, which are located approximately 92m (southbound) and 137m (northbound) from the site respectively, as shown in **Figure 2**, overleaf.

Figure 2: Bus Stop Locations



2.4 **Table 2** illustrates the services which can be accessed from the bus stops outlined above.

Table 2 Bus Services

Service	Route	Frequency		
		Mon - Fri	Saturday	Sunday
195	Charville Lane Estate - Church Road - Hayes - Bulls Bridge - Southall - Hanwell - Boston Manor - Brentford, County Court	12 mins	12 mins	15 mins
278	Heathrow Central - Hayes & Harlington - Hillingdon - Ickenham - West Ruislip - Ruislip	15 mins	15 mins	20mins
H98	Hounslow - Hayes - Hayes End	10 mins	10 mins	15 mins

(Source: Public Transport Operator Websites)

2.5 As can be seen, the site is well served by buses, with frequent services passing the site Monday – Sunday. The proximity of bus stops to the development would also make bus travel an attractive option for future residents, as opposed to travelling by private car.

Sustainable Transport - Rail

2.6 The closest rail station to the site is Hayes and Harlington, which is located approximately 1.6km (20 minutes' walk, 6 minute cycle) south of the site and can be accessed via Church Road, Botwell Lane and Station Road. Given the proximity of the station to the site, it could be expected that residents could utilise the rail services serving this station, accessing the site on foot or by bike.

2.7 It should be noted that Hayes and Harlington forms part of the newly opened Elizabeth Line, which is served by approximately 8 services per hour in each direction between Reading – Central London - Shenfield. Clearly, the development's proximity to this station, with access to the Elizabeth line, providing an approximate 40-minute journey time to central London, would be attractive to prospective residents of the proposed development.

2.8 The station is also served by regular services between Heathrow (Terminals 2, 3 and 5), Reading, London Paddington and Didcot Parkway.

2.9 This section of the Technical Note has demonstrated that the site is well located to encourage residents to travel by sustainable modes of transport, as an alternative to the private car.

3. PARKING

3.1 It is noted that in the decision notice for the redevelopment of the site, the grounds for refusal was that the application “... *fails to demonstrate it will provide sufficient parking provision for the proposed development and would therefore result in an increase in on-street car parking in an area where parking demand already exceeds supply*”.

3.2 The site currently benefits from 4 car parking spaces, which are for use by residents of no. 136 Church Road. As has been discussed, this will increase to 5 parking spaces. Four of the parking spaces, as set out in the appeal decision for no. 136 are dedicated for use by no. 136 one will be for the use of no. 140.

3.3 All spaces will be provided to minimum dimensions of 2400mm x 4800mm, as per the requirements set out Table 1 of Appendix A of the London Borough of Hillingdon Local Plan.

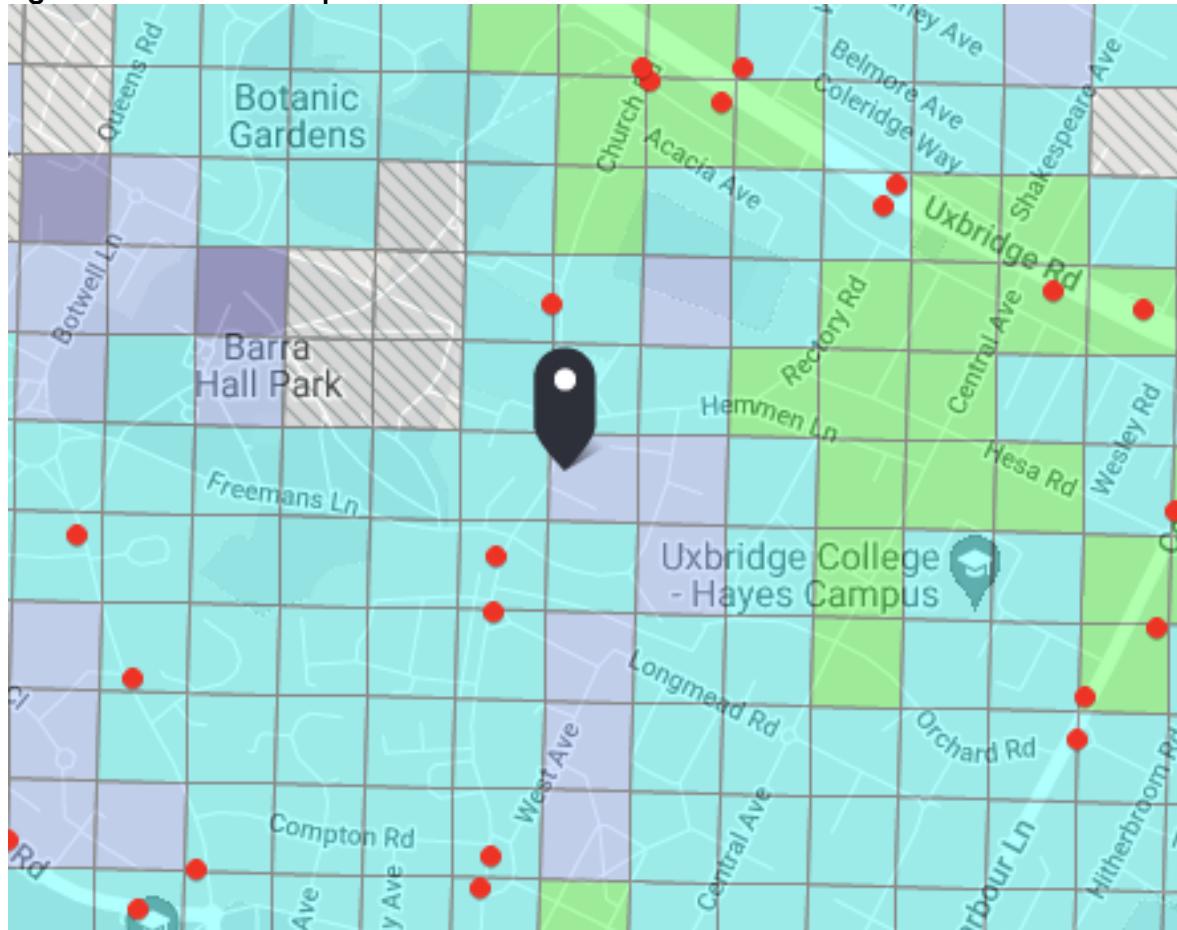
3.4 Maximum residential parking standards are provided in Table 10.3 of the Mayor's “London Plan” document, which illustrates the parking requirements by PTAL. **Figure 3** below, provides details of the parking standards.

Figure 3: The Mayor's London Plan Residential Parking Standards

Location	Number of beds	Maximum parking provision*
Outer London PTAL 4	1 – 2	Up to 0.5 - 0.75 spaces per dwelling+
Outer London PTAL 4	3+	Up to 0.5 - 0.75 spaces per dwelling+
Outer London PTAL 2 – 3	1 – 2	Up to 0.75 spaces per dwelling
Outer London PTAL 2 – 3	3+	Up to 1 space per dwelling
Outer London PTAL 0 – 1	1 – 2	Up to 1.5 space per dwelling
Outer London PTAL 0 – 1	3+	Up to 1.5 spaces per dwelling^

3.5 Following a review of the TfL WebCAT planning tool, it can be seen in **Figure 4** that the development site is in a PTAL 1b area, with maximum provision for a 3-bed dwelling, therefore, being 1.5 spaces. It should be noted that TfL have confirmed via email that the true PTAL score for the site is “2”, and as can be seen from **Figure 4**, the site is located within 100m of a 3 PTAL area.

Figure 4: TfL WebCAT Map



3.6 It should be noted that in the Appeal Decision for no. 136 Church Road, Hayes, which was granted approval (Ref: APP/R5510/W/16/3164850), the inspector stated: “Despite the site’s PTAL levels, I found that it is located in a reasonably sustainable town centre location within close proximity of both rail and bus network together with local services and places of employment and leisure. Unlike the view of the Council, it is likely that the accommodation would be attractive to those who either do not have access to a car or who would be able”.

3.7 With the above in mind, it is considered that the location of the development is such that residents would choose to travel by public transport and, therefore, would not rely on access to a private car despite having access to a dedicated car parking space. Also, since the inspector’s report for no. 136 was produced, the no. 278 bus route and the Elizabeth Line have been added, therefore, significantly changing the public transport accessibility of the site.

3.8 During discussions with TfL for a previous application at this site, they stated that: "It is inappropriate for councils, with areas impacted by Crossrail and new bus routes, to solely use PTAL as an assessment of future public transport performance.

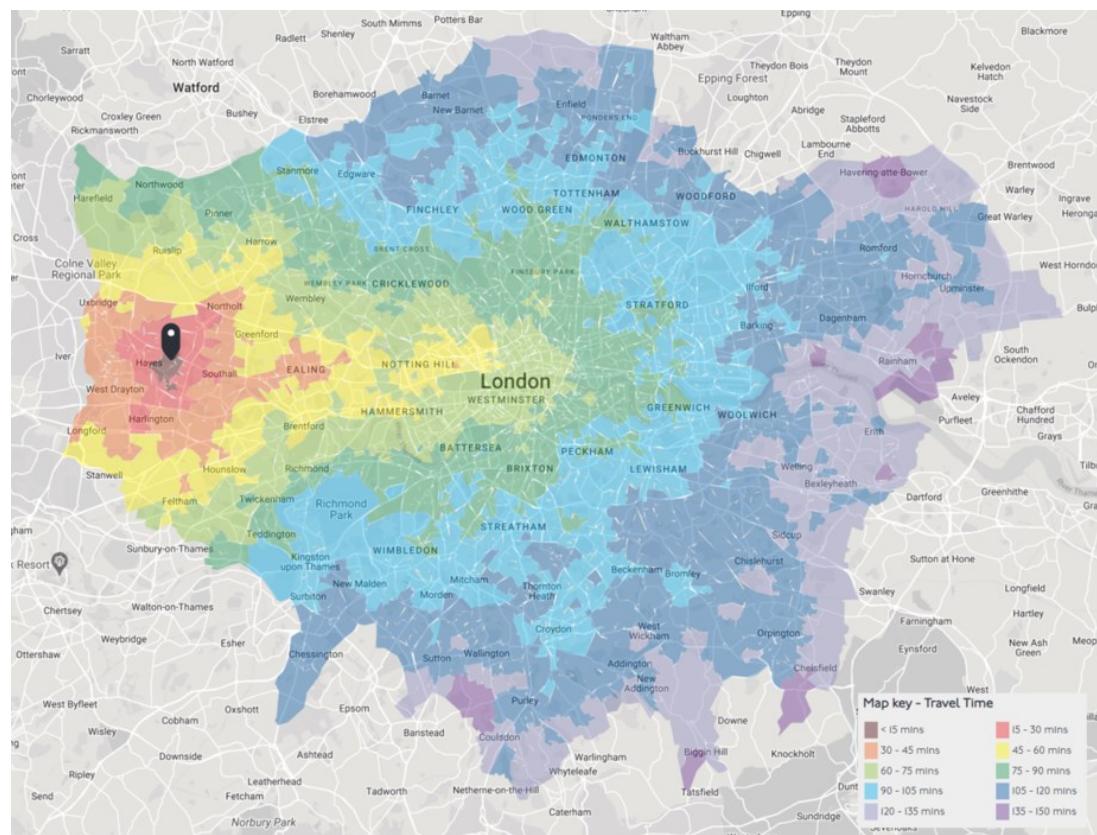
As mentioned above, PTAL is principally a measure of access to the public transport network. This is a good measure for supporting planning policy decisions, which are informed by a range of factors.

Other measures, such as the travel time mapping, can highlight the step change in improved travel times provided by a service such as the Elizabeth line. This information can complement PTAL in understanding how travel opportunities will change in the future"

3.9 Consequently, further analysis has been carried out of the TfL TIM travel time map, a tool which considers how far someone can travel in a given journey time.

3.10 As shown in **Figure 5**, overleaf, Hayes and Harlington Station, along with Hayes and Hayes Town are accessible within 15-30 minutes. Harlington and Southall can also be accessed within 15 to 30 minutes, while Ealing and Uxbridge are accessible within 30 to 45 minutes.

Figure 5: TIM Mapping



- 3.11 In accordance with the residential parking standards outline in the London Plan, a maximum of 1.5 parking spaces should be provided within the development proposals, based upon being located in Outer London (PTAL 0-1) with the unit containing 3+ beds.
- 3.12 Further to the requirements set out in the London Plan, the London Borough of Hillingdon Local Plan outlines local parking standards for residential use. Table 1 of Appendix A requires that for 3-4 bedroom flats between, up to 2 spaces per unit is provided. Consequently, the maximum requirement for the development proposals is 2 car parking spaces. It is deemed that the provision of one space for the development is acceptable, given the sustainable location of the site.

Car Ownership

- 3.13 While it has been determined in this Technical Note that the level of parking provision is suitable based on the maximum parking standards set out in the Mayor's London Plan and the likely trip generation associated with the development proposals, a review of car ownership has also been carried out.
- 3.14 2011 Census dataset QS416EW - Car or van availability, for MSOA E02000513: Hillingdon 027 in which the development is located, has been interrogated and it can be seen that 74% of all households within the MSOA owned 1 or fewer cars. The discussed car ownership data can be found in **Appendix B**.
- 3.15 Based on this anticipated car ownership, it is considered that one proposed parking space for the dwelling is entirely appropriate. Swept path analysis of the proposed parking space associated with no. 140 is provided at **Appendix C**.

Trip Generation

- 3.16 In order to understand the potential impact of the proposed development, when considered against the existing use on the site, a trip generation comparison has been undertaken, based on trip rates obtained from the TRICS Database. A TRICS output for each land use is attached at **Appendix D**, with a comparison provided in **Figure 6**. This is based on a comparison between the proposed 1 residential unit and a 75sqm of Use Class E. There is no direct comparison with the existing site in the TRICS database and, therefore, Employment – Office has been used as a proxy. It is recognised that this is not directly comparable, however, this gives an indication that commercial use of the premises has a higher trip generating potential than a residential unit.

Figure 6: TRICS Comparison – Total Person Trips

	AM		PM		Daily	
	Trip Rate	Trip Gen	Trip Rate	Trip Gen	Trip Rate	Trip Gen
Flats (Privately owned) – Vehicles	0.240	<1	0.216	<1	2.343	3
Flats (Privately Owned) – Total People	1.080	1	0.784	<1	8.190	8
Office – Vehicles	0.918	<1	0.720	<1	4.389	3
Office – Total People	2.005	<2	1.910	<2	13.345	10

3.17 As can be seen in **Figure 6**, a residential unit in this location would have a similar vehicle trip generating impact as the existing commercial premises. It should be noted that this is not a direct comparison, as the trip rate of the existing land use is bespoke and unknown.

3.18 The information is reinforced by the response received from the London Borough of Hillingdon, which acknowledged that, by its very nature, residential use has less impact than commercial: *“Upon reviewing the submitted information, given the very nature of the proposals, it is expected that a reduction in trip rates will be experienced to and from the site”*.

4. SUMMARY

Summary

4.1 This Technical Note has been prepared to support a planning application for a proposed change of use from class E to a 3 bedroom self-contained flat, with an associated parking space, at 140 Church Road, Hayes.

4.2 As the site was subject to a planning refusal, this note has responded to the concerns of the planning officer. The key points of the Note can be summarised as:

- The development is located within 250m of a frequent bus service, in accordance with IHT's 'Planning for Public Transport in Developments', and is therefore travel by bus is likely to represent an attractive alternative to the private car;
- Car parking provision is provided in accordance with the maximum residential car parking standards set out in the Mayor's London Plan for developments in PTAL 1b areas, as well as the requirements outlined in the London Borough of Hillingdon Local Plan; and
- Following a review of the 2011 Census, it has been established that 74% of households in the Hillington 27 MSOA own up to one car. However, with the 2022 Elizabeth Line going live, "Europe's largest infrastructure project", it is reasonable to forecast an ongoing, and significant, reduction in car ownership in Hayes.

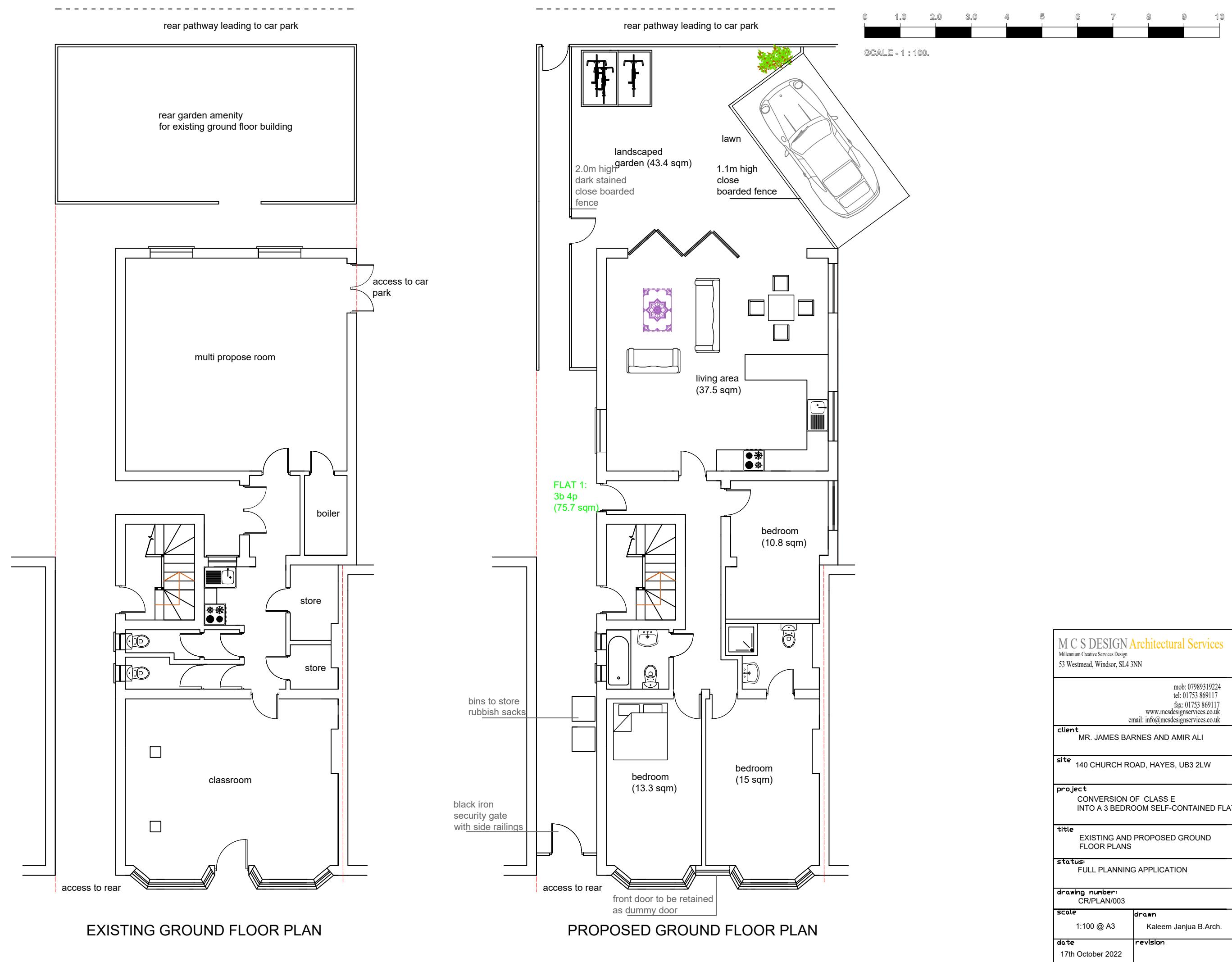
Conclusion

4.3 This Technical Note has demonstrated that the previous concerns regarding car parking provision have been met sufficiently. It is, therefore, considered that there are no substantive highway reasons why the proposals should not be granted planning consent.



Appendix A

Plans





Appendix B

Car Ownership Data

QS416EW - Car or van availability

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population All households; All cars or vans
units Households
area type 2011 super output areas - middle layer
area name E02000520 : Hillingdon 027
rural urban Total

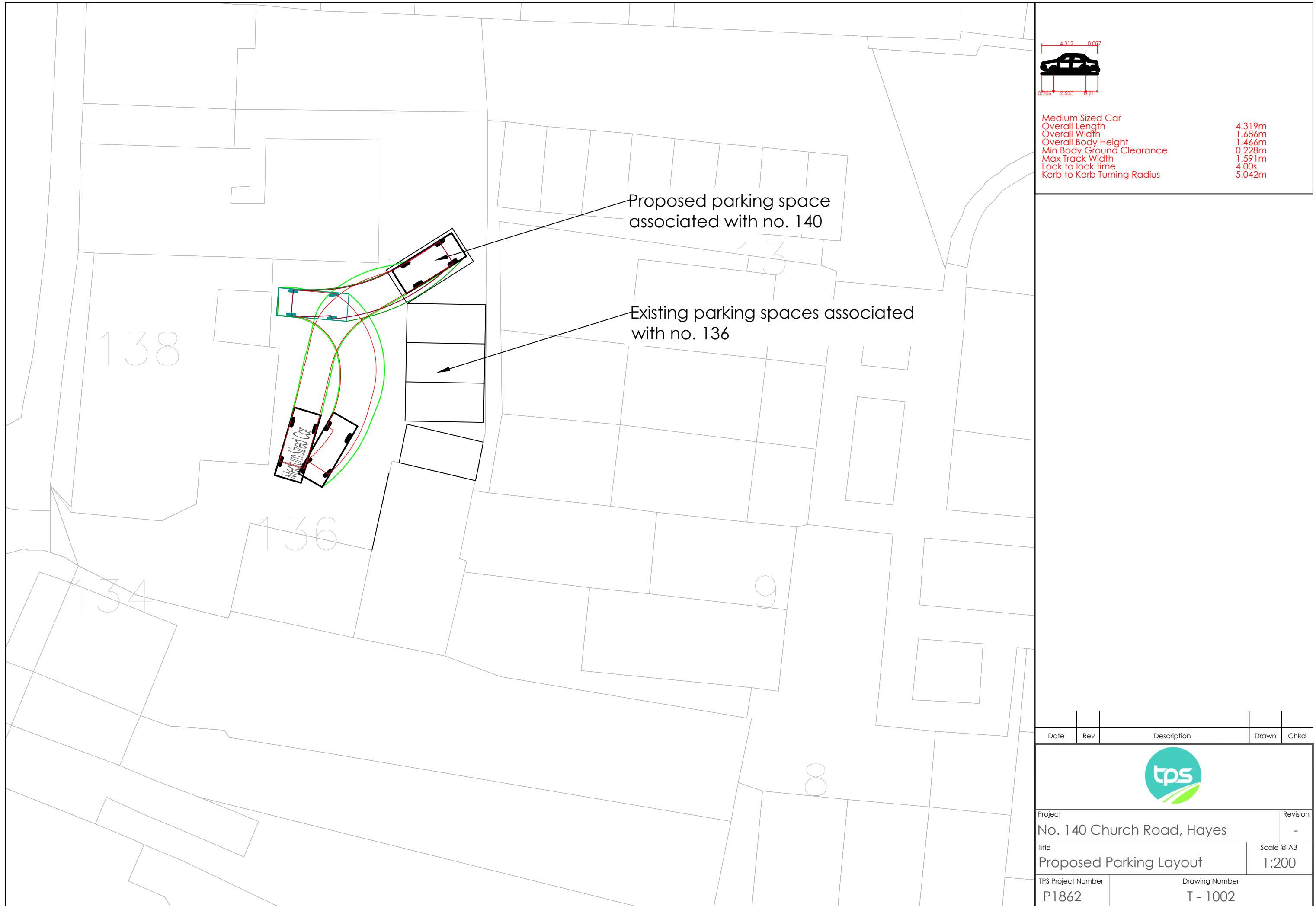
Cars	2011	
No cars or vans in household	1,177	32%
1 car or van in household	1,507	41%
2 cars or vans in household	697	19%
3 cars or vans in household	195	5%
4 or more cars or vans in household	69	2%
	3,645	

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies.



Appendix C

Swept Path Analysis





Appendix D

TRICS Outputs

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : C - FLATS PRIVATELY OWNED
 MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON		
EN	ENFIELD		1 days
HG	HARINGEY		1 days
HK	HACKNEY		1 days
HO	HOUNSLOW		1 days
WF	WALTHAM FOREST		1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: No of Dwellings
 Actual Range: 10 to 44 (units:)
 Range Selected by User: 6 to 50 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 25/05/21

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Tuesday	1 days
Wednesday	3 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	4
Edge of Town	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	5
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This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C3 5 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

20,001 to 25,000	2 days
50,001 to 100,000	3 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

500,001 or More	5 days
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This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	5 days
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This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	5 days
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This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	1 days
1a (Low) Very poor	1 days
2 Poor	1 days
4 Good	1 days
6a Excellent	1 days

This data displays the number of selected surveys with PTAL Ratings.

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
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LIST OF SITES relevant to selection parameters

1	EN-03-C-03	BLOCKS OF FLATS NORTH CIRCULAR ROAD PALMERS GREEN		ENFIELD
		Suburban Area (PPS6 Out of Centre) Residential Zone		
		Total No of Dwellings: <i>Survey date: WEDNESDAY</i>	27 08/11/17	<i>Survey Type: MANUAL</i>
2	HG-03-C-02	BLOCK OF FLATS HIGH ROAD WOOD GREEN WOODSIDE PARK		HARINGEY
		Suburban Area (PPS6 Out of Centre) Residential Zone		
		Total No of Dwellings: <i>Survey date: WEDNESDAY</i>	30 01/10/14	<i>Survey Type: MANUAL</i>
3	HK-03-C-03	BLOCK OF FLATS GREEN LANES FINSBURY PARK MANOR HOUSE		HACKNEY
		Suburban Area (PPS6 Out of Centre) Residential Zone		
		Total No of Dwellings: <i>Survey date: WEDNESDAY</i>	10 24/09/14	<i>Survey Type: MANUAL</i>
4	HO-03-C-05	BLOCK OF FLATS PARK LANE HOUNSLOW CRANFORD		HOUNSLOW
		Edge of Town Residential Zone		
		Total No of Dwellings: <i>Survey date: FRIDAY</i>	14 06/03/20	<i>Survey Type: MANUAL</i>
5	WF-03-C-06	BLOCKS OF FLATS BELGRAVE ROAD WANSTEAD		WALTHAM FOREST
		Suburban Area (PPS6 Out of Centre) Residential Zone		
		Total No of Dwellings: <i>Survey date: TUESDAY</i>	44 25/05/21	<i>Survey Type: MANUAL</i>

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 3.57

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	25	0.032	5	25	0.096	5	25	0.128
08:00 - 09:00	5	25	0.080	5	25	0.160	5	25	0.240
09:00 - 10:00	5	25	0.056	5	25	0.056	5	25	0.112
10:00 - 11:00	5	25	0.064	5	25	0.064	5	25	0.128
11:00 - 12:00	5	25	0.064	5	25	0.056	5	25	0.120
12:00 - 13:00	5	25	0.072	5	25	0.064	5	25	0.136
13:00 - 14:00	5	25	0.056	5	25	0.088	5	25	0.144
14:00 - 15:00	5	25	0.096	5	25	0.072	5	25	0.168
15:00 - 16:00	5	25	0.064	5	25	0.064	5	25	0.128
16:00 - 17:00	5	25	0.128	5	25	0.096	5	25	0.224
17:00 - 18:00	5	25	0.128	5	25	0.088	5	25	0.216
18:00 - 19:00	5	25	0.096	5	25	0.080	5	25	0.176
19:00 - 20:00	3	28	0.141	3	28	0.129	3	28	0.270
20:00 - 21:00	3	28	0.106	3	28	0.047	3	28	0.153
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		1.183			1.160				2.343

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

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Parameter summary

Trip rate parameter range selected:	10 - 44 (units:)
Survey date date range:	01/01/14 - 25/05/21
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 3.57

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	25	0.128	5	25	0.624	5	25	0.752
08:00 - 09:00	5	25	0.224	5	25	0.856	5	25	1.080
09:00 - 10:00	5	25	0.184	5	25	0.240	5	25	0.424
10:00 - 11:00	5	25	0.176	5	25	0.208	5	25	0.384
11:00 - 12:00	5	25	0.176	5	25	0.128	5	25	0.304
12:00 - 13:00	5	25	0.216	5	25	0.152	5	25	0.368
13:00 - 14:00	5	25	0.112	5	25	0.232	5	25	0.344
14:00 - 15:00	5	25	0.272	5	25	0.240	5	25	0.512
15:00 - 16:00	5	25	0.464	5	25	0.200	5	25	0.664
16:00 - 17:00	5	25	0.568	5	25	0.304	5	25	0.872
17:00 - 18:00	5	25	0.472	5	25	0.312	5	25	0.784
18:00 - 19:00	5	25	0.544	5	25	0.216	5	25	0.760
19:00 - 20:00	3	28	0.400	3	28	0.224	3	28	0.624
20:00 - 21:00	3	28	0.259	3	28	0.059	3	28	0.318
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		4.195			3.995				8.190

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Calculation Reference: AUDIT-640801-221128-1142

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : A - OFFICE
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	BN	BARNET	1 days
	BT	BRENT	2 days
	HD	HILLINGDON	2 days
	LB	LAMBETH	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
Actual Range: 920 to 16350 (units: sqm)
Range Selected by User: 408 to 25000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 28/06/22

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	1 days
Tuesday	1 days
Wednesday	2 days
Thursday	2 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	6 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Edge of Town Centre	4
Suburban Area (PPS6 Out of Centre)	2

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Commercial Zone	2
Development Zone	2
Built-Up Zone	1
No Sub Category	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

Not Known 6 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Population within 1 mile:

25,001 to 50,000	3 days
50,001 to 100,000	2 days
100,001 or More	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

500,001 or More	6 days
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This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	2 days
1.1 to 1.5	3 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	4 days
No	2 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

3 Moderate	1 days
4 Good	2 days
5 Very Good	1 days
6a Excellent	1 days
6b (High) Excellent	1 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	BN-02-A-01	OFFICES	BARNET
	MOON LANE		
	HIGH BARNET		
	Edge of Town Centre		
	No Sub Category		
	Total Gross floor area:	1366 sqm	
	<i>Survey date: THURSDAY</i>	11/11/21	<i>Survey Type: MANUAL</i>
2	BT-02-A-03	OFFICES	BRENT
	EMPIRE WAY		
	WEMBLEY		
	Suburban Area (PPS6 Out of Centre)		
	Development Zone		
	Total Gross floor area:	920 sqm	
	<i>Survey date: WEDNESDAY</i>	03/06/15	<i>Survey Type: MANUAL</i>
3	BT-02-A-04	OFFICES	BRENT
	EMPIRE WAY		
	WEMBLEY		
	Suburban Area (PPS6 Out of Centre)		
	Development Zone		
	Total Gross floor area:	10625 sqm	
	<i>Survey date: THURSDAY</i>	14/05/15	<i>Survey Type: MANUAL</i>
4	HD-02-A-07	DATA CENTRE	HILLINGDON
	MILLINGTON ROAD		
	HAYES		
	HYDE PARK		
	Edge of Town Centre		
	Commercial Zone		
	Total Gross floor area:	11950 sqm	
	<i>Survey date: TUESDAY</i>	19/05/15	<i>Survey Type: MANUAL</i>
5	HD-02-A-10	DATA CENTRE	HILLINGDON
	MILLINGTON ROAD		
	HAYES		
	Edge of Town Centre		
	Commercial Zone		
	Total Gross floor area:	16350 sqm	
	<i>Survey date: WEDNESDAY</i>	02/03/22	<i>Survey Type: MANUAL</i>
6	LB-02-A-01	START UP OFFICES & STUDIOS	LAMBETH
	DURHAM STREET		
	VAUXHALL		
	Edge of Town Centre		
	Built-Up Zone		
	Total Gross floor area:	10200 sqm	
	<i>Survey date: MONDAY</i>	19/11/18	<i>Survey Type: MANUAL</i>

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 3.23

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	6	8569	0.338	6	8569	0.035	6	8569	0.373
08:00 - 09:00	6	8569	0.869	6	8569	0.049	6	8569	0.918
09:00 - 10:00	6	8569	0.282	6	8569	0.060	6	8569	0.342
10:00 - 11:00	6	8569	0.165	6	8569	0.091	6	8569	0.256
11:00 - 12:00	6	8569	0.086	6	8569	0.093	6	8569	0.179
12:00 - 13:00	6	8569	0.109	6	8569	0.156	6	8569	0.265
13:00 - 14:00	6	8569	0.099	6	8569	0.080	6	8569	0.179
14:00 - 15:00	6	8569	0.070	6	8569	0.089	6	8569	0.159
15:00 - 16:00	6	8569	0.053	6	8569	0.138	6	8569	0.191
16:00 - 17:00	6	8569	0.068	6	8569	0.329	6	8569	0.397
17:00 - 18:00	6	8569	0.045	6	8569	0.675	6	8569	0.720
18:00 - 19:00	6	8569	0.031	6	8569	0.379	6	8569	0.410
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		2.215			2.174				4.389

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Parameter summary

Trip rate parameter range selected:	920 - 16350 (units: sqm)
Survey date date range:	01/01/14 - 28/06/22
Number of weekdays (Monday-Friday):	6
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.