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**Karawana Ltd**

**29 New End, Hampstead, LB  
Camden**

Proof of Evidence

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Planning Inspectorate Reference  
APP/X5210/A/14/2218243

LB Camden Reference 2012/3089/P

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# 1 INTRODUCTION

- 1.1 My name is Nick Bond, I hold a Bachelor of Engineering Honours degree in Civil Engineering and a Master of Science degree in Transportation Planning and Management. I am a Chartered Member of the Institute of Logistics and Transport.
- 1.2 I am a resident of the London Borough of Camden and am employed as an Associate Director of TTP Consulting, a company that specialises in providing traffic and transport advice to the private sector and have over 15 years of experience in the transport assessment of development proposals.
- 1.3 The evidence which I have prepared and provide for this appeal reference APP/X5210/A/14/2218243 in this proof of evidence is true and I confirm that the opinions expressed are my true and professional opinions.

## Background

- 1.4 TTP have been retained by Karawana Ltd ("the appellant") to provide traffic and transport advice in relation to the proposed redevelopment of 29 New End ("the appeal site") in the London Borough of Camden since 2011.
- 1.5 The appeal site is located on the north side of New End, Hampstead, within the London Borough of Camden.
- 1.6 The appeal site comprises a former hostel, whilst the appeal proposal envisages the redevelopment of the site to provide 17 residential units (2 x studio, 5 x 2 bed units, 6 x 3 bed units and 4 x 4 bed units) and associated cycle and car parking (17 spaces), requiring the formation of a new vehicular site access.
- 1.7 Planning application reference 2012/3089/P was refused at Committee in November 2013.
- 1.8 The Council's Decision Notice includes 11 reasons for refusal. My proof of evidence addresses the third reason for refusal, which primarily relates to the proposed level of car parking and the construction traffic element of the sixth reason for refusal.
- 1.9 Where transport related, the relevant S.106 reasons for refusal are also addressed here.

1.10 The remainder of my Proof of Evidence is set out as follows:

- Section 2 summarises the existing transport conditions;
- Section 3 describes the transport policy context;
- Section 4 provides a summary of the proposals;
- Section 5 discusses construction traffic;
- Section 6 considers the reasons for refusal; and,
- Section 7 summarises and concludes.

## 2 EXISTING CONDITIONS

- 2.1 The site location is shown in **Figure 1** with respect to the local road and Underground network. In December 2013 LB Camden implemented a borough-wide 20mph limit.
- 2.2 The site comprises a former hostel, which is currently vacant but retains a lawful use for that purpose.
- 2.3 It is correctly noted within the Officers' report to Committee at paragraph 6.67 that the reuse of the building as a 75 bedroom hostel would be lawful and would clearly have the potential to generate more parking and traffic congestion than the present situation, resulting in the usage of several on street permit car parking spaces. Even if only 10% of occupants were to acquire parking permits this would amount to demand for 8 on street parking spaces, if 50% were to apply for a permit this would amount to a demand for 38 car parking spaces.

### Local Highway Network

#### New End

- 2.4 New End is a moderately trafficked one-way road. It is a predominantly residential street, but also accommodates two public houses, a junior / primary school and the New End Theatre.
- 2.5 It runs one-way (west to east) from the A502 Heath Street, to the west, to New End Square / Willow Road, to the east and has a carriageway width of circa 6.0 metres.
- 2.6 Footways are well maintained, but narrow in places in the vicinity of the site.
- 2.7 Residents' parking is permitted on the northern side of the road, whilst elsewhere in the vicinity, parking is restricted by double yellow line parking / waiting controls.

#### Heath Street

- 2.8 As noted above, Heath Street forms part of the A502 in the vicinity of the site. It provides a key link between Golders Green (to the north west) and Camden Town (to the south east).
- 2.9 Heath Street accommodates a mix of commercial uses, including a number of boutique shops, galleries and mid to high end restaurants.
- 2.10 It runs two-way and in the vicinity of the site, Heath Street has well lit, well maintained and generally wide footways.

- 2.11 There is a zebra crossing on Heath Street immediately to the north of New End.

### **Parking**

- 2.12 The entire Borough is subject to Controlled Parking Zones and the site lies within CPZ zone CA-H, with controls in place 09:00 to 20:00, Monday to Saturday.

### **Traffic Flows**

- 2.13 As set out in the Transport Statement submitted with the planning application an Automatic Traffic Counter was used in February 2012 to record the traffic flow on New End.
- 2.14 A total of 759 eastbound vehicle movements were recorded on a Wednesday, of which 53 or 7% were medium or heavy goods vehicles.
- 2.15 The peak traffic flow was recorded at 08:00 to 09:00 with 144 vehicles using New End eastbound.
- 2.16 To the west Heath Street has a traffic flow of approximately 17,000 vehicles per day based on Department for Transport data for the A502, as provided at **Appendix A**.

### **Public Transport**

- 2.17 The planning application site is reasonably well served by public transport, being within walking distance of Hampstead Station and a number of bus routes served by dedicated bus stops on Heath Street.

### **Underground Services**

- 2.18 Hampstead Station, which is located within a 350 metres walk distance (4 minutes walk time) of the site according to the TfL Public Transport Accessibility Level database, is served by the Edgware Branch of the Northern Line.
- 2.19 The Northern Line provides direct links to/from Central London and South London (via either Charing Cross or Bank) and Edgware to the north. In addition, High Barnet and Mill Hill East can be accessed following a change at Camden Town.
- 2.20 The Northern Line provides interchanges to all the other major London Underground Lines and, thus, the planning application site provides reasonable accessibility to central London.

## Bus Services

2.21 A number of bus services proceed along Heath Street. The relevant services are summarised below:

- Route 46 – operates between Farringdon and Lancaster Gate with an approximate daytime frequency of a bus every 9-12 minutes in either direction.
- Route 210 – operates between Brent Cross and Finsbury Park with an approximate daytime frequency of a bus every 6-10 minutes in either direction.
- Route 268 – operates between Finchley Road (Sainsbury's) and Golders Green with an approximate daytime frequency of a bus every 12 minutes in either direction.
- Route 603 – operates between Muswell Hill and Swiss Cottage. It operates during peak hours only (Monday to Friday) with two services in either direction.
- Route N5 – operates between Edgware and Trafalgar Square with an approximate night time frequency of a bus every hour in either direction (Sunday to Thursday) and a bus every 10 minutes in either direction (on Fridays and Saturdays).

2.22 The bus stops for the 46, 210 and 268 are the closest to the site and are within the PTAL cut off distance of 640m.

2.23 **Appendix B** includes a Transport for London "spider map", which summarises the local bus services.

## Public Transport Accessibility (PTAL) Rating

2.24 The PTAL (Public Transport Accessibility Level) is a generic measure of the public transport accessibility at a given site. The PTAL is measured on a scale between 1a (poor rating) and 6b (excellent rating).

2.25 **Appendix C** includes a PTAL calculation undertaken in September 2014 for the entrance to the site derived from Transport for London's own planning database, which indicates that the site benefits from a PTAL rating of 3. It is noted that the PTAL rating for the centre of the site is a lower 2 rating, as provided at **Appendix D**. This confirms that the site benefits from 'moderate' level of public transport accessibility in the context of the Borough.



- 2.26 I attended the Committee meeting and noted that a Council member incorrectly assumed that the 'BUS Walk Access Time' of 8 minutes and the 'LU LRT Walk Access Time' of 12 minutes as highlighted in red in the appended PTAL data referred to the appeal site and suggested that as bus and Underground services could be walked to in much less than this time that the accessibility of the site had been underestimated. This is indicated in the first paragraph of page 6 of the Committee report and was not corrected by the Transport Officer present.
- 2.27 These factors are in fact the same on every PTAL calculation anywhere in London and refer to the maximum walk access times that are allowed for within the PTAL methodology. The figures highlighted in blue represent the site specific walk distances estimated by the database. i.e. 4 minutes to Hampstead Underground station and 3 minutes to the nearest bus stop.
- 2.28 However, we do accept as set out by the Transport Officer that the PTAL measure does have certain limitations, such as not allowing for gradient.
- 2.29 A PTAL rating of 2/3 suggests that the appeal site has reasonable accessibility to public transport and is an appropriate location in principle for residential development. But the site is not **very** well located for public transport and the steep gradient for example between Hampstead High Street and the appeal site means that the site is not necessarily so well located for public transport access for all sections of the community, for the elderly and infirm, nor indeed for parents/guardians with children and/or for people carrying heavy shopping bags, for example.

### Section Summary

- 2.30 The site is located in close proximity to Hampstead Station and, in addition, is served by a number of bus services which proceed along Heath Street close by the site and in the London wide context has a moderate level of public transport accessibility. The site is not one of those that is very well served in the Borough, it is necessary to be realistic about the choice of transport mode to reflect this position.
- 2.31 Hampstead is well served by a variety of retail / commercial facilities, which provide the full range of shops and services that potential future residents of the planning application scheme would be likely to require.

### 3 PLANNING POLICY

- 3.1 The principal (national, regional and local) planning policies and guidance relevant to the transportation matters.

#### **National Planning Policy**

- 3.2 The National Planning Policy Framework (NPPF) (Core Document C1) sets out the Government's planning policies for England and how these are expected to be applied.
- 3.3 With regards to parking, paragraph 39 states that: *"If setting local parking standards for residential and non-residential development, local planning authorities should take into account:*
- *the accessibility of the development;*
  - *the type, mix and use of development;*
  - *the availability of and opportunities for public transport;*
  - *local car ownership levels; and*
  - *an overall need to reduce the use of high-emission vehicles."*
- 3.4 The NPPF, which postdates all local policy takes a deliberately pragmatic and reasonable approach to parking and states (at para 39) that car parking standards should take account of the accessibility of a development and, importantly, *"the type, mix and use of development"*.
- 3.5 Earlier at paragraph 32 (third bullet point), it states that *"Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe."* This is a new and deliberate attempt to ensure that transportation issues do not stand in the way of economic activity unless such impacts are severe.
- 3.6 My view is that there are no "severe" residual transport impacts arising from the appeal proposal.

#### **Regional Planning Policy**

- 3.7 At the strategic level, The London Plan (2011) (Core Document A1) states that an appropriate balance should be struck between promoting new development and preventing excessive car parking provision.

3.8 Policy 6.13 Parking inter alia states the following:

*A. The Mayor wishes to see an appropriate balance being struck between promoting new development and preventing excessive car parking provision that can undermine cycling, walking and public transport use.*

3.9 The parking addendum to Chapter 6 of the London Plan includes Table 6.2 which sets out standards for different types of development. In respect of residential development maximum parking standards are set out as follows:

4 or more beds: 2-1.5 spaces per unit  
3 beds: 1.5-1 spaces per unit  
1-2 beds: less than 1 space per unit

3.10 Application of the maximum parking standards identified in Table 6.2 of the London Plan would indicate a maximum parking provision of 24 spaces for the 17 proposed residential units. (7 x studio/2 bed units = 7 spaces; 6 x 3 bed units = 9 spaces; and, 4 No 4 bed units = 8 spaces). Of course the provision made is just 17 spaces and is within and compliant with the plan's provision.

3.11 The Housing Supplementary Planning Guidance (November 2012) sets out within Standard 3.3.1 that *"In areas of good public transport accessibility and / or town centres the aim should be to provide no more than one space per dwelling."*

3.12 The Revised Early Minor Alterations to the London Plan (October 2013) (Core Document A2) sets out that:

*"The Mayor is currently conducting a review of residential car parking standards in conjunction with Transport for London and with the advice of the Outer London Commission. In particular, he is considering the scope for greater flexibility in different parts of London having regard to patterns of car ownership and use, levels of public transport accessibility, the need for integrated approaches to on- and off-street parking, efficiency in land use and overall impact on the environment and the transport network. Further alterations to this Plan will be brought forward as appropriate, and in the meantime supplementary guidance will be issued giving further details and advice."*

- 3.13 The latest emerging standards are provided in the Draft Further Alterations to the London Plan (January 2014) (Core Document A3) and are:

4 or more beds: up to 2 spaces per unit  
3 beds: up to 1.5 spaces per unit  
1-2 beds: 0-1 per unit

- 3.14 These figures are not to be applied mechanistically. The adjacent location and PTAL matrix in the FALP indicates that parking provision of up to 1.5 spaces per unit can be appropriate in urban locations with a PTAL range of 2 to 4.

- 3.15 My view is that when seen against this most up-to-date and relevant policy matrix the provision of 17 spaces strikes the appropriate balance between providing sufficient spaces to promote new development and not so many as to promote excessive car parking, particularly when considered in the context of the public transport accessibility of the site, the mix of units proposed and local car ownership levels.

### **Local Planning Policy**

- 3.16 The Council has produced a Core Strategy (2010) (Core Document B2) and Development Policies Document (2010) (Core Document B3). In addition, Supplementary Planning Guidance – CPG7 Transport (2011) (Core Document B9) supports the policies in the Core Strategy and Development Policies Document and explains how they are to work in practice.
- 3.17 The Core Strategy and Development Policies Document (including Supplementary Planning Guidance) both form part of the Local Development Framework (LDF) and, as such, should be read together as part of the suite of guidance to which decision makers should have regard.
- 3.18 Both documents predate the NPPF and its emphasis on transportation reasons for refusal, which requires impacts to be severe.

### **Policy CS5**

- 3.19 Policy CS5 “Managing the impact of growth and development” sets out that the Council will protect the amenity of Camden’s residents and those working in and visiting the Borough by making sure that the impacts of developments are considered and mitigated where necessary.

### **Policy CS11**

- 3.20 Policy CS11 "Promoting sustainable and efficient travel" addresses matters relating to the delivery of transport infrastructure and the availability of sustainable transport choices. The following elements of the policy are of relevance to a consideration of the provision of car parking:

*"The Council will promote the delivery of transport infrastructure and the availability of sustainable transport choices in order to support Camden's growth, reduce the environmental impact of travel, and relieve pressure on the borough's transport network."*

- 3.21 Paragraphs 11.17-11.22 are titled "Making private transport more sustainable". In particular, it is stated (paragraph 11.17) that the Council will limit parking available for private cars and specifically to seek car-free development in the most accessible parts of the borough (Central London, town centres – except Hampstead – and other areas well served by public transport).

- 3.22 The exclusion of Hampstead reflects the lower public transport profile and topography of that centre.

### **Policy CS19**

- 3.23 Within this policy "Delivering and monitoring the Core Strategy" it is set out that the Council will use planning obligations, and other suitable mechanisms, where appropriate to support sustainable development and to mitigate the impact of development.

### **Policy DP17**

- 3.24 Policy DP17 – Walking, cycling and public transport sets out that the Council will promote walking, cycling and public transport use and that the Council will resist development that would be dependent on travel by private motor car.

- 3.25 It is clarified at paragraph 17.2 that *"Developments will be dependent on travel by private motor vehicles if they are designed without a safe means of access to footways, nearby bus-stops, and a road or other route appropriate for cyclists."*

- 3.26 The site fronts New End and so the new residents would have direct, convenient and safe means of access to footways, bus-stops and roads and so, clearly the development is not dependent on travel by private motor vehicles. There is no suggestion other than that this is the case.

## Policy DP18

3.27 Policy DP18 - Parking standards and limiting the availability of car parking provides the Council's detailed approach to parking in new development. The policy states as follows:

*"The Council will seek to ensure that developments provide the minimum necessary car parking provision. The Council will expect development to be car free in the Central London Area, the town centres of Camden Town, Finchley Road/Swiss Cottage, Kentish Town, Kilburn High Road and West Hampstead, and other areas within Controlled Parking Zones that are easily accessible by public transport.*

*Development should comply with the Council's parking standards, as set out in Appendix 2 to this document. Where the Council accepts the need for car parking provision, development should not exceed the maximum standard for the area in which it is located (excluding spaces designated for disabled people). Developments in areas of on-street parking stress should be 'car capped'.*

*For car free and car capped developments, the Council will:*

- a) *Limit on-site car parking to:*
  - *Spaces designated for disabled people,*
  - *Any operational or servicing needs, and*
  - *Spaces designated for the occupiers of development specified as car capped;*
- b) *Not issue on-street parking permits; and*
- c) *Use a legal agreement to ensure that future occupants are aware they are not entitled to on-street parking permits.*

*Developments will also be expected to meet the Council's minimum standards for cycle parking set out in Appendix 2.*

*The Council will:*

- d) *Strongly encourage contributions to car clubs and pool car schemes in place of private parking in new developments across the borough; and*
- e) *Seek the provision of electric charging points as part of any car parking provision."*

3.28 Car free development is defined as one that has no car parking within the site and occupiers are not issued with on-street parking permits. It is stated that the Central London Area and named town centres (notably and consistently Hampstead is excluded) are well equipped to support car-free households. It is stated that development in these areas is expected to be car-free and that the inclusion of general car parking will be resisted unless supported by a Transport Assessment or other compelling justification.

3.29 Car parking standards in the borough are to comply with those set out at Appendix 2 of the Development Policies Document. This states the following in relation to housing developments:

"General car parking: Low parking provision areas: maximum of 0.5 spaces per dwelling.  
Rest of borough: maximum of 1 space per dwelling". (DPD, p156)

3.30 Low Parking provision areas are defined within the parking standards interpretation section of Appendix 2 as the Central London Area, the town centres of Camden Town, Finchley Road / Swiss Cottage, Kentish Town, Kilburn High Road and West Hampstead, and other areas within Controlled Parking Zones that are easily accessible by public transport. Paragraph of the 18.6 DPD states that as car free development is "generally" sought in the Low Parking Provision Areas, the car parking standards (at Appendix 2) will only apply where it is demonstrated to the Council's satisfaction that such parking should be provided on a site.

3.31 In the "rest of the Borough" the provision is 1 space per dwelling. The development is thus compliant with this provision. It is to be noted that such provision sits below the levels now considered acceptable within the published Mayoral Guidance and FALP.

3.32 It is set out that the maximum car parking standards are for general car parking, with a separate standard of 1 space per dwelling provided for wheelchair housing.

3.33 In this location, the public transport accessibility profile, the nature and mix of the development all mean that the provision is appropriate. No harm is associated with this level of provision.

3.34 Further, in the circumstances of this case, commercial viability is an issue and car parking has an impact on values.

### **Policy CPG7**

3.35 In 2011 the Council produced updated planning guidance to support the policies in the Core Strategy and Development Policies Document. The Camden Planning Guidance (CPG) 7 "Transport" provides advice in relation to car-free and car-capped development (section 5, pp 25-28, CPG7).

3.36 Paragraph 5.4 states that car-free and car-capped requirements will apply to developments in the central London area, town centres and other areas of high PTAL (car-free) and where the creation of a new access could lead to on street parking problems. Car-capped will apply to those schemes that would have an unacceptable impact on on-street parking conditions or highway management and safety.

## Policy DP19

3.37 In relation to car-capped developments, it is stated that these will be sought in areas of high on-street parking stress (paragraph 18.8, DPD). Car-free and car-capped development will be achieved through a legal agreement between the Council and developer removing entitlements for parking permits for future occupiers. (Paragraph 18.9 DPD).

3.38 The potential impacts of parking associated with development in terms of on-street parking conditions and wider environmental conditions are addressed at Policy DP19 "Managing the impact of parking". The policy states as follows:

*"The Council will seek to ensure that the creation of additional car parking spaces will not have negative impacts on parking, highways or the environment, and will encourage the removal of surplus car parking spaces. We will resist development that would:*

- a) Harm highway safety or hinder pedestrian movement;*
- b) Provide inadequate sightlines for vehicles leaving the site;*
- c) Add to on-street parking demand where on-street parking spaces cannot meet existing demand, or otherwise harm existing on-street parking conditions;*
- d) Require detrimental amendment to existing or proposed Controlled Parking Zones;*
- e) Create a shortfall of parking provision in terms of the Council's Parking Standards for bicycles, people with disabilities, service vehicles, coaches and taxis;*
- f) Create a shortfall of public car parking, operational business parking or residents' parking;*
- g) Create, or add to, an area of car parking that has a harmful visual impact.*

*The Council will require off-street parking to:*

- h) Preserve a building's setting and the character of the surrounding area;*
- i) Preserve any means of enclosure, trees or other features of a forecourt or garden that make a significant contribution to the visual appearance of the area; and*
- j) Provide adequate soft landscaping, permeable surfaces, boundary treatment and other treatments to offset adverse visual impacts and increases in surface run-off.*

*The Council will only permit public off-street parking where it is supported by a transport assessment and it is shown to meet a need that cannot be met by public transport. The Council will expect new public off-street parking to be subject to a legal agreement to control the layout of the parking spaces, the nature of the users and the pricing structure. We will also seek a legal agreement to secure removal of parking spaces in response to any improvement to public transport capacity in the area.*

*Where parking is created or reallocated, Camden will encourage the allocation of spaces for low emission vehicles, car clubs, pool cars, cycle hire and parking, and electric vehicle charging equipment."*

3.39 Paragraphs 19.6-19.9 of the DPD address the potential impacts on on-street car parking provision and of provision off-street. In particular, the guidance refers to potential issues that



can arise in creating a link to the highway network such as implications for highway safety, ease of pedestrian movement and the adequacy of sightlines.

## **Policy DP20 - Movement of goods and materials**

### ***"Minimising the movement of goods and materials by road***

*In order to minimise the movement of goods and materials by road the Council will:*

- a) expect development that would generate significant movement of goods or materials both during construction and in operation to minimise the movement of goods and materials by road, and consider the use of more sustainable alternatives such as rail and canal links;*
- b) promote the development and use of freight consolidation facilities and other initiatives with potential to reduce the impact of goods vehicles, and encourage the use of cycle courier services for local deliveries; and*
- c) seek to promote and protect facilities for the movement of goods by rail and water, including facilities for transfer between road, rail and canal.*

### ***Minimising the impact of the movement of goods and materials by road***

*The Council will expect development that would generate significant movement of goods or materials by road, both during construction and in operation, to:*

- d) be located close to the Transport for London Road Network or other Major Roads;*
- e) avoid any additional need for movement of vehicles over 7.5 tonnes in predominantly residential areas;*
- f) accommodate goods vehicles on site; and*
- g) seek opportunities to minimise disruption for local communities through effective management, including through the optimisation of collection and delivery timings and the use of low emission vehicles for deliveries."*

- 3.40 It is stated that **"Policy DP21 - Development connecting to the highway network** *"seeks to guide all forms of transport to the appropriate parts of Camden's road hierarchy. The roads considered to be most suitable for use by lorries and other heavy goods vehicles are those in the Transport for London Road Network and others designated as Major Roads. It*

*will not usually be possible for development to directly access or be loaded from the Transport for London Road Network, but new development that will be served by heavy goods vehicles should be located to minimise the use of district and local roads for the movement of goods, particularly roads which provide primarily for access to residential properties."*

*It is set out here that "Where appropriate, the Council will ensure that applicants provide Construction Management Plans to demonstrate how a development will minimise impacts from the movement of goods and materials during the construction process. Construction Management Plans should deal with the hours of site activity; pick-up and delivery times for materials and equipment; limits on construction vehicle size; trip numbers and routes; the safety of road users during construction; and any temporary use of the highway for siting of construction plant. They should also deal with any temporary disruption or severance of highway links needed during the development process, as well as any other relevant measures needed to manage the construction phase."*

***Policy DP21 - Development connecting to the highway network*** sets out that "The Council will expect developments connecting to the highway network to:

- a) ensure the use of the most appropriate roads by each form of transport and purpose of journey, in accordance with Camden's road hierarchy;*
- b) avoid direct vehicular access to the Transport for London Road Network (TLRN) and other Major Roads; and*
- c) avoid the use of local roads by through traffic.*

*The Council will expect works affecting highways to:*

- d) avoid disruption to the highway network and its function, particularly use of appropriate routes by emergency vehicles;*
- e) avoid harm to on-street parking conditions or require detrimental amendment to Controlled Parking Zones;*
- f) ensure adequate sightlines for vehicles leaving the site;*
- g) address the needs of wheelchair users and other people with mobility difficulties, people with sight impairments, children, elderly people and other vulnerable users;*

*h) avoid causing harm to highway safety or hinder pedestrian movement and avoid unnecessary street clutter;*

*i) contribute to the creation of high quality streets and public spaces; and*

*j) repair any construction damage to transport infrastructure or landscaping and reinstate all affected transport network links and road and footway surfaces following development.*

*Where development will be connected to the highway network, the Council will require all new public highways to be constructed to a standard it considers to be appropriate for adoption, and expect the routes to be adopted, owned and managed by the relevant Highway Authority.”*

**Policy DP26 – Managing the impact of development** sets out that the Council will only grant permission for development that does not cause harm to amenity.

## **Section Summary**

- 3.41 Policy does not mean that no car parking should be provided to serve new development, but rather that an appropriate balance should be struck.
- 3.42 With respect to national policy guidance, the NPPF requires that there should be no severe impact arising as a result of new development and that, if this is so, planning permission should be granted to encourage economic activity.
- 3.43 The London Plan requires that an appropriate balance is struck between providing sufficient spaces to promote new development and not so many as to promote excessive car parking that can undermine walking, cycling and public transport use.
- 3.44 In Policy CS11 (Council’s Core Strategy) it is stated (paragraph 11.17) that the Council will limit parking available for private cars and specifically to seek car-free development in the most accessible parts of the borough (Central London, town centres – except Hampstead – and other areas well served by public transport). The site is located within Hampstead and only has a moderate level of public transport accessibility and so is not required to be car-free development. It should be noted that any disabled badge holders are taken to be exempt from car-free restrictions on a particular development.
- 3.45 Policy DP17 (Council’s Development Policies Document) sets out that the Council will resist development that would not have safe access for pedestrians and cyclists and so would be

dependent on travel by private motor car. Access to the site for pedestrians and cyclists is safe and is no less convenient than that provided to the existing adjacent residential properties.

- 3.46 At paragraph 6.64 of the Committee Report it is set out that due to the PTAL of the site it would not be reasonable to require the development to be car free, i.e. have no on site car parking and that the applicant has agreed to enter into a legal agreement to prevent the new residents from applying for parking permits. This is in line with Policies DP18 and CPG7 which do not require car free housing in locations which do not have a high PTAL rating.
- 3.47 Policy DP19 states that the Council will manage the impact of parking and that it will seek to ensure that car parking will not have negative impacts. The appeal proposal will reduce the potential demand for on-street parking that the reuse of the existing site could create and the proposed site access provides for safe access and a permit free agreement will be used to limit the ability of the new residents to park on-street.
- 3.48 A S.106 Planning Obligation will be presented to the Inquiry which will minimise the potential impacts of the development in line with Policy CS19.
- 3.49 Policy DP21 sets out that site access arrangements should be safe and avoid harm to on-street parking conditions. Officers' note in their report to Committee that the car park and its ramp are acceptable in terms of layout and gradient and on balance accept that the proposed entrance and its impact on-street conditions in the area would be acceptable.
- 3.50 With regard to Policies DP20 and DP26 the appellant has worked with Camden to agree a two-way traffic working strategy to reduce the travel distance of construction vehicles through the area and has proposed to adopt construction working hours that help to minimise any impact on the school run and the operation of the synagogue and so the potential impacts of the construction process have been considered in consultation with the Council and mitigated where practical and officers noted in their report that *"At this stage it is considered that the CMP demonstrates that it is possible to carry out the development in such a way that minimises its impact on local amenity and transport conditions as far as possible, given the large scale of the works involved and the constrained context of the site."*
- 3.51 Council officers advised that the two-way working on New End would be the best solution for construction traffic management and that the same procedure was adopted when the flats on the nearby New End Hospital site were constructed.

## **4 THE PROPOSALS**

### **Car Parking**

- 4.1 As set out in the Transport Statement report (April 2012) submitted with the application the 17 residential units are proposed to be provided with 17 car parking spaces, including 2 disabled parking spaces.
- 4.2 This level of car parking is in accordance with the Council's own car parking standards and those of the London Plan.
- 4.3 This car parking requires the creation of a new site access, which as agreed within the officer's report to Committee will result in the loss of 1 to 2 existing on street permit parking spaces.
- 4.4 However, officers agreed that the reuse of the site as a hostel would have the potential to generate additional car parking demand to that experienced at present, as the site is empty, and so that the loss of permit parking bays to facilitate the new access was on balance acceptable.
- 4.5 It should also be noted that were for example a car-free development to be provided on the site, with residents unable to apply for parking permits to park on-street, that any disabled badge holders would be allowed a permit and thus would be able to park on-street, potentially leading to additional on-street parking demand equivalent to the 1-2 spaces that would be lost by creating a vehicular access to serve the appeal scheme.

## **5 CONSTRUCTION TRAFFIC**

- 5.1 A Construction Management Traffic Plan (April 2012) was submitted with the planning application and as set out in the officers' report to Committee it was noted that this was a draft document and that a final version would be negotiated and agreed with transport planners, this to be secured via appropriate Conditions on the planning permission and S.106 Planning Obligations.
- 5.2 However, it was set out within the report to Committee that the CMP submitted demonstrated that it is possible to carry out the development in such a way that minimises its impact on local amenity and transport conditions as far as possible, given the scale of works involved and the constrained context of the site.
- 5.3 The mitigation measures identified within the Construction Management Traffic Plan were noted, including reduced working hours to avoid impacting upon school run times and the operation of the adjacent synagogue and a limit on the size of vehicles accessing the site (limited to three axle six wheeled vehicles up to 26 tonnes).
- 5.4 It is noted that within the peak period of construction during basement excavation in Phase 3, construction traffic would during the compressed working hours agreed amount to one construction vehicle every 20 minutes. This would represent less than a 2% increase in existing daily traffic flows on New End and an increase of 0.1% on traffic Flows on Heath Street.
- 5.5 A S106 Planning Obligation, ensuring adherence to the Construction Traffic Management Plan during the demolition and construction phases, will be entered into by the developer.

## 6 REASONS FOR REFUSAL

### Third Reason for Refusal

- 6.1 The Council's view is that "*The proposed development, by virtue of the provision of new car parking in the basement, and in the absence of a legal agreement to secure car-free housing units, would be likely to contribute unacceptably to increased traffic generation, parking stress and congestion in the surrounding area and create an over-dependence of use on motor vehicles, which would fail to promote more sustainable and efficient forms of transport, contrary to policies CS11 (Promoting sustainable and efficient travel) and CS19 (Delivering and monitoring the Core Strategy) of the London Borough of Camden Local Development Framework Core Strategy and policies DP17 (Walking, cycling and public transport), DP18 (Parking standards and limiting the availability of car parking) and DP19 (Managing the impact of parking) of the London Borough of Camden Local Development Framework Development Policies.*"

### Car Ownership and Parking Stress

- 6.2 Officers have set out in their report to Committee that with the site having a lawful hostel use it could be occupied by students, medics or professional people which could have higher car ownership and that even if only 10% of past or future occupants secured parking permits that an additional 7 cars could then seek to park in the permit bays surrounding the development were the building on site to be reused in its current configuration.
- 6.3 Therefore in principle we consider that the loss of the 1-2 on-street parking spaces required to provide the vehicular access to the site can be considered to represent an improvement in parking stress conditions over what would occur with the reuse of the building on the site.
- 6.4 Were a car free development to be provided here disabled badge holders would still be able to apply for permits and to park on-street, giving a potential reduction in parking availability equivalent to the creation of the proposed vehicular access.
- 6.5 Census 2011 data (see **Appendix E**) sets out that 45% of households in the local ward do not own a car, somewhat lower than the Borough average of 61%.
- 6.6 On average each household in the ward owns 0.74 cars, compared to an average of 0.48 across the Borough.

### **Policy Context**

- 6.7 The NPPF states that local planning authorities are encouraged to take account of the accessibility of a development and, importantly, "*the type, mix and use of development*" when determining applications and the relevant car parking provision.
- 6.8 Furthermore, in light of the location and the mix of residential units proposed, it is highly likely that many of the 3 and 4 bedroom flats proposed will be occupied by families and a proportion of the 2 bedroom flats by smaller families.
- 6.9 The NPPF also states that car parking standards should take account of "*local car ownership levels*".
- 6.10 A review of (2011 Census) car ownership data for Camden (see **Appendix E**) indicates that the Hampstead Town Ward exhibits a significantly higher level of car ownership than the Borough average.
- 6.11 The site has a moderate level of public transport accessibility and taking account of the mix of units proposed, the proposed level of car parking at 1 space per residential unit is totally compliant with London Plan parking standards and the Council's own parking standards as set out in policies DP18 and CPG7. The site is clearly not solely dependent on car usage and therefore is in accordance with the requirements of Camden's Policy DP17.
- 6.12 The appellant confirms that it will enter into a S.106 Planning Obligation to restrict future occupiers from obtaining parking permits to park on-street in the local controlled parking zone. The provision of 2 disabled bays on-site makes it unlikely that disabled badge holders living on site would seek to obtain a permit.
- 6.13 A S.106 Planning Obligation will be presented to the Inquiry to facilitate this, which addresses the 'absence of legal agreement' stated by the Council in the third reason for refusal and will limit the ability of the development to add to on-street parking demand addressing Policy DP19 and CS11.
- 6.14 Given the above it is considered that the level of car parking proposed, together with a permit free S.106 Planning Obligation, is in line with the Council's own parking policies.

### **Traffic Generation**

- 6.15 The ownership and storage of a car within a residential development does not necessarily mean that every vehicle will be used on a frequent basis.



- 6.16 A review of the Trip Rate Assessment Valid for London (TRAVL) database indicates that an inner London residential site of 17 units with a parking ratio of 1.26 spaces per unit (higher than that proposed) would have a peak traffic generation of 5 cars per hour.
- 6.17 It is inconceivable that this level of additional traffic, less than 1 vehicle every 10 minutes could be considered to add materially to any congestion in the area.

### **Sixth Reason for Refusal**

- 6.18 The Council set out that *"The proposed development, by virtue of its scale and size and the level of excavation associated with its new basement accommodation, and the consequent associated impact of works and traffic throughout the demolition and construction period, would be harmful to the amenities of neighbouring occupiers and the area in general, contrary to policies CS5 (Managing the impact of growth and development) and CS11 (Promoting sustainable and efficient travel) of the London Borough of Camden Local Development Framework Core Strategy and policies DP20 (Movement of goods and materials), DP21 (Development connecting to the highway network) and DP26 (Managing the impact of development on occupiers and neighbours) of the London Borough of Camden Local Development Framework Development Policies."*
- 6.19 A range of mitigation measures were discussed and agreed with LB Camden in order to minimise the impact of construction vehicles as far as possible, the key measures included:
- a limit on the size of vehicles accessing the site regularly (limited to three axle six wheeled vehicles up to 26 tonnes), a reduction from the eight wheeled vehicles originally proposed;
  - amending working hours to avoid the school run and the peak usage of the synagogue; and
  - a two-way access route to reduce the distance that construction vehicles travel through the area as utilised for the development of the nearby New End Hospital site.
- 6.20 The use of banksmen and marshals will also help to manage the movement of construction vehicles and the interaction with other vehicles and pedestrians.
- 6.21 A high proportion of development in London takes place on sites that raise challenges due to the constrained nature of the sites and the immediate highway access routes, this is an

inevitable consequence of the historic nature of much of London and the direction that the meeting of need for the desperate shortage of housing should be met first on brown field inner urban sites. So some temporary disruption to areas surrounding the development cannot be avoided during construction and this in itself cannot be allowed to prevent the delivery of much needed housing and other development across London.

- 6.22 By providing the mitigation measures outlined above the appellant has sought to reduce the temporary impacts arising from construction traffic and so has sought to manage the construction impacts of the proposed development, in accordance with Camden's policies.
- 6.23 Planning, transport and environmental health officers very used to controlling such temporary effects were all satisfied that subject to appropriate mitigation, the transportation and construction impacts of effecting the development would be acceptable.
- 6.24 Appropriate Conditions on the planning permission will be presented to the Inquiry which would ensure the carrying out of highway works, as are required as a result of the development, prior to the development being occupied.
- 6.25 A S.106 Planning Obligation will be entered into by the developer regarding the Contribution sought by the Council for improvements to the public realm and in respect of pedestrian, cycling and environmental improvements.

## 7 SUMMARY AND CONCLUSION

7.1 The appeal site currently comprises 75 self-contained hostel units, whilst the appeal proposal envisages a redevelopment to provide 17 C3 residential units supported by 17 car parking spaces at basement level, served by a new vehicular access on New End.

7.2 My view is that the level of parking proposed is acceptable for a number of reasons, which are set out in Section 6 of this proof of evidence.

7.3 In summary, the reasons include:

- Car Ownership Data – the NPPF, which postdates all relevant local policy states that consideration should be given to local car ownership levels. The Hampstead Town Ward in which the appeal site is located has a high level of car ownership in comparison to the average for the London Borough of Camden reflecting the mix of units in the Ward and, also, the accessibility characteristics. (vis-à-vis the topographical conditions in the area).
- Commercial requirements – a reduction in car parking would impact upon the value of the proposed residential units.
- Policy guidance – the proposals are in line with Camden's own parking policy and the London Plan, taking account of the accessibility of the site and the mix of units proposed.

7.4 In light of the above, my view is that the level of parking proposed is acceptable in traffic and transport planning terms and will not give rise to any, much less severe harm and, thus, would be wholly in accordance with the requirement of the NPPF as stated at paragraph 32.

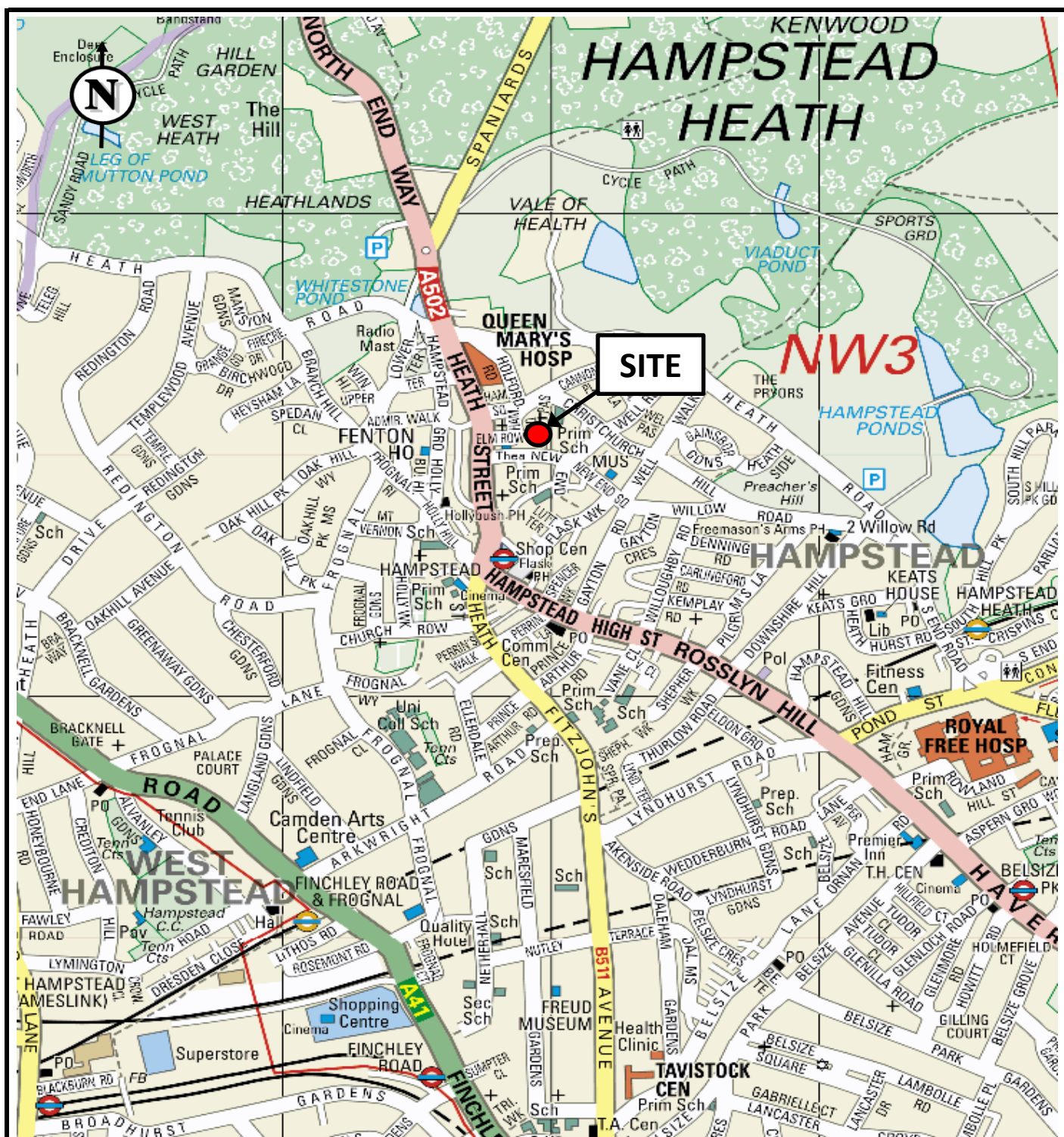
7.5 With regard to the impacts of construction traffic the appellant has put in place mitigation measures in order to minimise the residual effects of construction traffic insofar as can be reasonably achieved. These effects are temporary and cannot be avoided and should not be allowed to prevent the delivery of housing on this site.

7.6 The development is not particularly large and schemes of such scale are regularly constructed within London.

### **Conclusion**

7.7 In light of the above, I conclude that the appeal proposal is acceptable in traffic and transport terms.

## Figures



29 New End

Karawana Ltd

Drawing Title

## Site Location Plan

**TTP Consulting Ltd**

131-151 Great Titchfield Street  
London W1W 5BB  
020 3008 8940

Drawn		Checked		Scale	Drawing Number	Rev
Name	Date	Name	Date			
SWD	28.06.2011	PAC	28.06.2011	Not to Scale	Figure 1	

# APPENDIX A

## DfT Traffic Data

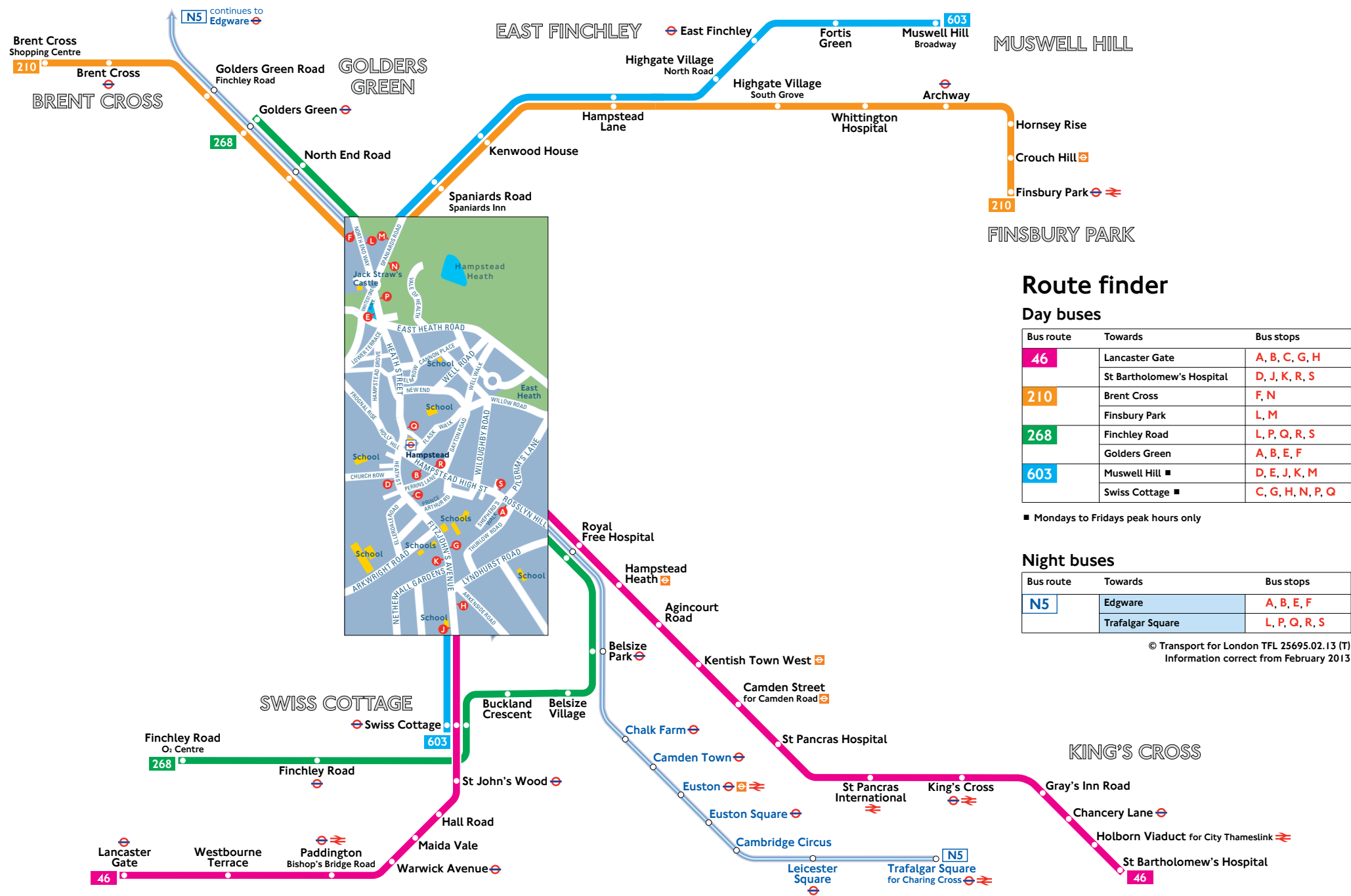
AADYear	CP	Region	LocalAuthority	Road	RoadCategory	Easting	Northing	StartJunction	EndJunction	LinkLength_km	LinkLength_miles	PedalCycles	Motorcycles	CarsTaxis	BusesCoaches	LightGoodsVehicles	V2AxleRigidHGV	V3AxleRigidHGV	V4or5AxleRigidHGV	V3or4AxleArticHGV	V5AxleArticHGV	V6orMoreAxleArticHGV	AllHGVs	AllMotorVehicles
2000	37264	London	Camden	A502	PU	527450	185000	Castlehaven Rd	LA boundary	4.3	2.67	109	417	13788	287	1410	262	20	7	5	1	0	295	16197
2001	37264	London	Camden	A502	PU	527450	185000	Castlehaven Rd	LA boundary	4.3	2.67	162	608	15845	325	2217	245	30	8	5	5	0	293	19288
2002	37264	London	Camden	A502	PU	527450	185000	Castlehaven Rd	LA boundary	4.3	2.67	246	876	14226	314	1906	282	17	1	3	3	0	306	17628
2003	37264	London	Camden	A502	PU	527450	185000	Castlehaven Rd	LA boundary	4.3	2.67	213	537	16486	442	1931	251	10	10	13	1	1	286	19682
2004	37264	London	Camden	A502	PU	527450	185000	Castlehaven Rd	LA boundary	4.3	2.67	336	736	12578	361	1551	352	39	9	3	0	0	403	15629
2005	37264	London	Camden	A502	PU	527450	185000	Castlehaven Rd	LA boundary	4.3	2.67	323	663	13509	452	2595	208	28	7	12	2	1	258	17477
2006	37264	London	Camden	A502	PU	527450	185000	Castlehaven Rd	LA boundary	4.3	2.67	490	912	13111	603	2926	258	30	5	7	0	2	302	17854
2007	37264	London	Camden	A502	PU	527450	185000	Castlehaven Rd	LA boundary	4.3	2.67	484	932	12953	594	2993	235	28	5	5	0	2	275	17747
2008	37264	London	Camden	A502	PU	527450	185000	Castlehaven Rd	LA boundary	4.3	2.67	569	770	13371	699	2224	281	34	8	2	3	1	329	17393
2009	37264	London	Camden	A502	PU	527450	185000	Castlehaven Rd	LA boundary	4.3	2.67	564	748	13010	715	2155	281	37	8	2	3	1	332	16960
2010	37264	London	Camden	A502	PU	527450	185000	Castlehaven Rd	LA boundary	4.3	2.67	622	740	12802	721	2116	294	37	7	2	3	1	344	16723
2011	37264	London	Camden	A502	PU	527450	185000	Castlehaven Rd	LA boundary	4.3	2.67	611	727	12623	731	2080	289	39	7	2	3	1	341	16502
2012	37264	London	Camden	A502	PU	527450	185000	Castlehaven Rd	LA boundary	4.3	2.671896127	628	692	12210	770	2013	304	44	8	2	3	1	362	16047
2013	37264	London	Camden	A502	PU	527450	185000	Castlehaven Rd	LA boundary	4.3	2.7	598	637	12129	814	2029	313	49	10	1	3	1	377	15986

## **APPENDIX B**

### **Bus Map**



# Buses from Hampstead



## Route finder

### Day buses

Bus route	Towards	Bus stops
46	Lancaster Gate	A, B, C, G, H
	St Bartholomew's Hospital	D, J, K, R, S
210	Brent Cross	F, N
	Finsbury Park	L, M
268	Finchley Road	L, P, Q, R, S
	Golders Green	A, B, E, F
603	Muswell Hill ■	D, E, J, K, M
	Swiss Cottage ■	C, G, H, N, P, Q

■ Mondays to Fridays peak hours only

### Night buses

Bus route	Towards	Bus stops
N5	Edgware	A, B, E, F
	Trafalgar Square	L, P, Q, R, S

© Transport for London TFL 25695.02.13 (T)  
Information correct from February 2013

## **APPENDIX C**

### **PTAL Calculation for the pedestrian entrance to the site**

# PTAI Study Report File Summary

## PTAI Run Parameters

PTAI Run 20140708142909  
Description 20140708142909  
Run by user PTAL web application  
Date and time 07/08/2014 14:29

## Walk File Parameters

Walk File	PLSQLTest
Day of Week	M-F
Time Period	AM Peak
Walk Speed	4.8 kph
BUS Walk Access Time (mins)	8
BUS Reliability Factor	2.0
LU LRT Walk Access Time (mins)	12
LU LRT Reliability Factor	0.75
NATIONAL RAIL Walk Access Time (mins)	12
NATIONAL_RAIL Reliability Factor	0.75

Coordinates: 526472, 186009

Mode	Stop	Route	Distance (metres)	Frequency (vph)	Weight	Walk time (mins)	SWT (mins)	TAT (mins)	EDF	AI
BUS	JACK STRAW'S CASTLE	210	587.72	7.5	0.5	7.35	6.0	13.35	2.25	1.12
BUS	Heath St Hampstead Stn	268	249.86	5.0	1.0	3.12	8.0	11.12	2.7	2.7

BUS	HAMPSTEAD STATION	46	473.85	6.0	0.5	5.92	7.0	12.92	2.32	1.16
LU LRT	Hampstead	Northern Line Edgware to Morden	338	9.7	1.0	4.23	3.84	8.07	3.72	3.72
LU LRT	Hampstead	Northern Line Edgware to Morden	338	8.3	0.5	4.23	4.36	8.59	3.49	1.75
LU LRT	Hampstead	Northern Line Kennington to Edgware	338	5.0	0.5	4.23	6.75	10.98	2.73	1.37

NR SAP Points Not Found

Total AI for this POI is 11.82.

PTAL Rating is 3.

## **APPENDIX D**

### **PTAL Calculation for the centre of the site**

# PTAI Study Report File Summary

## PTAI Run Parameters

PTAI Run 20140608221554  
Description 20140608221554  
Run by user PTAL web application  
Date and time 06/08/2014 22:15

## Walk File Parameters

Walk File PLSQLTest  
Day of Week M-F  
Time Period AM Peak  
Walk Speed 4.8 kph  
BUS Walk Access Time (mins) 8  
BUS Reliability Factor 2.0  
LU LRT Walk Access Time (mins) 12  
LU LRT Reliability Factor 0.75  
NATIONAL\_RAIL Walk Access Time (mins) 12  
NATIONAL\_RAIL Reliability Factor 0.75

Coordinates: 526472, 186027

Mode	Stop	Route	Distance (metres)	Frequency (vph)	Weight	Walk time (mins)	SWT (mins)	TAT (mins)	EDF	AI
BUS	JACK STRAW'S CASTLE	210	561.92	7.5	1.0	7.02	6.0	13.02	2.3	2.3
BUS	JACK STRAW'S CASTLE	268	403.06	5.0	0.5	5.04	8.0	13.04	2.3	1.15

LU LRT	Hampstead	Northern Line Edgware to Morden	740.9	9.7	1.0	9.26	3.84	13.1	2.29	2.29
LU LRT	Hampstead	Northern Line Edgware to Morden	740.9	8.3	0.5	9.26	4.36	13.63	2.2	1.1
LU LRT	Hampstead	Northern Line Kennington to Edgware	740.9	5.0	0.5	9.26	6.75	16.01	1.87	0.94

NR SAP Points Not Found

Total AI for this POI is 7.78.

PTAL Rating is 2.

# **APPENDIX E**

## **Census Data**



Car or Van Availability (QS416EW)

				Hampstead Town Ward	Camden London Borough	London Region	England Country
All Households	Count	Households	Mar-11	5200	97534	3266173	22063368
No Cars or Vans in Household	Count	Households	Mar-11	2327	59595	1357251	5691251
1 Car or Van in Household	Count	Households	Mar-11	2126	30991	1324032	9301776
2 Cars or Vans in Household	Count	Households	Mar-11	602	5757	458659	5441593
3 Cars or Vans in Household	Count	Households	Mar-11	107	912	95619	1203865
4 or More Cars or Vans in Household	Count	Households	Mar-11	38	279	30612	424883
All Cars or Vans in Area	Count	Vehicles	Mar-11	3856	46601	2664414	25696833

Car or Van Availability, 2011 (QS416EW), Mar11  
Car or Van Availability, 2011 (QS416EW), Mar11  
Car or Van Availability (QS416EW)

LastUpdated 30-Jan-13  
Source Office for National Statistics  
National Statistics

0.74 0.48

# **APPENDIX F**

## **Trip Rate Data**

# TRAVL - Average Trip Rate by Mode and Time

Report ID 9

## List of Surveys:

Name	Address	Postcode	Survey Date
Battersea Reach (private units)	York Road	SW18 1TW	22/10/2009
Riverside West (Priv and Aff)	Riverside West Smugglers Way	SW18 1DB	20/10/2009
Stanley Close	Stanley Close Greenwich, London	SE9 2DR	24/04/2008

Number of sites considered 3

## Counts By Mode:

Mode: All Modes

Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip Rate	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.01240	0.11692	0.12932	0.2	2.0	2.2
07:30-08:00	3	0.03366	0.23915	0.27281	0.6	4.1	4.6
08:00-08:30	3	0.05403	0.26926	0.32329	0.9	4.6	5.5
08:30-09:00	3	0.04163	0.23472	0.27635	0.7	4.0	4.7
09:00-09:30	3	0.05049	0.12312	0.17360	0.9	2.1	3.0
09:30-10:00	3	0.05403	0.07795	0.13198	0.9	1.3	2.2
10:00-10:30	3	0.03986	0.07883	0.11869	0.7	1.3	2.0
10:30-11:00	3	0.04340	0.06820	0.11160	0.7	1.2	1.9
11:00-11:30	3	0.04960	0.03543	0.08503	0.8	0.6	1.4
11:30-12:00	3	0.04606	0.06466	0.11072	0.8	1.1	1.9
12:00-12:30	3	0.06023	0.06997	0.13020	1.0	1.2	2.2
12:30-13:00	3	0.05846	0.06289	0.12135	1.0	1.1	2.1
13:00-13:30	3	0.06200	0.08769	0.14969	1.1	1.5	2.5
13:30-14:00	3	0.06377	0.08149	0.14526	1.1	1.4	2.5
14:00-14:30	3	0.09212	0.07440	0.16652	1.6	1.3	2.8
14:30-15:00	3	0.05492	0.05403	0.10895	0.9	0.9	1.9
15:00-15:30	3	0.06909	0.07529	0.14438	1.2	1.3	2.5
15:30-16:00	3	0.10983	0.06289	0.17272	1.9	1.1	2.9
16:00-16:30	3	0.09035	0.05934	0.14969	1.5	1.0	2.5
16:30-17:00	3	0.08503	0.07617	0.16120	1.4	1.3	2.7
17:00-17:30	3	0.12223	0.06732	0.18955	2.1	1.1	3.2
17:30-18:00	3	0.13198	0.09212	0.22409	2.2	1.6	3.8
18:00-18:30	3	0.20283	0.09920	0.30204	3.4	1.7	5.1
18:30-19:00	3	0.21701	0.10540	0.32241	3.7	1.8	5.5
19:00-19:30	3	0.19132	0.09566	0.28698	3.3	1.6	4.9
19:30-20:00	3	0.21789	0.11957	0.33747	3.7	2.0	5.7
20:00-20:30	3	0.15058	0.06554	0.21612	2.6	1.1	3.7
20:30-21:00	3	0.09123	0.06732	0.15855	1.6	1.1	2.7
21:00-21:30	3	0.06466	0.03986	0.10452	1.1	0.7	1.8
21:30-22:00	3	0.04872	0.04517	0.09389	0.8	0.8	1.6

Mode: All Modes

Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip Rate	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
-----------	-------------	--------------	---------------	-----------------	--------------------	---------------------	-----------------------

Peak Period For All Modes

In	18:30-19:00	0.22
Out	08:00-08:30	0.27
Total	19:30-20:00	0.34

**Mode: Car Driver + Passengers**

Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip Rate	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00177	0.01683	0.01860	0.0	0.3	0.3
07:30-08:00	3	0.01329	0.04163	0.05492	0.2	0.7	0.9
08:00-08:30	3	0.00974	0.04429	0.05403	0.2	0.8	0.9
08:30-09:00	3	0.00709	0.05757	0.06466	0.1	1.0	1.1
09:00-09:30	3	0.01949	0.02834	0.04783	0.3	0.5	0.8
09:30-10:00	3	0.01771	0.01683	0.03454	0.3	0.3	0.6
10:00-10:30	3	0.01506	0.02657	0.04163	0.3	0.5	0.7
10:30-11:00	3	0.00886	0.02480	0.03366	0.2	0.4	0.6
11:00-11:30	3	0.02214	0.01063	0.03277	0.4	0.2	0.6
11:30-12:00	3	0.01506	0.02746	0.04252	0.3	0.5	0.7
12:00-12:30	3	0.00974	0.01860	0.02834	0.2	0.3	0.5
12:30-13:00	3	0.02569	0.01683	0.04252	0.4	0.3	0.7
13:00-13:30	3	0.01594	0.01771	0.03366	0.3	0.3	0.6
13:30-14:00	3	0.02037	0.02834	0.04872	0.3	0.5	0.8
14:00-14:30	3	0.03012	0.02569	0.05580	0.5	0.4	0.9
14:30-15:00	3	0.01594	0.01240	0.02834	0.3	0.2	0.5
15:00-15:30	3	0.02569	0.02834	0.05403	0.4	0.5	0.9
15:30-16:00	3	0.04517	0.02834	0.07352	0.8	0.5	1.2
16:00-16:30	3	0.02391	0.02303	0.04694	0.4	0.4	0.8
16:30-17:00	3	0.03277	0.02569	0.05846	0.6	0.4	1.0
17:00-17:30	3	0.03632	0.02391	0.06023	0.6	0.4	1.0
17:30-18:00	3	0.02923	0.03100	0.06023	0.5	0.5	1.0
18:00-18:30	3	0.04694	0.03189	0.07883	0.8	0.5	1.3
18:30-19:00	3	0.04783	0.03100	0.07883	0.8	0.5	1.3
19:00-19:30	3	0.04340	0.03100	0.07440	0.7	0.5	1.3
19:30-20:00	3	0.05669	0.04163	0.09832	1.0	0.7	1.7
20:00-20:30	3	0.04252	0.01771	0.06023	0.7	0.3	1.0
20:30-21:00	3	0.03012	0.03366	0.06377	0.5	0.6	1.1
21:00-21:30	3	0.01771	0.01329	0.03100	0.3	0.2	0.5
21:30-22:00	3	0.01683	0.01594	0.03277	0.3	0.3	0.6

**Peak Period For Car Driver + Passengers**

<b>In</b>	<b>19:30-20:00</b>	<b>0.06</b>
<b>Out</b>	<b>08:30-09:00</b>	<b>0.06</b>
<b>Total</b>	<b>19:30-20:00</b>	<b>0.10</b>

Mode: Car Driver

Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip Rate	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00177	0.01506	0.01683	0.0	0.3	0.3
07:30-08:00	3	0.00886	0.02834	0.03720	0.2	0.5	0.6
08:00-08:30	3	0.00886	0.03543	0.04429	0.2	0.6	0.8
08:30-09:00	3	0.00620	0.03277	0.03897	0.1	0.6	0.7
09:00-09:30	3	0.01949	0.02037	0.03986	0.3	0.3	0.7
09:30-10:00	3	0.01240	0.01506	0.02746	0.2	0.3	0.5
10:00-10:30	3	0.01506	0.01771	0.03277	0.3	0.3	0.6
10:30-11:00	3	0.00886	0.01860	0.02746	0.2	0.3	0.5
11:00-11:30	3	0.01683	0.00974	0.02657	0.3	0.2	0.5
11:30-12:00	3	0.01151	0.02214	0.03366	0.2	0.4	0.6
12:00-12:30	3	0.00709	0.01506	0.02214	0.1	0.3	0.4
12:30-13:00	3	0.01594	0.01063	0.02657	0.3	0.2	0.5
13:00-13:30	3	0.01240	0.01417	0.02657	0.2	0.2	0.5
13:30-14:00	3	0.01506	0.01594	0.03100	0.3	0.3	0.5
14:00-14:30	3	0.01949	0.01771	0.03720	0.3	0.3	0.6
14:30-15:00	3	0.01329	0.00974	0.02303	0.2	0.2	0.4
15:00-15:30	3	0.01683	0.02037	0.03720	0.3	0.3	0.6
15:30-16:00	3	0.02657	0.01860	0.04517	0.5	0.3	0.8
16:00-16:30	3	0.01506	0.01506	0.03012	0.3	0.3	0.5
16:30-17:00	3	0.02126	0.01949	0.04074	0.4	0.3	0.7
17:00-17:30	3	0.02480	0.01860	0.04340	0.4	0.3	0.7
17:30-18:00	3	0.02657	0.02391	0.05049	0.5	0.4	0.9
18:00-18:30	3	0.03100	0.02126	0.05226	0.5	0.4	0.9
18:30-19:00	3	0.03543	0.02126	0.05669	0.6	0.4	1.0
19:00-19:30	3	0.03366	0.02480	0.05846	0.6	0.4	1.0
19:30-20:00	3	0.03277	0.02480	0.05757	0.6	0.4	1.0
20:00-20:30	3	0.02657	0.01240	0.03897	0.5	0.2	0.7
20:30-21:00	3	0.01771	0.01860	0.03632	0.3	0.3	0.6
21:00-21:30	3	0.01240	0.00886	0.02126	0.2	0.2	0.4
21:30-22:00	3	0.01240	0.00974	0.02214	0.2	0.2	0.4

Peak Period For Car Driver

In	18:30-19:00	0.04
Out	08:00-08:30	0.04
Total	18:30-19:00	0.06