GRS Limited

112 Great Russell Street
Transport Statement

30480/D1F
May 2015

TPP
transport planning practice

Contents

Tables

Insets

Figures

Transport Planning Practice
70 Cowcross Street
London
EC1M 6EL
020 7608 0008
email@tppweb.co.uk
www.tppweb.co.uk

Appendices

A	PTAL output
B	West End Project Plans
C	JMP Feasibility Study
D	TRAVL Output

Transport Planning Practice
70 Cowcross Street
London
EC1M 6EL
020 7608 0008
email@tppweb.co.uk
www.tppweb.co.uk

Transport Planning Practice
70 Cowcross Street
London
EC1M 6EL
020 7608 0008
email@tppweb.co.uk
www.tppweb.co.uk

1 INTRODUCTION

1.1.1 Transport Planning Practice (TPP) has been appointed to prepare a Transport Statement (TS) in support of the planning application for the redevelopment of the existing National Car Park (NCP) at 112a Great Russell Street within the London Borough of Camden (LBC) to provide a 166 bedroom hotel.

1.1.2 The application site is currently in use as a 140 space NCP car park. In September 2011, a Feasibility Study was undertaken by JMP Consultants to assess the impact of the loss of the NCP car park at 112a Great Russell Street on the surrounding area. The study concluded that displaced parking could be absorbed by similar 24hr car parking facilities in the area. The study is considered further in Section 4.

1.1.3 In September 2014, LBC refused a planning application (planning reference: 2013/5075/P) at the site to provide a 166 room hotel.

1.1.4 This TS provides supporting information to a new planning application being submitted to LBC which seeks to address the Council's reasons for refusal. It is noted that none of these reasons related to highways matters.

Scope of report

1.1.5 The remainder of this report is structured as follows:

- **Section 2: Existing Conditions** - This section describes the site's accessibility by different transport modes and sets out the existing transport conditions in the local area.
- **Section 3: Proposed Development** - This section outlines the scheme proposal together with the proposed access/servicing arrangements.
- **Section 4: Trip Generation** - This section estimates the number of trips to and from the proposed hotel and assesses the impacts on the different transport modes.
- **Section 5: Transport Policy** Context - This section looks at the relevant transport planning policies at national, regional and local levels.
- **Section 6: Sustainable Travel** - This section considers the sustainable travel credentials of the site.

- **Section 7: Conclusions** - This section summarises the conclusions on the transport aspects of the redevelopment proposals.

2 EXISTING CONDITIONS

2.1.1 The application site is currently in use as a 140 space NCP car park, spread over two basement levels (-4 and -5) at 112a Great Russell Street, in the London Borough of Camden (LBC).

Site location

2.1.2 The site is bound to the west by Tottenham Court Road, to the south by Great Russell Street, to the east by Adeline Place and to the north by Bedford Avenue. The site entrances are located on the north side of Great Russell Street, and within Adeline Place. Tottenham Court Road is located approximately 80 metres to the west of the junction of Great Russell Street and Adeline Place, and Bloomsbury Street is approximately 150 metres to the east. Covent Garden is located approximately 670m to the south while Holborn is 670m to the east. A site location plan is provided in Figure 1.

2.1.3 The site is surrounded by hotel, office and small retail development, with major retail on Tottenham Court Road. Immediately above the site is St Giles Hotel which is accessed from Bedford Avenue. There is also a YMCA which is accessed from Great Russell Street, adjacent to the pedestrian entrance to the car park. To the east, there are hotels on Great Russell Street. The site is well located with excellent accessibility by public transport, walking and cycling.

Vehicular access

2.1.4 Vehicles can currently access and egress the car park from Adeline Place via two separate entry and exit ramps.

2.1.5 The local road network is made up of one-way and two-way streets. Adeline Place is two-way for its entirety. Bedford Avenue, Tottenham Court Road and Great Russell Street are one-way.

Taxis

2.1.6 There is a relatively high number of taxis in the local area due to the proximity of Tottenham Court Road and Oxford Street retail and leisure areas. Oxford Street is located to the west, which, due to its busy nature, tends to encourage taxis to use the quieter roads. Taxis serving the St Giles Hotel are able to wait in Bedford Avenue where there is space for two taxis.

Existing parking provision

2.1.7 The current use of the site provides car parking on two levels. According to NCP there are 140 spaces of which two are disabled bays. Based on information provided by NCP, the average daily occupancy of the car park is 57% or approximately 80 vehicles per day.

2.1.8 On-street parking in the local area consists mainly of permit parking and pay and display on Great Russell Street, Adeline Place and Bedford Avenue. There is also space for two coaches outside St Giles Hotel on Bedford Avenue. The controlled parking zone CA-C operates between Monday and Saturday from 08.30 to 18.30. Double yellow lines restrict parking on Adeline Place and single yellow lines are in existence on Great Russell Street, however, loading and unloading is not restricted.

Pedestrian access

2.1.9 Pedestrians can currently access the site via the entrance on Great Russell Street. This provides access to stairs and a lift to the basement car park levels at -4 and -5.

2.1.10 There are footways on both sides of Great Russell Street, Adeline Place, Bedford Avenue and Tottenham Court Road and these roads are lit.

Cycle access

2.1.11 There are cycle routes in close proximity to the site. The closest signed cycle route is along Bloomsbury Street to the east and New Oxford Street and Charing Cross Road to the south, providing a link with Covent Garden further to the south and Oxford Circus to the west. There is a good network of cycle routes in the area that link to the wider route network. Figure 2 shows the existing cycle network in the vicinity of the development site.

2.1.12 There are three Transport for London (TfL) cycle hire docking stations within 400m of the site which give access to 78 stands. These are located at Great Russell Street (25), Earnshaw Street (17) and Soho Square (36). Cycle parking in the form of Sheffield type stands is available on Great Russell Street and Adeline Place.

Motorcycle access

2.1.13 The closest motorcycle parking bays are located at the eastern end of the section of Great Russell Street before it meets Adeline Place. There is space for 14 solo motorcycles parked perpendicular to the footway with rings to secure locks.

LBC West End project

2.1.14 In January 2015, the Council Cabinet approved the West End project which is a set of public realm proposals in and around Tottenham Court Road aimed at making the area more pedestrian and cycle friendly ahead of Crossrail completion in 2018. In the vicinity of the site, Bedford Avenue will be closed at the junction with Tottenham Court Road to all traffic except for cyclists. Paving upgrades are also proposed on many roads including Great Russell Street.

2.1.15 The Council expects the scheme to improve safety, reduce congestion and improve access to public transport.

Public Transport accessibility

2.1.16 The site is well located in terms of public transport, being within a short walk of Tottenham Court Road underground station and the high frequency bus routes that operate in the area.

Public Transport Accessibility Level (PTAL)

2.1.17 PTAL assessment is widely used by the London Boroughs to measure public transport accessibility and is supported by Transport for London. The site has a PTAL rating of 6b indicating excellent accessibility. This has been informed by the TfL Planning Information Database (http://webptals.gov.uk). A copy of the site-specific TfL PTAL calculation is included at Appendix A.

Underground

2.1.18 The site is located approximately 170m (two minute walk1) to the north of Tottenham Court Road station. The station provides interchange between Central Line (Ealing Broadway/West Ruislip to Epping) and Northern Line (Charing Cross branch) services.

[1] Walk speed of 80m per minute

2.1.19 The Central Line provides access to much of central London and a number of transport hubs including London Liverpool Street, Bank and Oxford Circus. The Central Line also offers interchange with the Piccadilly, Victoria, Circle, Bakerloo, District, Jubilee, and Waterloo & City lines and the Docklands Light Railway.

2.1.20 Tottenham Court Road is served by the Charing Cross branch of the Northern Line providing services between Morden in the south and High Barnet/Edgware in the north. This offers interchange with a number of lines including the Victoria, Jubilee and Bakerloo lines.

2.1.21 Holborn underground station is located approximately 700m (9 minute walk) to the east of the site, providing access to the Piccadilly Line in addition to Central Line services. The Piccadilly Line operates between Cockfosters and Uxbridge/Heathrow Terminal 5.

2.1.22 Oxford Circus underground station is located approximately 980m (12 minute walk) to the west of the site, providing access to the Bakerloo and Victoria Lines in addition to Central Line services. The Bakerloo Line operates between Harrow & Wealdstone and Elephant & Castle. The Victoria Line operates between Walthamstow Central and Brixton. Table 2.1 provides a summary of the underground services peak frequencies.

Table 2.1 - Underground weekday peak hour maximum frequencies

Underground services	AM peak hour frequency (two-way)	PM peak hour frequency (two-way)
Central Line	56	56
Northern Line	39	41
Piccadilly Line	46	48
Bakerloo Line	35	35
Victoria Line	56	56
Total	232	236

Source: TfL website

Crossrail

2.1.23 Tottenham Court Road station is currently undergoing a major upgrade to increase capacity and prepare for Crossrail. When completed in 2018, Crossrail will provide up to 24 services per hour linking Maidenhead and Heathrow Airport

in the west to Shenfield and Abbey Wood in the east via central London thus making the site even more accessible than at present.

Buses

2.1.24 There are a number of buses within easy walking distance of the site on Tottenham Court Road (110m), Bloomsbury Street (225m) and New Oxford Street (250m). The local bus network is shown in Figure 3. This shows that there are 18 frequent bus services on Oxford Street in the vicinity of the site. Eight of these services operate a 24 hour service.

2.1.25 Table 2.2 outlines the peak hour frequencies of the above bus services.

Table 2.2 - Local bus service weekday AM peak hour frequencies

Bus service	Route	AM peak hour frequency (two-way)
1	Tottenham Court Road - Canada Water	14
7	East Acton – Russell Square	16
8	Bow – Oxford Circus	15
10	Hammersmith – King's Cross	15
14	Putney Heath – Warren Street	18
19	Battersea Bridge – Finsbury Park	14
24	Hampstead Heath - Pimlico	20
25	Ilford – Oxford Circus	20
29	Trafalgar Square – Wood Green	25
38	Clapton - Victoria	30
55	Leyton – Oxford Circus	20
73	Stoke Newington - Victoria	27
98	Holborn – Willesden	16
134	Tottenham Court Road - North Finchley	24
171	Holborn - Catford	16
176	Tottenham Court Road - Penge	12
242	Tottenham Court Road - Homerton Hospital	14
390	Archway – Notting Hill Gate	14
Total		330

Source: TfL website

2.1.26 As can be seen, the 18 bus routes in the vicinity of the site provide a combined frequency of approximately 330 services per hour in both directions.

3 PROPOSED DEVELOPMENT

3.1.1 The proposed scheme comprises the complete refurbishment of the existing basement car park to provide a 166 bedroom hotel over two basement levels.

Proposed scheme

3.1.2 The proposed development would be a budget hotel providing basic accommodation with no ancillary facilities typical of more traditional hotels such as a restaurant, bar, conference rooms or gym facilities.

Pedestrian access

3.1.3 All public access to the building will be via the existing pedestrian access on Great Russell Street leading to a new lobby.

Cycle access

3.1.4 The proposed development would provide a secure cycle store off Adeline Place providing capacity for 16 bicycles in the form of 8 Sheffield stands. Additionally, the proposals include provision of 20 bicycle spaces (10 Sheffield stands) within the footway on Adeline Place which is within the development's boundary. This replaces 4 Sheffield stands which are currently provided on Adeline Place.

3.1.5 The proposed level of provision meets LBC's cycle parking standards (1 space per 500m^2 for staff and 1 space per 500m^2 for guests) which has been calculated as a total of 20 spaces based on the proposed GFA of 5,039m^2 The proposed cycle parking provision also meets TfL standards which require 1 space to be provided per 20 bedrooms for long-stay parking and 1 space to be provided per 50 bedrooms for short stay parking. Based on the 166 bedrooms proposed, the minimum requirement is calculated as 13 spaces.

Vehicular access

3.1.6 The existing crossovers providing access to the entry and exit ramps on Adeline Place will be removed and the footway reinstated. It is intended to retain the exit ramp for the transfer of goods (i.e. linen/refuse) between ground and basement levels using a small electric vehicle.

Taxis

3.1.7 Taxi pick-up and drop-off is expected to take place on Great Russell Street where single yellow lines are in place to facilitate this activity. The closest taxi waiting rank is located outside the St Giles Hotel in Bedford Avenue, where there is space for two taxis.

Parking

3.1.8 There is not proposed to be any car parking on site, due to the limited space and the proximity of the site to excellent high frequency public transport services. This is in line with LBC's policies which encourage car-free developments in areas of excellent public transport accessibility and within a Controlled Parking Zone (CPZ).

3.1.9 To ensure that all site users are aware of the travel choices available to them, information regarding sustainable travel choices will be available on the hotel's website.

Coaches

3.1.10 No coach visits are predicted to the proposed hotel. This is because of a booking policy that would be adopted by the hotel whereby group bookings would not be permitted. This would be incorporated in the hotel online booking system.

Servicing

Servicing trip generation

3.1.11 The proposed development would be a budget hotel providing basic accommodation with no ancillary facilities typical of more traditional hotels such as a restaurant, bar, conference rooms or gym facilities. The lack of ancillary facilities has implications for the servicing demand, limiting the number of vehicles that would require access to the site. For example the lack of any kitchen facilities removes the need for food and beverage deliveries; this in turn limits waste generation and the associated refuse collection trips. It is considered unrealistic to expect that the proposed development could in the future provide a different hotel format that could be different from the proposed budget arrangement. The gross internal area of the development is 5,039m^2 and there are 166 rooms proposed. On this basis, the ratio of the total floor area to a room is approximately 30m^2. Therefore, there would not be sufficient room to provide

ancillary facilities beyond what is proposed at the moment, even if operators were to change.

3.1.12 In assessing the servicing movements of the proposed development, empirical evidence has been obtained from other hotel developments. While advising on a hotel site in Greenwich, TPP met with the manager of Bermondsey Square hotel in London to discuss their servicing requirements. Typical delivery schedule was as follows:

- Laundry. 10 bags, six days per week in a transit size van;
- Most deliveries take less than 10 minutes; and
- Refuse collected every day – one 1100 litre Eurobin stored within building.

3.1.13 The Bermondsey Square Hotel also receives daily deliveries of food and weekly deliveries of dry goods as it includes a restaurant, a bar and three conference rooms. Therefore, in order to provide a realistic estimate of the servicing movements to the proposed hotel, the above figures have been adjusted to take account of the proposed budget nature of the accommodation. The service activity is therefore expected to be as follows:

- Up to 1 combined linen delivery/collection per day to be made by a transit size van;
- 1 – 2 refuse collections a week to be made by a private contractor; and
- An ad-hoc delivery of vending supplies made by a small van. For robustness, one delivery a week has been assumed.

3.1.14 Therefore, based on the above, on a typical day the hotel would generate one servicing movement. The maximum number of daily servicing trips to the site is at most predicted to be 3 visits. It should be noted that this would be expected to occur on one day a week only. Based upon empirical evidence at other hotel sites, typical duration of stay for deliveries would be less than 10 minutes.

Servicing arrangement

3.1.15 In developing the proposed servicing arrangement for the proposed development, different options have been considered.

3.1.16 The site has physical constrains which makes provision of a dedicated service area impossible due to the lack of sufficient space at ground level. There is a small area between the back of the footway on Adeline Place and the edge of the

building which is understood to be within the client's ownership. The area is shown in Inset 1 and as can be seen appears to be used for parking of cars. This will be removed following the redevelopment.

3.1.17 To retain this area for servicing is not considered feasible as the available space is not large enough to accommodate servicing vehicles. This would also be undesirable from the pedestrian environment point of view given that two crossovers would need to be provided on Adeline Place. This would also mean that this area would continue to be unavailable to pedestrians.

Inset 3.1 – Adeline Place – footway area

3.1.18 As suggested by LBC, a possibility of consolidating the servicing arrangements with St Giles Hotel in Bedford Avenue has also been explored. However, this is considered unfeasible from the commercial and practical point of view. As with every commercial establishment, the proposed hotel would like to have flexibility in terms of choosing their own suppliers (such as linen and laundering services supplier) which might be different to the one used by the St Giles.

3.1.19 Furthermore, it is considered that it would not be practical for servicing vehicles to utilise the Bedford Avenue loading bay as the servicing entrance to the proposed hotel is on Adeline Place.

3.1.20 Similarly, refuse collection would be best undertaken from Adeline Place where the proposed waste store would be located. If a refuse vehicle was to utilise the loading bay on Bedford Avenue this would require transporting of bins across the footway which is impractical and undesirable.

3.1.21 With the above in mind, it is proposed to service the development from Adeline Place where double yellow lines are in existence along the site frontage. These allow for a vehicle to stop in order to load/unload for an unlimited amount of time from the end of controlled hours (6.30pm) through to 11am the next day provided loading and unloading continues. Outside of these times, heavy goods vehicles (3.5 tonnes and above) can load for up to 40 minutes. The loading/unloading time for cars and light goods vehicles such as small vans is permitted for up to 20 minutes. It has been demonstrated that deliveries to the site would take much less than the maximum permitted stay. With this in mind and given the low servicing movements as demonstrated above, it is considered that servicing could take place on-street from Adeline Place without causing a negative impact on the highway network.

3.1.22 The above servicing arrangement was also proposed for the previous application (Reference: 2013/5075/P) which also proposed 166 bedrooms. It is noted that with regards to servicing the following was noted in the officer's report for the previous scheme:

> *'The proposed hotel servicing would be on-street. The TA indicates deliveries would be between 0700 to 1800hrs every day including Sundays and bank holidays. Linen related deliveries would be daily and vending machines twice weekly. There is a loading bay on Bedford Avenue. A recent appeal decision for a hotel in the area at Brook House (Refs: APP/X5210/A/13/2207166 & APP/X5210/E/13/2207168) found that on-street servicing of a hotel would not cause any material harm to the living conditions of local residents. It appears that on-street servicing is a common arrangement for hotels in the area and there is sufficient space to allow it. Notwithstanding, delivery, waste and servicing planning would be secured as part of a hotel management plan by planning obligation if the council were to consider approval.'*

3.1.23 Given that the number of bedrooms is the same as for the previous application, there should be no reason why the proposed servicing arrangement would now be considered unacceptable.

3.1.24 It is noted that the West End Project has been approved since the previous application submission, however, the associated proposals would not impact on the proposed servicing arrangement.

3.1.25 The West End Project is understood to introduce changes to some roads in the Tottenham Court Road area in order to enhance the pedestrian and cycle environment. However, these proposals will not remove the ability of existing businesses in the area to be serviced on-street.

3.1.26 For all roads where changes are proposed, plans are available on the Council's dedicated website (https://www.wearecamden.org/westendproject/). The plans relevant to the site are included in Appendix B. A review of the available information shows that in the immediate vicinity of the site, the junction of Tottenham Court Road and Bedford Avenue will be closed to traffic except for cyclists. However, the junction of Great Russell Street of Tottenham Court Road will continue to operate as per the existing situation. It is noted that paving upgrades are proposed on Great Russell Street.

3.1.27 No plans are available for Adeline Place which indicates that no changes are proposed to the road which could affect the proposed servicing arrangement. It is noted that in an overall area plan, Adeline Place has not been included by the Council.

4 TRIP GENERATION

4.1.1 This section considers the assumptions and conclusions of the Feasibility Study undertaken by JMP in September 2011, and assesses the expected trip generation characteristics of the proposals. The full Feasibility Study document is provided at Appendix C.

Existing use

4.1.2 The site is currently in use as a 140 space car park operated by NCP. Data provided by NCP for 2010/11 indicates that the car park had an average daily occupation of 57%. Further daily spot counts were undertaken in September 2011 and March 2012 by JMP and TPP at approximately 11.00. In order to further corroborate the NCP data, spot counts were also undertaken at the nearby NCP Shaftesbury car park at Selkirk House, Museum Street. The results are shown in Table 4.1.

Table 4.1 - Car park occupancy

Car park	Spaces	Occupied spaces		Occupancy (%)	
		13/09/11	19/03/12	13/09/11	19/03/12
Great Russell Street	140	49	40	35%	29%
Shaftesbury	228	111	44	49%	19%

4.1.3 The study, as previously undertaken by JMP and further checked by TPP indicates that there is sufficient spare capacity in car parks in the local area, and that displaced parking from the closure of the NCP at Great Russell Street could be accommodated locally. The surrounding streets are within the controlled parking zone CA-C, which restricts the ability of drivers to park on street.

4.1.4 The car park does not provide any designated motorcycle spaces which was confirmed during a site visit in February 2013. In addition, no motorcycles were found parked anywhere in the car park. As such the redevelopment of the site will not affect the number of motorcycle spaces available in the area.

4.1.5 The proposed removal of the car park is in line with the aspirations of the Council's West End Project which focuses on reducing traffic in the area and improving access for pedestrians and cyclists over motorised users.

Proposed development

4.1.6 The trip generation for the proposed hotel is based on an interrogation of the TRAVL database and first principles. Whilst the TRAVL database contains a number of hotel sites, these do not appear to be comparable to the proposed hotel. The main differences being that the majority of hotels include some form of parking and nearly all include a restaurant/food service.

4.1.7 From the sites available, the Days Inn in Lambeth, which was surveyed in 2002, appears to be the most appropriate. The site includes 162 rooms and 18 parking spaces. It is within walking distance of tourist attractions such as the Millennium Wheel and close to bus and underground services. It is well suited to both tourist and business customers on a relatively low budget. Although refreshments are available in the reception area, meals are not included so guests generally choose to eat out.

TRAVL assessment

4.1.8 To assess the potential trip generation of the hotel use, survey data for the Days Inn site has been used. Details of the TRAVL site selected are provided in Appendix D.

4.1.9 The derived trip rates, expressed as trips per room, are summarised in Table 4.2 for the typical highway morning and evening peak hours and the predicted hotel's peak hour (18:00 – 19:00). The Full TRAVL output is included in Appendix D.

4.1.10 The trip rates have been multiplied by the number of rooms to provide the total person trips. The total person trips are those trips undertaken by all modes to and from the development.

Table 4.2 - Proposed hotel: total person trips (166 rooms)

Time	Person trip rate			Person trips		
	In	Out	Total	In	Out	Total
08:00 – 09:00	0.148	0.290	0.438	25	48	73
17:00 – 18:00	0.278	0.099	0.377	46	16	63
18:00 – 19:00	0.302	0.333	0.636	50	55	106

4.1.11 The modal split for trips generated by the hotel has also been based on the selected TRAVL site. This is shown in Table 4.3 for the typical highway morning and evening peak hours and the predicted hotel's peak hour.

Table 4.3 - Proposed hotel: total multi-modal trips

Mode	08:00 – 09:00	17:00 – 18:00	18:00 – 19:00
Car driver	8 (16%)	4 (7%)	2 (2%)
Car passenger	6 (11%)	4 (8%)	1 (1%)
Taxi	4 (8%)	7 (12%)	7 (7%)
Walk + Public Transport	33 (65%)	41 (74%)	95 (90%)
Total	**50 (100%)**	**55 (100%)**	**106 (100%)**

4.1.12 The analysis shows that the majority of trips would be undertaken by public transport and on foot. This would be expected given the site's excellent public transport accessibility. Taking into account the lack of parking available on the site and the introduction of the Congestion Charging Zone since the survey was undertaken at the TRAVL site, it is reasonable to assume that the number of car trips will be lower than predicted here. In any case, public car parking is available in local council operated and NCP car parks (which operate 24 hours), where there is sufficient capacity to accommodate the number of vehicles that could be generated by this site. Given the nature of the proposed site, any cycle or motorcycle trips are likely to be made by staff. Cycle parking will be provided on-site in accordance with both LBC's and TfL's standards. Motorcycle parking is available in the local area with the closest motorcycle bays located at the eastern end of Great Russell Street.

Net change

4.1.13 It is reasonable to expect that there would be an overall increase as a result of the proposed redevelopment. However, by its nature, the current use generates almost solely car trips, whereas the proposed use will generate the majority of its trips on foot or public transport. Therefore there will be an overall reduction in car trips relative to the existing use. The next section considers the impact of the predicted trips on the different transport modes.

Impact assessment

4.1.14 It is noted that the survey of the selected TRAVL site does not provide a breakdown of the trips made on foot and by public transport ('Walk and PT mode split'). Therefore, a more detailed breakdown for the walking and public transport modes has been derived from the Office for National Statistics (ONS) 2011 Census 'travel to work daytime population data' at a local ward level. The resultant breakdown of the sustainable transport modes is provided in Table 4.4.

Table 4.4 - Walk & public transport modal split (Census data)

Mode	Split
Underground/Train	81.3%
Bus	13.1%
Walk	5.7%

4.1.15 The above split is based on the travel patterns of the daytime population and thus provides a useful indication as to the transport choices used by people travelling to the area. As would be expected the majority of trips are shown to be made by the underground. The above split has been applied to the walk & public transport trips predicted by the TRAVL analysis; this is provided in Table 4.5.

Table 4.5 - Proposed hotel sustainable trips

Mode	08:00 – 09:00	17:00 – 18:00	18:00 – 19:00
Underground/Train	27	33	77
Bus	4	5	12
Walk	2	2	5
Total	**33**	**41**	**95**

Impact assessment - walking

4.1.16 The proposed development is predicted to generate approximately 95 walk trips to and from the proposed development in its busiest hour. Of these, 89 would be from/towards the public transport services at the Underground station and the local bus stops. Approximately five walking trips are predicted to be undertaking solely on foot which is expected to be associated with hotel staff travel rather than guests.

4.1.17 The predicted 95 peak hour walking movements equate on average to approximately less than 2 pedestrians per minute which is considered low and is unlikely to be noticeable in a Central London location. It is also noted that the existing development has a potential for a considerable amount of pedestrian movements associated with drivers walking to and from the site having parked their cars and before retrieving them. Therefore, the addition of pedestrian movements as a result of the redevelopment would be even lower than suggested by the above paragraph.

4.1.18 The proposed redevelopment will enhance the pedestrian environment on Adeline Place by removing the existing ramp crossovers and reinstating the footway. The width of the footway will be increased on Adeline Place which is a significant improvement over the existing situation as the area between the back of the public footway and the building edge appears to be used for car parking.

4.1.19 The proposed redevelopment will also increase the number of public cycle parking Sheffield stands from eight to 20 spaces on Adeline Place.

Impact assessment - bus

4.1.20 Table 4.5 indicates a relatively low number of bus trips to and from the proposed hotel. As mentioned in section 2, there are 18 different bus routes available in the vicinity of the site providing a combined frequency of 330 services per hour (both directions). This level of provision is considered to be capable of accommodating the additional bus demand resulting from the proposed development.

Impact assessment - underground

4.1.21 The trip generation assessment indicates that the greatest increase in underground trips would take place between 18:00 – 19:00 hours when 77 additional underground trips are predicted. These would be distributed across the westbound and eastbound directions on the Central Line and northbound and southbound directions on the Northern Line.

4.1.22 Information from Transport for London (TfL) indicates that each Central and Northern Line train has capacity to carry over 900 passengers (both seated and standing). The latest line load data from 2013 provided by TfL indicates that the busiest section between 18:00 – 19:00 hours is on the Central Line in the

westbound direction between Tottenham Court Road and Oxford Circus with approximately 15,123 passengers using the service.

4.1.23 Therefore, if, as a worst case scenario, all development underground trips are distributed in this direction (which in reality will not be the case as some will use the Northern Line or arrive/depart from the other direction on the Central Line) the number of passengers would increase to approximately 15,200 passengers. There are 27 trains in the westbound direction and therefore, based on a train planning capacity of 900 passengers and a weekday PM peak hour frequency of 27 trains, the Central Line has a capacity of around 24,300 passengers per hour in the westbound direction. Therefore, the impact of the proposed development on the capacity of the Underground services would be negligible and the additional users are likely to fall within fluctuations in hourly and daily passenger volumes.

4.1.24 In addition, Tottenham Court Road station is currently undergoing a major upgrade to increase capacity and prepare for Crossrail. The project is due to be completed in 2016 and will deliver the following improvements:

- An enlarged ticket hall;
- New station entrances (at Dean Street and Charing Cross Road) and additional access point to the Northern and Central line platforms; and
- Additional escalators and five new lifts to provide step-free access.

4.1.25 When completed in 2018, Crossrail will provide up to 24 services per hour linking Maidenhead and Heathrow Airport in the west to Shenfield and Abbey Wood in the east via central London.

4.1.26 With the above in mind, the impact of the additional demand on public transport services resulting from the proposed development is considered insignificant.

5 TRANSPORT POLICY CONTEXT

5.1.1 This section reviews relevant transport policy to provide the context for assessing the planning application from a transport standpoint. The main policy documents in this regard are:-

- National Planning Policy Framework (March 2012);
- The London Plan (July 2011 and March 2015); and
- London Borough of Camden Local Development Framework (2010).

National Policy

National Planning Policy Framework (March 2012)

5.1.2 The National Planning Policy Framework (NPPF) was published on 27th March 2012 and supersedes all previous national planning policy documents such as PPS3 (Housing) and PPG13 (Transport). It focuses on a presumption in favour of sustainable development. One of the core planning principles relates to actively managing patterns of growth to make the fullest possible use of public transport, walking and cycling and focusing significant development in locations which are or can be made sustainable.

5.1.3 The NPPF recognises that the transport system should be balanced in favour of sustainable transport modes so that people are given a real choice about how they travel. It encourages solutions which support reductions in both greenhouse gas emissions and congestion.

5.1.4 Developments which generate significant movement should be located where the need to travel will be minimised and the use of sustainable transport modes can be maximised. All developments which generate significant amounts of movement should be supported by a Transport Statement or a Transport Assessment and required to provide a Travel Plan.

5.1.5 Developments should be located and designed where practical to:

- Accommodate the efficient delivery of goods and supplies.
- Give priority to pedestrian and cycle movements, and have access to high quality public transport facilities.

- Create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians.
- Incorporate facilities for charging plug-in and other ultra-low emission vehicles.
- Consider the needs of people with disabilities by all modes of transport.

5.1.6 In respect of parking standards, the NPPF states that local planning authorities should take into account the following:

- Accessibility of the development.
- Type, mix and use of development.
- Availability of and opportunities for public transport;
- Local car ownership levels.
- Overall need to reduce the use of high-emission vehicles.

Regional Policy

The London Plan (2011), Revised Early Minor Alterations to the London Plan (2013) and Further Alterations to the London Plan (March 2015).

5.1.7 The London Plan sets out the spatial development strategy for London, and provides the London-wide context within which individual Boroughs set their local planning policies. A key objective of the London Plan is to improve London's accessibility, which amongst other issues, includes tackling traffic congestion. An issue that assists closer integration between transport and spatial development is encouraging patterns and forms of development that reduce the need to travel – especially by car.

5.1.8 With regard to parking strategy, the Mayor in conjunction with the boroughs seeks to ensure that on-site parking at new developments is kept to a minimum. Maximum parking standards are set which can be reduced in areas of good public transport accessibility. The London Plan also recognises the importance of site accessibility and location as inherent within the objective of making the most sustainable and efficient use of space by encouraging development intensification in areas that have good public transport accessibility.

5.1.9 Policies 6.9 and 6.10 aim to increase cycling and walking in London, in particular, to achieve a 5% modal share by 2026 for cycling. The proposed

developments should therefore provide secure and accessible cycle parking facilities and ensure there is a high quality pedestrian environment and street space.

5.1.10 In March 2015, the Mayor published the 'Further Alterations to the London Plan' document which included revised standards for cycle parking. For hotel developments, the standards require 1 long stay cycle parking space per 20 bedrooms and 1 short stay cycle space per 50 bedrooms which the proposed development complies with.

Local policies

London Borough of Camden Local Development Framework (2010)

5.1.11 The Local Development Framework (LDF) is a series of documents that set out the strategy for managing growth and development in the borough for the 15-year period to 2025. The Core Strategy is the main document, setting out the planning vision and strategy.

5.1.12 Policy CS11 sets out the strategy for promoting sustainable and efficient travel. This includes improving strategic infrastructure to support growth; promoting sustainable travel by improving public spaces and pedestrian links, improve facilities for cyclists including cycling parking and working with TfL to improve the bus, rail and London Underground networks; and making private transport more sustainable by expanding car pools and car clubs, minimise parking at new developments through car-free developments in the most accessible locations and car capped schemes as well as promoting low emission vehicles.

5.1.13 Policy CS13 relates to tackling climate change. In relation to transport, it states that this includes ensuring patterns of land use that minimise the need to travel by car. Uses that generate a large number of journeys will be located in the part of the borough that are most accessible.

5.1.14 More detailed development management policies are set out in Camden Development Policies document. Policy DP16 sets out that Camden will seek to ensure that development is properly integrated with the transport network. Where transport implications are likely to be significant, the council will require a Transport Assessment to examine the impact of transport movements arising from the development.

5.1.15 The Council will resist development that fails to assess and address any need for movements to, from and within the site including connections to the highway and street spaces; additional transport capacity off-site where the existing or committed capacity cannot meet the additional demand generated by the development; and safe pick-up, drop-off and waiting areas for taxis, private cars and coaches, where this activity is likely to be associated with the development.

5.1.16 Policy DP17 sets out the council's policy related to walking, cycling and public transport. The council will promote walking, cycling and public transport use. Developments should make suitable provision for pedestrians, cyclists and public transport. This may include convenient, safe and well signed routes; other features that may be required such as seating, cycle parking; safe road crossings where needed; and bus stops, shelters and waiting areas. The council will resist development that would be dependent on travel by private motor vehicles.

5.1.17 Policy DP18 sets out the policy on car parking. The council will seek to ensure that developments provide the minimum necessary car parking provision and will expect car-free development in the central areas, around town centres and other areas within controlled parking zones that are easily accessible by public transport.

Summary

5.1.18 Overall, the proposed development is considered to be compliant with transport policy at local, regional and national level. The development is located in an area with excellent accessibility to public transport and local amenities. The proposals seek to encourage sustainable patterns of travel by not providing any on-site car parking and the removal of the car park is positive in reducing car trips.

5.1.19 The existing walking and cycling routes are adequate to accommodate the expected demand from the development. The assessments also show that the proposed development is not expected to impact on the wider highway or public transport network and therefore is considered acceptable in transport terms.

6 SUSTAINABLE TRAVEL

6.1.1 The site has excellent accessibility to public transport and a range of local amenities. This is expected to encourage use of more sustainable modes of travel by guests and employees on the site. The lack of car parking provision on site, and the cost of parking in local car parks will further serve to discourage use of cars.

6.1.2 To ensure that all site users are aware of the travel choices available to them, information regarding sustainable travel choices will be available on the hotel's website. The website will be used to promote the use of sustainable modes of travel and make users aware of the benefits of using these modes, including health, environmental and cost benefits. The provision of cycle parking on site will encourage greater use of this mode by staff.

7 SUMMARY AND CONCLUSIONS

7.1.1 Transport Planning Practice was appointed to prepare a Transport Statement in support of a planning application for the redevelopment of the existing NCP car park at 112a Great Russell Street, London to provide a 166 room hotel.

7.1.2 The application site is currently in use as a 140 space NCP car park, spread over two basement levels. Vehicular access is taken from Adeline Place, with pedestrian access taken from Great Russell Street.

7.1.3 The site is well located in terms of public transport, being within a short walk of Tottenham Court Road underground station and the high frequency bus routes that operate in the area. TfL's PTAL calculator indicates that the site has a PTAL of 6b, which indicates excellent accessibility.

7.1.4 All car parking would be removed from the site as part of the proposed redevelopment. Vehicles would be able to drop off and pick up passengers from Great Russell Street and Adeline Place.

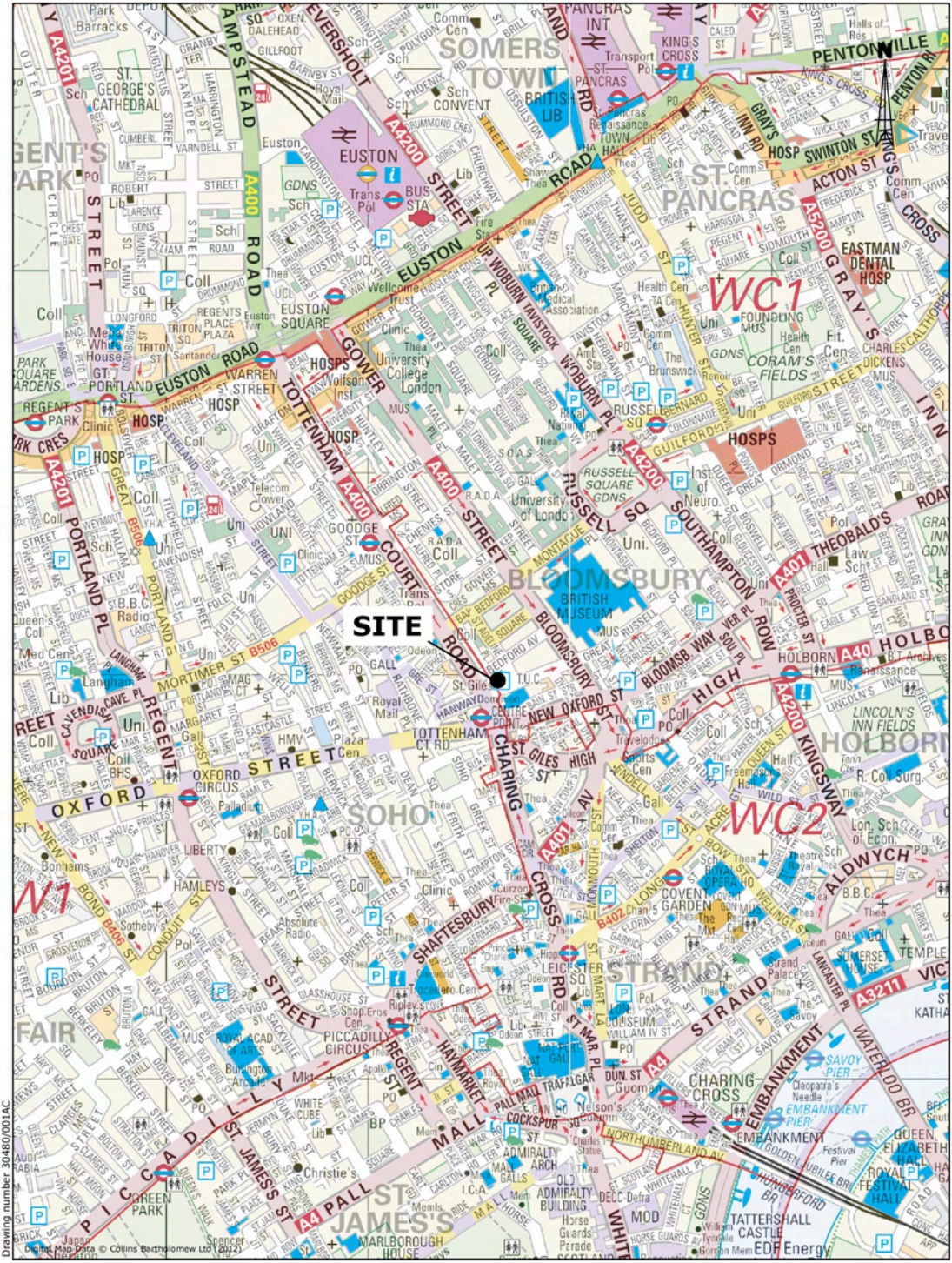
7.1.5 Cycle parking will be provided in accordance with LBC's and TfL's standards.

7.1.6 The proposals are in line with current policy which encourages car-free developments in areas of high accessibility. National, regional and local policies have been reviewed and it is considered that the proposals are in compliance.

7.1.7 The proposed trip generation for the site has been derived from the TRAVL database. The analysis has established the likely number persons and vehicle trips associated with the proposals. The results show that there is expected to be a net decrease in vehicle trips when compared to the former car park use. Whilst there is likely to be an increase in pedestrian and public transport movements, the impact on public transport services will be imperceptible given the site's excellent public transport accessibility. This will be further enhanced by the ongoing station improvements at Tottenham Court Road and the introduction of Crossrail services.

7.1.8 The proposed development is compatible with transport policies and would not give rise to any adverse transport impact. There is therefore no transport reason why the development should not proceed.

Figures

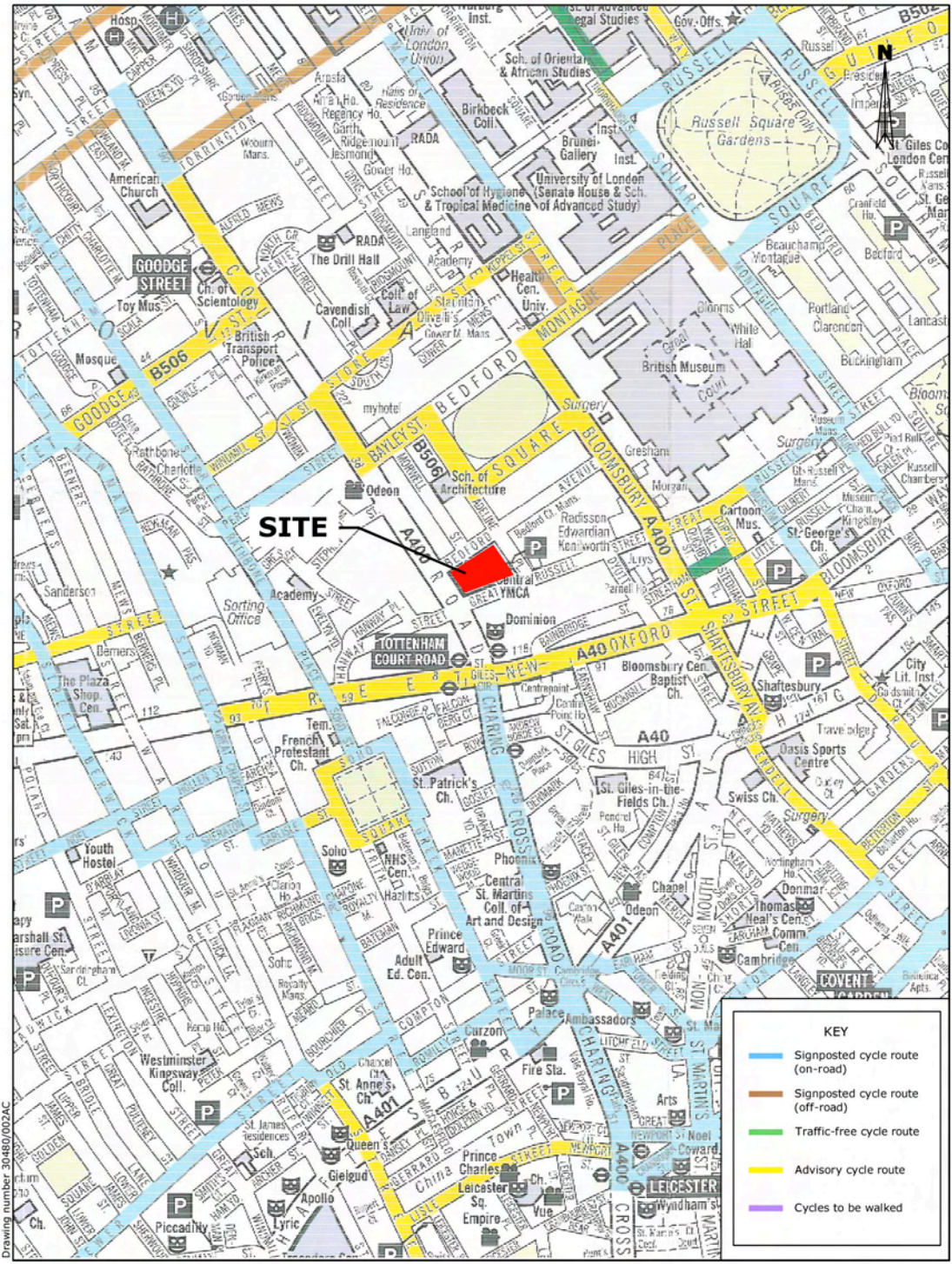


Drawing number 30480/001AC

Site location plan

Figure 1

TPP
transport planning practice
70 Cowcross Street
London, EC1M 6EL
t: 020 7608 0008
w: www.tppweb.co.uk

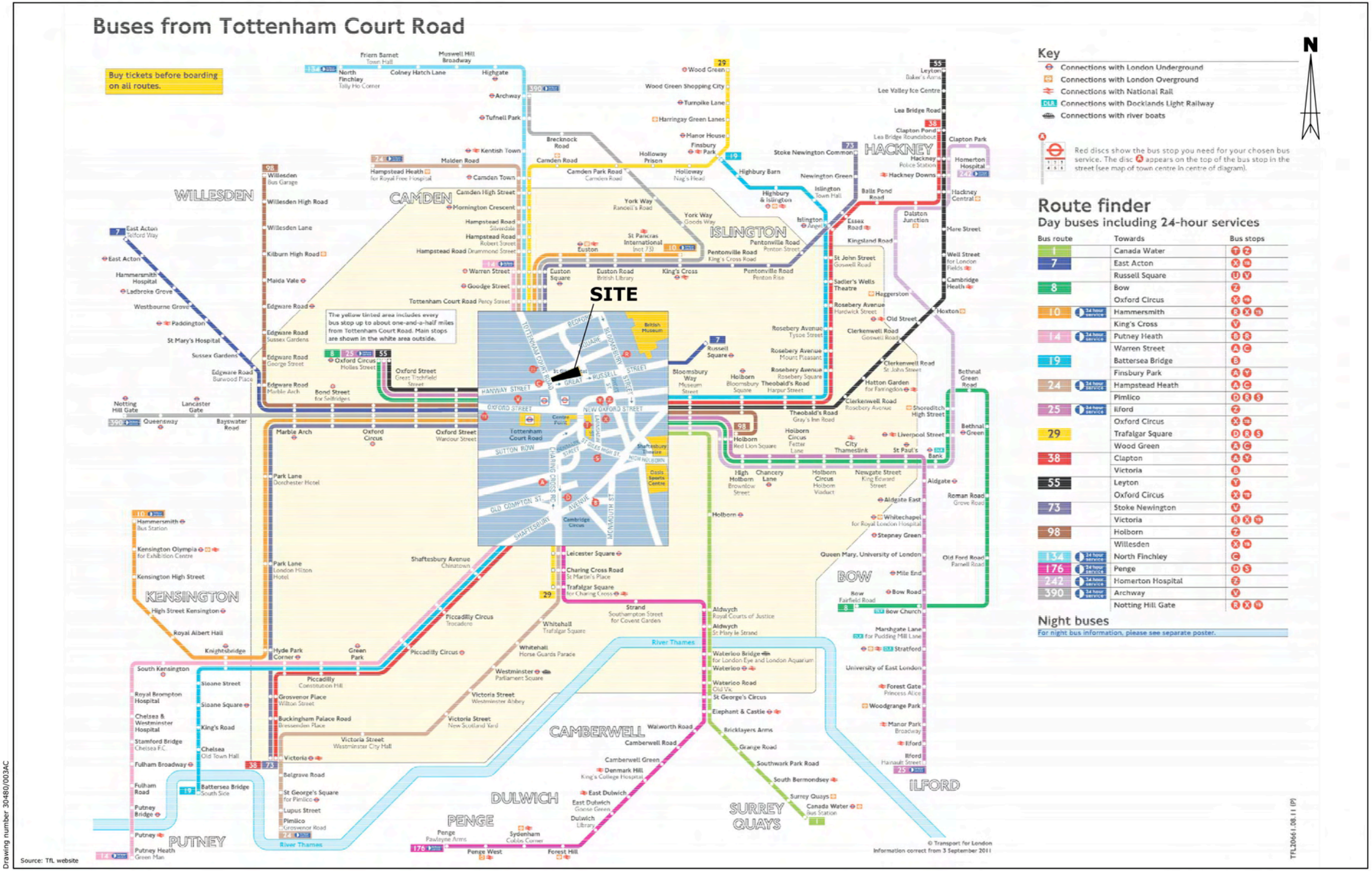


Based on Tfl London Cycle Guide Area 1 (2010)

TPP
transport planning practice
70 Cowcross Street
London, EC1M 6EL
t: 020 7608 0008
w: www.tppweb.co.uk

Local cycle network

Figure 2



Local bus network

Figure 3

TPP transport planning practice
70 Cowcross Street
London, EC1M 6EL
t: 020 7608 0008
w: www.tppweb.co.uk

Appendices

Appendix A

PTAL Output

PTAI Study Report File Summary

PTAI Run Parameters

PTAI Run	20121403164555
Description	20121403164555
Run by user	PTAL web application
Date and time	14/03/2012 16:45

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: 529850, 181498

Mode	Stop	Route	Distance (metres)	Frequency (vph)	Weight	Walk time (mins)	SWT (mins)	TAT (mins)	EDF	AI
BUS	BLOOMSBURY STREET	73	226.15	18.0	0.5	2.83	3.67	6.49	4.62	2.31
BUS	BLOOMSBURY STREET	10	226.15	10.0	0.5	2.83	5.0	7.83	3.83	1.92
BUS	NEW OXFORD ST CENTRE PNT	98	252.29	10.0	0.5	3.15	5.0	8.15	3.68	1.84
BUS	NEW OXFORD ST CENTRE PNT	7	252.29	9.0	0.5	3.15	5.33	8.49	3.53	1.77
BUS	BLOOMSBURY STREET	390	226.15	8.0	0.5	2.83	5.75	8.58	3.5	1.75
BUS	NEW OXFORD ST CENTRE PNT	25	252.29	8.0	0.5	3.15	5.75	8.9	3.37	1.68
BUS	NEW OXFORD ST CENTRE PNT	55	252.29	9.0	0.5	3.15	5.33	8.49	3.53	1.77
BUS	NEW OXFORD ST CENTRE PNT	8	252.29	10.0	0.5	3.15	5.0	8.15	3.68	1.84
BUS	NEW OXFORD ST CENTRE PNT	38	252.29	12.0	0.5	3.15	4.5	7.65	3.92	1.96
BUS	NEW OXFORD ST CENTRE PNT	19	252.29	10.0	0.5	3.15	5.0	8.15	3.68	1.84
BUS	TOTTENHAM CT RD DOMINION	14	107.32	13.0	0.5	1.34	4.31	5.65	5.31	2.66

BUS	NEW OXFORD ST CENTRE PNT	242	252.29	10.0	0.5	3.15	5.0	8.15	3.68	1.84
BUS	BLOOMSBURY NEW OXFORD ST	171	377.98	7.5	0.5	4.72	6.0	10.72	2.8	1.4
BUS	NEW OXFORD ST CENTRE PNT	1	252.29	8.0	0.5	3.15	5.75	8.9	3.37	1.68
BUS	TOTTENHAM CT RD DOMINION	29	107.32	15.0	1.0	1.34	4.0	5.34	5.62	5.62
BUS	TOTTENHAM CT RD DOMINION	24	107.32	12.0	0.5	1.34	4.5	5.84	5.14	2.57
BUS	NEW OXFORD ST CENTRE PNT	176	252.29	7.5	0.5	3.15	6.0	9.15	3.28	1.64
BUS	TOTTENHAM CT RD DOMINION	134	107.32	12.0	0.5	1.34	4.5	5.84	5.14	2.57
LU LRT	Tottenham Court Road	Northern Line High Barnet to Kennington	205.41	5.4	0.5	2.57	6.31	8.87	3.38	1.69
LU LRT	Tottenham Court Road	Northern Line Edgware to Morden	205.41	8.3	1.0	2.57	4.36	6.93	4.33	4.33
LU LRT	Tottenham Court Road	Northern Line Kennington to Edgware	205.41	5.0	0.5	2.57	6.75	9.32	3.22	1.61

LU LRT	Tottenham Court Road	Northern Line Morden to Mill Hill East	205.41	1.0	0.5	2.57	30.75	33.32	0.9	0.45
LU LRT	Tottenham Court Road	Northern Line Mill Hill East to Kennington	205.41	4.3	0.5	2.57	7.73	10.29	2.91	1.46
LU LRT	Tottenham Court Road	Northern Line Morden to High Barnet	205.41	3.7	0.5	2.57	8.86	11.43	2.63	1.31
LU LRT	Tottenham Court Road	Central Line Epping to West Ruislip	205.41	2.3	0.5	2.57	13.79	16.36	1.83	0.92
LU LRT	Tottenham Court Road	Central Line White City to Loughton	205.41	1.0	0.5	2.57	30.75	33.32	0.9	0.45
LU LRT	Leicester Square	Piccadilly Line Heathrow T5 to Cockfosters	757.01	6.0	0.5	9.46	5.75	15.21	1.97	0.99
LU LRT	Leicester Square	Piccadilly Line Uxbridge to Cockfosters	757.01	2.7	0.5	9.46	11.86	21.32	1.41	0.7
LU LRT	Tottenham Court Road	Central Line Grange Hill to North Acton	205.41	0.3	0.5	2.57	100.75	103.32	0.29	0.15
LU LRT	Leicester Square	Piccadilly Line Rayners Lane to Cockfosters	757.01	2.7	0.5	9.46	11.86	21.32	1.41	0.7

LU LRT	Tottenham Court Road	Central Line Hainault to White City	205.41	1.0	0.5	2.57	30.75	33.32	0.9	0.45
LU LRT	Tottenham Court Road	Central Line Epping to Northolt	205.41	0.3	0.5	2.57	100.75	103.32	0.29	0.15
LU LRT	Leicester Square	Piccadilly Line Cockfosters to Heathrow Terminal 4	757.01	6.0	0.5	9.46	5.75	15.21	1.97	0.99
LU LRT	Tottenham Court Road	Central Line Ealing Broadway to Newbury Park	205.41	0.7	0.5	2.57	43.61	46.17	0.65	0.32
LU LRT	Tottenham Court Road	Central Line Newbury Park to White City	205.41	0.3	0.5	2.57	100.75	103.32	0.29	0.15
LU LRT	Tottenham Court Road	Central Line Epping to North Acton	205.41	1.0	0.5	2.57	30.75	33.32	0.9	0.45
LU LRT	Tottenham Court Road	Central Line Debden to Northolt	205.41	0.7	0.5	2.57	43.61	46.17	0.65	0.32
LU LRT	Leicester Square	Piccadilly Line Oakwood to Rayners Lane	757.01	0.7	0.5	9.46	43.61	53.07	0.57	0.28

LU LRT	Leicester Square	Piccadilly Line Ruislip to Arnos Grove	757.01	1.3	0.5	9.46	23.83	33.29	0.9	0.45
LU LRT	Leicester Square	Piccadilly Line Ruislip to Cockfosters	757.01	1.3	0.5	9.46	23.83	33.29	0.9	0.45
LU LRT	Tottenham Court Road	Central Line Ruislip Gardens to Hainault	205.41	1.0	0.5	2.57	30.75	33.32	0.9	0.45
LU LRT	Leicester Square	Piccadilly Line Arnos Grove to Northfields	757.01	2.3	0.5	9.46	13.79	23.26	1.29	0.64
LU LRT	Tottenham Court Road	Central Line West Ruislip to Newbury Park	205.41	0.7	0.5	2.57	43.61	46.17	0.65	0.32
LU LRT	Tottenham Court Road	Central Line Ruislip Gardens to Newbury Park	205.41	1.7	0.5	2.57	18.4	20.96	1.43	0.72
LU LRT	Tottenham Court Road	Central Line Loughton to West Ruislip	205.41	0.7	0.5	2.57	43.61	46.17	0.65	0.32
LU LRT	Tottenham Court Road	Central Line Hainault to West Ruislip	205.41	3.3	0.5	2.57	9.84	12.41	2.42	1.21
LU LRT	Tottenham Court Road	Central Line Debden to West Ruislip	205.41	1.0	0.5	2.57	30.75	33.32	0.9	0.45

LU LRT	Tottenham Court Road	Central Line North Acton to Loughton	205.41	0.7	0.5	2.57	43.61	46.17	0.65	0.32
LU LRT	Tottenham Court Road	Central Line North Acton to Newbury Park	205.41	0.3	0.5	2.57	100.75	103.32	0.29	0.15
LU LRT	Tottenham Court Road	Central Line Hainault to North Acton	205.41	1.0	0.5	2.57	30.75	33.32	0.9	0.45
LU LRT	Tottenham Court Road	Central Line White City to Epping	205.41	0.7	0.5	2.57	43.61	46.17	0.65	0.32
LU LRT	Tottenham Court Road	Central Line Ealing Broadway to Epping	205.41	4.0	0.5	2.57	8.25	10.82	2.77	1.39
LU LRT	Tottenham Court Road	Central Line Hainault to Ealing Broadway	205.41	5.7	0.5	2.57	6.01	8.58	3.5	1.75
LU LRT	Tottenham Court Road	Central Line Hainault to Northolt	205.41	1.3	0.5	2.57	23.83	26.39	1.14	0.57
LU LRT	Leicester Square	Piccadilly Line Rayners Lane to Arnos Grove	757.01	1.3	0.5	9.46	23.83	33.29	0.9	0.45

LU LRT	Leicester Square	Piccadilly Line Arnos Grove to Uxbridge	757.01	1.3	0.5	9.46	23.83	33.29	0.9	0.45
LU LRT	Tottenham Court Road	Central Line Loughton to Ealing Broadway	205.41	0.3	0.5	2.57	100.75	103.32	0.29	0.15
LU LRT	Tottenham Court Road	Central Line Ruislip Gardens to Epping	205.41	1.7	0.5	2.57	18.4	20.96	1.43	0.72
LU LRT	Tottenham Court Road	Central Line Grange Hill to West Ruislip	205.41	1.0	0.5	2.57	30.75	33.32	0.9	0.45
LU LRT	Tottenham Court Road	Central Line Ruislip Gardens to Loughton	205.41	0.3	0.5	2.57	100.75	103.32	0.29	0.15
LU LRT	Leicester Square	Piccadilly Line Oakwood to Uxbridge	757.01	0.7	0.5	9.46	43.61	53.07	0.57	0.28
LU LRT	Tottenham Court Road	Central Line Grange Hill to White City	205.41	0.7	0.5	2.57	43.61	46.17	0.65	0.32
LU LRT	Tottenham Court Road	Central Line Debden to Ealing Broadway	205.41	0.7	0.5	2.57	43.61	46.17	0.65	0.32

LU LRT	Leicester Square	Piccadilly Line Heathrow Terminal 4 to Arnos Grove	757.01	2.0	0.5	9.46	15.75	25.21	1.19	0.59
LU LRT	Tottenham Court Road	Central Line Grange Hill to Ealing Broadway	205.41	1.0	0.5	2.57	30.75	33.32	0.9	0.45
LU LRT	Tottenham Court Road	Central Line Loughton to Northolt	205.41	0.3	0.5	2.57	100.75	103.32	0.29	0.15
LU LRT	Tottenham Court Road	Central Line Grange Hill to Northolt	205.41	0.3	0.5	2.57	100.75	103.32	0.29	0.15
LU LRT	Leicester Square	Piccadilly Line Oakwood to Ruislip	757.01	0.7	0.5	9.46	43.61	53.07	0.57	0.28
LU LRT	Tottenham Court Road	Central Line Debden to Ruislip Gardens	205.41	0.3	0.5	2.57	100.75	103.32	0.29	0.15
LU LRT	Oxford Circus	Bakerloo Line Stonebridge Park to Elephant & Castle	957.49	5.0	0.5	11.97	6.75	18.72	1.6	0.8
LU LRT	Oxford Circus	Bakerloo Line Queen's Park to Elephant &	957.49	11.0	0.5	11.97	3.48	15.45	1.94	0.97

		Castle								
LU LRT	Oxford Circus	Victoria Line Brixton to Walthamstow Central	957.49	15.7	0.5	11.97	2.66	14.63	2.05	1.03
LU LRT	Oxford Circus	Bakerloo Line Waterloo to Harrow & Wealdstone	957.49	0.3	0.5	11.97	100.75	112.72	0.27	0.13
LU LRT	Oxford Circus	Victoria Line Seven Sisters to Brixton	957.49	11.7	0.5	11.97	3.31	15.28	1.96	0.98
LU LRT	Oxford Circus	Bakerloo Line Elephant & Castle to Harrow & Wealdstone	957.49	5.7	0.5	11.97	6.01	17.98	1.67	0.83
LU LRT	Oxford Circus	Bakerloo Line Waterloo to Queen's Park	957.49	1.0	0.5	11.97	30.75	42.72	0.7	0.35

NR SAP Points Not Found

Total AI for this POI is 76.64.

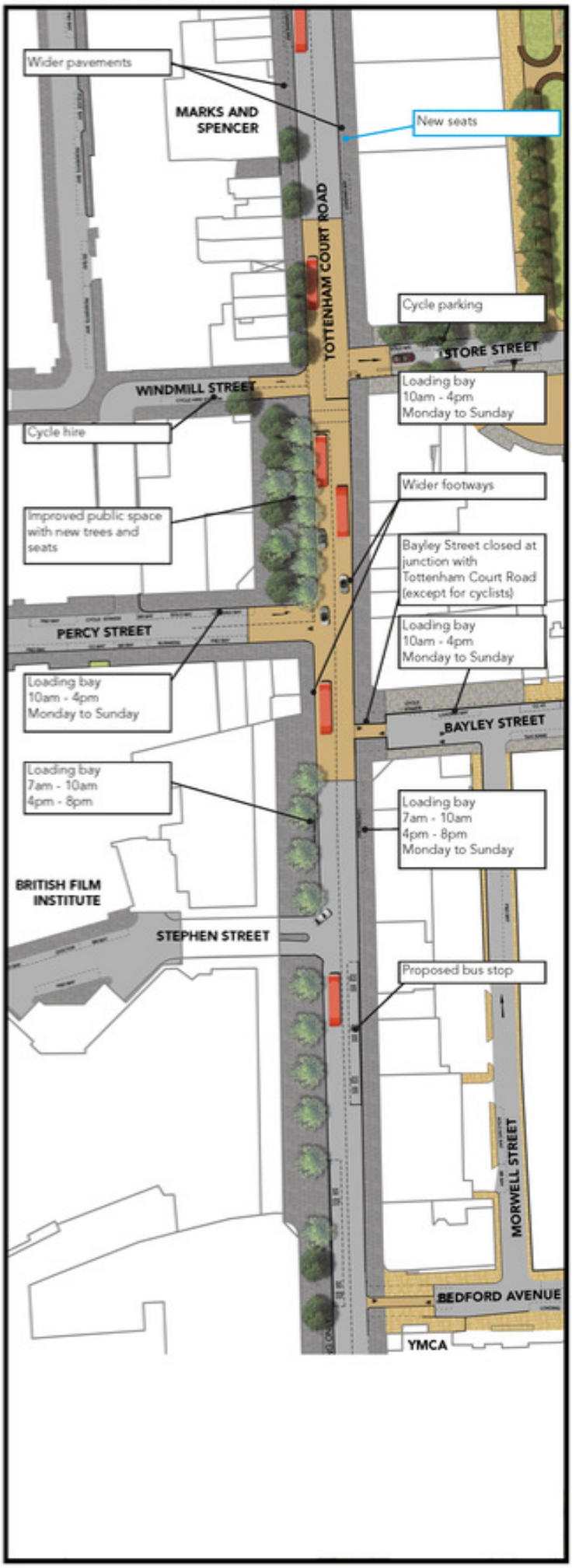
PTAL Rating is 6b.

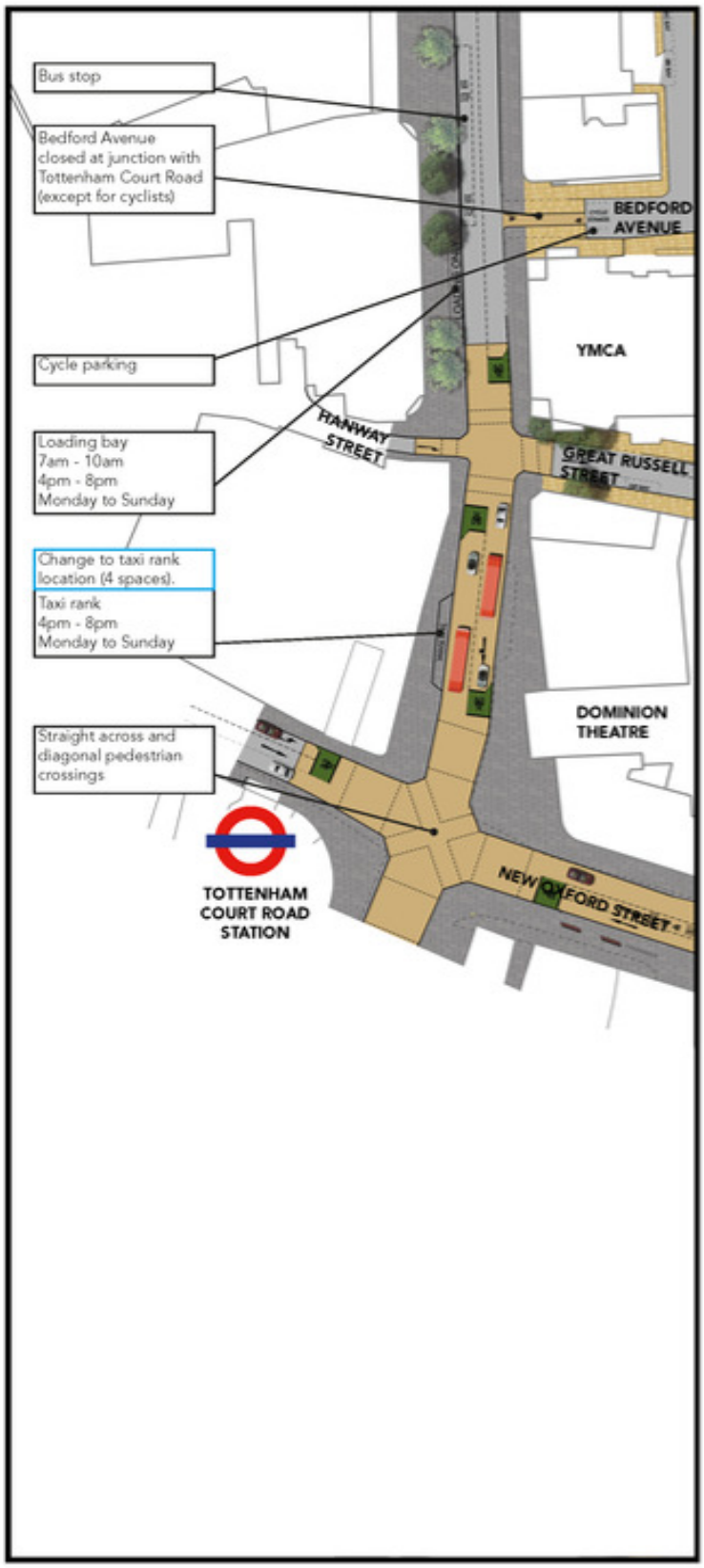
Appendix B

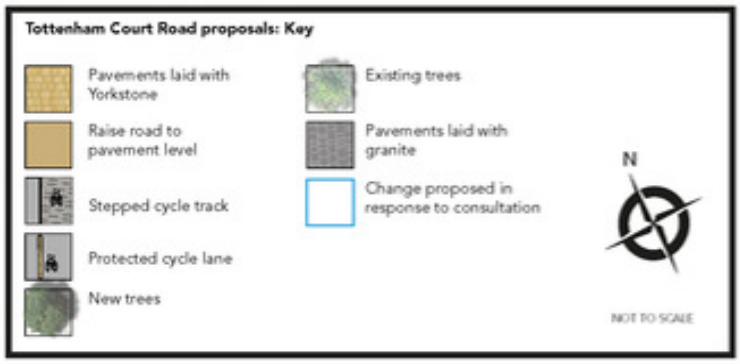
West End Project Plans

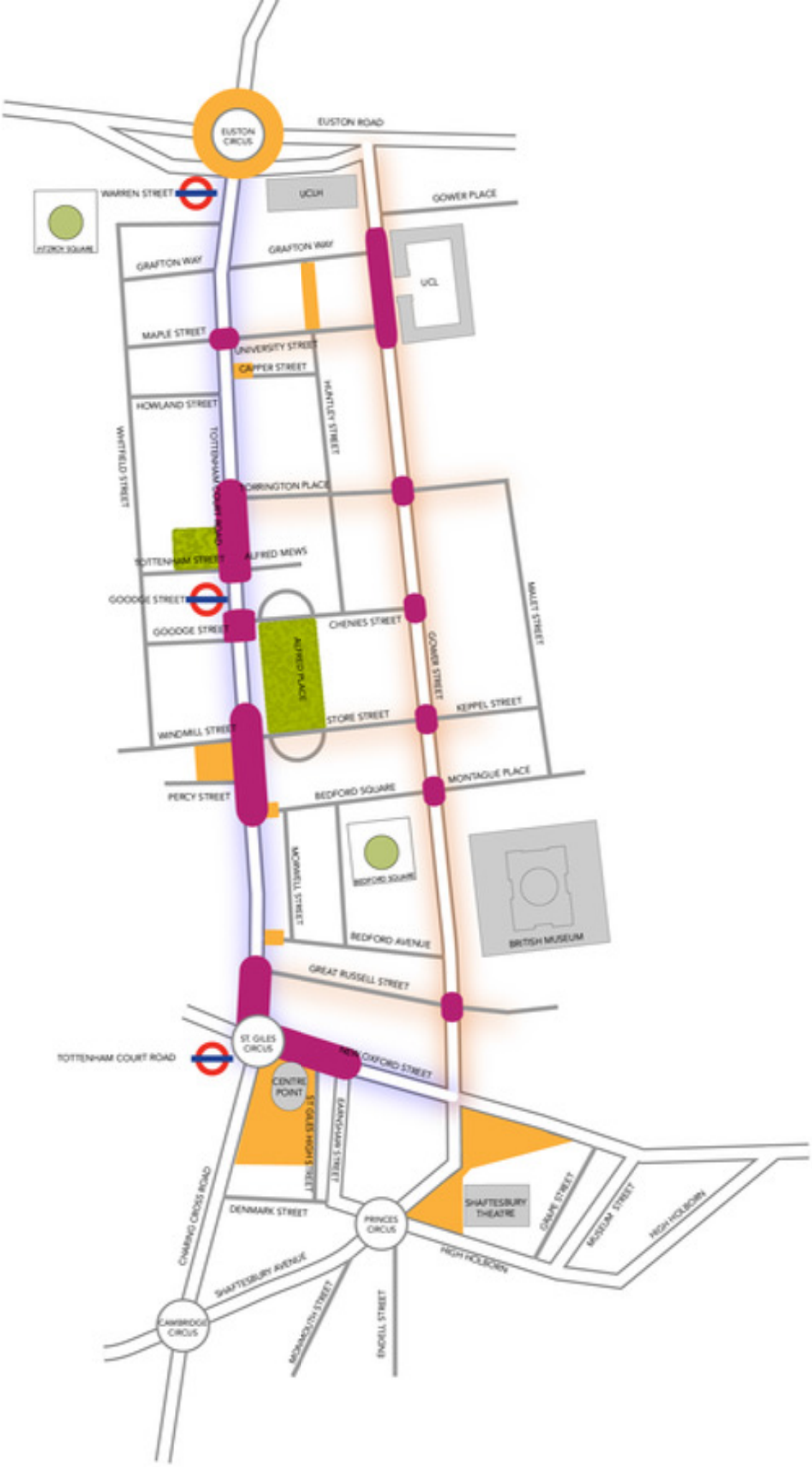
Tottenham Court Road (South) Proposals

Two way street for buses and cyclists only between 8am and 7pm from Monday to Saturday, except in sections for access.








EUSTON CIRCUS
EUSTON ROAD
WARREN STREET
FITZROY SQUARE
UCLH
GOWER PLACE
GRAFTON WAY
GRAFTON WAY
UCL
MAPLE STREET
UNIVERSITY STREET
CAPPER STREET
HUNTLEY STREET
HOWLAND STREET
WHITFIELD STREET
TOTTENHAM COURT ROAD
TORRINGTON PLACE
TOTTENHAM STREET
ALFRED MEWS
GOODGE STREET
GOODGE STREET
CHENIES STREET
GOWER STREET
MALLET STREET
ALFRED PLACE
STORE STREET
KEPPEL STREET
WINDMILL STREET
PERCY STREET
BEDFORD SQUARE
MONTAGUE PLACE
MORWELL STREET
BEDFORD SQUARE
BEDFORD AVENUE
BRITISH MUSEUM
GREAT RUSSELL STREET
ST GILES CIRCUS
TOTTENHAM COURT ROAD
NEW OXFORD STREET
CENTRE POINT
ST GILES HIGH STREET
EARNHAM STREET
CHARING CROSS ROAD
DENMARK STREET
PRINCES CIRCUS
SHAFTESBURY THEATRE
GRAPE STREET
MUSEUM STREET
HIGH HOLBORN
HIGH HOLBORN
SHAFTESBURY AVENUE
CAMBRIDGE CIRCUS
MONMOUTH STREET
ENDELL STREET
NEW / IMPROVED PARK
ROAD CLOSURE + NEW / IM
PUBLIC SPACE
RAISED AREAS
YORKSTONE PAVEMENT
GRANITE PAVEMENT

Appendix C

JMP Feasibility Study

TPP
transport planning practice

112 Great Russell Street Car park

Feasibility Study

Final

112 Great Russell Street Car park

Feasibility Study

Final

JMP Consultants Limited
3 Harbour Exchange Square
London E14 9GE

T 020 7536 8040
F 020 7005 0462
E docklands@jmp.co.uk

www.jmp.co.uk

Job No. ST12038

Report No. 1

Prepared by COB

Verified DW

Approved by PM

Status Draft

Issue No. 1

Date 21 September 2011

112 Great Russell Street Car park

Feasibility Study

Final

Contents Amendments Record

This document has been issued and amended as follows:

Status/Revision	Revision description	Issue Number	Approved By	Date
Draft		1	PM	14/09/2011
Final		1	PM	21/09/2011

Contents

Tables and Figures

1 Introduction

1.1 JMP Consultants Limited (JMP) has been commissioned by Criterion Capital Limited (the 'Applicant') to prepare a short Technical Note (the 'note') establishing whether there would be any potential issues with the displacement of parking, associated with the loss of an NCP Car Park located at 112 Great Russell Street (the 'Site').

1.2 The Local Planning Authority is Camden Borough Council (the 'Borough').

1.3 The Note is designed to review; the current Policy; the Local Baseline Conditions and analyse what impact, if any removing the Great Russell Car Park might have on parking in the surrounding area.

Report Scope

1.4 The Report structure is as follows

- **Section 2: Key Policies –** Provides an outline of the Borough's key policies relating to parking provision.
- **Chapter 3 Baseline Conditions –** Provides an outline and review of existing 'baseline' parking conditions at the Site and the immediate surrounding area.
- **Chapter 4: Parking Analysis –** Provides an analysis of the parking occupancy at the Site and other local car parks
- **Chapter 5: Summary & Conclusion –** Provides a summary and conclusion by highlighting the key points raised within the Note.

2 Key Policies

General

2.1 It is noted that Camden's policy aims to reduce the use of car single occupancy car trips within the Borough. A key element of reducing car trips within the Borough is the reduction or restriction in car parking.

Camden Council, Camden Local Development Framework, Camden Development Policies, 2010

2.2 The Camden Council Camden Development Policy, 2010, DP18 and DP19 defines both the current and future transport strategy within Camden for new development and the removal of off-street parking.

2.3 DP18 Policy states that the council will seek to ensure that developments provide the minimum necessary car parking provision.

2.4 Section 18.1 describes that 'limiting the supply of car-parking is a key factor in addressing congestion within the borough and encouraging people to use more sustainable travel.

2.5 Section 18.2 seeks to 'encouraging car free lifestyles' and to 'reduce commuting by car and promote car-free work-related journeys'.

2.6 Section 18.5 refers to the parking standards of the borough emphasising encouraging people to 'consider all alternatives to private car travel'.

2.7 Section 18.7 describes the maximum car parking standards for employment and the intention to limit the potential for commuting by private car.

2.8 DP19 Policy states that 'the council ... will encourage the removal of surplus car parking spaces'.

2.9 Section 19.14 portrays a view to promoting more sustainable modes of travel through the council generally welcoming 'proposals to reduce the amount of off-street parking in the borough', in accordance with it not leading to shortfalls against 'minimum parking standards relating to bicycles, people with disabilities, service vehicles, coaches and taxis'. For it not to 'cause difficulties for existing users, particularly if the spaces are used by shoppers, by nearby residents, or for the operational needs of a business' or for it to 'displace parking to controlled parking zones, particularly in identified areas of parking stress'.

2.10 The policy review shows that the removal of the car parking space is in line with the overarching Borough policy of reducing car trips.

3 Baseline

3.1 It is important that baseline conditions are accurately established so that the context of any potential future development at the Site, and its potential impact on the surrounding transport and highway networks, can be fully understood.

General

3.2 The Site is located in the London Borough of Camden, just to the east of the junction between Tottenham Court Road and Great Russell Street. The immediate surrounding streets are a mix of residential and retail, with numerous restaurants accompanied by museums, colleges and a casino.

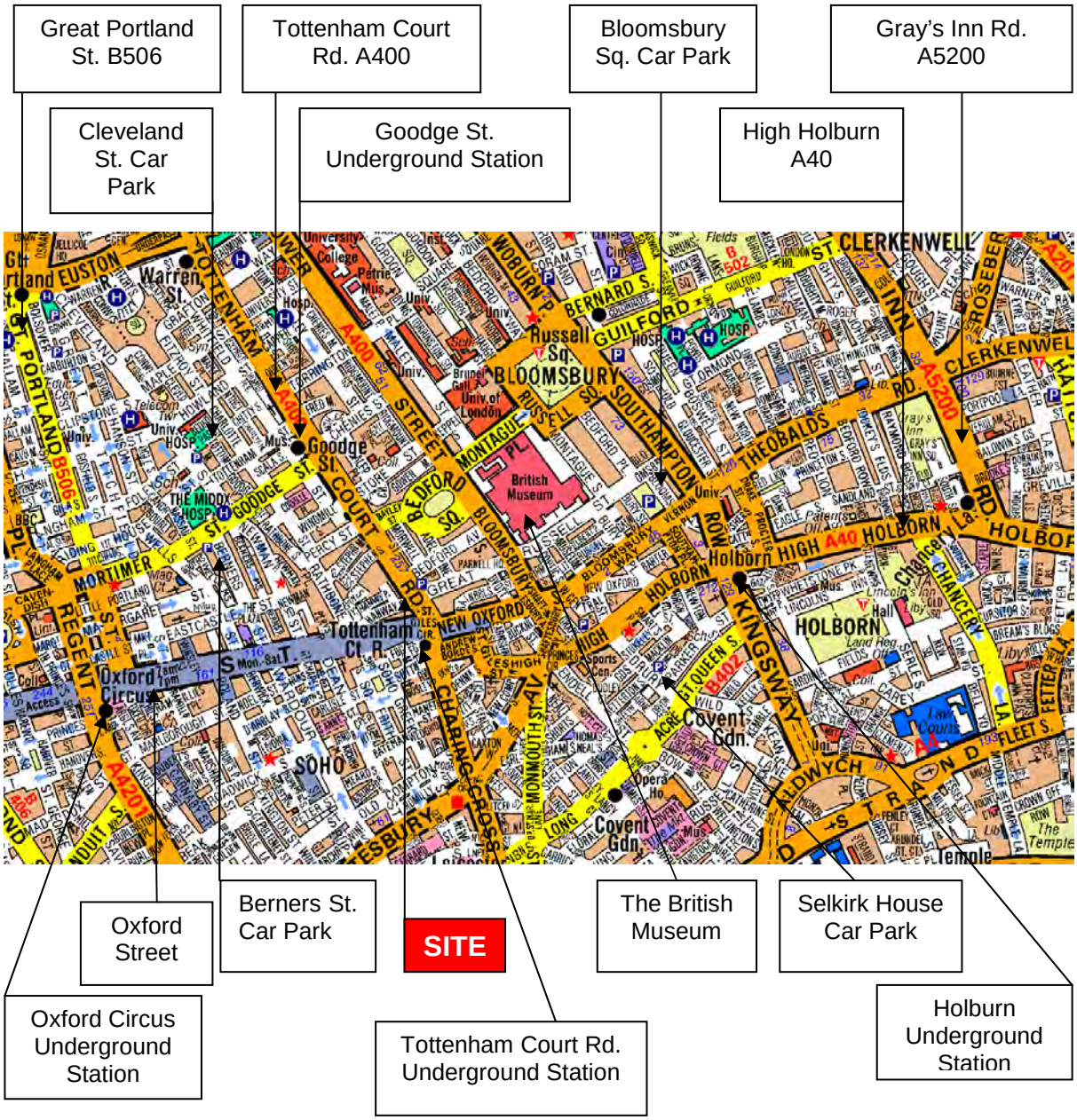
3.3 Tottenham Court Road Underground Station (on the Central and Northern line) is located approximately 300m to the south of the Site station and Holburn Underground (on the Central and Piccadilly line) is located approximately 500m to the East to the Site.

3.4 The site falls in the Controlled Parking Zone (CPZ) of CA-C, Holborn & Covent Garden. Residents Bay are controlled 24hrs a day, 7 days a week and Parking controls on single yellow lines/Pay & Display bays are Mon-Sat 8.30-18.30.(*http://www.camden.gov.uk/ccm/cms-service/stream/asset/?asset_id=2262249*).

3.5 It is also noted that the Site is within the Congestion Charging Zone, which discourages the use of car trips.

3.6 **Figure 3.1** provides a map of the local area.

Figure 3.1 Site Plan



Reproduced by permission of Geographers A-Z Map Co. Ltd Licence A1036.

Existing Land Use

3.7 The Site is currently used as a 24hr multi-storey car park, with capacity for up to 140 parking spaces for vehicles with two disabled spaces. There is a height limit of 1.88m for vehicles entering and exiting the car park.

3.8 The typical cost of the car park is;

- £5.00 / 1 hour
- £1.00 / 2 hours
- £15.00 / 3 hours

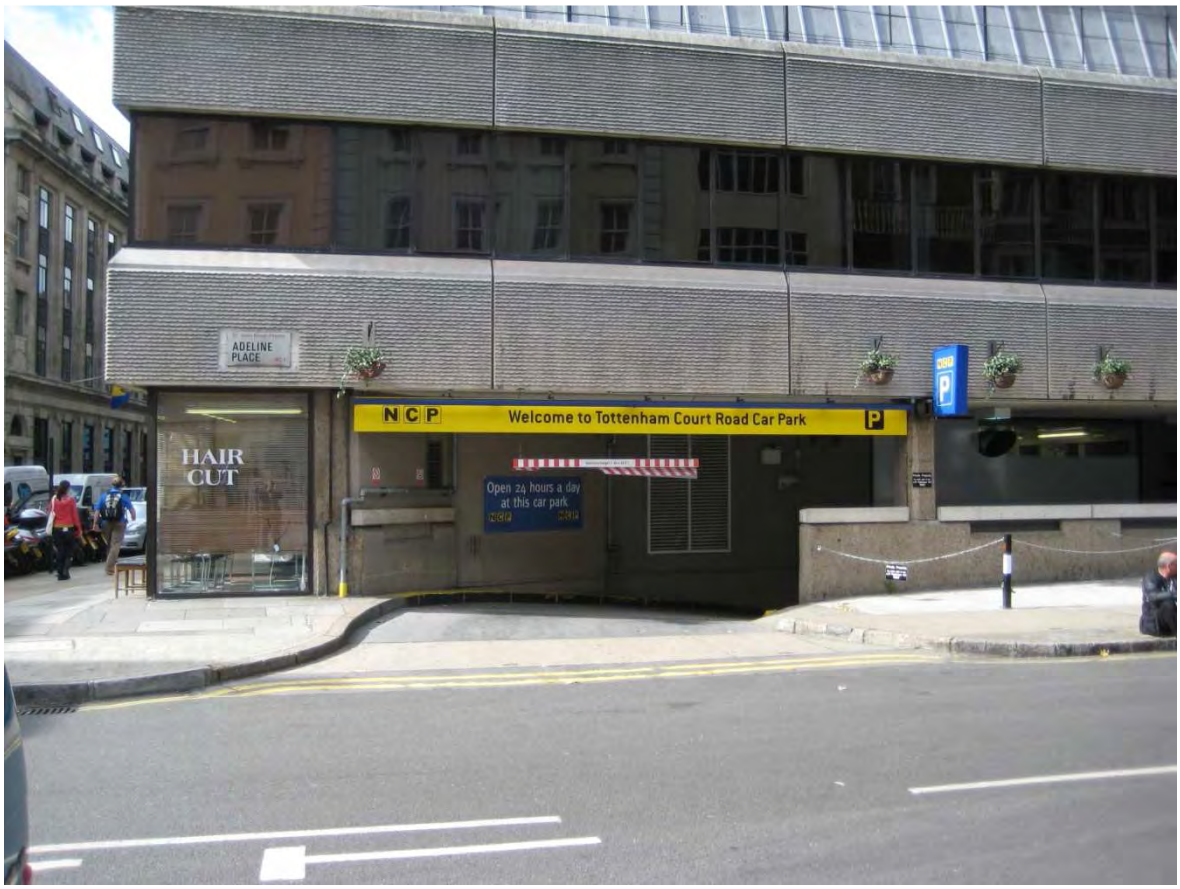
- £20.00 / 4 hours
- £25.00 / 5 hours
- £30.00 / 24 hours
- £5.00 / motorcycle

Existing Access Arrangements

3.9 The Site is currently accessed via the entrance to the car park off of Adeline Place.

3.10 The access is shown in **Figure 3.2** below.

Figure 3.2 Site Access



Accessibility

3.11 Accessibility to places of employment, key services (e.g. education including primary education, health, retail and leisure) and infrastructure by sustainable modes of transport (i.e. passenger transport, walking and cycling) is a key policy objective at national, regional (i.e. London-wide) and local (i.e. Borough-wide) levels. Accessibility is also essential in ensuring quality of life and is key to the cross-cutting social inclusion agenda.

Public Transport Accessibility

3.12 The industry standard accessibility indicator for London, the Public Transport Accessibility Level (PTAL) rating, has been used to identify the level of accessibility of the Site to the Local public transport network.

3.13 A PTAL rating is an industry standard method for the assessment of public transport accessibility of a certain point. This method was developed in 1992 by the London Borough of Hammersmith & Fulham (LBH&F) and acknowledges walk access times and frequency of service. A PTAL rating is defined by a scoring of 1a to 6b. A rating of 1a ('Very Poor') is the lowest level obtainable and 6b ('Excellent') is the highest level achievable.

3.14 The Site is identified as being located within an area with a PTAL rating of 6b ('Excellent'). This has been informed by a site specific PTAL calculation, using the TfL Planning Information Database (*http://webpid.elgin.gov.uk)*.

Local Parking

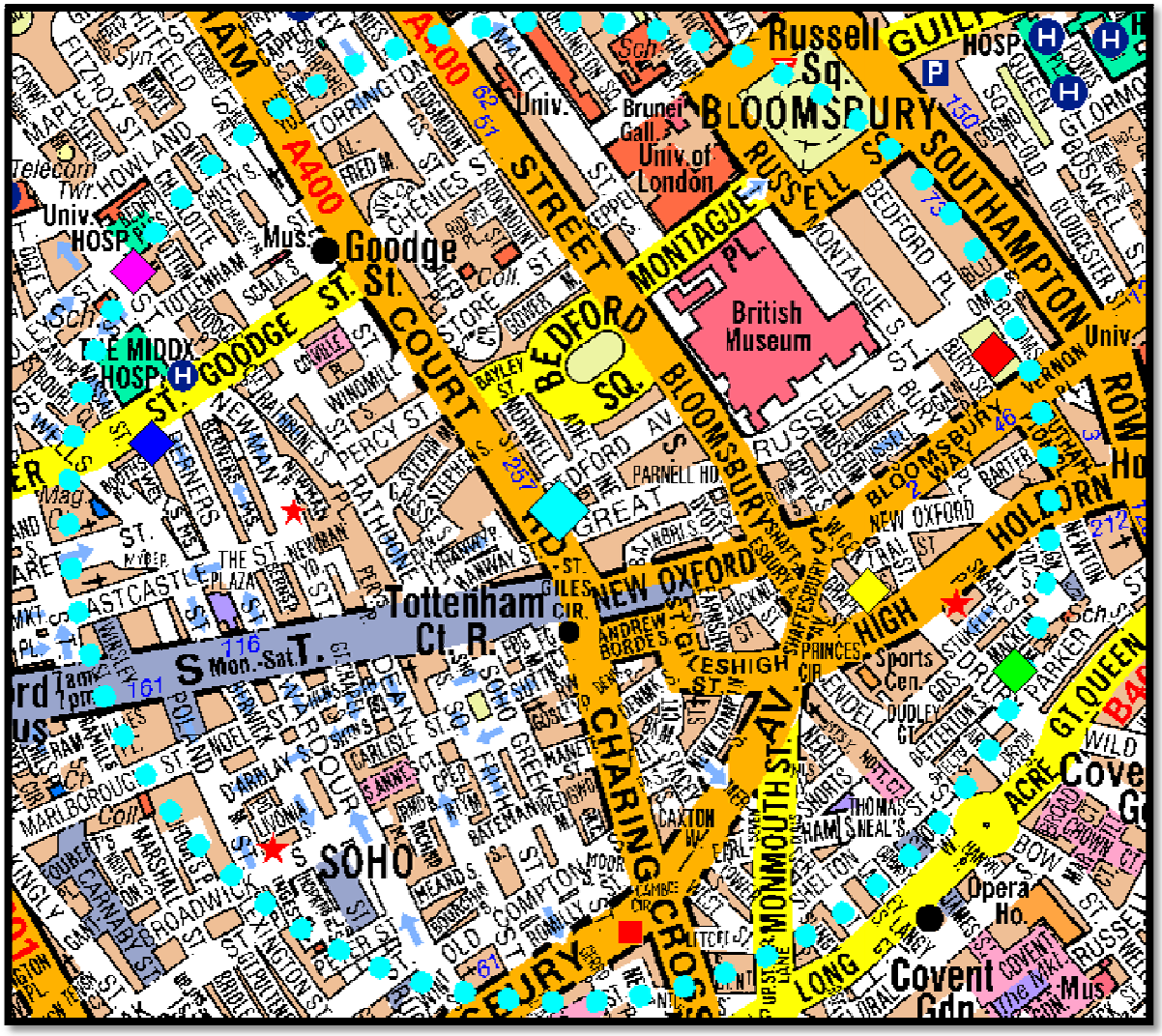
3.15 There are a further three 24hr car parks in close proximity to the Site:

1. Bloomsbury Square Car park - 440 Spaces
2. Selkirk House Car Park – 228 Spaces
3. Drury Lane Car Park – 330 Spaces

3.16 There are also two smaller car parks situated to the west of the Site on Cleveland Street (84 spaces) and Berners Street (96 spaces). Although it is noted that neither of these car parks are 24hr.

3.17 **Figure 3.3** below shows the five car parks in relation to the Site. They are all within 600 km or 7.5 minutes walk time and are therefore viable alternative options.

Figure 3.3 Local Car Parks



Reproduced by permission of Geographers A-Z Map Co. Ltd Licence A1036.

4 Analysis

General

4.1 Data has been provided by NCP (the car park operator) to show occupancy rates at the car park.

4.2 The data shows that the car park is generally underutilised and in line with Camden Policy could be removed to discourage car trips in the area.

Annual

4.3 Based on data from the NCP Car Park, the Site has an average annual occupancy of 80 vehicles on any given day (leaving 60 empty spaces). This equates to an average occupancy of approximately 57%.

Daily

4.4 A daily spot count was provided by NCP, for Wednesday 18th May 2011, which showed that there were 71 vehicles in the car park. This equates to an occupancy of approximately 51%.

4.5 Further counts were undertaken by JMP at 11am on Tuesday 13th September 2011 to corroborate the NCP data provided. A further spot count was also made at the Selkirk House Car Par to check whether any displaced car parking could be absorbed at another local car park. The results are shown in **Table 4.1** below.

Table 4.1 Car Park Occupancy

Car Park	Size	Empty Spaces	Occupancy (%)
Great Russell Street (the Site) Car Park	140	91	35%
Selkirk House Car Park	228	117	49%

4.6 Table 4.1 shows that the Site is currently underutilised, with only 49 spaces occupied during the time of the survey. Even if the average parking occupancy of the Site were all displaced to Selkirk House, that car park would still have 46 spaces available (20% capacity).

4.7 This analysis clearly shows that the car park is underutilised and that should it close there will be no impact upon the surrounding area as people will be able to locate to one of the other car parks nearby.

4.8 The surrounding streets are within a 24hr Controlled Park Zone and therefore, displacement would not occur on local streets.

4.9 It is also noted that, should the car park be removed, it will be replaced by a Pod Hotel. The new development would be car free and hence the amount of trips generated would be reduced significantly.

5 Conclusion

General

This section of the Report outlines the key points from the Note:

1. There are three alternative 24hr car parks (Selkirk House, Bloomsbury Square and Drury Lane) in the local area, which would provide suitable alternatives to the Site;
2. From the data that has been provided by NCP and the spot counts conducted by JMP, the Site appears to be underutilised and any displaced parking could be absorbed by other local car parks in the area;
3. Given Camden's policy to reduce the level of parking and particularly excess parking, the removal of the car park is in line with policy; and
4. The Site will be replaced by a car-free pod hotel, which will reduce the number of trips in the area significantly.

Appendix D

TRAVL Output

TRAVL - Average Trip Rate by Mode and Time

Report ID 9

List of Surveys:

Name	Address	Postcode	Survey Date
Days Inn Hotel	54 Kennington Road	SE1 7BJ	28/05/2002

Number of sites considered **1**

Counts By Mode: 175

Mode: All Modes

Time Banc	No of Sites	Trip Rate In	Trip Rate Out	Total Trip Rate	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:3	1	0.01852	0.06173	0.08025	3.2	10.8	14.0
07:30-08:0	1	0.05556	0.12963	0.18519	9.7	22.7	32.4
08:00-08:3	1	0.06173	0.14198	0.20370	10.8	24.8	35.6
08:30-09:0	1	0.08642	0.14815	0.23457	15.1	25.9	41.0
09:00-09:3	1	0.04321	0.08025	0.12346	7.6	14.0	21.6
09:30-10:0	1	0.03086	0.11111	0.14198	5.4	19.4	24.8
10:00-10:3	1	0.04938	0.09259	0.14198	8.6	16.2	24.8
10:30-11:0	1	0.00000	0.03086	0.03086	0.0	5.4	5.4
11:00-11:3	1	0.03086	0.07407	0.10494	5.4	13.0	18.4
11:30-12:0	1	0.01235	0.04321	0.05556	2.2	7.6	9.7
12:00-12:3	1	0.01235	0.01235	0.02469	2.2	2.2	4.3
12:30-13:0	1	0.01235	0.01852	0.03086	2.2	3.2	5.4
13:00-13:3	1	0.03086	0.04938	0.08025	5.4	8.6	14.0
13:30-14:0	1	0.01235	0.01235	0.02469	2.2	2.2	4.3
14:00-14:3	1	0.11728	0.06790	0.18519	20.5	11.9	32.4
14:30-15:0	1	0.08025	0.12963	0.20988	14.0	22.7	36.7
15:00-15:3	1	0.10494	0.07407	0.17901	18.4	13.0	31.3
15:30-16:0	1	0.01235	0.03086	0.04321	2.2	5.4	7.6
16:00-16:3	1	0.09259	0.03086	0.12346	16.2	5.4	21.6
16:30-17:0	1	0.09259	0.07407	0.16667	16.2	13.0	29.2
17:00-17:3	1	0.15432	0.04321	0.19753	27.0	7.6	34.6
17:30-18:0	1	0.12346	0.05556	0.17901	21.6	9.7	31.3
18:00-18:3	1	0.16049	0.14198	0.30247	28.1	24.8	52.9
18:30-19:0	1	0.14198	0.19136	0.33333	24.8	33.5	58.3
19:00-19:3	1	0.09259	0.05556	0.14815	16.2	9.7	25.9
19:30-20:0	1	0.12346	0.11728	0.24074	21.6	20.5	42.1
20:00-20:3	1	0.16667	0.10494	0.27160	29.2	18.4	47.5
20:30-21:0	1	0.11111	0.10494	0.21605	19.4	18.4	37.8
21:00-21:3	1	0.14815	0.06790	0.21605	25.9	11.9	37.8
21:30-22:0	1	0.20370	0.03086	0.23457	35.6	5.4	41.0

Peak Period For All Modes

In	**21:30-22:00**	**0.20**
Out	**18:30-19:00**	**0.19**
Total	**18:30-19:00**	**0.33**

Mode: Car Driver

Time Banc	No of Sites	Trip Rate In	Trip Rate Out	Total Trip Rate	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:3	1	0.00617	0.00617	0.01235	1.0	1.0	2.0
07:30-08:0	1	0.01852	0.02469	0.04321	3.1	4.1	7.1
08:00-08:3	1	0.01235	0.01235	0.02469	2.0	2.0	4.1
08:30-09:0	1	0.02469	0.01852	0.04321	4.1	3.1	7.1
09:00-09:3	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
09:30-10:0	1	0.00617	0.01235	0.01852	1.0	2.0	3.1
10:00-10:3	1	0.00617	0.00000	0.00617	1.0	0.0	1.0
10:30-11:0	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
11:00-11:3	1	0.00617	0.01235	0.01852	1.0	2.0	3.1
11:30-12:0	1	0.00000	0.01235	0.01235	0.0	2.0	2.0
12:00-12:3	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
12:30-13:0	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
13:00-13:3	1	0.00617	0.00617	0.01235	1.0	1.0	2.0
13:30-14:0	1	0.00000	0.00617	0.00617	0.0	1.0	1.0
14:00-14:3	1	0.00617	0.00000	0.00617	1.0	0.0	1.0
14:30-15:0	1	0.00000	0.00617	0.00617	0.0	1.0	1.0
15:00-15:3	1	0.01852	0.00000	0.01852	3.1	0.0	3.1
15:30-16:0	1	0.00617	0.00617	0.01235	1.0	1.0	2.0
16:00-16:3	1	0.00617	0.00000	0.00617	1.0	0.0	1.0
16:30-17:0	1	0.00000	0.01235	0.01235	0.0	2.0	2.0
17:00-17:3	1	0.01235	0.00000	0.01235	2.0	0.0	2.0
17:30-18:0	1	0.00617	0.00617	0.01235	1.0	1.0	2.0
18:00-18:3	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
18:30-19:0	1	0.00617	0.00617	0.01235	1.0	1.0	2.0
19:00-19:3	1	0.00617	0.00617	0.01235	1.0	1.0	2.0
19:30-20:0	1	0.00617	0.00617	0.01235	1.0	1.0	2.0
20:00-20:3	1	0.00000	0.01235	0.01235	0.0	2.0	2.0
20:30-21:0	1	0.00617	0.00000	0.00617	1.0	0.0	1.0
21:00-21:3	1	0.00617	0.00000	0.00617	1.0	0.0	1.0
21:30-22:0	1	0.02469	0.00617	0.03086	4.1	1.0	5.1

Peak Period For		**Car Driver**
In	**21:30-22:00**	**0.02**
Out	**07:30-08:00**	**0.02**
Total	**08:30-09:00**	**0.04**

Mode: Car Passenger

Time Banc	No of Sites	Trip Rate In	Trip Rate Out	Total Trip Rate	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:3	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
07:30-08:0	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
08:00-08:3	1	0.00617	0.00617	0.01235	1.0	1.0	2.0
08:30-09:0	1	0.00617	0.03086	0.03704	1.0	5.1	6.1
09:00-09:3	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
09:30-10:0	1	0.00000	0.01852	0.01852	0.0	3.1	3.1
10:00-10:3	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
10:30-11:0	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
11:00-11:3	1	0.00000	0.03086	0.03086	0.0	5.1	5.1
11:30-12:0	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
12:00-12:3	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
12:30-13:0	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
13:00-13:3	1	0.00000	0.00617	0.00617	0.0	1.0	1.0
13:30-14:0	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
14:00-14:3	1	0.00617	0.00000	0.00617	1.0	0.0	1.0
14:30-15:0	1	0.00000	0.00617	0.00617	0.0	1.0	1.0
15:00-15:3	1	0.00617	0.00000	0.00617	1.0	0.0	1.0
15:30-16:0	1	0.00617	0.00000	0.00617	1.0	0.0	1.0
16:00-16:3	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
16:30-17:0	1	0.00000	0.00617	0.00617	0.0	1.0	1.0
17:00-17:3	1	0.01235	0.00000	0.01235	2.0	0.0	2.0
17:30-18:0	1	0.01235	0.00617	0.01852	2.0	1.0	3.1
18:00-18:3	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
18:30-19:0	1	0.00617	0.00000	0.00617	1.0	0.0	1.0
19:00-19:3	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
19:30-20:0	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
20:00-20:3	1	0.00000	0.00617	0.00617	0.0	1.0	1.0
20:30-21:0	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
21:00-21:3	1	0.00617	0.00000	0.00617	1.0	0.0	1.0
21:30-22:0	1	0.01235	0.00617	0.01852	2.0	1.0	3.1

Peak Period For Car Passenger

In	**21:30-22:00**	**0.01**
Out	**11:00-11:30**	**0.03**
Total	**08:30-09:00**	**0.04**

Mode: Taxi

Time Banc	No of Sites	Trip Rate In	Trip Rate Out	Total Trip Rate	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:3	1	0.00000	0.00617	0.00617	0.0	1.0	1.0
07:30-08:0	1	0.00000	0.01235	0.01235	0.0	2.0	2.0
08:00-08:3	1	0.00000	0.01852	0.01852	0.0	3.1	3.1
08:30-09:0	1	0.00000	0.01852	0.01852	0.0	3.1	3.1
09:00-09:3	1	0.00000	0.01235	0.01235	0.0	2.0	2.0
09:30-10:0	1	0.00617	0.01852	0.02469	1.0	3.1	4.1
10:00-10:3	1	0.00000	0.00617	0.00617	0.0	1.0	1.0
10:30-11:0	1	0.00000	0.00617	0.00617	0.0	1.0	1.0
11:00-11:3	1	0.00000	0.01235	0.01235	0.0	2.0	2.0
11:30-12:0	1	0.00000	0.00617	0.00617	0.0	1.0	1.0
12:00-12:3	1	0.00617	0.00617	0.01235	1.0	1.0	2.0
12:30-13:0	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
13:00-13:3	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
13:30-14:0	1	0.01235	0.00000	0.01235	2.0	0.0	2.0
14:00-14:3	1	0.00617	0.00000	0.00617	1.0	0.0	1.0
14:30-15:0	1	0.00617	0.00000	0.00617	1.0	0.0	1.0
15:00-15:3	1	0.00617	0.00617	0.01235	1.0	1.0	2.0
15:30-16:0	1	0.00000	0.00000	0.00000	0.0	0.0	0.0
16:00-16:3	1	0.01235	0.00000	0.01235	2.0	0.0	2.0
16:30-17:0	1	0.00617	0.01235	0.01852	1.0	2.0	3.1
17:00-17:3	1	0.01852	0.00000	0.01852	3.1	0.0	3.1
17:30-18:0	1	0.01235	0.01235	0.02469	2.0	2.0	4.1
18:00-18:3	1	0.01235	0.01235	0.02469	2.0	2.0	4.1
18:30-19:0	1	0.00617	0.01235	0.01852	1.0	2.0	3.1
19:00-19:3	1	0.00617	0.00617	0.01235	1.0	1.0	2.0
19:30-20:0	1	0.01852	0.00617	0.02469	3.1	1.0	4.1
20:00-20:3	1	0.01235	0.00000	0.01235	2.0	0.0	2.0
20:30-21:0	1	0.00617	0.00000	0.00617	1.0	0.0	1.0
21:00-21:3	1	0.01852	0.00000	0.01852	3.1	0.0	3.1
21:30-22:0	1	0.03704	0.00000	0.03704	6.1	0.0	6.1

Peak Period For Taxi

In	**21:30-22:00**	**0.04**
Out	**08:00-08:30**	**0.02**
Total	**21:30-22:00**	**0.04**

Mode: Walk & PT

Time Banc	No of Sites	Trip Rate In	Trip Rate Out	Total Trip Rate	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:3	1	0.01235	0.04938	0.06173	2.0	8.1	10.2
07:30-08:0	1	0.03704	0.09259	0.12963	6.1	15.3	21.4
08:00-08:3	1	0.04321	0.10494	0.14815	7.1	17.3	24.4
08:30-09:0	1	0.05556	0.08025	0.13580	9.2	13.2	22.4
09:00-09:3	1	0.04321	0.06790	0.11111	7.1	11.2	18.3
09:30-10:0	1	0.01852	0.06173	0.08025	3.1	10.2	13.2
10:00-10:3	1	0.04321	0.08642	0.12963	7.1	14.3	21.4
10:30-11:0	1	0.00000	0.02469	0.02469	0.0	4.1	4.1
11:00-11:3	1	0.02469	0.01852	0.04321	4.1	3.1	7.1
11:30-12:0	1	0.01235	0.02469	0.03704	2.0	4.1	6.1
12:00-12:3	1	0.00617	0.00617	0.01235	1.0	1.0	2.0
12:30-13:0	1	0.01235	0.01852	0.03086	2.0	3.1	5.1
13:00-13:3	1	0.02469	0.03704	0.06173	4.1	6.1	10.2
13:30-14:0	1	0.00000	0.00617	0.00617	0.0	1.0	1.0
14:00-14:3	1	0.09877	0.06790	0.16667	16.3	11.2	27.5
14:30-15:0	1	0.07407	0.11728	0.19136	12.2	19.4	31.6
15:00-15:3	1	0.07407	0.06790	0.14198	12.2	11.2	23.4
15:30-16:0	1	0.00000	0.02469	0.02469	0.0	4.1	4.1
16:00-16:3	1	0.07407	0.03086	0.10494	12.2	5.1	17.3
16:30-17:0	1	0.08642	0.04321	0.12963	14.3	7.1	21.4
17:00-17:3	1	0.11111	0.04321	0.15432	18.3	7.1	25.5
17:30-18:0	1	0.09259	0.03086	0.12346	15.3	5.1	20.4
18:00-18:3	1	0.14815	0.12963	0.27778	24.4	21.4	45.8
18:30-19:0	1	0.12346	0.17284	0.29630	20.4	28.5	48.9
19:00-19:3	1	0.08025	0.04321	0.12346	13.2	7.1	20.4
19:30-20:0	1	0.09877	0.10494	0.20370	16.3	17.3	33.6
20:00-20:3	1	0.15432	0.08642	0.24074	25.5	14.3	39.7
20:30-21:0	1	0.09877	0.10494	0.20370	16.3	17.3	33.6
21:00-21:3	1	0.11728	0.06790	0.18519	19.4	11.2	30.6
21:30-22:0	1	0.12963	0.01852	0.14815	21.4	3.1	24.4

Peak Period For	**Walk & PT**	
In	**20:00-20:30**	**0.15**
Out	**18:30-19:00**	**0.17**
Total	**18:30-19:00**	**0.30**

Transport Planning Practice
70 Cowcross Street
London EC1M 6EL
020 7608 0008
email@tppweb.co.uk

www.tppweb.co.uk