13 BLACKBURN ROAD TRANSPORT STATEMENT

Author	Client	Project	Date
TTP Consulting Ltd	WHIP Ltd	13 Blackburn Road	June 2020

ttp consulting

transport planning specialists

West Hampstead Investments Partnership Ltd.

13 Blackburn Road

Transport Statement

June 2020

TTP Consulting Ltd
111-113 Great Portland Street
London W1W 6QQ
Tel: 020 7100 0753

www.ttp-consulting.co.uk

Registered in England: 09931399

Contents

Appendices

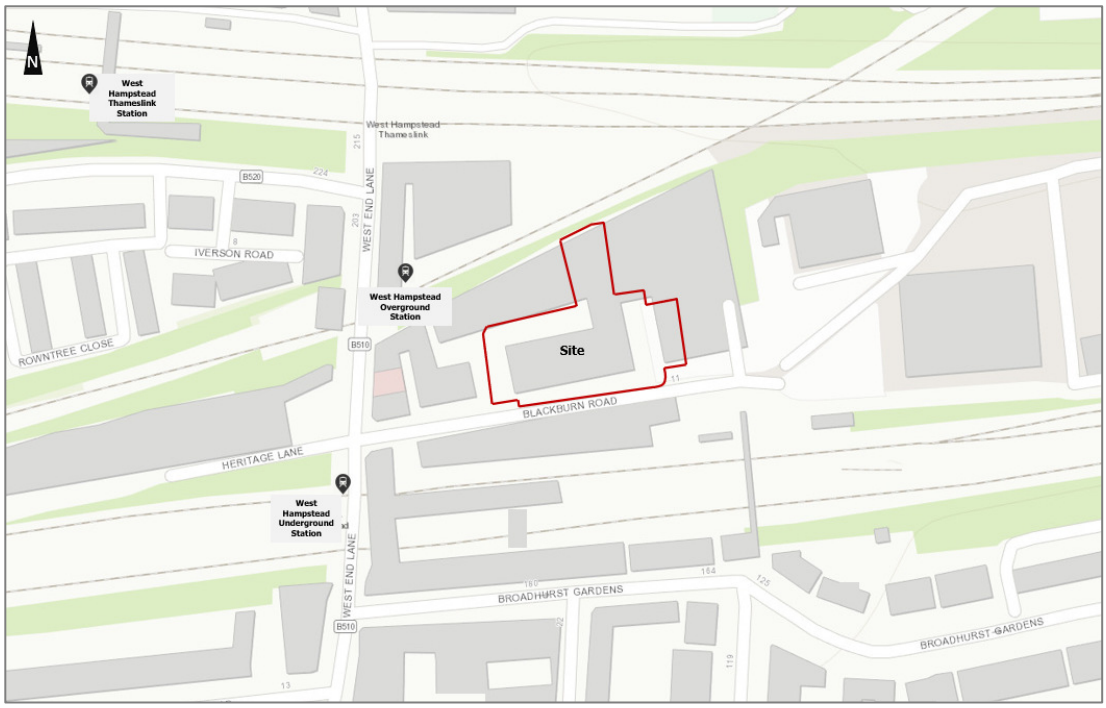
Appendix A - Existing Layout Plan
Appendix B - Proposed Layout Plan
Appendix C - Bus Route Map
Appendix D - PTAL Output
Appendix E - Swept Path Analysis
Appendix F - TRICS Output Files

1 INTRODUCTION

1.1 TTP Consulting has been appointed by West Hampstead Investments Partnership Ltd. ('the Applicant') to provide traffic and transport advice in relation to the proposed development at 13 Blackburn Road ('the site'), West Hampstead located in the London Borough of Camden (LBC).

1.2 The application site benefits from an excellent Public Transport Accessibility Level (PTAL) rating being located within a short walking distance of National Rail, London Underground and London Overground stations, as well as local bus stops. The site location is shown in **Figure 1.1**.

Figure 1.1 – Site Location Plan



1.3 The site takes frontage from the northside of Blackburn Road. The existing residential building comprises of 29 units having been converted from office to residential under general permitted development order. The site includes vehicular access taken from the eastern boundary. The adjacent student accommodation site has a right of way over the access. The existing layout plan is included at **Appendix A**.

1.4 The description of the development is:

"Demolition of existing building and construction of three buildings and connecting pavilion standing between 1 and 9 storeys (plus basement) in height, comprising 53 dwellings, 4,802sqm (GIA) of commercial floorspace, new public square, public realm improvements, landscaping and resident's facilities including cycle, refuse and parking facilities."

1.5 The proposal will remove the fenced area in front of the site and hence the effective width of the pedestrian route in front of the site will appear wider than existing. Additionally, a courtyard space will be provided between the buildings which the building lobbies will take access onto.

1.6 A total of five disabled parking spaces will be provided which will be accessed from the existing crossover serving the site. Smaller delivery vehicles will access the site, whilst it is envisaged that larger vehicles will stop on-street. The proposed layout plan is included at **Appendix B**.

1.7 This report benefits from a site visit and considers the effect of development in transport terms including trip generation, access, car parking, cycle parking, deliveries and servicing activity.

1.8 The remainder of the report is structured as follows:

- Section 2 summarises the existing situation;
- Section 3 sets out the accessibility of the site;
- Section 4 reviews relevant transport policies;
- Section 5 sets out the development proposals and considers the potential effects;
- Section 6 provides the expected trip generation for the development;
- Section 7 sets out the mitigation measures proposed; and
- Section 8 provides a summary and conclusion.

2 EXISTING SITUATION

The Site

2.1 The site fronts onto the north side of Blackburn Road. It is bound to the east by student accommodation, to the west by access to buildings located to the north of the site beyond the access to the west are houses. On the south side of Blackburn Road opposite is a builders depot.

2.2 Pedestrian access to the existing building is taken from the centre of the site on Blackburn Road. It is noted that the building line is set back, providing ramped access into the site and a lightwell for the basement below. Vehicular access to the rear of the building is taken from the east side of the site. The adjacent student accommodation building has a right of way over the access.

2.3 The existing building provides residential dwellings comprising 15 x studio units, 13 x 1 bed units and 1 x 2 bed unit having been converted from office to residential under general permitted development order. An existing site plan is shown below.

Figure 2.1 – Existing Site Plan

Surrounding Area

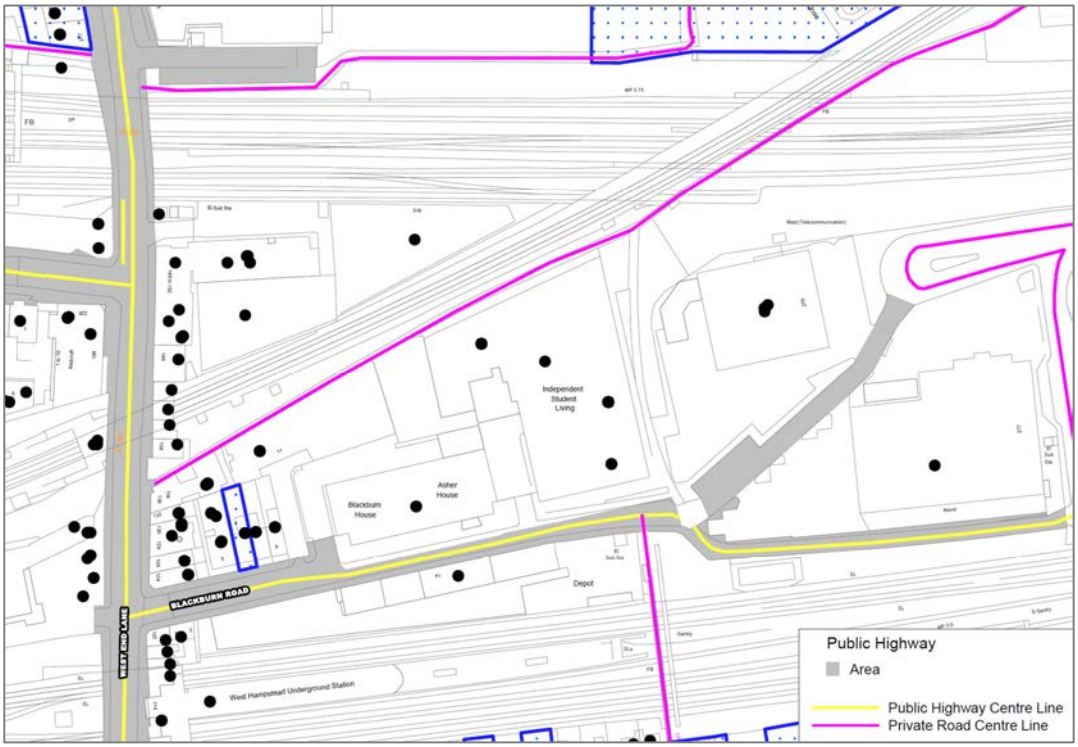
2.4 Within the wider area there are a mix of residential properties, office units and commercial properties. The site is also located near to several public transport options including West Hampstead Overground Station located 100m to the north, West Hampstead Underground Station located 100m to the south and West Hampstead Thameslink Station, located 270m to the north. In addition, there are local bus routes available within walking distance, with stops

located on West End Lane and Broadhurst Gardens, located within a 100m – 200m walk of the site. As such, the proposed development is considered to be located within an established area that benefits from numerous local amenities.

2.5 There are planning consents locally with 11 Blackburn Road consented for the demolition of the existing office building and provision of six 2-bedroom units.

2.6 An extract of the highway boundary data for Blackburn Road is shown in **Figure 2.2** below with the file contained in **Appendix C**.

Figure 2.2 – Extract Highway Boundary Data



Local Highway Network

2.7 Blackburn Road lies in an east to west orientation located directly south of the site and provides vehicular and pedestrian access. Although connected to the site, Blackburn Road is also present on the other side of the car park providing access to the O2 Centre, connecting to the A41 Finchley Road to the east.

2.8 Blackburn Road connects to West End Lane to the west and terminates approximately 100m to the east for vehicles, adjacent to the gated car park for Alan Day Volkswagen. To the east a pedestrian link provides access to the O2 Centre and to the north is Billy Fury Way, a pedestrian walkway designated as a Metropolitan Walk. Double yellow lines are in operation along Blackburn Road in the vicinity of the site. A car club bay, permit holder only bays and a motorcycle bay are provided to the west.

2.9 The B510 West End Lane provides for two-way traffic movement in a broadly north-south direction to west of the site. It offers a connection to the A41 Finchley Road to the north and the A5 Kilburn High Road to the south.

2.10 The site is situated within Camden's Controlled Parking Zone (CPZ) 'CA-R' which is operational Monday to Friday from 08:30 to 18:30.

3 ACCESSIBILITY

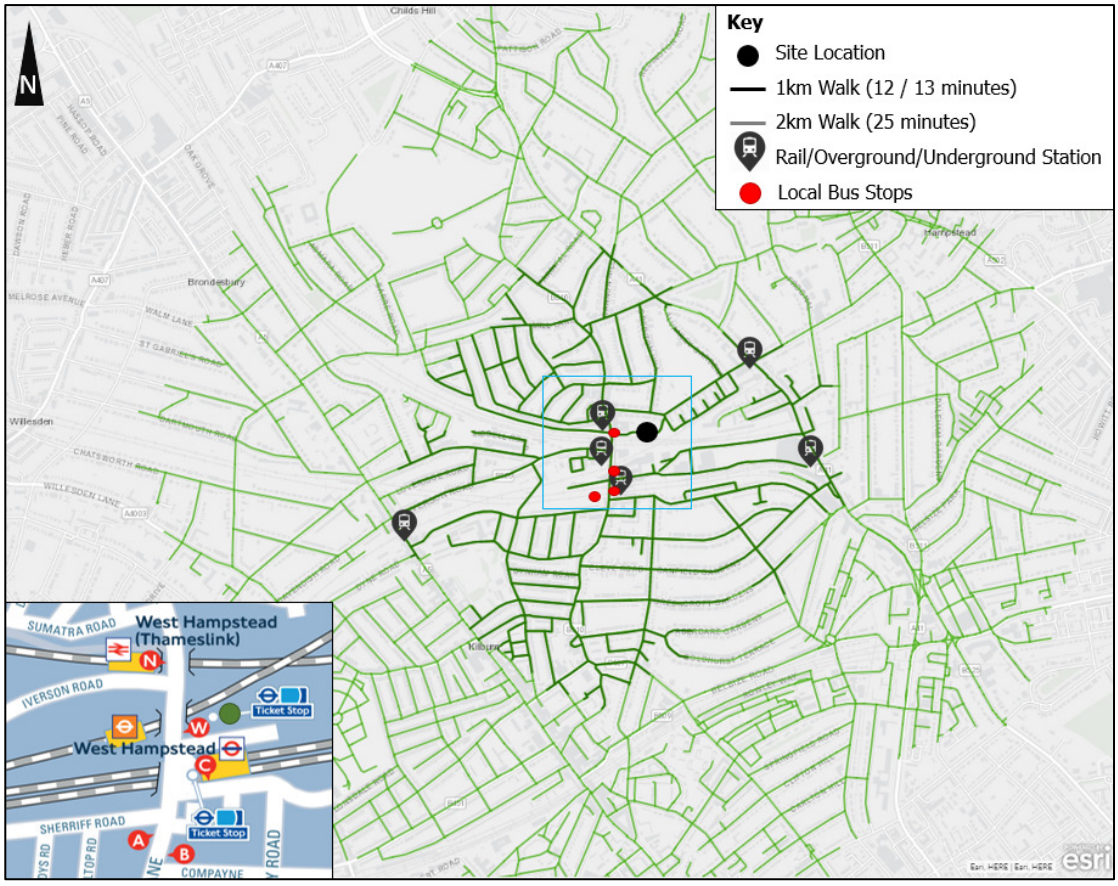
3.1 The site is accessible by a variety of modes of transport with a number of amenities within a reasonable walking distance of the site. The following paragraphs summarise the site's accessibility by non-car modes.

Walking

3.2 Like much of Inner London the site benefits from being within a short walking distance of public transport opportunities, local facilities and amenities as well as residential areas. Roughly half of all walking journeys in London are part of longer public transport journeys, for example walking to or from the bus stop or tube / train station, whilst a third of car journeys are within a 25-minute (2km) walk, suggesting there are real opportunities for active modes to replace the car.

3.3 **Figure 3.1** provides details of a 1km and 2km catchment zone surrounding the site. The map shows that a number of bus stops and stations could be reached on foot. Additionally, a large quantity of residential streets are highlighted within the catchment areas.

Figure 3.1 – Walking Isochrone Map

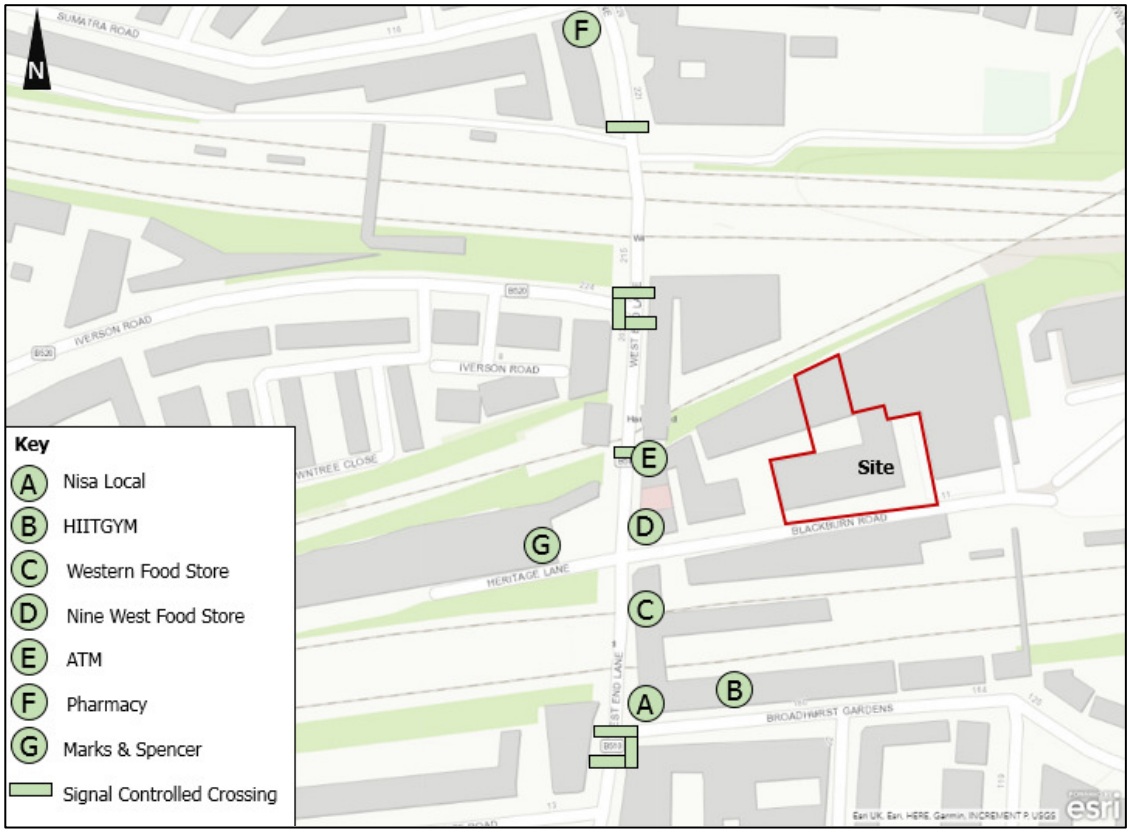


3.4 Footways are provided on both sides of Blackburn Road and West End Lane. The site is well connected to the main pedestrian routes that serve public transport facilities and local amenities. The local area is provided with well-maintained footways, street lighting and a number of crossings with dropped kerbs and tactile paving. In particular, a number of signalised crossing facilities are located a short walk to the west on West End Lane.

3.5 There is also pedestrian link to the east of the site, designated as a Metropolitan Walk, which connects past the O2 Centre and to Finchley Road for access to Finchley Road Station.

3.6 West Hampstead Town Centre boundary is located approximately 30m to the west of the site, along West End Lane. The primary retail frontage is located 260m to the north along West End Road, where there are a wider array of shops, facilities and services. There are cafes, convenience stores, a gym and pharmacy within the immediate vicinity of the site. The location of which are shown on **Figure 3.1**. Whilst further north, within a 400m walk of the site, there is a Tesco Express, Sainsbury's Local and Barclay's Bank.

Figure 3.2 – Local Facilities and Amenities Plan



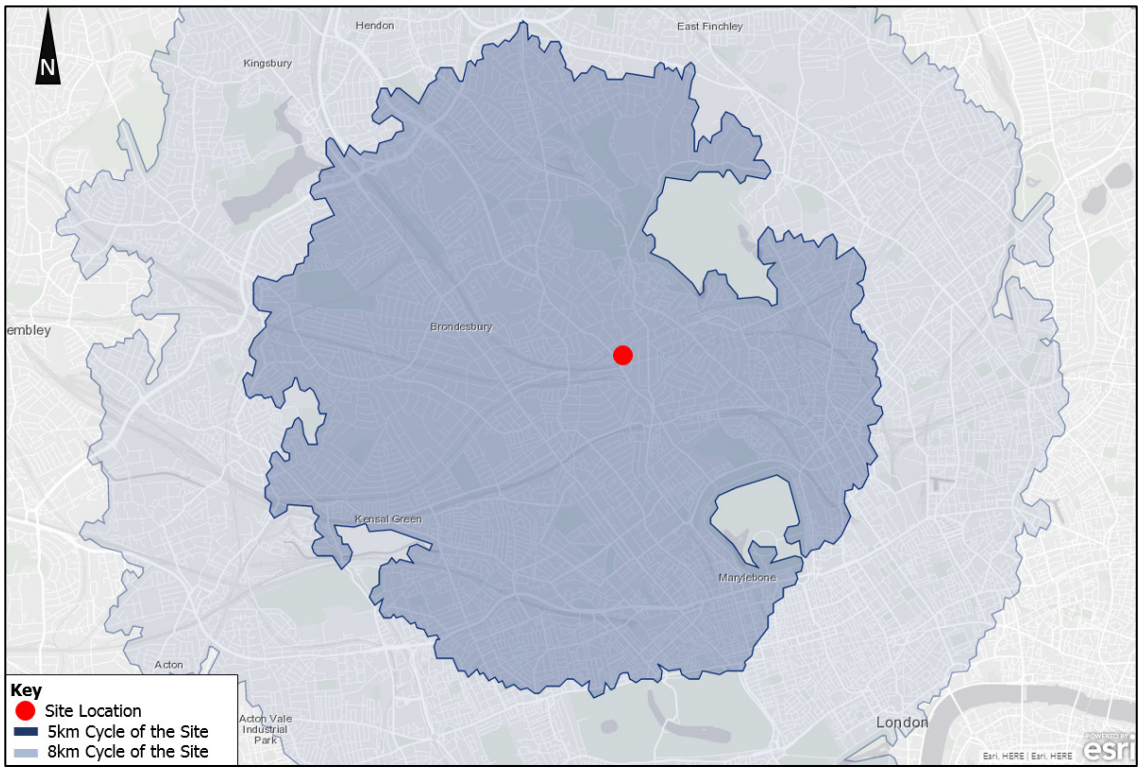
3.7 **Table 3.1** sets out details of distances between the site and public transport opportunities. This illustrates that there are a number of public transport facilities within a short walking distance with an average walking speed assumed to be 80m per minute.

Table 3.1 – Approximate Distances to Local Public Transport Opportunities			
Stop / Station	**Location**	**Distance**	**Walking Time***
Bus Stops	West End Lane	<100m	1 minute
	Broadhurst Gardens	<200m	2 – 3 minutes
West Hampstead Underground Station	West End Lane	100m	1 – 2 minutes
West Hampstead Overground Station	West End Lane	100m	1 – 2 minutes
West Hampstead Thameslink Station	Iverson Road	230m	2 – 3 minutes
*Based on walking speed of 80m per minute			

Cycling

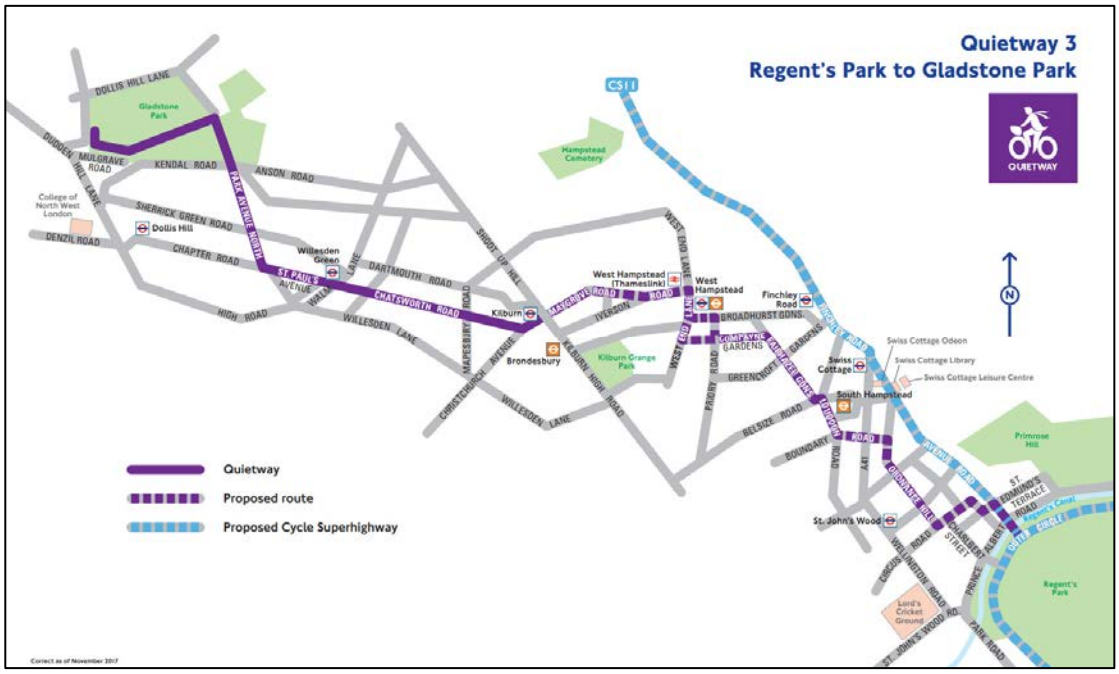
3.8 It is generally accepted that cycling is a sustainable mode of travel for journeys up to 8km in length, although in London, longer journeys are commonplace. **Figure 3.3** shows a 5km and 8km cycling catchment from the site where all parts of Camden, Brent Cross and Hampstead Heath to the north and Central London to the south are within cycling distance.

Figure 3.3 – Cycling Catchment Map



3.9 The closest cycle infrastructure is Quietway 3 which runs between Regent's Park and Gladstone Park. An extract of the Quietway 3 map is shown in **Figure 3.4**, along with the connection to Cycle Superhighway 11, showing the route around Regent's Park and towards Westminster. Transport for London (TfL) are replacing cycle superhighways and quietways with cycleways, which are routes that connect communities, businesses and destinations.

Figure 3.4 – Quietway 3 TfL Map Extract



3.10 A summary, the relevant cycling infrastructure surrounding the site is:

- There are advanced stop lines at the West End Lane / Iverson Road junction;
- Blackburn Road is subject to a 20mph speed restriction;
- Cycle parking is provided along West End Lane, outside West Hampstead Underground and Thameslink stations;
- Cycle / pedestrian shared route from Blackburn Road to east connecting Finchley Road.

3.11 TfL's Journey Planner tool allows for cycle route planning dependent on the difficulty of the route, being fast, moderate or easy. From the site the following destinations can be reached within various journey times:

- Paddington Station (17 minutes / 20 minutes / 27 minutes);
- King's Cross Station (19 minutes / 27 minutes / 34 minutes);
- Victoria Station (25 minutes / 34 minutes / 45 minutes); and
- Holborn Station (26 minutes / 35 minutes / 45 minutes).

Public Transport

Bus Services

3.12 The closest bus stops are located on West End Lane provide access to routes 139, 328 and C11 with stops on Broadhurst Gardens within an acceptable walking distance and also providing access to the C11. **Figure 3.2** sets out the site's proximity to local bus stops whilst **Table 3.2** provides a summary of the local bus routes. The relevant TfL bus spider map is included at **Appendix C**. In addition, London buses provide step-free access.

Table 3.2 – Summary of Local Bus Services

Bus Stops & Location	Route		Daytime Frequency (every 'x' minutes)		
	No.	Destination	Mon-Fri	Saturday	Sunday
West End Lane (Stops N and W)	139	Golders Green Station to Waterloo Station	7 – 10	6 – 10	8 – 12
	328	Golders Green Station to Chelsea Worlds End or Limerston Street	8 – 12	8 – 12	10 – 13
	C11	Archway Station to Brent Cross Shopping Centre	7 – 11	School days only	

London Underground, Overground and Rail Services

3.13 West Hampstead Underground Station is located within 100m of the site to these. The station provides access to the Jubilee Line with regular services between Stanmore and Stratford via Waterloo.

3.14 West Hampstead Overground and West Hampstead Thameslink are located 100m – 270m to the north of the site within a short walk from the underground station. The main services from the Overground Station travel between Clapham Junction, Stratford and Richmond offering approximately 16 services an hour. The Thameslink Station offers approximately 13 services an hour to destinations including Luton, Bedford, Brighton, Sutton (Surrey), St. Albans City and Sevenoaks. Both stations have step-free access from street to platform.

3.15 Finchley Road Station is located 800m to the west of the site. It is served by London Underground services on the Jubilee and Metropolitan Lines. The Jubilee Line offers services between Stratford and Stanmore approximately every 2 minutes in either direction, whilst the Metropolitan Line offers services between Aldgate and Uxbridge/Chesham/Watford/Amersham. There are services approximately every 5-10 minutes in either direction.

Public Transport Accessibility Level (PTAL)

3.16 Public Transport Accessibility Levels (PTALs) are a theoretical measure of the accessibility of a given point to the public transport network, taking into account walk access time and service availability. The method is essentially a way of measuring the density of the public transport network at a particular point. The scale has a range of 0 (worst) to 6b (best), with 6b demonstrating high level of accessibility. The site has a PTAL level of '6a', demonstrating that it has an excellent level of accessibility to public transport. The PTAL report is included at **Appendix D**.

Public Transport Improvements

3.17 West Hampstead Overground Station has a new entrance which is now open with more ticket gates, two wide aisle gates and a bigger station concourse. Two lifts have been installed providing step-free access from street to platform level. The new station has been designed to accommodate future growth in passenger numbers, with more gates and a much larger passenger circulation area.

3.18 This is the largest Access for All scheme on the London Overground network and is a key interchange for northwest London, given the proximity to West Hampstead's Thameslink and London Underground stations.

Car Clubs

3.19 Car clubs enable residents to have access to a car without the need to own one or pay for maintenance and running costs. The TPC, through the Travel Pack, will promote the benefits of belonging to a Car Club. Car Clubs offer economic (no tax, MOT, fuel, servicing, repairs, depreciation and parking costs) and environmental benefits (fewer private vehicles in London) over owning and running a car. **Table 3.3** below provides details of the local car club bays in the vicinity of the site.

Table 3.3 – Local Car Club Operators

Operator	Location	Distance from Site	Approximate Walking Distance
Zipcar	Blackburn Road	30m	<1 minute
Zipcar	Sandwell Crescent	450m	6 minutes
Zipcar	Canfield Gardens	600m	8 minutes

Method of Travel to Work

3.20 The 2011 Census has been examined to establish the method of journey to work for the workplace population and residential population.

3.21 The data for the super output area – middle layer (Camden 010) in which the site is located is summarised in **Table 3.3**.

Table 3.3 – 2011 Method of Travel to Work [Camden 010]

Mode	Percentage (%)	
	(Workplace Population)	(Resident Population)
Underground / Overground	28%	55%
Rail	16%	16%
Bus	12%	7%
Taxi	1%	0%
Motorcycle	1%	1%
Car Driver	29%	10%
Car Passenger	2%	1%
Bicycle	2%	4%
Walking	10%	6%
Total	100%	100%

4 POLICY

National Planning Policy Framework

4.1 The revised National Planning Policy Framework (NPPF) was published on the 19th February 2019 setting out the Government's planning policies for England and how these are expected to be applied.

4.2 When considering the transport effects of a development, NPPF states that:
"*All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed."*

4.3 Paragraph 109 advises that:

"Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe."

4.4 Paragraph 110 states that:

"Within this context, applications for development should:

a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;

c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;

d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and

e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations."

Mayor's Transport Strategy

4.1 The Mayor of London's Transport Strategy, published March 2018, supports developments which can demonstrate they contribute to a reduction of Londoners' dependency on cars in favour of active, efficient and sustainable modes of travel, with the central aim for 80 per cent of all trips in London to be made on foot, by cycle or using public transport by 2041.

London Plan

4.2 The London Plan is a Spatial Development Strategy which sets out the framework for the development of London over a period of 20-25 years.

4.3 Paragraph 1.53 sets outs the Mayor's objectives and vision, with point 6 stating the following with regards to transport.

"Ensuring London is a city where it is easy, safe and convenient for everyone to access jobs, opportunities and facilities with an efficient and effective transport system which actively encourages more walking and cycling, makes better use of the Thames and supports delivery of all the objectives of this Plan."

4.4 Chapter 6 (Transport) states that:

"The Mayor recognises that transport plays a fundamental role in addressing the whole range of his spatial planning, environmental, economic and social policy priorities. It is critical to the efficient functioning and quality of life of London and its inhabitants. It also has major effects – positive and negative – on places, especially around interchanges and in town centres and on the environment, both within the city itself and more widely. Conversely, poor or reduced accessibility can be a major constraint on the success and quality of places, and their neighbourhoods and communities. He is particularly committed to improving the environment by encouraging more sustainable means of transport, through a cycling revolution, improving conditions for walking, and enhancement of public transport."

4.5 Policy 6.1 Strategic Approach states that:

"The Mayor will work with all relevant partners to encourage the closer integration of transport and development encouraging patterns and nodes of development that reduce the need to travel, especially by car."

4.6 Policy 6.13 Parking states that at a strategic level:

"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."

Intend to Publish London Plan

4.7 The Intend to Publish London Plan, dated December 2019, shows the Mayor's suggested changes following the Examination in Public. The document strives to promote a healthier and more active London with improving air quality and reducing car parking provision at the forefront of the plan.

4.8 Policy T1 seeks a strategic approach to transport and states at paragraph 10.1.1. that:

"The integration of land use and transport, and the provision of a robust and resilient public transport network, are essential in realising and maximising growth and ensuring that different parts of the city are connected in a sustainable and efficient way. In order to help facilitate this, an integrated strategic approach to transport is needed, with an ambitious aim to reduce Londoners' dependency on cars in favour of increased walking, cycling and public transport use. Without this shift away from car use, which the policies in the Plan and the Mayor's Transport Strategy seek to deliver, London cannot continue to grow sustainably."

4.9 The Mayor's strategic target strives for 80 per cent of all trips in London to be made by foot, cycle or public transport by 2041. There are transport policies that seek to achieve this with relevant policies considered below.

4.10 Policy T2 sets out the Healthy Streets Approach which states that development Plans should deliver patterns of land use that facilitate residents making shorter, regular trips by walking or cycling.

4.11 Policy T4 'Assessing and mitigating transport impacts' states that transport assessments / statements should be submitted with development proposals to ensure that impacts on the capacity of the transport network are fully addressed. Travel Plans, Parking Design and Management Plans, Construction Logistics Plans and Delivery and Servicing Plans will be required in accordance with relevant Transport for London guidance.

4.12 Policy T5, 'cycling', suggests that barriers to cycling can be removed and that a healthy environment in which people choose to cycle can be created through appropriate levels of cycle parking which are fit for purpose, secure and well-located.

4.13 The cycle parking standards as set out in Table 10.2 of the Draft New London Plan are summarised in **Table 4.1**.

Table 4.1 – Cycle Parking Draft London Plan Minimum Standards		
Use Class	**Long-stay**	**Short-stay**
B1 business offices	1 space per 75sqm (GEA)	first 5,000sqm: 1 space per 500sqm thereafter: 1 space per 5,000sqm (GEA)
C3 dwellings (all)	1 space per studio or 1 person 1 bedroom dwelling, 1.5 spaces per 2 person 1 bedroom dwelling, 2 spaces per all other dwellings	5 to 40 dwellings: 2 spaces Thereafter: 1 space per 40 units dwellings

4.14 Policy T6.1 describes residential parking requirements where sites in areas of PTAL 5 – 6 are suitable to be car free with the exception of disabled persons parking.

4.15 Disabled persons parking should be provided for new residential developments. Residential development proposals delivering ten or more units must, as a minimum: 1) ensure that for three per cent of dwellings, at least one designated disabled persons parking bay per dwelling is available from the outset 2) demonstrate as part of the Parking Design and Management Plan, how an additional seven per cent of dwellings could be provided with one designated disabled persons parking space per dwelling in future upon request as soon as existing provision is insufficient. This should be secured at the planning stage.

4.16 All residential car parking spaces must provide infrastructure for electric or Ultra-Low Emission vehicles. At least 20 per cent of spaces should have active charging facilities, with passive provision for all remaining spaces.

4.17 Policy T6.5 Non-residential disabled persons parking describes that all non-residential elements of a scheme should provide access to at least one on or off-street disabled person parking bay.

Camden Local Plan

4.18 Camden's Local Plan is the key strategic document in Camden's development plan. It sets out the vision for shaping the future of the Borough and contains policies for guiding planning decisions and was adopted in July 2017.

4.19 Transport related policies are set out in T1 through T4 a summary of the relevant policies is below.

4.20 Policy T1: Prioritising Walking, Cycling and Public Transport describes that the Council will promote sustainable transport by prioritising walking, cycling and public transport in the borough. Reference should be made to the minimum standards for cycle parking in the London plan with high quality facilities provided that promote cycle use including showers.

4.21 Policy T2: Parking and Car-free Development states that:

"The Council will limit the availability of parking and require all new developments in the borough to be car-free. We will:

a. not issue on-street or on-site parking permits in connection with new developments and use legal agreements to ensure that future occupants are aware that they are not entitled to on-street parking permits;

b. limit on-site parking to:
i. spaces designated for disabled people where necessary, and/or ii. essential operational or servicing needs; c. support the redevelopment of existing car parks for alternative uses; and

d. resist the development of boundary treatments and gardens to provide vehicle crossovers and on-site parking."

4.22 Policy T4 Sustainable Movement of Goods and Materials

"The Council will promote the sustainable movement of goods and materials and seek to minimise the movement of goods and materials by road. We will:
a. encourage the movement of goods and materials by canal, rail and bicycle where possible;
b. protect existing facilities for waterborne and rail freight traffic and;
c. promote the provision and use of freight consolidation facilities. Developments of over 2,500 sqm likely to generate significant movement of goods or materials by road (both during construction and operation) will be expected to:
d. minimise the impact of freight movement via road by prioritising use of the Transport for London Road Network or other major roads;
e. accommodate goods vehicles on site; and f. provide Construction Management Plans, Delivery and Servicing Management Plans and Transport Assessments where appropriate."

Camden Planning Guidance: Transport

4.23 The Camden Planning Guidance on Transport supports the policies in the Camden Local Plan 2017. It was adopted in March 2019. The guidance supports the Local Plan policies outlined above. It sets out clear guidance on the following:

- Travel Plans including the objectives, targets and monitoring that is required.
- Delivery and Servicing Plans including waste management and collection.
- Parking and car-free development which applies across the whole of the Borough.
- Provision of cycle parking facilities.
- Pedestrian and cycle movement considerations.

Policy Summary

4.24 National, regional and local planning policy relating to travel shares a common objective of reducing travel by car and in Camden in particular the provision of car parking is strongly discouraged in locations that are well located to public transport and have convenient access to facilities. The development is located within a highly accessible area and is conveniently located to enable staff and residents to travel on foot, by bicycle or public transport.

5 DEVELOPMENT PROPOSAL AND EFFECTS

5.1 The proposal seeks to develop three new buildings providing 53 residential units (C3 Use Class) and 5,388sqm (GEA) of commercial floor space (B1 Use Class). Buildings A and B will front onto Blackburn Road with Building C located to the rear of the site.

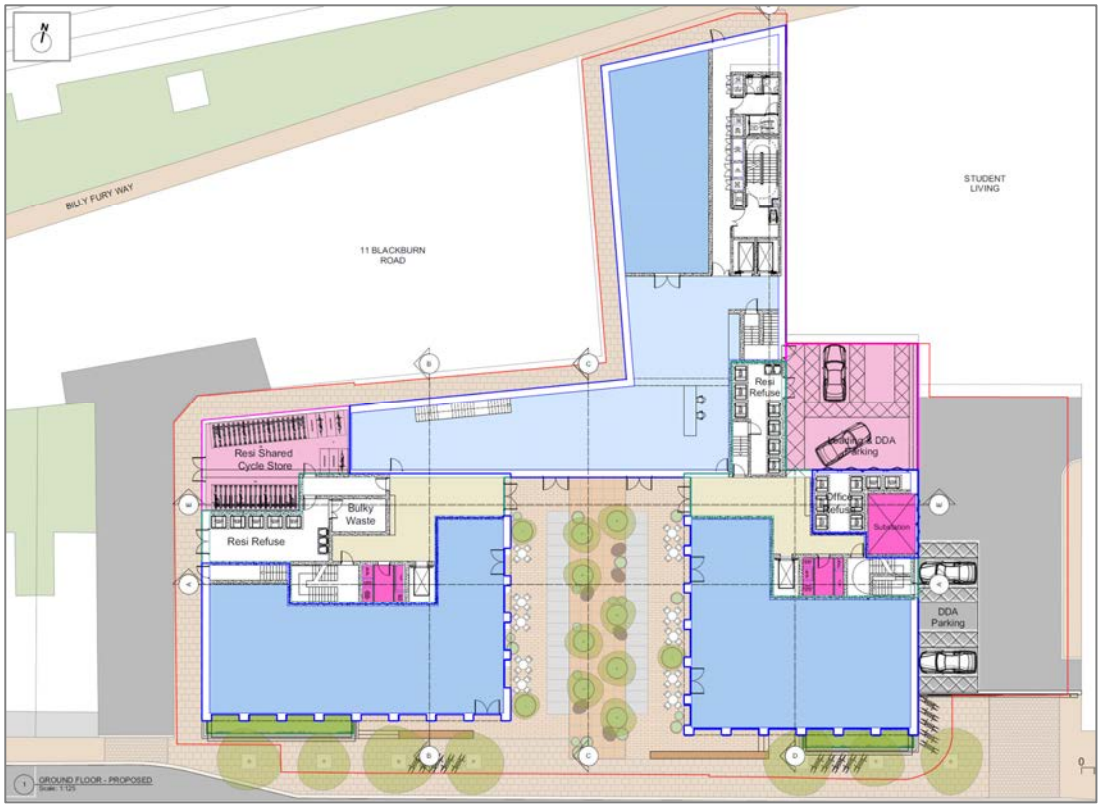
- Building A will provide 1,373sqm (GEA) of office floor space and 26 residential units across basement, ground and five upper floors.
- Building B will provide 290sqm of office floor space and 27 residential units across basement, ground and six upper floors.
- Building C will provide 3,725sqm of office floor space across basement, ground and eight upper floors.

5.2 Given that the existing site contains 29 residential units, the net increase will be 24 new homes and the office floorspace.

5.3 Landscaping and footpaths will connect the three buildings within the site with a courtyard provided between Buildings A and B. There will be basement floor space within each building.

5.4 An extract of the ground level layout is shown in **Figure 5.1**. The architect's layout plans can be found at **Appendix B**.

Figure 5.1 – Ground Level Layout



Access

5.5 Pedestrian entrances to the main lobbies in each building will be from the proposed courtyard.

5.6 The residential cycle store, bulky waste store and residential refuse store in Building A will be accessed through a pedestrian link to the west of building. Residents will also be able to access the refuse stores in Buildings A and B through doors connecting to the entrance lobbies.

5.7 The service access to the residential refuse store in Building B and the office refuse store is from the parking area.

5.8 The cycle store in Building C which is in the basement will be accessed though the main entrance from the courtyard where there will be a set of doors providing access to the lifts.

5.9 Vehicle access will be taken via Blackburn Road using the existing route which is used by the adjacent student accommodation building which is also within the Applicant's ownership. The access route is gated. This will serve the development and provide access to disabled parking spaces and a loading area for smaller delivery vehicles.

The proposal will remove the fenced area in front of the site and hence the effective width of the pedestrian route in front of the site will appear wider than existing.

Car Parking

5.10 It is envisaged that the development will be subject to a permit-free agreement, prohibiting residents, staff and visitors from obtaining permits for the future Controlled Parking Zone.

5.11 Camden's Planning Guidance on Transport supports the Local Plan which advocates that all new developments in the Borough are car-free. It describes at Policy T2 that the quantity of disabled parking required will be as set out in the latest version of the Mayor's London Plan.

5.12 The Intend to Publish version of the London Plan advises that:

- Residential sites with a PTAL rating of 6a, such as this, should be car-free with the exception of disabled parking (three per cent of dwellings having a space from the outset).
- An additional seven per cent of dwellings could be provided with one space per dwelling in the future upon request.
- At least one on or off-street disabled persons parking bay should be allocated to all non-residential elements of a scheme.

5.13 Ten per cent of the 53 units within the scheme will be wheelchair accessible and hence disabled parking will be provided on-site.

5.14 The proposal indicates that five disabled parking spaces will be provided with four allocated to the residential element of the scheme and one to the commercial element. Electric vehicle charge facilities will be provided.

5.15 The proposal is in accordance with parking requirements from the outset however in order to accord with policy for future provision, the development should be able provide a fifth disabled space for residential use should demand arise. The Applicant will explore whether there is an opportunity to convert existing on-street parking opportunities to provide a disabled parking space in the future should demand require it. The level of parking proposed is considered to be suitable and appropriate.

Cycle Parking

5.16 Based on the proposed schedule of accommodation, the residential store should provide a minimum of 72 long stay spaces and 3 short stay spaces.

5.17 There will be a total of 86 spaces and hence the level of provision is in excess of minimum standards. Of the provision, 72 spaces will be in the form of two-tier racks and there will be 7 Sheffield stands providing space for up to 14 bikes, including non-conventional bikes. The residential bike store will be located at ground level in Building A. It will be shared for all residents at the development. Access to the store will be via a pedestrian link located to the west of the building with direct access through one set of doors.

5.18 Based on 5,387sqm (GEA) of B1a office space, the scheme should provide a total of 72 long stay spaces and 11 short stay spaces. There will be 82 spaces for staff and visitors within a basement level store and hence the level of provision is in accordance with the relevant policy guidance. The store will provide two-tier racks. The bike store will be accessible through the main entrance lobby to building C, with lifts taking cyclists and their bikes down to the basement.

5.19 In the public realm areas there will be 15 Sheffield stands providing space for up to 30 bikes to park which can be used by visitors.

Deliveries and Servicing

5.20 Delivery and servicing activity will take place in a combination of on-site provision using the loading area and on-street in accordance with the existing situation.

5.21 There will be a concierge servicing the office and residential uses. They will be positioned within a central lobby area between the buildings. Part of their role will be to accept non-perishable deliveries that residents/staff can collect at a time that suits them in order to reduce missed deliveries. This ensures that the minimum amount of vehicle trips are made as possible.

Residential Deliveries

5.22 Given that the existing site contains 29 residential units, the net increase will be 24 new homes plus the office floorspace. As a general rule of thumb there are 9 deliveries made per 100 units per day according to a TRICS database assessment. Based on the additional 24 residential units, the residential element of the development would generate in the region of an additional 3 deliveries between a 07:00-19:00 period.

Office Deliveries

5.23 A review of the TRICS database indicates that office developments typically generate 0.335 deliveries per 100sqm per day. Based on a floor area of 5,387sqm, the proposed commercial use could result in up to 18 deliveries between 07:00-19:00, 12 of which are likely to occur by LGV and 3 by HGV.

Summary

5.24 In total, the development could result in an additional 20 deliveries throughout a 07:00-19:00 period. It is expected that in such a location 80% of deliveries would be made by light goods vehicles (LGVs) an 20% would be made by heavy goods vehicles (HGVs).

5.25 Given that the majority of deliveries will take place using LGVS, cars or bikes, the majority of vehicles will be able to stop on-site. The location of the site offers the opportunity for a percentage of these to take place on cargo bicycles. It is expected that vehicles up to a 7.5t box van will be able to utilise the loading area. Larger vehicles will be required to stop on-street in opportunities available within the vicinity.

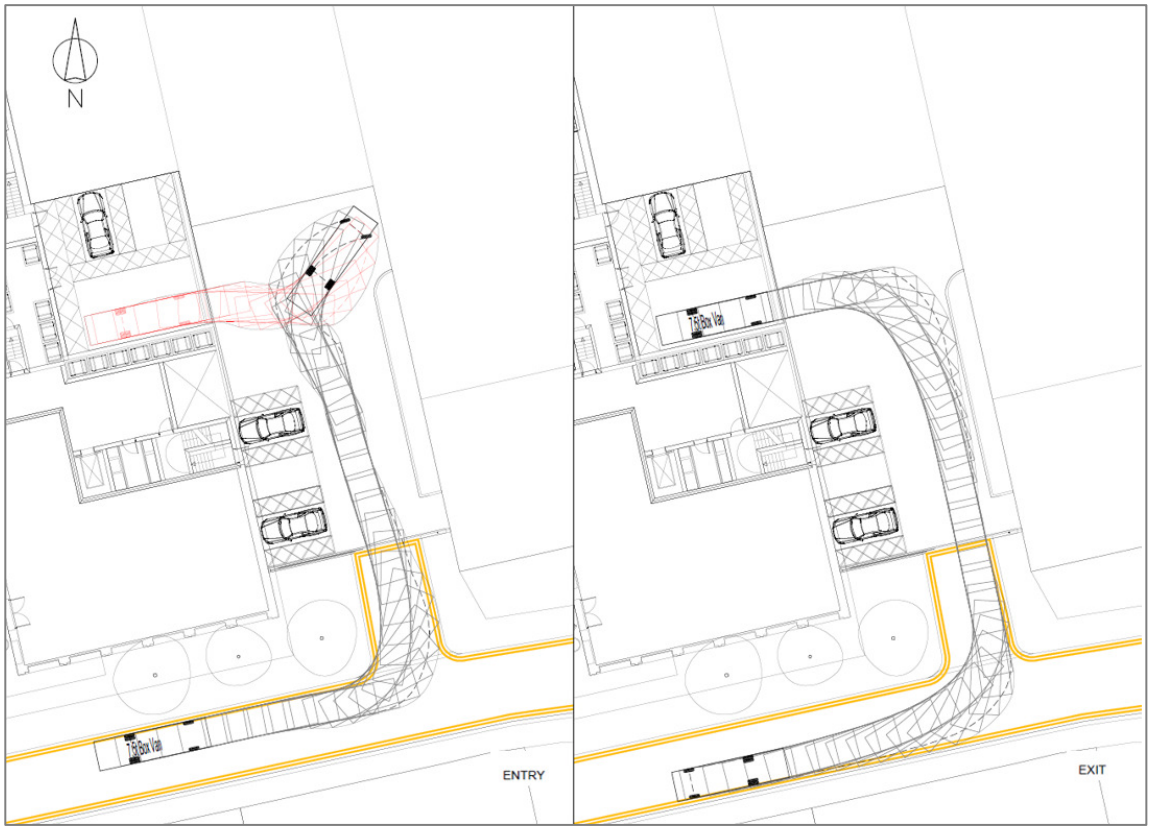
5.26 A Delivery and Servicing Plan accompanies the planning application which sets out to mitigate the potential impacts of servicing activity associated with the development. For example, a concierge would be available to reduce the risk of missed collections.

5.27 Further detail is provided in **Section 7**.

Vehicle Tracking

5.28 Swept path analysis demonstrating the largest vehicle which will enter and exit the site in forward gear is included at **Appendix E**. An extract of a 7.5t box van turning on-site is shown in **Figure 5.2**.

Figure 5.2 – Loading Area Tracking



Waste Strategy

5.29 Waste storage will be provided in accordance with Camden's Waste Guidance. There will be a minimum of 12 x 1,100L Eurobins and associated with the residential dwellings and 8 x 1,100L Eurobins for the commercial use at the site, as shown on the Architect's layout plans. It is envisaged that the waste vehicles would stop on-street on Blackburn Road when collecting waste associated with the development.

5.30 Residential and commercial waste will be stored separately.

Residential Store

5.31 The residential waste store has been designed in accordance with Camden's waste guidance and as such, the development will provide 120L of general waste storage per dwelling, 140L of storage for recyclables and 23L of storage for food waste.

5.32 There are two residential waste stores, one at ground level in Building A and one at ground level between Buildings B and C. Residents will be able to access the bin stores from the lobbies in the buildings whilst there will be direct external access for collection staff. Based on the development providing 1,100L bins for recyclables and general waste and 240L bins for food

waste, there will be 6 Eurobins associated with general waste, 6 for recyclables and 5 x 240L bins for food waste. Each store will have a mixture of bins.

5.33 In addition, there is an area identified in Building A for storage of bulky waste which is accessed via the pedestrian link to the west of the building and also through the residential bin store.

Commercial Store

5.34 The development will provide 8 x 1,100L bins for the office element of the scheme, of which (70%) will be for recyclables and (30%) will be for general waste. This provision is considered to be appropriate for the scale of the development, based on other Borough's guidance and employment densities. It is proposed that waste is collected twice per week arrange through a private contractor.

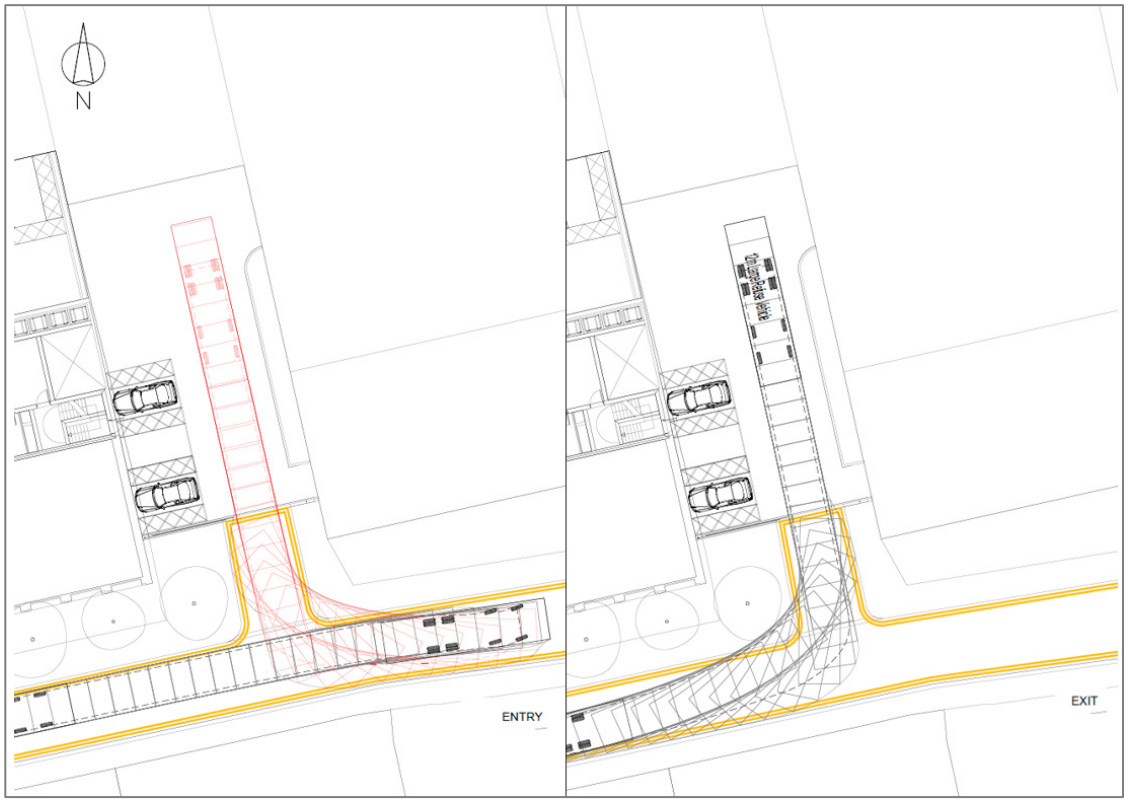
5.35 The benefit of a commercial scheme is such that if the development generates a higher quantum of waste than the scheme has designed for, the frequency of collection could in effect be increased.

Collection

5.36 It is understood that the existing student accommodation building has its waste collected by Veolia in association with LBC. The refuse vehicle reverses into the site from the vehicle access which is within the Applicant's ownership.

5.37 The same strategy is expected to be adopted for the proposed development as this will bring the back of the refuse vehicle close to the office and residential stores in Buildings B and C. Swept path analysis is included at **Appendix E**. There is a bollard on the footway so it is unlikely that in the current situation the refuse vehicle completes the manoeuvre in one go as shown. However it is proposed that the existing crossover is softened to ensure the vehicle does not overrun the footway.

Figure 5.3 – Refuse Vehicle Tracking



5.38 Should this not be considered acceptable, the refuse vehicle would wait on-street and a temporary storage location could be identified.

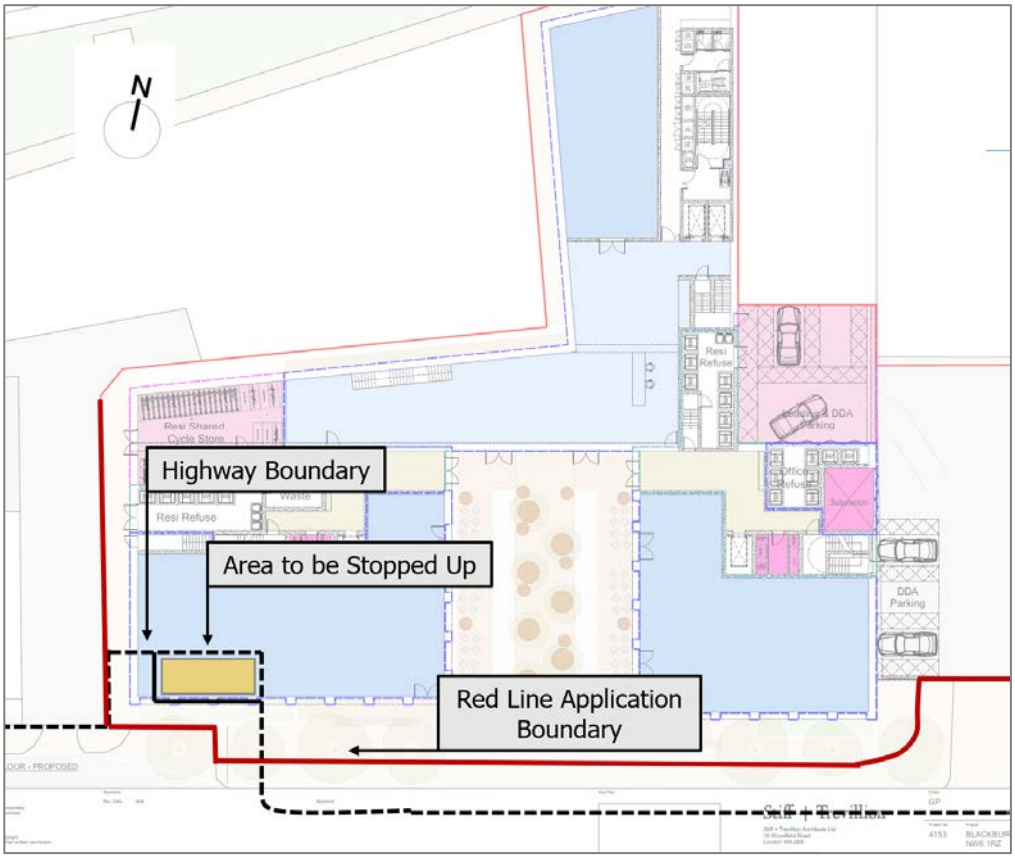
5.39 Refuse will be collected from the store in Building A with the vehicle stopping Blackburn Road as is the case for the other residential properties along the street. The vehicle will already have been required to turn on-site given Blackburn Road is a no-through road and there is little turning ability at the eastern extent of the road. Bins from this store will be transferred by facilities management to a temporary location close to the carriageway, on the day of collection, to ensure there are minimal drag distances for Council refuse staff to move bins.

5.40 No bins will be stored on the public highway.

Stopping Up Order

5.41 It is expected that the stopping up process for a section of footway/highway will be made through a S247 application for the area identified on the plan in **Figure 5.4**.

Figure 5.4 – Area to be Stopped Up



6 TRIP GENERATION

6.1 The trip generation by each mode of transport to and from the proposed development has been estimated for a typical weekday morning and evening peak period, as well as an entire day. The TRICS output files for both uses is contained at **Appendix F**.

Residential Trips

6.2 Total person trip rates have been obtained from comparable sites within the TRICS database, based on similar characteristics. All surveys included were undertaken in the last 5 years.

6.3 Although the parking ratios per unit of the selected sites are higher than those associated with the proposed development, and PTAL ratings vary, since 'total person' trip rates have been obtained and will be given a modal distribution based on Census data, the effect of car ownership, and location for the TRICS sites should not be reflected within the results.

6.4 The development proposes to provide 53 residential dwellings. Given that the existing site contains 29 residential units, the net increase will be 24 new homes and the office floorspace. The trip rates derived for the residential element have been applied to the 24 additional residential dwellings as shown in **Table 6.1**.

Table 6.1 – Trip Generation Summary for Proposed Residential Use

Period	Trip Rates (per unit)		Total Person Trips (for 24 new units)	
	In	Out	In	Out
07:00-08:00	0.10	0.63	3	15
08:00-09:00	0.25	1.14	6	27
09:00-10:00	0.25	0.46	6	11
07:00-10:00	**0.60**	**2.23**	**15**	**53**
16:00-17:00	0.53	0.26	13	6
17:00-18:00	0.61	0.31	15	8
18:00-19:00	0.72	0.34	17	8
16:00-19:00	**1.87**	**0.92**	**45**	**22**
07:00-19:00	**4.52**	**5.37**	**109**	**129**

6.5 **Table 5.1** shows that the morning peak hour of 08:00-09:00 is expected to generate an increase of 33 two-way trips in the morning peak hour (6 arrivals and 27 departures), whilst the traditional evening peak period of 17:00-18:00 is expected to generate 23 two-way trips (15 arrivals and 8 departures).

6.6 In order to establish a multi-modal distribution for the trips, Census journey to work data has been used (ref: **Table 3.3**). The data has been modified according to the development's characteristics i.e. reducing car driver trips from 10% locally to 3% to reflect the car-free nature of the development, with the exception of disabled parking, as shown in **Table 6.2**. The remaining 7% has been allocated to other modes.

Table 6.2 – Modal Split – Residents Journey to Work (Longest Leg)		
Mode	**Census Mode Split**	**Modified Modal Split**
Underground / Overground	55%	59%
Train	16%	18%
Bus	7%	8%
Taxi	0%	0%
Motorcycle	1%	1%
Car Driver	10%	3%
Car Passenger	1%	1%
Bicycle	4%	4%
Walk	6%	6%
Total	100%	100%

6.7 **Table 6.3** sets out the estimated multi-modal trip generation summary for the residential element during the morning peak hour (08:00-09:00) and afternoon peak (17:00-18:00).

Table 6.3 – Predicted Residential Trips by Mode				
Mode	**AM Peak (08:00-09:00)**		**PM Peak (17:00-18:00)**	
	Arrive	**Depart**	**Arrive**	**Depart**
Underground / Overground	4	16	10	5
Train	1	5	3	1
Bus	0	2	1	1
Taxi	0	0	0	0
Motorcycle	0	0	0	0
Car Driver	1	1	1	1
Car Passenger	0	0	0	0
Bicycle	0	1	1	0
Walk	0	2	1	0
Total	6	27	17	8

6.8 The table shows that during the morning peak hour for example there are expected to be an additional 20 trips on the underground and 15 during the evening peak hour.

Office Trips

6.9 To establish a comprehensive multi-modal trip generation scenario for the office use, the TRICS database has been interrogated. The trip rates were selected based on sites within the database in similar town centre locations given the proximity to the town centre boundary. A summary of the trip rates and resultant total person trips for the 5,387sqm (GEA) is shown in **Table 6.4**.

Table 6.4 – Total Person Trip Rates and Trip Generation (Office)

Time Period	Trip Rates per 100 sqm		Total Person Trips (for 5,387sqm)	
	In	Out	In	Out
07:00-08:00	0.75	0.13	40	7
08:00-09:00	2.99	0.28	158	15
09:00-10:00	2.27	0.39	120	20
07:00-10:00	**6.01**	**0.80**	**318**	**42**
16:00-17:00	0.31	1.08	16	57
17:00-18:00	0.22	2.64	12	140
18:00-19:00	0.09	1.41	5	75
16:00-19:00	**0.62**	**5.12**	**33**	**271**
07:00-19:00	**10.87**	**10.68**	**49**	**486**

6.10 To establish the mode of transport expected to be used by staff and visitors to the development, journey to work data from the 2011 Census for those working in the local area (ref: **Table 3.3**) has been applied to the total person trips. The Census mode relates to the longest part of the journey to work.

6.11 The modal split has been modified to reflect the car-free nature of the scheme, i.e. there will be no parking provided with the exception of one disabled parking space for staff / visitors. The car driver mode split has therefore been reduced from 29% to 0%. The remaining 29% has been reallocated to other modes. **Table 6.5** shows the predicted mode split percentages.

Table 6.5 – Modal Split – Staff Journeys to Work (Longest Leg)

Mode	2011 Census Data	Modified Modal Split
Underground / Overground	27%	40%
Train	16%	22%
Bus	12%	18%
Taxi	1%	1%
Motorcycle	1%	2%
Car Driver	29%	0%
Car Passenger	2%	0%
Bicycle	2%	3%
Walk	10%	14%
Total	100%	100%

6.12 The modified modal split has been applied to the total person trips. **Table 6.6** shows the estimated multi-modal trip generation summary for the office during the morning peak (08:00 – 09:00) and the evening peak (17:00 – 18:00). For example, the development is expected to generate 173 persons arriving at the site by all modes during the morning peak hour and 152 persons departing by all modes during the evening peak.

Table 6.6 – Predicted Multi-Modal Trip Generation (Office)

Mode	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)	
	In	Out	In	Out
Underground / Overground	63	6	5	56
Rail	35	3	3	31
Bus	28	3	2	25
Taxi	1	0	0	1
Motorcycle	3	0	0	3
Car Driver	0	0	0	0
Car Passenger	0	0	0	0
Bicycle	5	1	0	5
Walking	22	2	2	19
Total	158	15	12	140

6.13 For example, the table shows that the proposed office development is expected to result in an additional 139 trips by public transport including underground, rail and bus, in the busiest one-hour period between 08:00 – 09:00.

Total Trips

6.14 A site wide total person trip generation based on the multi-modal figures predicted for the residential and commercial uses combined are presented in **Table 6.7**.

Table 6.7 – Total Predicted Trips by Mode

Mode	AM Peak Hour		PM Peak Hour	
	Arrive	Depart	Arrive	Depart
Underground / Overground	67	22	15	61
Train	36	8	6	33
Bus	29	5	3	26
Taxi	1	0	0	1
Motorcycle	3	1	0	3
Car Driver	0	1	1	0
Car Passenger	0	0	0	0
Bicycle	6	2	1	5
Walk	22	4	3	20
Total	164	42	29	148

6.15 The above table suggests that the development would generate 207 trips (164 arrivals / 42 departures) in the morning peak hour and 177 trips (29 arrivals and 148 departures) in the evening peak hour. The site is in an accessible location, with many site users being able to make the most of the three bus routes, West Hampstead Rail, Overground and Underground Stations and Finchley Road Underground Station which are within an acceptable walking distance. In addition, the new West Hampstead Thameslink Station has been designed to accommodate future growth in passenger numbers, with more gates and a much larger passenger circulation area. Hence, the impact of the additional trips is not considered to be material and is not expected to result in a noticeable change to existing conditions.

7 MITIGATION MEASURES

Travel Plan

7.1 Residents and employees at the proposed development will be encouraged to travel to the site by sustainable modes through the implementation of a Travel Plan. A draft Residential Travel Plan and a draft Commercial Travel Plan have been prepared and included as a separate documents as part of the planning application.

7.2 The primary objective of the Travel Plans will be to set out a long-term strategy to facilitate and encourage sustainable modes of travel to the site. It will also seek to promote a shift from travel by public transport to active modes such as walking and cycling as these offer health benefits.

7.3 The initiatives and measures that form part of the Travel Plans will be a mixture of 'hard' and 'soft' measures. The 'hard' measures include the provision of facilities such as safe and secure cycle parking and a car-free scheme with the exception of disabled parking. The 'soft' measures include initiatives such as providing information on public transport services and walking and cycling routes.

7.4 The Travel Plans would be finalised, and agreed prior to the occupation of the proposed development.

Delivery and Servicing Plan

7.5 A draft Delivery and Servicing Plan (DSP) has been prepared by TTP Consulting. This is included as a separate document as part of the planning application and will be secured by way of condition. The purpose of the DSP will be to mitigate the potential impacts of servicing activity associated with the development. The key aims and objectives of the DSP are:

- To minimise disruption to the local roads;
- To manage deliveries effectively to avoid peaking of deliveries and departures that may have detrimental impact on the local highway network; and,
- To manage the number/volume of service vehicle movements during the morning and evening peak periods; and,
- To reduce the dwell time of the vehicle, by increasing the efficiency of the delivery.

Construction Management Plan

7.6 A Draft Construction Management Plan (CMP) has been prepared by TTP to accompany the planning application. The document details how the site would be set up including details of access arrangements, vehicle loading areas and storage facilities, information on vehicles numbers and vehicle routes, with reference to working hours and any remedial measures.

7.7 The purpose of the CMP will be to mitigate the potential impacts of construction activity associated with the development.

7.8 A final CMP would be secured via a condition and prepared upon appointment of a contractor.

8 SUMMARY AND CONCLUSION

Summary

8.1 TTP Consulting has been appointed by West Hampstead Investments Partnership Ltd. to provide transport advice in relation to the proposed development at 13 Blackburn Road, in the London Borough of Camden (LBC). The existing residential building comprises of 29 units having been converted from office to residential under general permitted development order. The proposal seeks to construct three new buildings providing 53 residential units and 5,387sqm of commercial floor space (GEA).

8.2 The site's existing public transport facilities and access to walking and cycling routes combined with the restrained-based approach to on-site car parking will maximise the sustainability of the site in accordance with local, regional and national policy and will promote a sustainable form of development.

8.3 The proposed building line will be set back on the southern boundary to provide the appearance of a wider footway. Additionally, a courtyard space with skylights will be provided between the buildings which the ground level units will take access onto.

8.4 Parking will be provided for five vehicles, of which all will be allocated to disabled users, with four spaces for the residential element of the scheme and one for the commercial element. This is in accordance with the latest version of the London Plan.

8.5 The onsite loading area and disabled parking will be accessed from the existing vehicle access used by the student accommodation, which is within the Applicant's ownership.

8.6 It is envisaged that the development will be subject to a permit-free agreement, prohibiting residents, staff and visitors from obtaining permits for the Controlled Parking Zone.

8.7 Cycle parking will be provided in accordance with the latest version of the New London Plan. A mix of Sheffield and two-tier stands will be provided.

8.8 Delivery and servicing activity will take place on-site for vehicles up to and including a 7.5t box van whilst larger vehicles will stop on-street. A draft Delivery and Servicing Plan (DSP) has been prepared and will be implemented at the development in order to mitigate the potential impacts of servicing activity.

8.9 Waste storage will be provided in line with the Council's standards. Vehicles will collect waste either by reversing into the site using the shared route as is currently the situation for the adjacent student accommodation or by stopping on-street.

8.10 The development is expected to generate an additional 207 (164 arrivals / 42 departures) in the morning peak hour and 177 (29 arrivals and 148 departures) in the evening peak hour. The site achieves a PTAL of 6a and benefits from access to 3 bus routes and access to West Hampstead Station. Hence, the impact of the additional trips is not considered to be material and is not expected to result in a noticeable change to existing conditions. A draft Residential Travel Plan and a draft Commercial Travel Plan have been prepared and included as a separate documents as part of the planning application. These documents will encourage sustainable travel to and from the site.

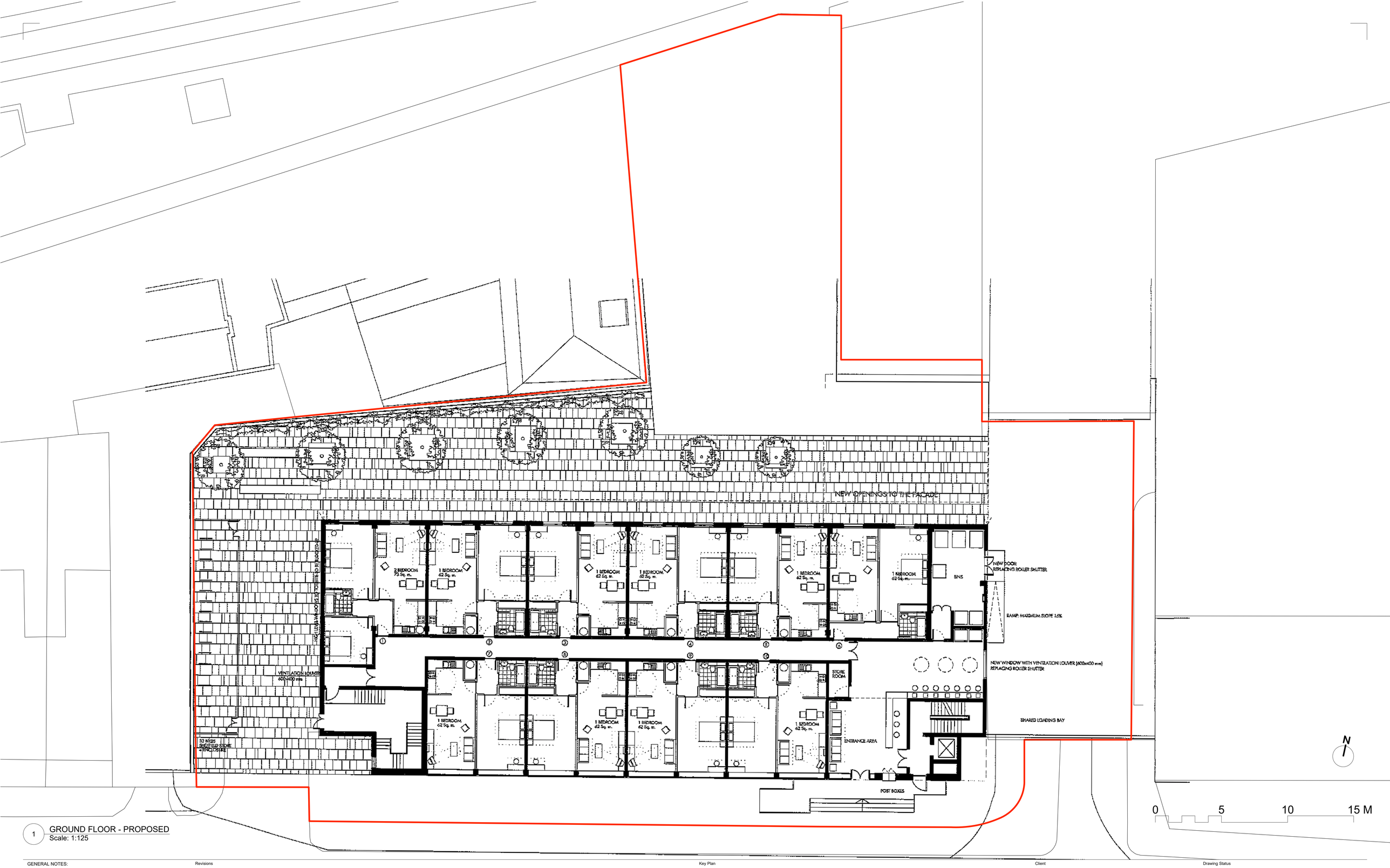
Conclusion

8.11 The proposed scheme is consistent with relevant transport planning policy guidance and will not give rise to any material transport related impacts. It therefore meets the test of the NPPF and paragraph 109, which states that:

"Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe."

Appendix A

(Existing Layout Plans)



1 GROUND FLOOR - PROPOSED
Scale: 1:125

GENERAL NOTES:
Do not scale from this drawing.

Check drawing on receipt and immediately report any discrepancies to the Architect. Verify all dimensions and levels on site prior to construction.

Revisions

Rev.	Date	Note	Approved

Key Plan

Stiff + Trevillion

Stiff + Trevillion Architects Ltd
16 Woodfield Road
London W9 2BE

T +44(0)20 8960 5550
mail@stiffandtrevillion.com
www.stiffandtrevillion.com

Client: GP

Drawing Status: STAGE 2

Project No.	Project	Date	Scale @ A1	Scale @ A3
4153	BLACKBURN ROAD NW6 1RZ	APRIL 2020	1:125	1:250

Drawing Title: GROUND FLOOR PLAN EXISTING

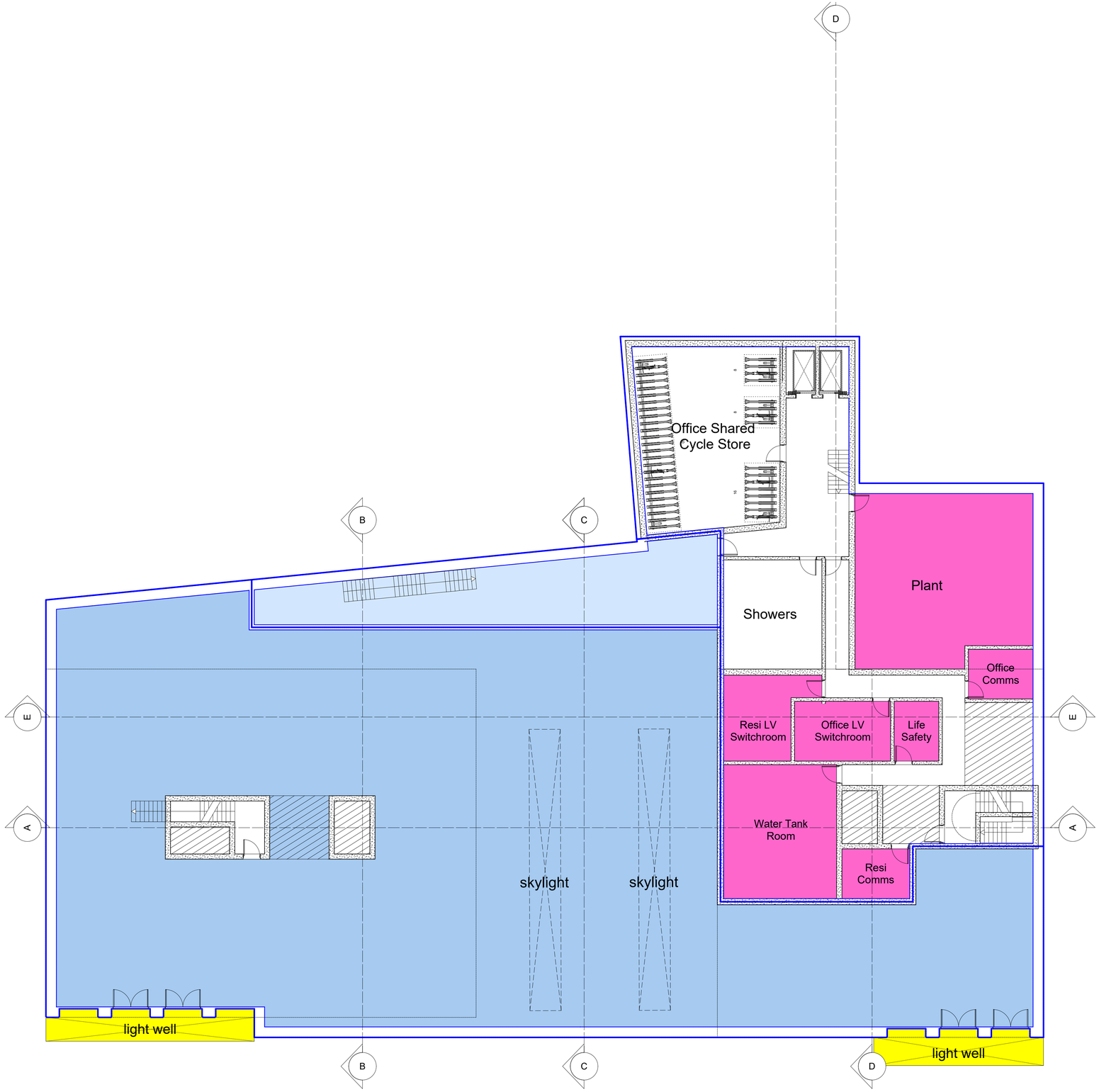
Drawing No.: ST-EX-02-100

Revision

DRAFT

Appendix B

(Proposed Layout Plans)



N

0 5 10 15 M

1 LOWER GROUND FLOOR - PROPOSED
Scale: 1:125

GENERAL NOTES:
Do not scale from this drawing.
Check drawing on receipt and immediately report any discrepancies to the Architect.
Verify all dimensions and levels on site prior to construction.

Revisions

Rev.	Date	Note	Approved

Key Plan

Stiff + Trevillion

Stiff + Trevillion Architects Ltd
16 Woodfield Road
London W9 2BE

T +44(0)20 8960 5550
mail@stiffandtrevillion.com
www.stiffandtrevillion.com

Client: GP

Drawing Status: STAGE 2

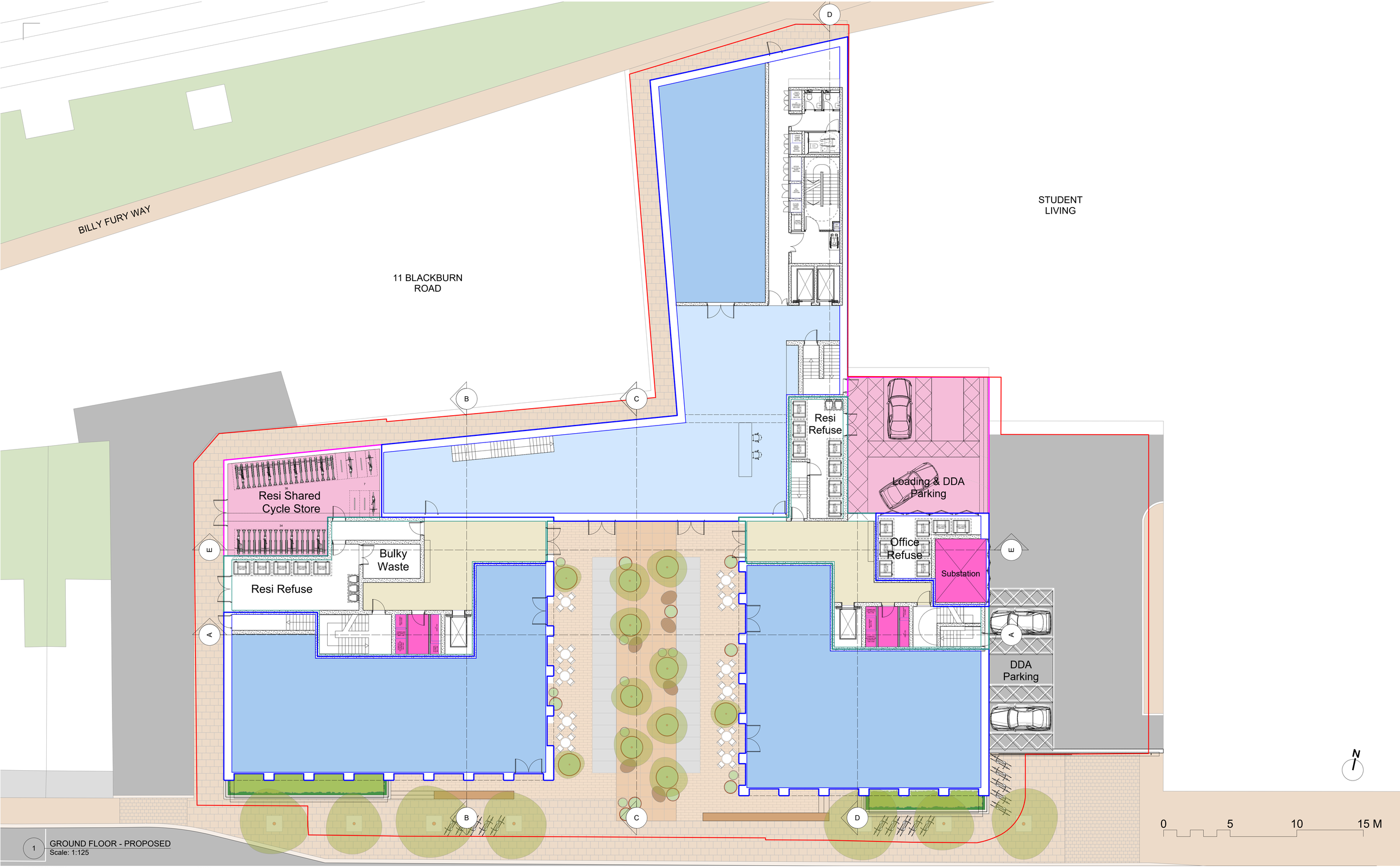
Project No.	Project	Date	Scale @ A1	Scale @ A3
4153	BLACKBURN ROAD NW6 1RZ	APRIL 2020	1:125	1:250

Drawing Title: LOWER GROUND FLOOR PLAN PROPOSED

Drawing No.: ST-PR-02-099

Revision:

DRAFT



1 GROUND FLOOR - PROPOSED
Scale: 1:125

GENERAL NOTES:
Do not scale from this drawing.
Check drawing on receipt and immediately report any discrepancies to the Architect.
Verify all dimensions and levels on site prior to construction.

Revisions

Rev.	Date	Note	Approved

Key Plan

Stiff + Trevillion

Stiff + Trevillion Architects Ltd
16 Woodfield Road
London W9 2BE

T +44(0)20 8960 5550
mail@stiffandtrevillion.com
www.stiffandtrevillion.com

Client
GP

Drawing Status
STAGE 2

Project No.	Project	Date	Scale @ A1	Scale @ A3
4153	BLACKBURN ROAD NW6 1RZ	APRIL 2020	1:125	1:250

Drawing Title
GROUND FLOOR PLAN PROPOSED

Drawing No. ST-PR-02-100

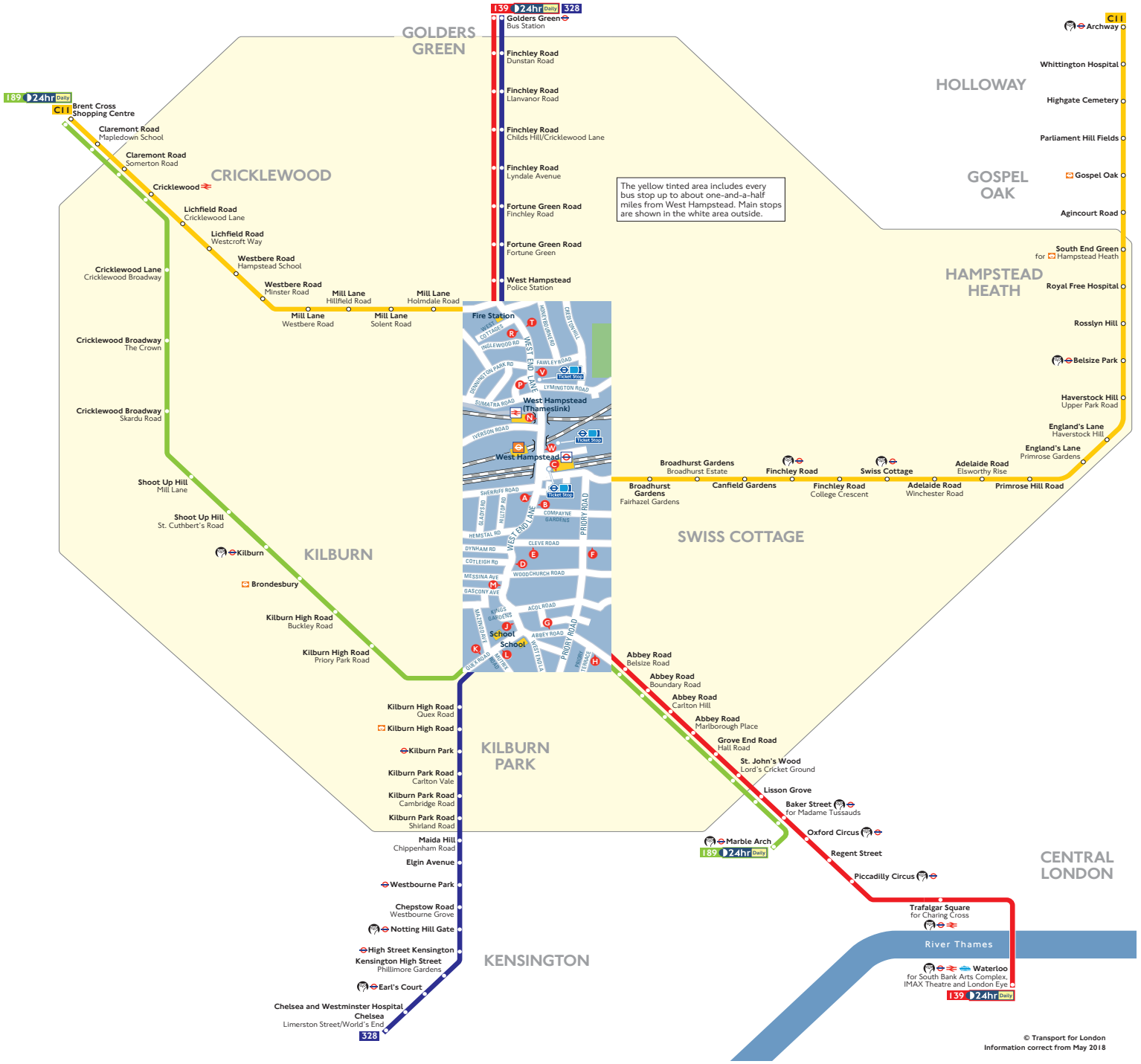
Revision

DRAFT

Appendix C

(Bus Route Map)

Buses from West Hampstead



Route finder

Bus route	Towards	Bus stops
139 24hr Daily	Golders Green	A H J M N P R
	Waterloo	B D G T V W
189 24hr Daily	Brent Cross Shopping Centre	H L
	Marble Arch	G K
328	Chelsea	B D L T V W
	Golders Green	A J K M N P R
C11	Archway	C T V W
	Brent Cross Shopping Centre	A E F N P R

Key

- Connections with London Underground
- Connections with London Overground
- Connections with National Rail
- Connections with river boats
- Tube station with 24-hour service Friday and Saturday nights

Ways to pay

Use your contactless debit or credit card. It's the same fare as Oyster and there is no need to top up.

Top up your Oyster pay as you go credit or buy Travelcards and bus & tram passes at around 4,000 shops across London.

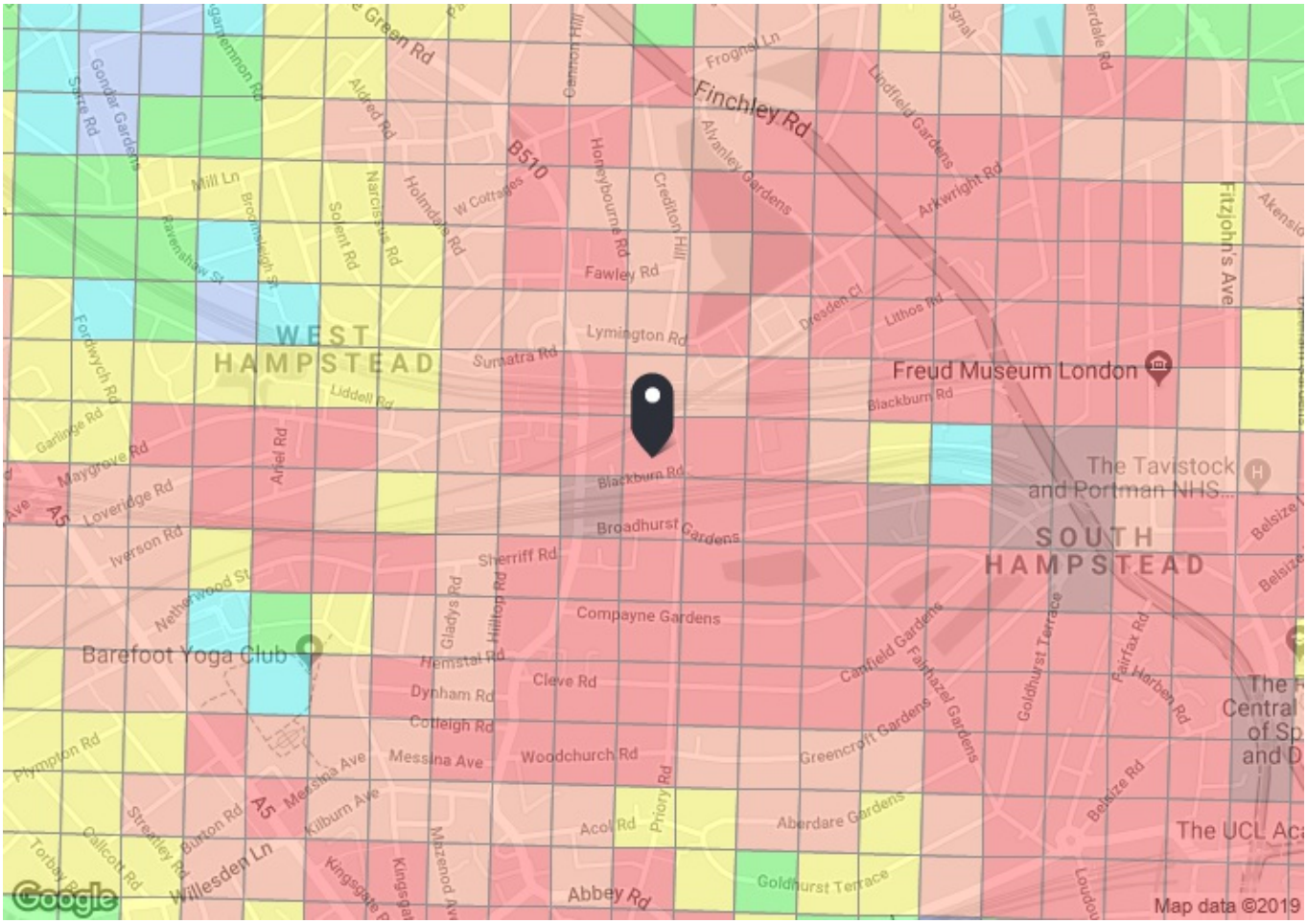
Sign up for an online account to top up online and see your travel history and spending.

TfL 323.05.18 (P)

Appendix D

(PTAL Output)

TRANSPORT FOR LONDON



PTAL output for Base Year
6a

NW6 1RZ
Blackburn Rd, West Hampstead, London NW6 1RZ, UK
Easting: 525646, Northing: 184719

Grid Cell: 102512

Report generated: 04/11/2019

Map key - PTAL

0 (Worst)	1a
1b	2
3	4
5	6a
6b (Best)	

Map layers

PTAL (cell size: 100m)

Calculation Parameters

Day of Week	M-F
Time Period	AM Peak
Walk Speed	4.8 kph
Bus Node Max. Walk Access Time (mins)	8
Bus Reliability Factor	2.0
LU Station Max. Walk Access Time (mins)	12
LU Reliability Factor	0.75
National Rail Station Max. Walk Access Time (mins)	12
National Rail Reliability Factor	0.75

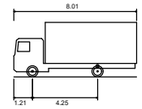
Calculation data

Mode	Stop	Route	Distance (metres)	Frequency (vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	WEST HAMPSTEAD STATION	C11	302.28	7.5	3.78	6	9.78	3.07	0.5	1.53
Bus	WEST HAMPSTEAD STATION	139	302.28	7.5	3.78	6	9.78	3.07	0.5	1.53
Bus	WEST HAMPSTEAD STATION	328	302.28	9	3.78	5.33	9.11	3.29	1	3.29
Bus	FNCH R O2 CENTRE HOMEBASE	268	307.45	5	3.84	8	11.84	2.53	0.5	1.27
Bus	FNCH R O2 CENTRE HOMEBASE	187	307.45	5.5	3.84	7.45	11.3	2.66	0.5	1.33
Rail	West Hampstead	'CLPHMJ2-STFD 2L50'	246.16	3.67	3.08	8.92	12	2.5	1	2.5
Rail	West Hampstead	'STFD-CLPHMJ2 2Y11'	246.16	3.67	3.08	8.92	12	2.5	0.5	1.25
LUL	Finchley Road	'Amer-AldgateFast'	864.82	1	10.81	30.75	41.56	0.72	0.5	0.36
LUL	Finchley Road	'Ches-AldgateFast'	864.82	2	10.81	15.75	26.56	1.13	0.5	0.56
LUL	Finchley Road	'Uxbridge-AldSlow'	864.82	5.33	10.81	6.38	17.19	1.75	0.5	0.87
LUL	Finchley Road	'BakerSt-AmerFast'	864.82	1.33	10.81	23.31	34.12	0.88	0.5	0.44
LUL	Finchley Road	'Watford-BStreetSF'	864.82	2.33	10.81	13.63	24.44	1.23	0.5	0.61
LUL	Finchley Road	'Watford-AldSfast'	864.82	3.67	10.81	8.92	19.73	1.52	0.5	0.76
LUL	Finchley Road	'Aldg-WatfordSlow'	864.82	3.67	10.81	8.92	19.73	1.52	0.5	0.76
LUL	Finchley Road	'BakStr-WatfordSlow'	864.82	1.67	10.81	18.71	29.52	1.02	0.5	0.51
LUL	Finchley Road	'BkStr-UxbridgeSFast'	864.82	2.33	10.81	13.63	24.44	1.23	0.5	0.61
LUL	Finchley Road	'Uxbridge-BStreetSl'	864.82	3.67	10.81	8.92	19.73	1.52	0.5	0.76
LUL	Finchley Road	'Ald-HarrowHill'	864.82	1.33	10.81	23.31	34.12	0.88	0.5	0.44
LUL	Finchley Road	'BStreet-WembleyPk'	864.82	0.33	10.81	91.66	102.47	0.29	0.5	0.15
LUL	Finchley Road	'BakerSt-HarrowHill'	864.82	0.67	10.81	45.53	56.34	0.53	0.5	0.27
LUL	West Hampstead	'WembleyPark-Stratfo'	224.11	3.67	2.8	8.92	11.73	2.56	0.5	1.28
LUL	West Hampstead	'WillesdenGreen-Stra'	224.11	4.33	2.8	7.68	10.48	2.86	0.5	1.43
LUL	West Hampstead	'Stanmore-Stratford'	224.11	17.65	2.8	2.45	5.25	5.71	1	5.71
Rail	West Hampstead	'BEDFDM-SUTTON 1O13'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'STALBCY-SVNOAKS 2E11'	525.67	1	6.57	30.75	37.32	0.8	0.5	0.4
Rail	West Hampstead	'BEDFDM-SVNOAKS 2E19'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'LUTON-SVNOAKS 2E21'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'STALBCY-SVNOAKS 2E95'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'SUTTON-LUTON 2O00'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'SUTTON-BEDFDM 2O04'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'SUTTON-STALBCY 2O06'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'SUTTON-LUTON 2O10'	525.67	1	6.57	30.75	37.32	0.8	0.5	0.4
Rail	West Hampstead	'LUTON-SUTTON 2O17'	525.67	0.67	6.57	45.53	52.1	0.58	0.5	0.29
Rail	West Hampstead	'STALBCY-SUTTON 2O21'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'STALBCY-SUTTON 2O29'	525.67	0.67	6.57	45.53	52.1	0.58	0.5	0.29
Rail	West Hampstead	'LUTON-BCKNHMJ 2S91'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'STALBCY-BROMLYS 2S93'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'BRGHTN-BEDFDM 2T02'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'BRGHTN-BEDFDM 2T04'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'SUTTON-STALBCY 2V02'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'SUTTON-STALBCY 2V08'	525.67	0.67	6.57	45.53	52.1	0.58	0.5	0.29
Rail	West Hampstead	'BEDFDM-SUTTON 2V15'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'SUTTON-BEDFDM 2V16'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'LUTON-SUTTON 2V19'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'STALBCY-SUTTON 2V27'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'LUTON-SUTTON 2V31'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'ORPNGTN-STALBCY 2D93'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'ORPNGTN-LUTON 2D95'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'SVNOAKS-STALBCY 2E59'	525.67	0.67	6.57	45.53	52.1	0.58	0.5	0.29
Rail	West Hampstead	'SVNOAKS-LUTON 2E61'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'SVNOAKS-WHMPSTM 2E63'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
Rail	West Hampstead	'BROMLYS-LUTON 2E93'	525.67	0.33	6.57	91.66	98.23	0.31	0.5	0.15
									Total Grid Cell AI:	**33.63**

Appendix E

(Swept Path Analysis)

Rev	Details	Drawn	Checked	Date
A	Scheme and swept paths updated.	MW	JP	28.04.20



7.5t Box Van

Overall Length	8.010m
Overall Width	2.100m
Overall Body Height	3.556m
Min Body Ground Clearance	0.351m
Track Width	2.064m
Lock to Lock Time	4.00 sec
Kerb to Kerb Turning Radius	7.400m

Notes:
1. This is not a construction drawing and is intended for illustrative purposes only.

Client
West Hampstead Investments Partnership Ltd.

Project
13 Blackburn Road

Drawing Title
Swept Path Analysis Using a 7.5t Box Van

Scale
1:250 at A3

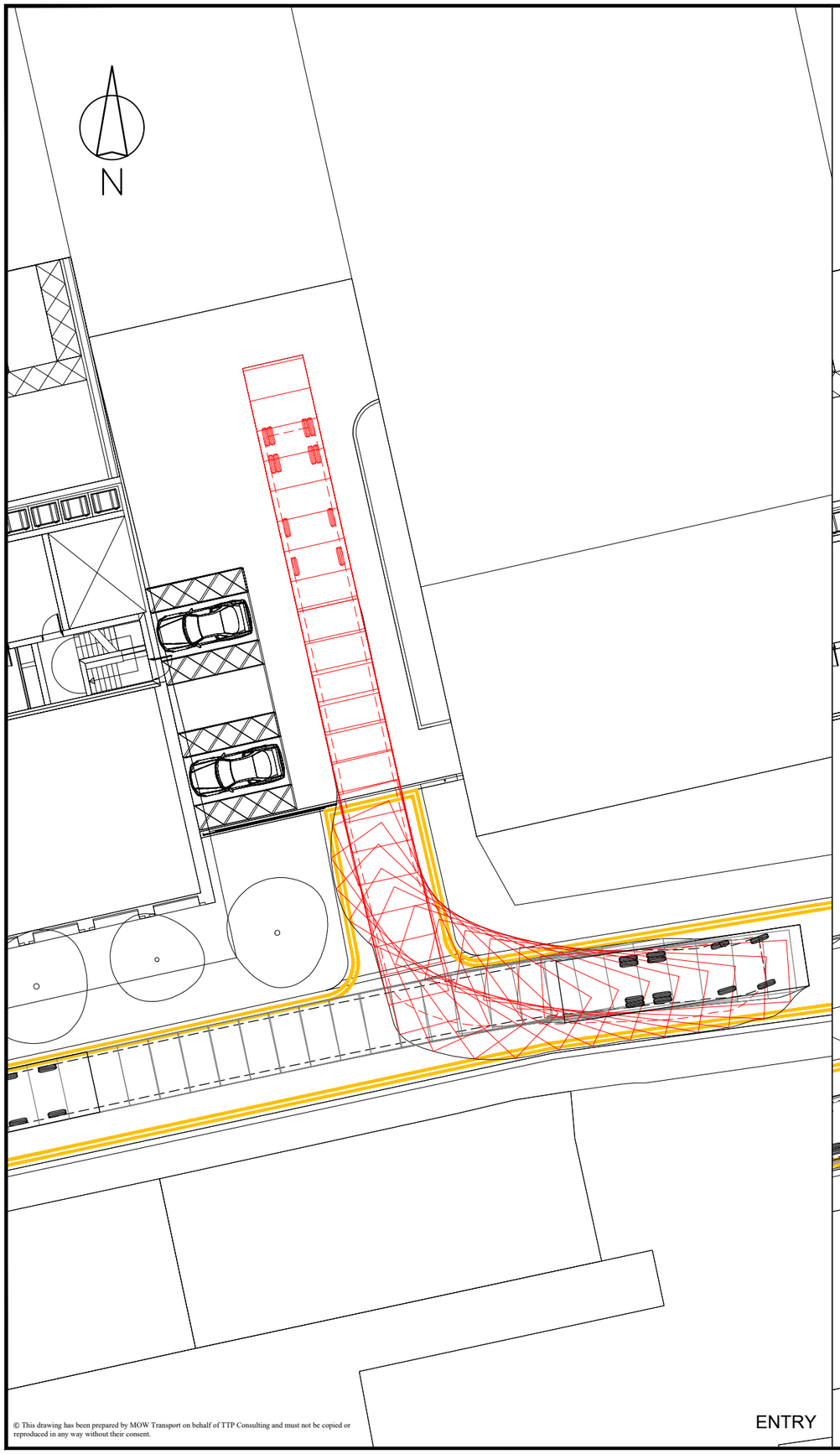
Drawn	MW	18.11.19
Checked	JP	18.11.19

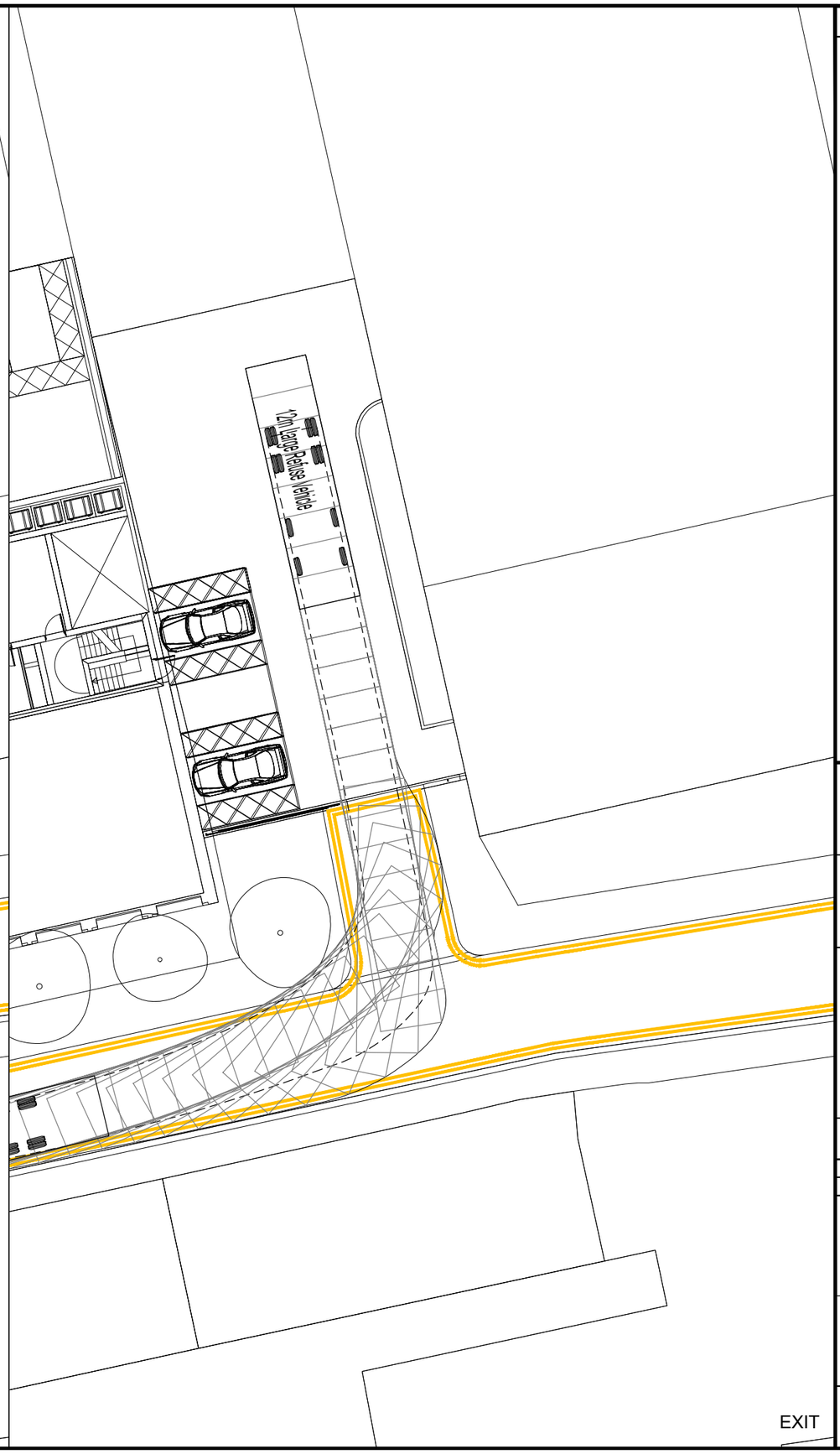
ttp consulting
transport planning specialists

111 - 113 Great Portland Street
London
W1W 6QQ
Tel. No. 0207 1000 753

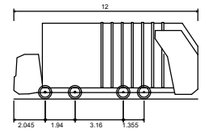
Drawing Number
2019-3692-AT-102

Rev
A





Rev	Details	Drawn	Checked	Date
A	Scheme and swept paths updated.	MW	JP	28.04.20



11m Large Refuse Vehicle

Overall Length	12.000m
Overall Width	3.000m
Overall Body Height	5.000m
Min Body Ground Clearance	0.302m
Track Width	2.490m
Lock to Lock Time	4.00s
Wall to Wall Turning Radius	10.250m

Notes:
1. This is not a construction drawing and is intended for illustrative purposes only.

Client
West Hampstead Investments Partnership Ltd.

Project
13 Blackburn Road

Drawing Title
Swept Path Analysis Using a 12m Large Refuse Vehicle

Scale
1:250 at A3

Drawn	MW	04.12.19
Checked	JP	04.12.19

ttp consulting
transport planning specialists

111 - 113 Great Portland Street
London
W1W 6QQ
Tel. No. 0207 1000 753

Drawing Number
2019-3692-AT-103

Rev
A

Appendix F

(TRICS Output Files)

Calculation Reference: AUDIT-752101-191129-1131

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

01	GREATER LONDON		
	CI	CITY OF LONDON	2 days
	CN	CAMDEN	1 days
	HM	HAMMERSMITH AND FULHAM	1 days
	WH	WANDSWORTH	1 days

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

Secondary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 1215 to 26639 (units: sqm)
Range Selected by User: 408 to 120000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 17/06/19

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

Selected survey days:

Monday	1 days
Wednesday	1 days
Thursday	1 days
Friday	2 days

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

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

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

Selected Locations:

Town Centre	5

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

Selected Location Sub Categories:

Commercial Zone	2
Built-Up Zone	3

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

Secondary Filtering selection:

Use Class:

B1	5 days

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

Secondary Filtering selection (Cont.):

Population within 1 mile:

10,001 to 15,000	1 days
50,001 to 100,000	3 days
100,001 or More	1 days

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

Population within 5 miles:

250,001 to 500,000	1 days
500,001 or More	4 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.5 or Less	2 days
0.6 to 1.0	3 days

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

Travel Plan:

Yes	1 days
No	4 days

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

PTAL Rating:

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

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

LIST OF SITES relevant to selection parameters

1	CI-02-A-02	OFFICES		CITY OF LONDON
	GRACECHURCH STREET			
	CITY OF LONDON			
	MONUMENT			
	Town Centre			
	Commercial Zone			
	Total Gross floor area:		9803 sqm	
	Survey date: FRIDAY		*29/11/13*	*Survey Type: MANUAL*
2	CI-02-A-03	OFFICES		CITY OF LONDON
	MONUMENT STREET			
	CITY OF LONDON			
	MONUMENT			
	Town Centre			
	Commercial Zone			
	Total Gross floor area:		1951 sqm	
	Survey date: FRIDAY		*29/11/13*	*Survey Type: MANUAL*
3	CN-02-A-03	PLANNING & ENGINEERING		CAMDEN
	FITZROY STREET			
	FITZROVIA			
	Town Centre			
	Built-Up Zone			
	Total Gross floor area:		26639 sqm	
	Survey date: WEDNESDAY		*06/12/17*	*Survey Type: MANUAL*
4	HM-02-A-01	REGUS OFFICES		HAMMERSMITH AND FULHAM
	QUEEN CAROLINE STREET			
	HAMMERSMITH			
	Town Centre			
	Built-Up Zone			
	Total Gross floor area:		2036 sqm	
	Survey date: MONDAY		*13/11/17*	*Survey Type: MANUAL*
5	WH-02-A-02	OFFICES		WANDSWORTH
	BATTERSEA PARK ROAD			
	BATTERSEA			
	Town Centre			
	Built-Up Zone			
	Total Gross floor area:		1215 sqm	
	Survey date: THURSDAY		*10/05/12*	*Survey Type: MANUAL*

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	8329	0.747	5	8329	0.125	5	8329	0.872
08:00 - 09:00	5	8329	2.990	5	8329	0.283	5	8329	3.273
09:00 - 10:00	5	8329	2.274	5	8329	0.387	5	8329	2.661
10:00 - 11:00	5	8329	0.980	5	8329	0.682	5	8329	1.662
11:00 - 12:00	5	8329	0.641	5	8329	0.644	5	8329	1.285
12:00 - 13:00	5	8329	0.802	5	8329	1.234	5	8329	2.036
13:00 - 14:00	5	8329	1.025	5	8329	0.958	5	8329	1.983
14:00 - 15:00	5	8329	0.523	5	8329	0.492	5	8329	1.015
15:00 - 16:00	5	8329	0.274	5	8329	0.747	5	8329	1.021
16:00 - 17:00	5	8329	0.307	5	8329	1.076	5	8329	1.383
17:00 - 18:00	5	8329	0.219	5	8329	2.637	5	8329	2.856
18:00 - 19:00	5	8329	0.089	5	8329	1.410	5	8329	1.499
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			10.871			10.675			21.546

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

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

Calculation Reference: AUDIT-752101-191126-1134

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

01	GREATER LONDON		
	BE	BEXLEY	1 days
	EN	ENFIELD	1 days
	KN	KENSINGTON AND CHELSEA	1 days
	SK	SOUTHWARK	1 days
	TH	TOWER HAMLETS	1 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
Actual Range: 53 to 83 (units:)
Range Selected by User: 50 to 100 (units:)

Parking Spaces Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 21/06/19

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

Selected survey days:

Wednesday	1 days
Friday	4 days

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

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	3
Edge of Town	1
Neighbourhood Centre (PPS6 Local Centre)	1

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

Selected Location Sub Categories:

Residential Zone	3
Built-Up Zone	1
No Sub Category	1

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

Secondary Filtering selection:

Use Class:

C3	5 days

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

Population within 1 mile:

5,001 to 10,000	1 days
25,001 to 50,000	2 days
50,001 to 100,000	2 days

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

Population within 5 miles:

125,001 to 250,000	2 days
500,001 or More	3 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	5 days

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

Travel Plan:

No	5 days

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

PTAL Rating:

1a (Low) Very poor	1 days
1b Very poor	1 days
3 Moderate	1 days
5 Very Good	1 days
6b (High) Excellent	1 days

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

LIST OF SITES relevant to selection parameters

1 BE-03-C-01 BLOCKS OF FLATS BEXLEY
CROOK LOG
BEXLEYHEATH

Edge of Town Centre
Residential Zone
Total Number of dwellings: 79
Survey date: WEDNESDAY *19/09/18* *Survey Type: MANUAL*

2 EN-03-C-02 BLOCKS OF FLATS ENFIELD
CARTERHATCH LANE
ENFIELD
FORTY HILL
Edge of Town
Residential Zone
Total Number of dwellings: 76
Survey date: FRIDAY *10/11/17* *Survey Type: MANUAL*

3 KN-03-C-03 BLOCK OF FLATS KENSINGTON AND CHELSEA
ALLEN STREET
KENSINGTON

Edge of Town Centre
Residential Zone
Total Number of dwellings: 72
Survey date: FRIDAY *11/05/12* *Survey Type: MANUAL*

4 SK-03-C-01 BLOCK OF FLATS SOUTHWARK
PARK STREET
SOUTHWARK

Edge of Town Centre
Built-Up Zone
Total Number of dwellings: 53
Survey date: FRIDAY *19/09/14* *Survey Type: MANUAL*

5 TH-03-C-04 BLOCK OF FLATS TOWER HAMLETS
LEVEN ROAD
POPLAR
ABERFELDY VILLAGE
Neighbourhood Centre (PPS6 Local Centre)
No Sub Category
Total Number of dwellings: 83
Survey date: FRIDAY *21/06/19* *Survey Type: MANUAL*

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	73	0.102	5	73	0.634	5	73	0.736
08:00 - 09:00	5	73	0.251	5	73	1.138	5	73	1.389
09:00 - 10:00	5	73	0.245	5	73	0.457	5	73	0.702
10:00 - 11:00	5	73	0.278	5	73	0.449	5	73	0.727
11:00 - 12:00	5	73	0.248	5	73	0.353	5	73	0.601
12:00 - 13:00	5	73	0.320	5	73	0.350	5	73	0.670
13:00 - 14:00	5	73	0.339	5	73	0.366	5	73	0.705
14:00 - 15:00	5	73	0.295	5	73	0.320	5	73	0.615
15:00 - 16:00	5	73	0.581	5	73	0.386	5	73	0.967
16:00 - 17:00	5	73	0.532	5	73	0.262	5	73	0.794
17:00 - 18:00	5	73	0.614	5	73	0.314	5	73	0.928
18:00 - 19:00	5	73	0.719	5	73	0.339	5	73	1.058
19:00 - 20:00	3	79	0.929	3	79	0.420	3	79	1.349
20:00 - 21:00	3	79	0.563	3	79	0.231	3	79	0.794
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			6.016			6.019			12.035

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

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