



**ttp consulting**

transport planning specialists

## **Westlake Property Ltd**

**47a Lower Mortlake Road,  
London Borough of Richmond  
upon Thames**

### **Transport Statement**

**October 2019**

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## Contents

<b>1</b>	<b>INTRODUCTION .....</b>	<b>1</b>
	Scope of the Report .....	2
<b>2</b>	<b>EXISTING SITUATION.....</b>	<b>3</b>
	Site and Surrounding Area.....	3
	Local Highway Network.....	3
	Accessibility .....	5
	Car Clubs .....	10
	Car Ownership .....	11
	Method of Journey to Work .....	11
<b>3</b>	<b>POLICY .....</b>	<b>12</b>
	National Policy .....	12
	Regional Policy.....	13
	Local Policy .....	16
<b>4</b>	<b>PROPOSED DEVELOPMENT .....</b>	<b>17</b>
	Access .....	17
	Parking.....	17
	Deliveries and Servicing.....	17
	Refuse Storage and Collection.....	17
<b>5</b>	<b>EFFECTS OF DEVELOPMENT .....</b>	<b>18</b>
	Trip Generation .....	18
	Parking.....	20
	Access .....	21
	Deliveries and Servicing.....	21
	Healthy Streets .....	21
	Mitigation.....	22
<b>6</b>	<b>SUMMARY AND CONCLUSION .....</b>	<b>23</b>
	Summary.....	23
	Conclusion.....	23

## Figures

- Figure 1.1 - Site Location Plan;
- Figure 2.1 - Local Highway Network;
- Figure 2.2 - Local Controlled Parking Zones;
- Figure 2.3 - Walking Isochrone Plan;
- Figure 2.4 - Cycling Isochrone Plan;
- Figure 2.5 - Bus Stop Locations; and,
- Figure 2.6 - Car Club Locations.

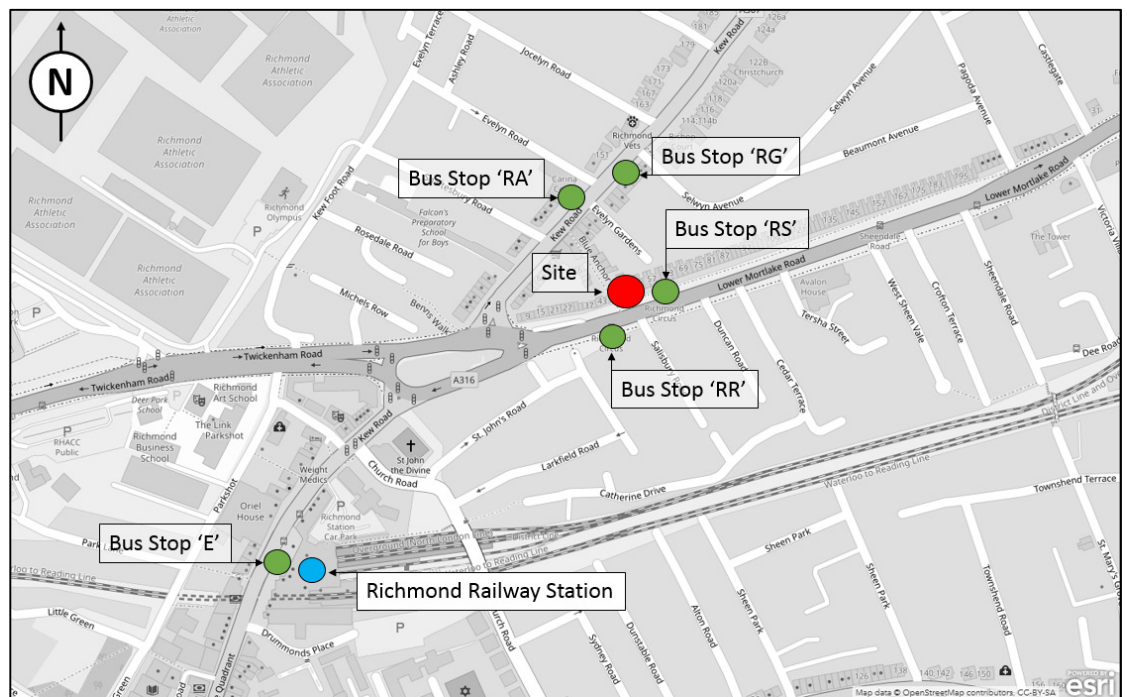
## Appendices

- Appendix A - Architect Plans;
- Appendix B - Parking Survey;
- Appendix C - PTAL Report;
- Appendix D - TfL Bus Spider Map; and,
- Appendix E - TRICS Report.

# 1 INTRODUCTION

- 1.1 TTP Consulting has been appointed by Westlake Property Ltd (“the Applicant”) to provide traffic and transport advice in relation to the development proposals at 47a Lower Mortlake Road, within the London Borough of Richmond upon Thames (LBRuT).
- 1.2 The site is located in a highly accessible area in close proximity to Richmond town centre and Richmond Rail and Underground Station, providing access to numerous local amenities and public transport services. Lower Mortlake Road forms part of the Transport for London Road Network (TLRN) connecting the site immediately to the town centre, bus services, and the existing pedestrian and cycle networks. A site location plan is shown at **Figure 1.1**

**Figure 1.1: Site Location Plan**



- 1.3 The existing site comprises an unused yard and is currently considered vacant with no formal land use. Vehicle access to the yard is served by an existing crossover on Lower Mortlake Road.
- 1.4 The proposals seek to construct a three storey plus basement co-living scheme (Sui Generis) with 16 bedrooms and communal living spaces including a sunken courtyard. The development will be car-free with the existing vehicle crossover made redundant. Cycle parking and bin storage will also be provided. The architect’s plans are included at **Appendix A**.

## Scope of the Report

1.5 This Transport Statement considers the effects of the proposed development in traffic and transport terms including accessibility, trip generation, car and cycle parking, servicing requirements and refuse collection. The remainder of this report will be set out as follows:

- Section 2 describes the existing situation;
- Section 3 sets out the relevant national, regional and local policy;
- Section 4 details the proposals;
- Section 5 considers the effect of the development and mitigation; and,
- Section 6 summarises and concludes.

## 2 EXISTING SITUATION

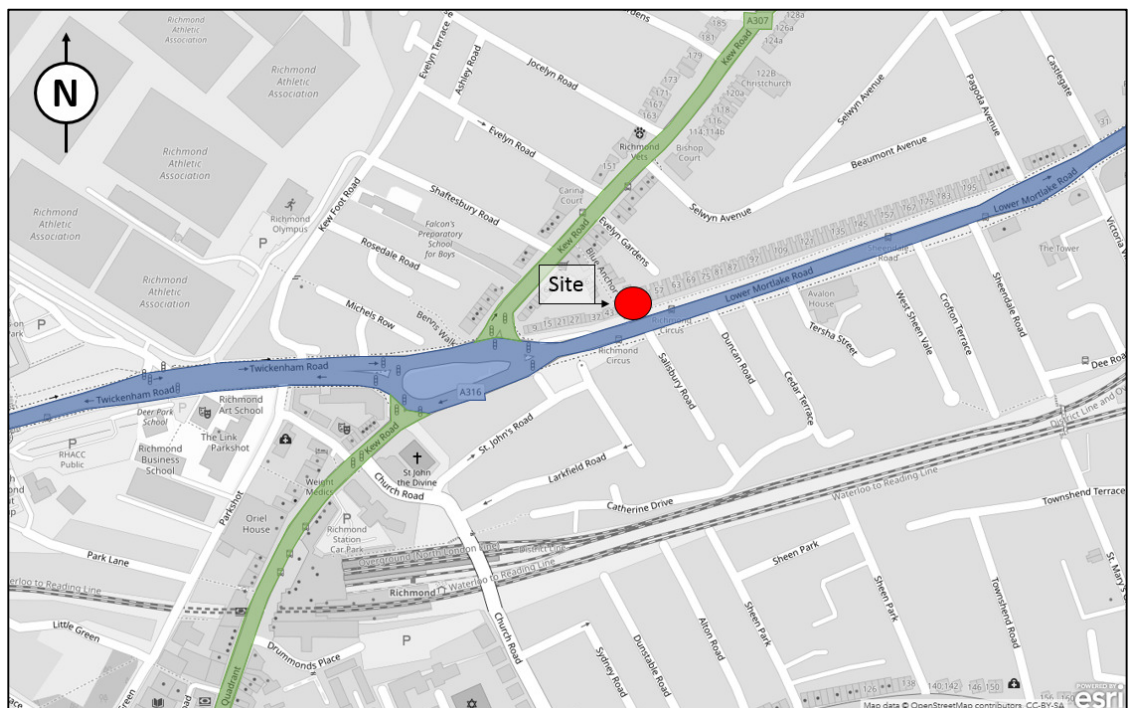
### Site and Surrounding Area

- 2.1 The site is currently unused and comprises of a concrete hardstanding which has previously functioned as a builders merchants. The site is situated between Blue Anchor Alleyway and No.47 Lower Mortlake Road, with vehicle access taken from Lower Mortlake Road via an existing crossover.
- 2.2 The site is located within a well-established residential area in close proximity to Richmond town centre. There are various commercial uses located within the town centre including a variety of restaurants and bars, medical services and convenience stores. Local bus stops are situated on Lower Mortlake Road in close proximity to the site access, whilst Richmond Rail and Underground Station is a 400m walk to the west.

### Local Highway Network

- 2.3 A plan of the local highway network in the vicinity of the site is shown at **Figure 2.1**.

**Figure 2.1: Local Highway Network**



- 2.4 Lower Mortlake Road (A316) is a two-way dual carriageway orientated in an east to west direction between Richmond and North Sheen. It functions as a bus corridor with stops at intervals along its length including stop 'RS' immediately east of the site. Further east on-

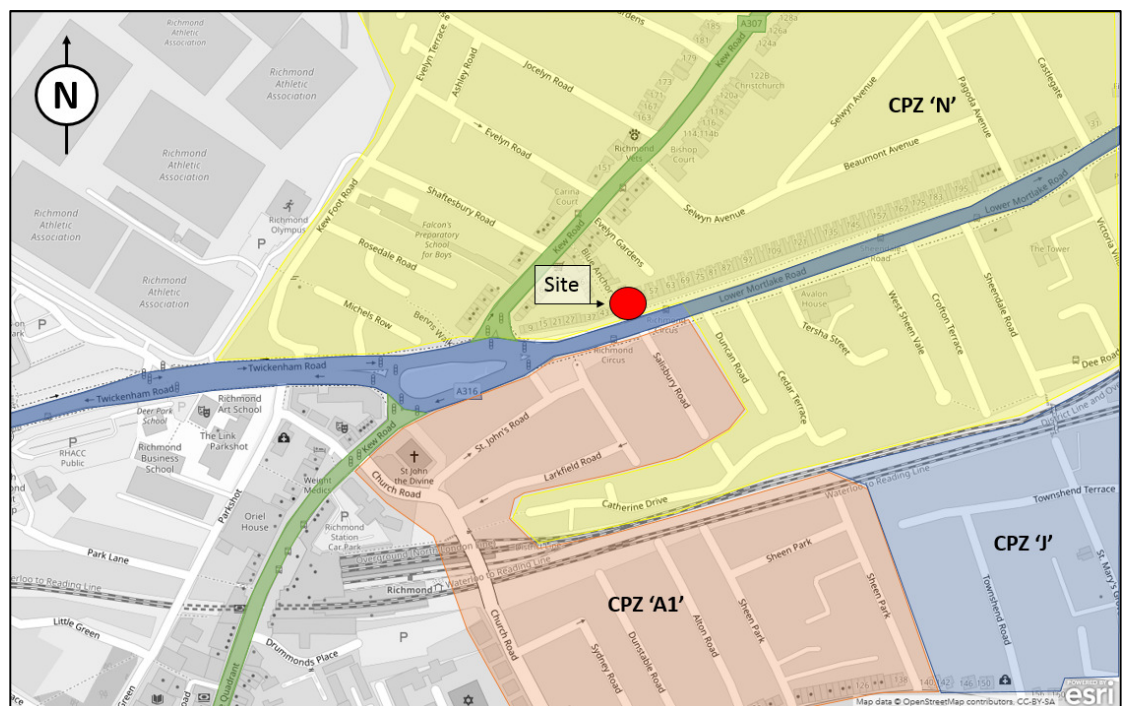
street parking is provided along its northern side. Lower Mortlake Road forms part of the TLRN, and, as such, is subject to double red lines for the majority of its length.

2.5 Footways are provided on both sides of the road with trees and streetlighting at intervals along its length. Additionally, there is a loading bay immediately to the west of the site access, which restricts stopping Monday-Saturday between 7am and 7pm, except loading for a maximum of 20 minutes.

### On-Street Parking

2.6 The site is within LBRuT Controlled Parking Zone 'N' (CPZ N) which operates restrictions Monday-Saturday from 10am to 4.30pm. CPZ 'A1' is also in close proximity to the site and operates restrictions Monday-Saturday from 8.30am to 6.30pm. However, in part, controls also apply on Sundays and Bank Holidays, and between 8.30am to Midnight everyday. **Figure 2.2** shows a map of local parking restrictions.

**Figure 2.2: Local Controlled Parking Zones**



2.7 On-street parking opportunities are located in close proximity to the site, there are resident parking bays, shared use spaces and single yellow line opportunities which can accommodate Blue Badge holders on most surrounding roads.

2.8 Blue Badge holders or drivers with a passenger who hold a valid badge can park in:

- Any disabled bay (observe time limits on signs in short-stay disabled bays);
- Permit holder bays, pay and display bays/pay by phone – free of charge and no time limit;



- Shared use (permit holders or pay and display) – free of charge and no time limit; and,
- Waiting restrictions (single or double yellow lines) – up to three hours, provided the clock card is displayed and set to time of arrival.

## Parking Surveys

2.9 Overnight parking surveys were conducted on Sunday 15<sup>th</sup> September, Tuesday 17<sup>th</sup> September and Wednesday 18<sup>th</sup> September 2019 to ascertain current levels of parking within the local highway network during the typical busiest period. The survey covered a 200m walking distance from the site. A summary of the total number of parked cars and observed spaces is provided at **Table 2.1**. The full parking survey results are included at **Appendix B**.

**Table 2.1: Parking Survey Summary**

<b>Table 2.1: Parking Survey Summary</b>						
<b>Area</b>	<b>Sunday 15<sup>th</sup> September 2019</b>		<b>Tuesday 17<sup>th</sup> September 2019</b>		<b>Wednesday 18<sup>th</sup> September 2019</b>	
	<b>Parked Cars</b>	<b>Observed Spaces</b>	<b>Parked Cars</b>	<b>Observed Spaces</b>	<b>Parked Cars</b>	<b>Observed Spaces</b>
	CPZ 'N'	269	64	278	59	280
CPZ 'A1'	79	8	86	4	87	4

## Accessibility

### On-Foot

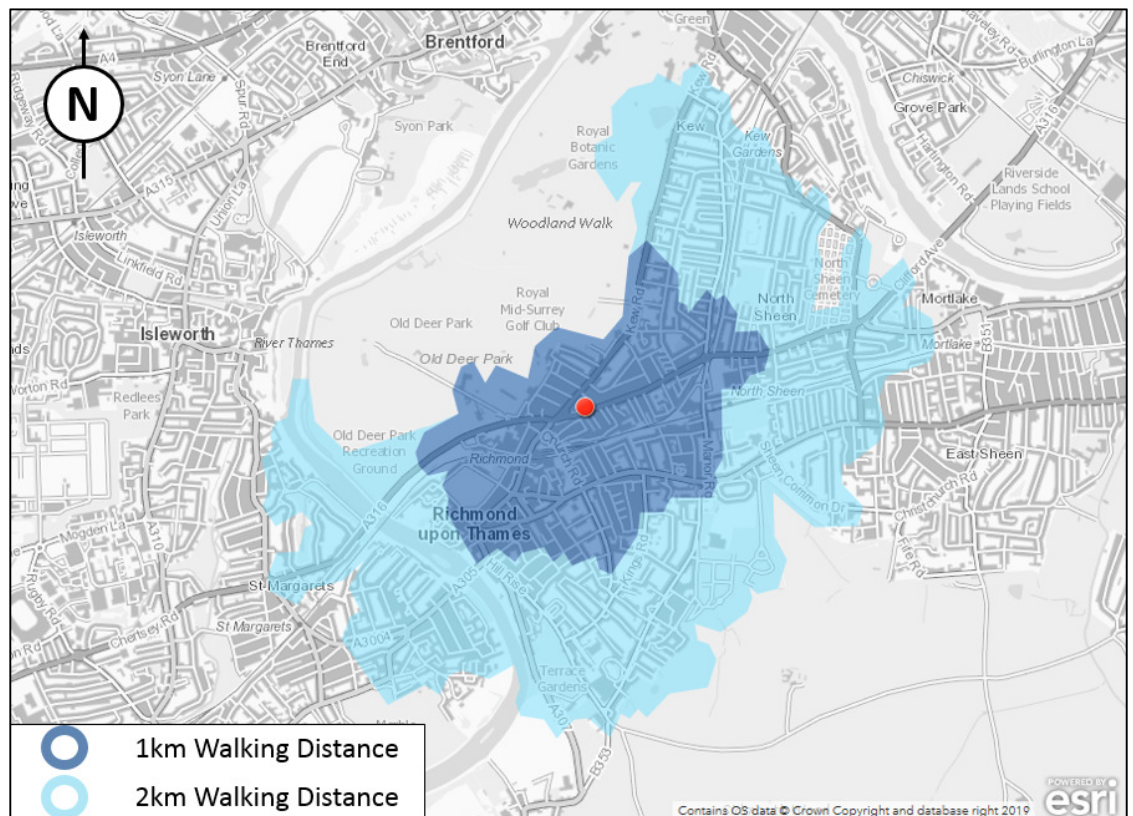
2.10 Generally, a person's willingness to walk is dependent on many factors including; access to a car, safety, road congestion, weather, gradients, parking, health, direction of route, and purpose of journey. It is generally accepted that for journeys of up to 2km walking is an appropriate mode to replace car trips as set out in The Chartered Institution of Highways and Transportation (CIHT) Guidelines (*Guidelines for Providing for Journeys on Foot, 2000*) which suggests a maximum 'acceptable' walking distance for pedestrians without mobility impairment of 2km. The Transport for London guidance document "Walking Best Practice", April 2012, also refers to car journeys up to 2km in length which could easily be walked in less than 30 minutes.

2.11 Richmond town centre is within an acceptable walking distance and accommodates a variety of facilities that serve the local catchment areas including bars, restaurants, a Post Office, an food stores, a gym, coffee shops and public houses.



- 2.12 There is a network of footways in the surrounding area, providing access to public transport facilities and local amenities. There is a step-free route between the site and Richmond High Street which involves the crossing of Lower Mortlake Road. Pedestrian crossings are provided with tactile paving, rotating cones, green-man and push button controls. The crossing is staggered with a barriered refuge island.
- 2.13 Footways are provided on both sides of most local roads with all main road providing at least 2m wide footways. Walking routes utilising Lower Mortlake Road and the Richmond gyratory to local transport opportunities are step-free, including Richmond Station which is step free from entrance to all platforms and from platform to train.
- 2.14 **Figure 2.3** highlights the site's 1km and 2km walking catchments.

**Figure 2.3: Walking Isochrone Catchment Map**



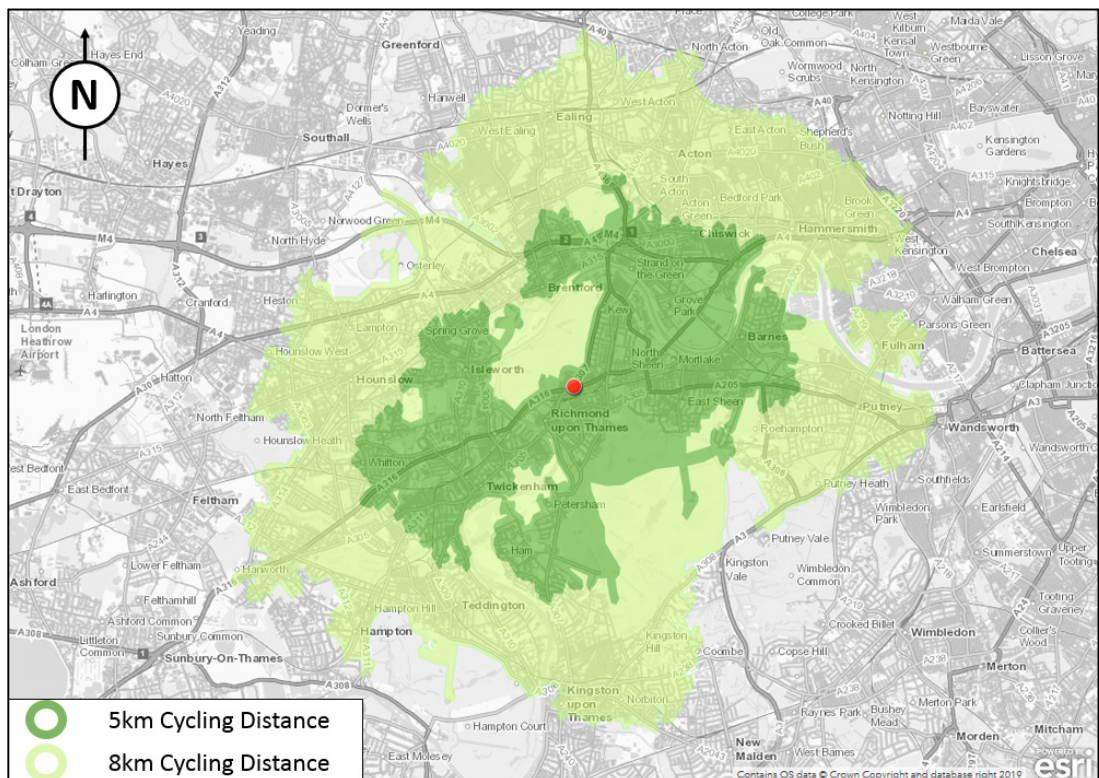
- 2.15 There are a number of public transport opportunities located within a 1km walking distance of the site. TfL's recently published Healthy Streets initiatives refers to approximately one third of car trips which could be replaced by 25-minute walk, equivalent to a 2km distance.
- 2.16 **Table 2.2** sets out details of approximate distances to public transport opportunities.

<b>Table 2.2: Approximate Distance to Public Transport Opportunities</b>			
<b>Amenity</b>	<b>Location</b>	<b>Distance</b>	<b>Approximate Walking Time</b>
<b>Public Transport Opportunity</b>			
<b>Bus Stops</b>	Lower Mortlake Road (Stop 'RS')	<100m	1-minute
	Lower Mortlake Road (Stop 'RR')	<100m	1-minute
	Kew Road (Stop 'RA')	150m	2-minutes'
	Kew Road (Stop 'RG')	150m	2-minutes'
<b>Stations</b>	Richmond Railway, Overground and Underground Station	400m	5-minutes'

### By Bicycle

2.17 It is generally accepted that cycling is a suitable mode of travel for journeys up to 8km in length although in London, longer journeys are commonplace. A number of town centres are within a 5km ride of the site. All of Richmond as well as Kew, Twickenham, Teddington, Hounslow, Acton, Kingston upon Thames, Putney and Hammersmith & Fulham are within an 8km cycle ride from the site, as shown in **Figure 2.4**.

**Figure 2.4: Cycling Isochrone Catchment Map**



- 2.18 There is a two-way stepped cycle track located on the southern footway of Lower Mortlake Road, which provides access from Richmond gyratory east towards North Sheen and along Lower Richmond Road towards Hammersmith.
- 2.19 Cycle parking is provided at Richmond Station with a total of 212 spaces located in the car park accessed via Drummonds Place.

## Public Transport

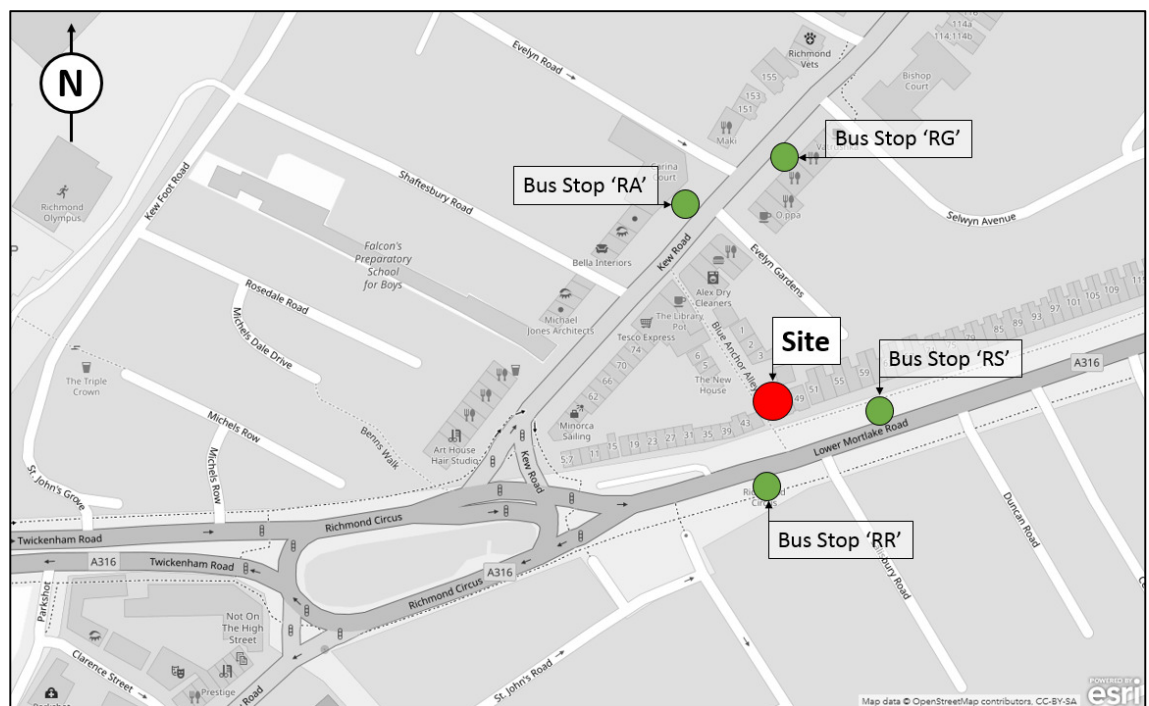
### Public Transport Accessibility Level (PTAL)

- 2.20 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 PTAL is categorised in six levels, where 6 represents a high level of accessibility and 1 a low level of accessibility.
- 2.21 The site has a PTAL level of 6a, demonstrating that it has an excellent level of accessibility to public transport. **Appendix C** includes a summary of the PTAL report.

### Bus Services

- 2.22 There are regular services from a number of bus stops located within a 100m walk of the site. The bus stops on Lower Mortlake Road and Kew Road are the closest to the site and are shown in **Figure 2.5**.

**Figure 2.5: Bus Stop Locations**



2.23 All bus stops have the following features:

- Security (including lighting);
- Bus stop post and flag;
- Surface markings for buses;
- Bus passenger shelter and seating;
- Information (including timetables and maps); and,
- Connectivity with the footway.

2.24 The local area TfL bus spider map is included at **Appendix D** which provides further information regarding the bus routes listed in the table.

<b>Table 2.3: Summary of Bus Services</b>				
<b>Service No.</b>	<b>Route</b>	<b>Service Frequency (every 'x' minutes)</b>		
		Mon-Fri	Sat	Sun
65	Brook Street – Ealing Broadway Station	4-8	5-9	8-12
190	George Street – Empress State Bldg/ West Brompton Station	12-16	15	20
371	Manor Road/Sainsbury's – Kingston Hall Road	9-12		11-12
391	George Street – Sands End/Sainsbury's	11-14		11-13
419	George Street – Barnes Pond	11-16		25-30
493	St George's/University of London – Richmond/Manor Road	10-14		19-21
H22	The Bell – Manor Road	11-14		19-21
H37	Hounslow Blenheim Centre – Manor Road	6-10	5-8	7-10
N22	South/Fulwell – Margaret Street/Oxford Circus	30 from 00.00 until 5.22am		
N65	Chessington World of Adventures – Ealing Broadway Station	30 from 00.00 until 5.24am		
R68	Kew Retail Park – Hampton Court Station	15	11-15	15
R70	Nurserylands Shopping Centre – Richmond/Manor Road	6-10		15

### Rail Services

2.25 Richmond Railway Station is located 400m (5-minute walk) to the west of the site and provides access to South Western Railway, London Overground and London Underground services. Richmond Station is step-free from the entrance to all platforms and trains. The station is run and managed by South Western Railway.



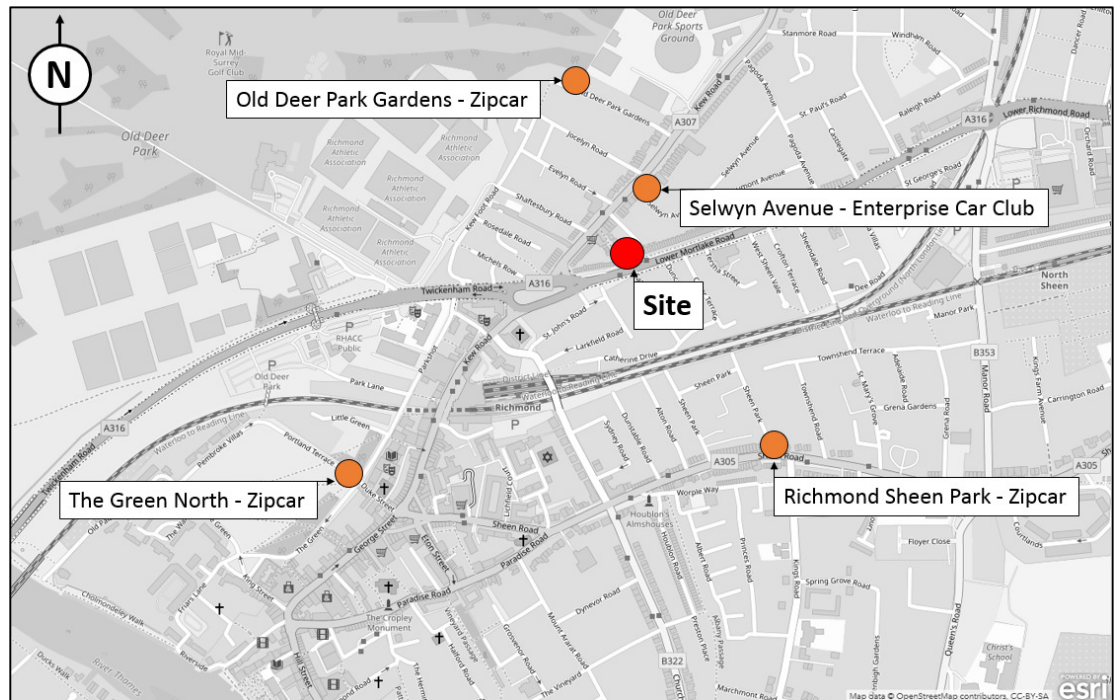
- 2.26 Rail services run from Richmond to London Waterloo, Wimbledon and Reading. There are 11 London bound services every hour and 6 outward bound services towards Reading and Windsor.
- 2.27 London Overground services terminate at Richmond and run to Stratford calling at all stations between. Four services leave the station towards Stratford every hour, calling at key stations such as Willesden Junction, Gospel Oak, Highbury & Islington, Hackney Central and Stratford.
- 2.28 A branch of the London Underground District Line serves and terminates at Richmond Station. Services run towards Upminster with opportunities to interchange at stations such as Earl's Court, Victoria, Embankment and Monument. There are 7 services leaving the terminus during the peak hours from Richmond towards Earl's Court.

## Car Clubs

- 2.29 Car clubs provide access to a car without the need to own one or pay for maintenance and running costs. The closest vehicle is located on Selwyn Avenue circa 160m (2-minute walk) from the site and run by Enterprise Car Club. There are further car club vehicles on Old Deer Park Gardens, Richmond Sheen Park and The Green North which are run by Zipcar. Locations and distances of car clubs are shown on **Figure 2.6** and summarised below:

- Selwyn Avenue - 160m (2-minute walk) enterprise Carclub;
- Old Deer Park Gardens - 500m (6-minute walk) Zipcar;
- The Green North - 750m (9-minute walk) Zipcar; and,
- Richmond Sheen Park - 1.1km (14-minute walk) Zipcar.

**Figure 2.6: Car Club Locations**



## Car Ownership

- 2.30 The 2011 Census has been interrogated to ascertain car ownership levels for private rented accommodation (1-3 rooms) in the Lower Super Output Area in which the site is located, Richmond upon Thames 004C. The data suggests that 62% of households do not own a car.

## Method of Journey to Work

- 2.31 The 2011 Census has also been examined to establish the method of journey to work for residents in the area (associated with the longest part of their journey). This is shown at **Table 2.4**.

<b>Modal Split</b>	<b>Baseline</b>
Underground	22%
Train	32%
Bus	6%
Taxi	0%
Motorcycle	1%
Car or Van	24%
Walk and Cycle	15%

## 3 POLICY

### National Policy

#### National Planning Policy Framework

- 3.1 The National Planning Policy Framework (NPPF) was published in March 2018 and revised in February 2019 and sets out the Government's planning policies for England and how these are expected to be applied.
- 3.2 Chapter 9 sets out promoting sustainable transport which states that Planning Policies should:
- *"provide for high quality walking and cycling networks and supporting facilities such as cycle parking – drawing on Local Cycling and Walking Infrastructure Plans;*
  - *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;*
  - *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; and,*
  - *allow for the efficient delivery of goods, and access by service and emergency vehicle."*
- 3.3 When considering the transport effects of a development, NPPF states that:
- *"all developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment and that development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe."*
- 3.4 Plans and decisions should take account of whether:
- *"the opportunities for sustainable transport modes have been taken up depending on the nature of the development and location of the site;*
  - *safe and suitable access to the site can be achieved for all people; and*
  - *any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."*



3.5 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."*

## **Regional Policy**

### **The London Plan**

3.6 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 and was published in March 2016.

3.7 Paragraph 1.53 sets out 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."*

3.8 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."*

3.9 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."*

3.10 There are maximum parking standards for different land uses in the London Plan. 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."*

3.11 Developments in London must:

- Ensure that 1 in 5 spaces (both active and passive) provide an electrical charging point to encourage the uptake of electric vehicles;
- Provide parking for disabled people;
- Meet minimum cycle parking standards; and
- Provide for the needs of businesses for delivery and servicing.

3.12 Paragraph 6A.2 describes parking requirements for Blue Badge holders and states that:

*"Non-residential elements of a development should provide at least one accessible on or off street car parking bay designated for Blue Badge holders, even if no general parking is provided. Any development providing off-street parking should provide at least two bays designated for Blue Badge holders."*

3.13 Table 6.3 of the London Plan summarises the minimum cycle standards for different land uses. The relevant minimum cycle parking standards are set out below:

- C3: other:
  - Long-stay spaces: 1 space per studio and 1-bedroom; and
  - Short stay spaces 1 space per 40 dwellings.

### **Draft New London Plan**

3.14 The Draft London Plan 'Consolidated Suggested Changes Version', dated July 2019, is the consolidated version of the London Plan which shows all of the Mayor's suggested changes following the Examination in Public (EiP) of the draft Plan. 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. Chapter 10 focuses on transport.

3.15 Policy T1 'Strategic approach to transport' states that development proposals should facilitate the delivery of the Mayor's strategic target of 80% of trips in London to be made by foot, cycle or public transport by 2041.

3.16 Policy T2 'Healthy Streets' states that:

*"Development proposals and Development Plans should deliver patterns of land use that facilitate residents making shorter, regular trips by walking or cycling."*

- 3.17 The policy goes on to state that development proposals should:
- "1) demonstrate how they will deliver improvements that support the ten Healthy Streets Indicators in line with Transport for London guidance.*
- 2) reduce the dominance of vehicles on London's streets whether stationary or moving.*
- 3) be permeable by foot and cycle and connect to local walking and cycling networks as well as public transport."*
- 3.18 Paragraph 10.2.4 describes that Londoners' direct interaction with the Healthy Streets Approach will be through the streets they use every day. The dominance of vehicles should be reduced by using design to ensure slower vehicle speeds and safer driver behaviour in line with the Mayor's Vision Zero ambition.
- 3.19 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.
- 3.20 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.
- 3.21 For sui generis developments, the Draft New London Plan states that cycle parking should be provided at the most relevant other standard. For shared living schemes, the C3-studio figure should be used.
- 3.22 Policy T6 refers to parking and makes a number of statements to consider. These include:
- *"Car parking should be restricted in line with levels of existing and future public transport accessibility and connectivity;*
  - *Car free development should be the starting point for all development proposals in places that are (or are planned to be) well-connected by public transport, with developments elsewhere designed to provide the minimum necessary parking ('car-lite'); and*
  - *Adequate provision should be made for efficient deliveries and servicing."*

## Local Policy

### The London Borough of Richmond upon Thames Local Plan (2018)

3.23 The Local Plan sets out the strategic planning framework for the next 15 years.

3.24 Policy LP44 outlines Sustainable Travel Choices and how the borough is to promote them.

*"The Council will work in partnership to promote safe, sustainable and accessible transport solutions, which minimise the impacts of development including in relation to congestion, air pollution and carbon dioxide emissions, and maximise opportunities including for health benefits and providing access to services, facilities and employment."*

3.25 The Council will:

*"Encourage high trip generating development to be located in areas with good public transport with sufficient capacity, or which are capable of supporting improvements to provide good public transport accessibility and capacity, taking account of local character and context.*

*Ensure that new development is designed to maximise permeability within and to the immediate vicinity of the development site through the provision of safe and convenient walking and cycling routes, and to provide opportunities for walking and cycling, including through the provision of links and enhancements to existing networks.*

*Ensure that major new developments maximise opportunities to provide safe and convenient access to public transport services.*

*Ensure that new development does not have a severe impact on the operation, safety or accessibility to the local or strategic highway networks. Any impacts on the local or strategic highway networks, arising from the development itself or the cumulative effects of development, including in relation to on-street parking, should be mitigated through the provision of, or contributions towards, necessary and relevant transport improvements."*

3.26 LP45 includes parking standards for the borough – stating:

*"The Council will require new development to make provision for the accommodation of vehicles in order to provide for the needs of the development while minimising the impact of car based travel including on the operation of the road network and local environment, and ensuring making the best use of land.*

*Car free housing development may be appropriate in location with high public transport accessibility, such as areas with a PTAL of 5 or 6, subject to the provision of disabled parking, appropriate servicing arrangements and demonstrating the proper controls can be put in place to ensure that the proposal will not contribute to on-street parking stress in the locality."*

## **4 PROPOSED DEVELOPMENT**

- 4.1 The proposals seek to construct a 3 storey, plus basement, co-living building, providing 16 bedrooms and shared communal facilities.

### **Access**

- 4.2 The site will front onto Lower Mortlake Road with pedestrian access located towards the western side of the building. The building outline has been designed to open up Blue Anchor Alley at its connection with Lower Mortlake Road.
- 4.3 The development will not provide any vehicle access. As such, the existing vehicle access on Lower Mortlake Road will be made redundant and can be reinstated as footway.

### **Parking**

- 4.4 No vehicle parking is proposed with this site. As such, it will be car-free. Future residents would also be subject to a permit-free agreement. Any demand for disabled parking would be met on-street locally in line with existing restrictions.
- 4.5 Cycle parking will be provided in accordance with standards and positioned at ground floor level within a secure cycle store. The store is located at the front of the site, with cycle parking provided in a two-tier format. There will be 16 spaces provided in total for long stay users and 1 space for visitors.

### **Deliveries and Servicing**

- 4.6 Deliveries and servicing activity to the proposed development will be accommodated on-street with vehicles stopping within the loading bay on Lower Mortlake Road, immediately west of the site.

### **Refuse Storage and Collection**

- 4.7 A refuse store is provided at ground floor level at the front of the site with provision for 4 bins. The bin store would be maintained by on-site management.
- 4.8 A private collection service would be arranged to collect waste from the site. The refuse vehicle will be able to stop within the loading bay on Lower Mortlake Road with operatives transferring bins to and from the rear of the vehicle before returning the bins to the store.

## 5 EFFECTS OF DEVELOPMENT

### Trip Generation

- 5.1 A trip generation assessment for the proposed development by all modes of transport has been undertaken for the typical weekday morning peak period (7am – 10am) and evening peak period (4pm – 7pm). The trip generation data is provided to determine the impact of the proposed development on the local highway and public transport networks.
- 5.2 Total person trip rates have been obtained from comparable sites within the TRICS database, based on similar characteristics such as location and size, including sites between 0-25 units with no car parking. All surveys included were undertaken in the last 5 years. The TRICS data is contained in **Appendix E**.
- 5.3 Trip rates per unit and the total number of predicted trips for 16 units are contained in **Table 5.1**.

<b>Table 5.1: Trip Generation Summary for Proposed Use (16 units)</b>				
<b>Period</b>	<b>Trip Rates</b>		<b>Total Persons</b>	
	<b>IN</b>	<b>OUT</b>	<b>IN</b>	<b>OUT</b>
7am – 8am	0.034	0.310	1	5
8am – 9am	0.034	0.586	1	9
9am – 10am	0.034	0.345	1	6
<b>7am – 10am</b>	<b>0.102</b>	<b>1.241</b>	<b>3</b>	<b>20</b>
<b>PM Period</b>				
4pm – 5pm	0.310	0.103	5	2
5pm – 6pm	0.276	0.034	4	1
6pm – 7pm	0.379	0.241	6	4
<b>4pm – 7pm</b>	<b>0.965</b>	<b>0.378</b>	<b>15</b>	<b>7</b>
<b>Daily Total (12 hours)</b>				
<b>7am – 7pm</b>	<b>1.514</b>	<b>2.308</b>	<b>24</b>	<b>37</b>

- 5.4 **Table 5.1** shows that the morning peak period of 7am – 10am is expected to generate 23 two-way person trips in the morning peak period (3 arrivals and 20 departures), whilst the evening peak period of 4pm – 7pm is expected to generate 22 two-way trips (15 arrivals and 7 departures).

- 5.5 The travel to work Census data, provided in Section 2, has been modified according to the development's characteristics i.e. reducing car driver trips from 24% locally to 0% to reflect the car-free nature of the development. The resultant mode split is shown in **Table 5.2**.

<b>Modal Split</b>	<b>Baseline</b>	<b>Adjusted</b>
Underground	22%	30%
Train	32%	42%
Bus	6%	9%
Taxi	0%	0%
Motorcycle	1%	1%
Car or Van	24%	0%
Walk and Cycle	15%	18%
<b>Total</b>	<b>100%</b>	<b>100%</b>

- 5.6 **Table 5.3** sets out the estimated multi-modal trip generation summary for the development during the morning peak hours (7am – 10am) and afternoon peak (4pm – 7pm).

<b>Mode</b>	<b>AM Peak (7am – 10am)</b>		<b>PM Peak (4pm – 7pm)</b>	
	<b>Arrive</b>	<b>Depart</b>	<b>Arrive</b>	<b>Depart</b>
Underground	1	6	5	2
Train	1	8	6	3
Bus	0	2	1	1
Taxi	0	0	0	0
Motorcycle	0	0	0	0
Car or Van	0	0	0	0
Walk and cycle	1	4	3	1
<b>Total</b>	<b>3</b>	<b>20</b>	<b>15</b>	<b>7</b>

### **Highway Impact**

- 5.7 The site has a PTAL rating of 6a, will not be providing on-site parking and is located within a controlled parking zone with future occupants prevented from applying for permits. On this basis, and the adjusted modal split, vehicle activity associated with the proposed development will be limited to deliveries, taxis and servicing and therefore the impact on the local highway network is expected to be negligible.



## **Public Transport Impact**

- 5.8 During the 3-hour assessment periods, there are expected to be an additional 7 trips undertaken by underground (1 arrival and 6 departures), and 7 trips in the evening (5 arrivals and 2 departures) as a result of the development. Given that Richmond Station is serviced by the District Line which has 7 services an hour towards the city as it is the terminus, this equates to 21 services within the three hour peak. As a result the development is not expected to cause a noticeable difference to underground services.
- 5.9 By rail, there are expected to be an additional 9 trips (1 arrival and 8 departures) between 7am - 10am and 9 trips (6 arrivals and 3 departures) between 4pm – 7pm. Given that there are 11 London bound services and 6 outbound services plus 4 Overground services an hour (33 London bound, 18 outbound and 12 Overground), an increase of 9 trips in either peak period is not expected to have a noticeable impact.
- 5.10 On local bus services there are expected to be an additional 2 trips made in the morning and evening peak periods. There are 10 bus routes providing approximately 40 services in each direction during each peak period, thus an extra 2 trips in either peak period is not going to have a noticeable impact on passenger loadings.

## **Parking**

- 5.11 The site is proposed to be car-free and therefore does not provide any on-site car parking. Future residents of the development will also be unable to apply for a permit and thus not able to park within the CPZ during active hours.
- 5.12 The provision of a car-free development is considered appropriate given the location of the site and its excellent accessibility. The permit-free agreement is also considered to significantly reduce car ownership levels and avoid any potential impact on-street.
- 5.13 It is acknowledged that CPZ N does not restrict parking all day which in theory could allow residents to own a car and park it overnight, however, this would require vehicles to be moved out of the zone between 10am and 4.30pm every day of the year, which is considered highly unlikely. Notwithstanding this, an assessment to understand the impact on parking levels has been undertaken.
- 5.14 The car ownership levels presented in Section 2 suggest that 16 rooms could generate a parking demand for 6 vehicles. As such, if these were to park on-street locally within CPZ N outside of hours, there would still be approximately 48 observed spaces during the weekday overnight period and 58 observed spaces during the weekend overnight period. The level of additional parking demand is therefore unlikely to affect local occupancy levels.

- 5.15 There is no proposed disabled parking, however, any demand could be accommodated on-street in line with existing restrictions for blue badge holders.
- 5.16 Cycle parking is provided in accordance with the Draft New London Plan, in the form of two-tier stands within a secure sheltered cycle store. A total of 16 spaces are proposed with 1 additional Sheffield stand space for visitors.

## **Access**

- 5.17 The proposed development will no longer require the use of the existing vehicle crossover on Lower Mortlake Road. As such, this could be reinstated as footway or used for other purposes such as an extension of the existing loading bay which is located west of the site. Any amendments to the crossover would require agreement with Transport for London.

## **Deliveries and Servicing**

- 5.18 Deliveries associated with the new development will be undertaken on-street within the existing inset loading bay on Lower Mortlake Road, immediately west of the site. The development is likely to generate approximately 1-2 deliveries per day.
- 5.19 Deliveries would include postal deliveries, deliveries of food and or other goods purchased on-line. In this regard, post and on-line food deliveries are likely to be linked with another delivery elsewhere in the local area, whilst the delivery of purchases such as household / white goods is likely to be dedicated deliveries.
- 5.20 Based on the above, and given dwell times associated with most deliveries would be typically under 15-minutes, delivery activity associated with the development would not result in a material impact on the highway.
- 5.21 Private collection crews will collect bins from the site by transferring bins to and from the loading bay on Lower Mortlake Road. The number of collections will be formalised upon appointment of a private collector.

## **Healthy Streets**

- 5.22 The development makes a positive contribution to the Healthy Street Approach as follows:
- Reduced car dependence by locating development in an area benefitting from excellent access to public transport opportunities and amenities which are convenient for travel by walking or cycling;
  - Reduced car dependence by limiting car parking provision and preventing residents from participation in the local permit controlled parking zone;
  - Improving pedestrian links in the vicinity and an improved public realm; and,

- Providing cycle parking facilities and direct access onto the cycle network on Lower Mortlake Road.

## Mitigation

### Construction Management Statement

- 5.23 A draft Construction Management Statement (CMS) has been prepared to detail how the site will function during construction, however, a full CMS would be secured via condition and prepared upon appointment of a contractor. The document details how the site would be set up including details of access arrangements, vehicle loading and storage facilities, information on vehicle numbers and vehicle routes, and reference to working hours and any remedial measures.
- 5.24 The purpose of the CMS will be to mitigate the potential impacts of construction activity associated with the development.

### Travel Plan Statement

- 5.25 This Travel Plan Statement has been prepared for the future occupants of the development.
- 5.26 The main objectives of the Travel Plan Statement are to ensure residents are aware of the opportunities to travel by sustainable modes. A series of measures are set out to ensure trips can be undertaken by non-car modes.

### Measures

- 5.27 The following measures will help to encourage sustainable travel:
- Provision of a car-free development;
  - Provision of a Welcome Pack to residents;
  - Provision of Travel information;
  - Secure and undercover cycle parking facilities;
  - Promotion of the health benefits associated with sustainable travel;
  - Information on pedestrian and cycle routes as well as public transport timetables; and,
  - Participation in walk-to-work week and cycle-to-work events will be encouraged.

## 6 SUMMARY AND CONCLUSION

### Summary

6.1 TTP Consulting has been appointed by Westlake Property Limited to provide traffic and transport advice in relation to the proposed development at 47a Lower Mortlake Road, in the London Borough of Richmond upon Thames.

6.2 In summary:

- The site achieves a PTAL rating of 6a and is very accessible by all modes. As such, it is anticipated that the majority of trips associated with the site would be undertaken using sustainable modes of travel. Given the number of public transport services available within walking distance, the proposals are not expected to have material impact on public transport networks;
- The development will be car-free with future residents subject to a permit-free agreement. This is in accordance with policy and considered appropriate given the site's location, proximity to public transport opportunities and given there are existing CPZ restrictions operating within the local area;
- Notwithstanding the car-free nature of the scheme, and the proposed permit-free agreement, an assessment of car ownership levels and parking surveys suggest that there is still capacity on local streets to accommodate parking demand in the event a resident still chose to own a car;
- Cycle parking will be provided in accordance with policy requirements. A total of 16 spaces are proposed to the front of the site within a secure cycle store; and,
- Servicing and delivery activity will be undertaken on-street utilising the existing loading bay on Lower Mortlake Road. There is expected to be approximately 1-2 deliveries per day which is not expected to affect the local highway network. Refuse collections will be undertaken via a private agreement.

### Conclusion

6.3 In light of the above, we conclude that the development proposals will not result in a material impact in highways and transportation terms. Furthermore, in accordance with NPPF paragraph 109, the residual cumulative impacts of the development are not considered to be severe, and, as such, the development should not be prevented or refused on highways grounds.

# **Appendix A**

## **(Architect Plans)**



P1 Issued to Consultants 01.08.19 CK

©Lynas Smith  
2016  
Original drawing is A3. Do not scale from this drawing.

DATE: 01.08.19  
DESIGN: CK  
KS

Project No: 1602  
01.08.19

Lower Mortlake Road  
Ground Floor Plan

1 : 100 @A3  
15-100 - P1



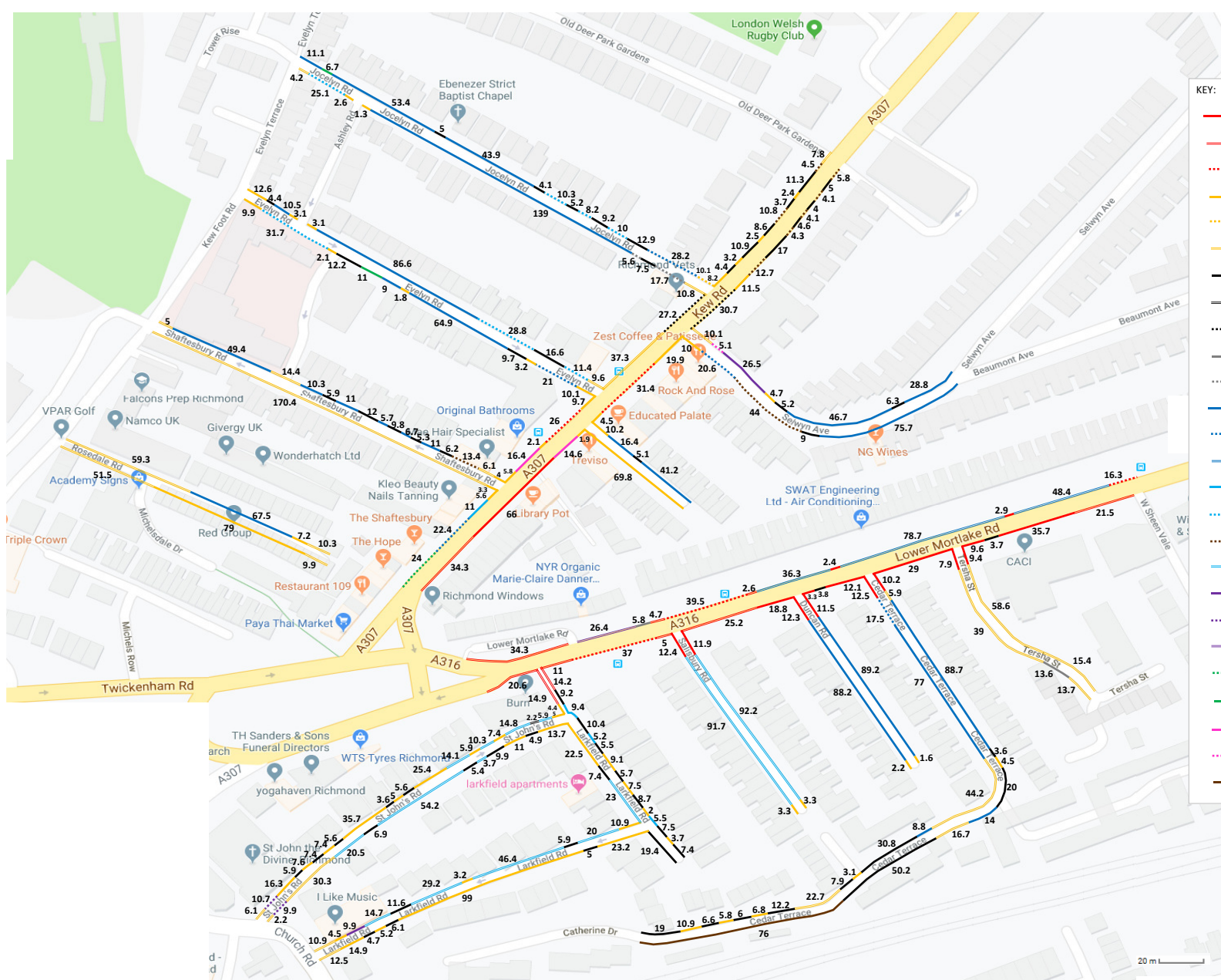
**LYNAS  
SMITH**

# **Appendix B**

## **(Parking Survey)**







- KEY:**
- = SINGLE RED LINE
  - = = DOUBLE RED LINE
  - ⋯ = BUS STOP
  - = SINGLE YELLOW LINE
  - ⋯ = SINGLE YELLOW LINE MON-SAT 0800-1830
  - = = DOUBLE YELLOW LINE
  - = DROPPED KERB
  - = KERB BUILD OUT
  - = PEDESTRIAN CROSSING
  - = ACCESS DROPPED KERB
  - = BUSINESS PERMIT MON-SAT 0800-1830
  - = RESIDENT PERMIT MON-SAT 1000-1630
  - = 2 HOUR PAY & DISPLAY MON-SAT 1000-1630
  - = SINGLE RED LINE / 4 HOUR VOUCHER / PERMIT (PAVEMENT)
  - = 30 MINS MON-SAT 1000-1630
  - = 4 HOUR VOUCHER / PERMIT MON-SAT 1000-1630
  - = PERMIT / 4 HOUR PAY & DISPLAY MON-SAT 1000-1630
  - = RESIDENT PERMIT MON-SAT 0830-1830
  - = 2 HOUR PAY & DISPLAY MON-SAT 0830-1830
  - = 4 HOUR PAY & DISPLAY MON-SAT 0830-1830
  - = RED ROUTE BAY LOADING 20 MINS
  - = RED ROUTE LOADING 20 MINS, DISABLED 3 HOURS
  - = DISABLED BAY
  - = LOADING 20 MINS MON-SAT 0830-1830
  - = CAR CLUB



K&M TRAFFIC SURVEYS

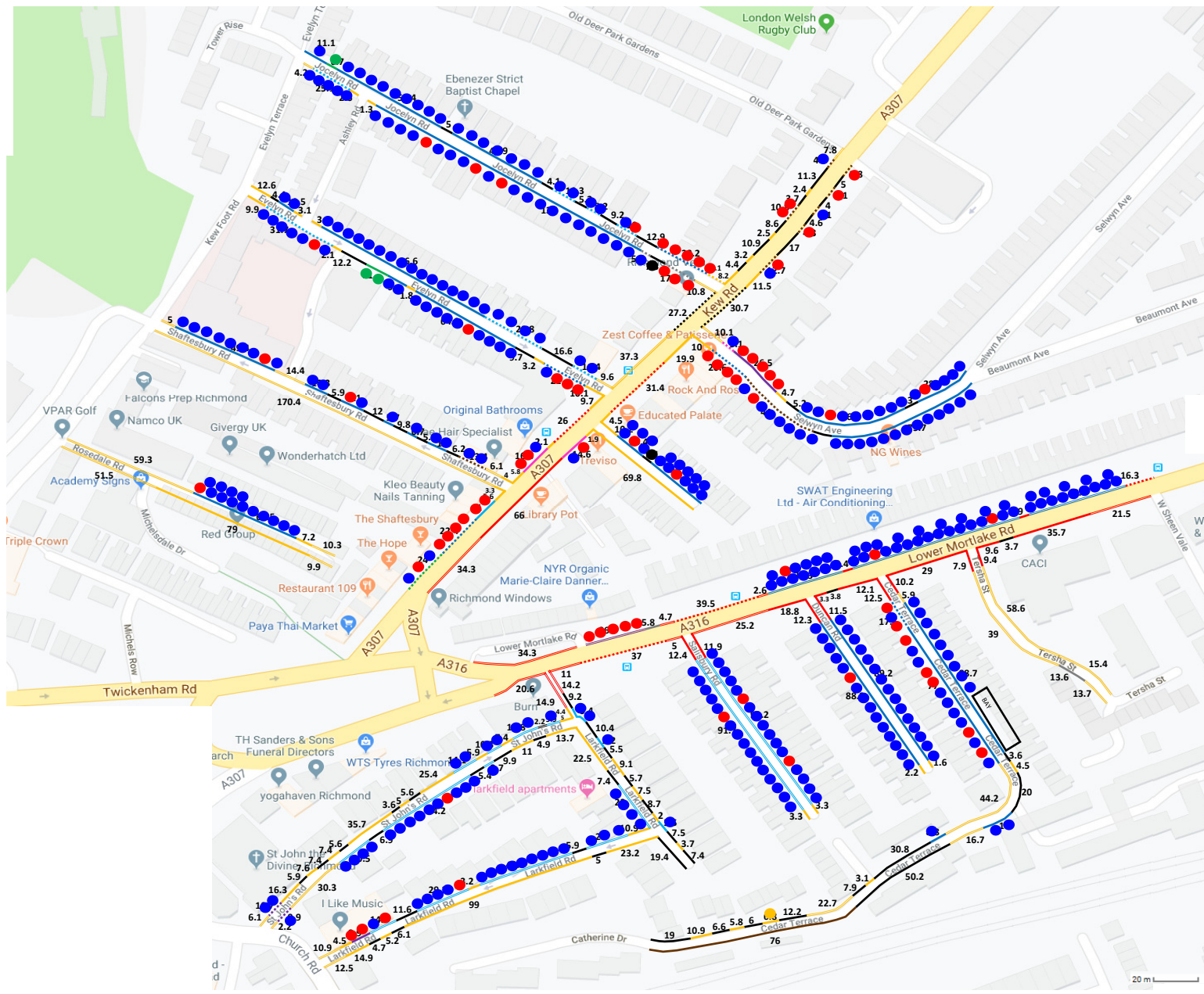
DATE : 15th, 17th & 18th SEPTEMBER 2019

DAY : SUNDAY, TUESDAY, AND WEDNESDAY

LOCATION : LOWER MORTLAKE RD, RICHMOND

						SUNDAY 15th SEPTEMBER 2019		
						TIME : 0400		
ROAD NAME	ZONE	RESTRICTION	METRES	5 METRES = 1 SPACE	PARKED	OBSERVED SPACES	% STREET STRESS	
LOWER MORTLAKE RD	1	RED DOUBLE LINES	21.5					
		SINGLE RED LINES	45.3					
		DROP KERB	3.7					
TERSHA ST	2	SINGLE RED LINES	9.4					
		DOUBLE YELLOW LINES	74					
	3	DOUBLE YELLOW LINES	52.7					
		ACCESS DROP KERB	13.6					
CEDAR TELL	4	SINGLE RED LINES	29					
		SINGLE RED LINES	10.2					
		DOUBLE YELLOW LINES	22.6					
	5	RESIDENT PERMIT HOLDER MON-SAT 1000-430PM	102.7	19	11	0	100.0%	
		DROP KERB	73.8					
		ROADWORKS	76					
		YELLOW SINGLE LINES	4.5					
		DROP KERB	82.5					
		YELLOW SINGLE LINES	26.6					
		RESIDENT PERMIT HOLDER MON-SAT 1000-430PM	85.8	16	9	5	64.3%	
		2HOURLY PAY AND DISPLAY MON-FRI 1000-430PM	17.5	3	1	2	33.3%	
		SINGLE RED LINES	12.5					
DOUBLE YELLOW LINES	66.9							
DUNCAN RD	8	SINGLE RED LINES	15.4					
		RESIDENT PERMIT HOLDER MON-SAT 1000-430PM	89.2	17	15	0	100.0%	
		YELLOW SINGLE LINES	1.6					
9	RESIDENT PERMIT HOLDER MON-SAT 1000-430PM	2.2						
	RESIDENT PERMIT HOLDER MON-SAT 1000-430PM	88.2	17	14	1	93.3%		
LOWER MORTLAKE RD	10	SINGLE RED LINES	12.3					
		SINGLE RED LINES	18.8					
SALISBURY RD	11	RED DOUBLE LINES	25.2					
		SINGLE RED LINES	11.9					
		MON-SAT 830-630PM RESIDENT PERMIT HOLDER	92.2	18	15	2	88.2%	
		YELLOW SINGLE LINES	3.3					
12	YELLOW SINGLE LINES	3.3						
	MON-SAT 830-630PM RESIDENT PERMIT HOLDER	91.7	18	15	1	93.8%		
LOWER MORTLAKE RD	13	SINGLE RED LINES	12.4					
		RED DOUBLE LINES	16					
		BUS STOP DOUBLE RED LINES	37					
LARKFIELD RD	14	RED DOUBLE LINES	14.2					
		DROP KERB	54.4					
		MON-SAT 830-630PM RESIDENT PERMIT HOLDER	20.1	3	4	0	100.0%	
	15	YELLOW SINGLE LINES	22.3					
		DROP KERB	19.4					
	16	YELLOW SINGLE LINES	142.3					
		DROP KERB	15.8					
		DOUBLE YELLOW LINES	12.5					
		DOUBLE YELLOW LINES	10.9					
	17	YELLOW SINGLE LINES	18.6					
PAY AND DISPLAY 2HR MON-SAT 830-630PM		9.9	2	0	2	0.0%		
DROP KERB		17.5						
MON-SAT 830-630PM RESIDENT PERMIT HOLDER		110.3	20	17	2	89.5%		
18	MON-SAT 830-630PM RESIDENT PERMIT HOLDER	23	4	4	0	100.0%		
	DROP KERB	7.4						
	YELLOW SINGLE LINES	22.5						
	YELLOW SINGLE LINES	24.7						
ST JOHNS RD	19	DROP KERB	27.1					
		MON-SAT 830-630PM RESIDENT PERMIT HOLDER	78.4	14	14	1	93.3%	
		4HOURLY PAY AND DISPLAY MON-SAT 830-630PM	9.9	1	1	0	100.0%	
	20	DOUBLE YELLOW LINES	32.5					
		DOUBLE YELLOW LINES	6.1					
		4HOURLY PAY AND DISPLAY MON-SAT 830-630PM	10.7	2	2	0	100.0%	
21	YELLOW SINGLE LINES	115.7						
	DROP KERB	28.1						
	MON-SAT 830-630PM RESIDENT PERMIT HOLDER	45.1	7	7	0	100.0%		
LOWER MORTLAKE RD	22	KERB BUILD OUT	2.2					
		YELLOW SINGLE LINES	4.4					
		RED DOUBLE LINES	34.9					
23	RED DOUBLE LINES	20.6						
	RED DOUBLE LINES	34.3						
	7-7 MON-SAT RED ROUTE BAY LOADING 20MINS	26.4	5	0	5	0.0%		
	ACCESS DROP KERB	5.8						
	SINGLE RED LINES	7.3						
24	1000-430PM MON-SAT SINGLE RED LINES/4HR VOUCHER/PERMIT PAV - nose in parking	163.4	app 50 spaces	49	3	94.2%		
	BUS STOP DOUBLE RED LINES	55.8						
	SINGLE RED LINES	5.3						
	DISABLED BAY 3 HOUR RED ROUTE LOADING 20MINS MON-SAT 7-7	24	4	2	1	66.7%		
KEW RD	25	2HOURLY PAY AND DISPLAY MON-FRI 1000-430PM	22.4	4	0	4	0.0%	
		30MINS RESIDENT PERMIT HOLDER MON-SAT 100-430PM	11	2	0	2	0.0%	
		YELLOW SINGLE LINES	5.6					
SHAFTSBURY RD	26	YELLOW SINGLE LINES	3.3					
		DOUBLE YELLOW LINES	170.4					
ROSEDALE RD	27	DOUBLE YELLOW LINES	69.6					
		RESIDENT PERMIT HOLDER MON-SAT 1000-430PM	67.5	13	13	1	92.9%	
		YELLOW SINGLE LINES	7.2					
SHAFTSBURY RD	28	DOUBLE YELLOW LINES	61.4					
		YELLOW SINGLE LINES	79					
	29	DOUBLE YELLOW LINES	25.5					
		RESIDENT PERMIT HOLDER MON-SAT 1000-430PM	94.1	17	15	2	88.2%	
KEW RD	30	DROP KERB	39.2					
		PERMIT/4HOURLY PAY AND DISPLAY MON-SAT 1000-430PM	13.4	2	2	0	100.0%	
		YELLOW SINGLE LINES	4					
EVELYN RD	31	YELLOW SINGLE LINES	17.6					
		LOADING 20MINS MON-SAT 830-630	16.4	3	1	2	33.3%	
		BUS STOP	26					
	32	YELLOW SINGLE LINES	27.1					
		2HOURLY PAY AND DISPLAY MON-FRI 1000-430PM	21	4	1	3	25.0%	
		DROP KERB	21.9					
		830-630 MON-FRI DISABLED BAY	11	2	2	0	100.0%	
	33	1000-430PM MON-SAT SINGLE RED LINES/4HR VOUCHER/PERMIT PAV	31.7	6	6	1	85.7%	
		RESIDENT PERMIT HOLDER MON-SAT 1000-430PM	73.9	13	11	1	91.7%	
		YELLOW SINGLE LINES	15.7					
DROP KERB		4.4						
34	MON-SAT 830-630PM RESIDENT PERMIT HOLDER	100.5	2	2	0	100.0%		
	YELLOW SINGLE LINES	3.1						
	RESIDENT PERMIT HOLDER MON-SAT 1000-430PM	86.6	17	16	0	100.0%		
35	PERMIT/4HOURLY PAY AND DISPLAY MON-SAT 1000-430PM	40.2	7	6	0	100.0%		
	DOUBLE YELLOW LINES	9.6						
	DROP KERB	16.6						
JOCELYN RD	36	DOUBLE YELLOW LINES	37.3					
		PEDESTRIAN CROSSING	27.2					
		DOUBLE YELLOW LINES	10.8					
	37	BUSINESS PERMIT MON-SAT 830-630	23.3	4	1	3	25.0%	
		RESIDENT PERMIT HOLDER MON-SAT 1000-430PM	139	27	18	3	85.7%	
		DROP KERB	7.5					
		YELLOW SINGLE LINES	1.3					
	38	YELLOW SINGLE LINES	2.6					
		4HOURLY PAY AND DISPLAY MON-SAT 830-630PM	25.1	5	5	0	100.0%	
		DOUBLE YELLOW LINES	4.2					
RESIDENT PERMIT HOLDER MON-SAT 1000-430PM		108.4	20	17	0	100.0%		
39	DISABLED BAY	6.7	1	1	0	100.0%		
	4HOURLY PAY AND DISPLAY MON-SAT 830-630PM	28.5	5	5	1	83.3%		
	2HOURLY PAY AND DISPLAY MON-FRI 1000-430PM	28.2	5	0	5	0.0%		
	DROP KERB	36.4						
40	830-630 MON-SAT SINGLE YELLOW	10.1						
	YELLOW SINGLE LINES	16.3						
	DROP KERB	38.9						
	4HOURLY PAY AND DISPLAY MON-SAT 830-630PM	15.3	3	1	2	33.3%		
41	DOUBLE YELLOW LINES	7.8						
	4HOURLY PAY AND DISPLAY MON-SAT 830-630PM	31	6	2	4	33.3%		
	DROP KERB	30.6						
	YELLOW SINGLE LINES	11.5						
42	PEDESTRIAN CROSSING	30.7						
	DOUBLE YELLOW LINES	10.1						
	CAR CLUB	5.1	1	1	0	100.0%		
	2HOURLY PAY AND DISPLAY MON-FRI 1000-430PM	26.5	5	0	5	0.0%		
43	RESIDENT PERMIT HOLDER MON-SAT 1000-430PM	75.5	14	13	2	86.7%		
	YELLOW SINGLE LINES	4.7						
	DROP KERB	11.5						
	RESIDENT PERMIT HOLDER MON-SAT 1000-430PM	75.7	15	13	0	100.0%		
44	DROP KERB	9						
	4HOURLY PAY AND DISPLAY MON-SAT 830-630PM	44	8	7	1	87.5%		
	2HOURLY PAY AND DISPLAY MON-FRI 1000-430PM	20.6	4	0	4	0.0%		
	YELLOW SINGLE LINES	10						
45	YELLOW SINGLE LINES	24.4						
	BUS STOP	31.4						
46	YELLOW SINGLE LINES	10.2						
	RESIDENT PERMIT HOLDER MON-SAT 1000-430PM	57.6	app 18 spaces	15	2	88.2%		
47	DROP KERB	5.1						
	YELLOW SINGLE LINES	69.8						
48	YELLOW SINGLE LINES	1.9						
	20MINS LOADING MON-SAT 830-630	14.6	2	1	1	50.0%		
49	RED DOUBLE LINES	34.3						
	SINGLE RED LINES	66						

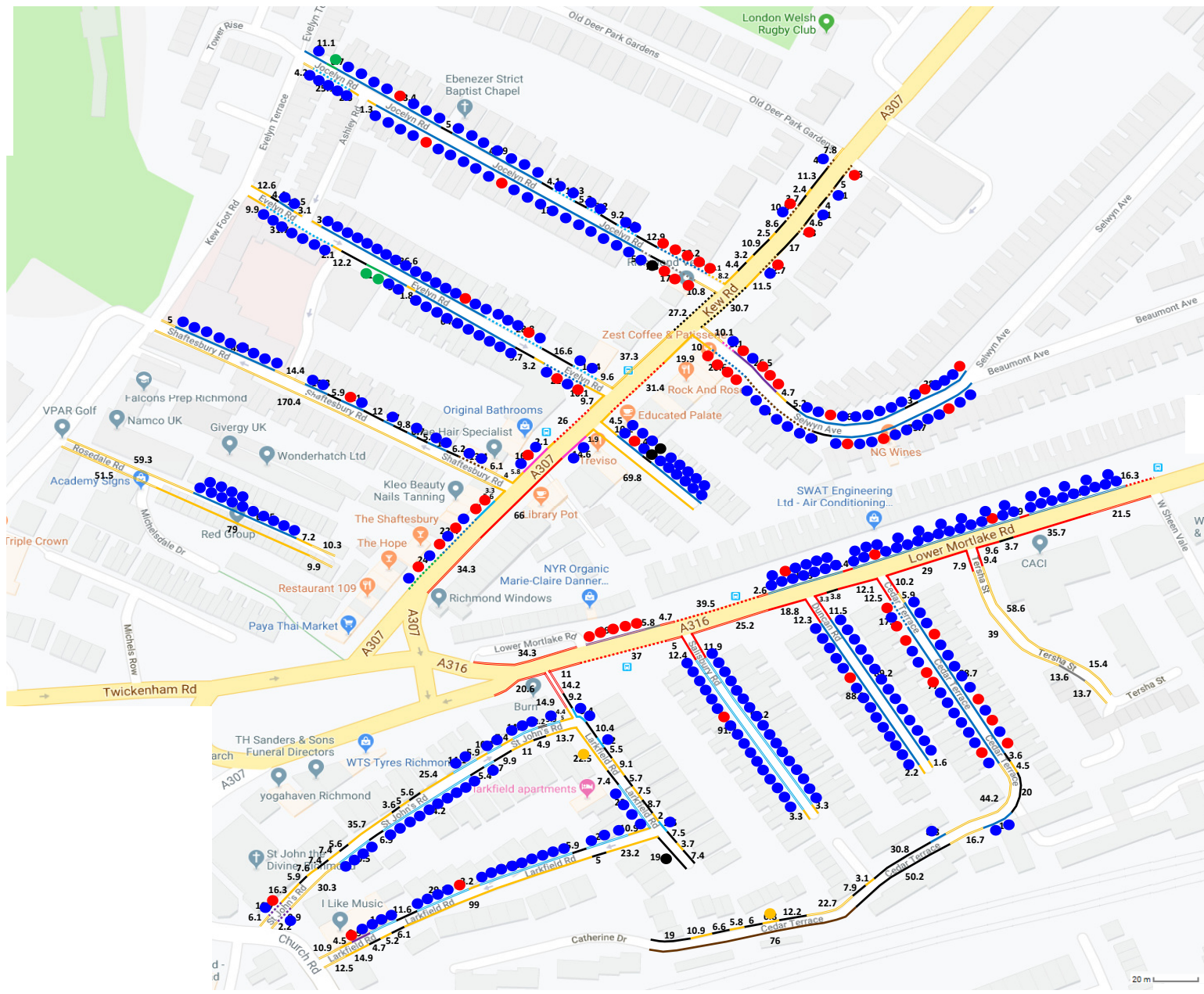
						TUESDAY 17th SEPTEMBER 2019		
						TIME : 0315		
ROAD NAME	ZONE	RESTRICTION	METRES	5 METRES = 1 SPACE	PARKED	OBSERVED SPACES	% STREET STRESS	
LOWER MORTLAKE RD	1	RED DOUBLE LINES	21.5					
		SINGLE RED LINES	45.3					
		DROP KERB	3.7					
TERSHA ST	2	SINGLE RED LINES	9.4					
		DOUBLE YELLOW LINES	74					
	3	DOUBLE YELLOW LINES	52.7					
		ACCESS DROP KERB	13.6					
CEDAR TELL	4	SINGLE RED LINES	29					
		SINGLE RED LINES	10.2					
		DOUBLE YELLOW LINES	22.6					
	5	RESIDENT PERMIT HOLDER MON-SAT 1000-430PM	102.7	19	11	0	100.0%	
		DROP KERB	73.8					
		ROADWORKS	76					
		YELLOW SINGLE LINES	4.5					
		DROP KERB	82.5					
		YELLOW SINGLE LINES	26.6					
		RESIDENT PERMIT HOLDER MON-SAT 1000-430PM	85.8	16	9	5	64.3%	
		2HOURLY PAY AND DISPLAY MON-FRI 1000-430PM	17.5	3	1	2	33.3%	
		SINGLE RED LINES	12.5					
DOUBLE YELLOW LINES	66.9							
DUNCAN RD	8	SINGLE RED LINES	15.4					
		RESIDENT PERMIT HOLDER MON-SAT 1000-430PM	89.2	17	15	0	100.0%	
		YELLOW SINGLE LINES	1.6					
9	RESIDENT PERMIT HOLDER MON-SAT 1000-430PM	2.2						
	RESIDENT PERMIT HOLDER MON-SAT 1000-430PM	88.2	17	14	1	93.3%		
LOWER MORTLAKE RD	10	SINGLE RED LINES	12.3					
		SINGLE RED LINES	18.8					
SALISBURY RD	11	RED DOUBLE LINES	25.2					
		SINGLE RED LINES	11.9					
		MON-SAT 830-630PM RESIDENT PERMIT HOLDER	92.2	18	15	2	88.2%	
		YELLOW SINGLE LINES	3.3					
12	YELLOW SINGLE LINES	3.3						
	MON-SAT 830-630PM RESIDENT PERMIT HOLDER	91.7	18	15	1	93.8%		
LOWER MORTLAKE RD	13	SINGLE RED LINES	12.4					
		RED DOUBLE LINES	16					
		BUS STOP DOUBLE RED LINES	37					
LARKFIELD RD	14	RED DOUBLE LINES	14.2					
		DROP KERB	54.4					
		MON-SAT 830-630PM RESIDENT PERMIT HOLDER	20.1	3	4	0	100.0%	
	15	YELLOW SINGLE LINES	22.3					
		DROP KERB	19.4					
	16	YELLOW SINGLE LINES	142.3					
		DROP KERB	15.8					
		DOUBLE YELLOW LINES	12.5					
		DOUBLE YELLOW LINES	10.9					
	17	YELLOW SINGLE LINES	18.6					
PAY AND DISPLAY 2HR MON-SAT 830-630PM		9.9	2	0	2	0.0%		
DROP KERB		17.5						
MON-SAT 830-630PM RESIDENT PERMIT HOLDER		110.3	20	17	2	89.5%		
18	MON-SAT 830-630PM RESIDENT PERMIT HOLDER	23	4	4	0	100.0%		
	DROP KERB	7.4						
	YELLOW SINGLE LINES	22.5						
	YELLOW SINGLE LINES	24.7						
ST JOHNS RD	19	DROP KERB	27.1					
		MON-SAT 830-630PM RESIDENT PERMIT HOLDER	78.4	14	14	1	93.3%	
		4HOURLY PAY AND DISPLAY MON-SAT 830-630PM	9.9	1	1	0	100.0%	
	20	DOUBLE YELLOW LINES	32.5					
		DOUBLE YELLOW LINES	6.1					



- KEY:**
- = SINGLE RED LINE
  - = = DOUBLE RED LINE
  - ⋯ = BUS STOP
  - = SINGLE YELLOW LINE
  - ⋯ = SINGLE YELLOW LINE MON-SAT 0800-1830
  - = = DOUBLE YELLOW LINE
  - = DROPPED KERB
  - = = KERB BUILD OUT
  - ⋯ = PEDESTRIAN CROSSING
  - = = ACCESS DROPPED KERB
  - ⋯ = BUSINESS PERMIT MON-SAT 0800-1830
  - = = RESIDENT PERMIT MON-SAT 1000-1630
  - ⋯ = 2 HOUR PAY & DISPLAY MON-SAT 1000-1630
  - = = SINGLE RED LINE / 4 HOUR VOUCHER / PERMIT (PAVEMENT)
  - ⋯ = 30 MINS MON-SAT 1000-1630
  - = = 4 HOUR VOUCHER / PERMIT MON-SAT 1000-1630
  - ⋯ = PERMIT / 4 HOUR PAY & DISPLAY MON-SAT 1000-1630
  - = = RESIDENT PERMIT MON-SAT 0830-1830
  - ⋯ = 2 HOUR PAY & DISPLAY MON-SAT 0830-1830
  - = = 4 HOUR PAY & DISPLAY MON-SAT 0830-1830
  - ⋯ = RED ROUTE BAY LOADING 20 MINS
  - = = RED ROUTE LOADING 20 MINS, DISABLED 3 HOURS
  - = = DISABLED BAY
  - ⋯ = LOADING 20 MINS MON-SAT 0830-1830
  - = = CAR CLUB

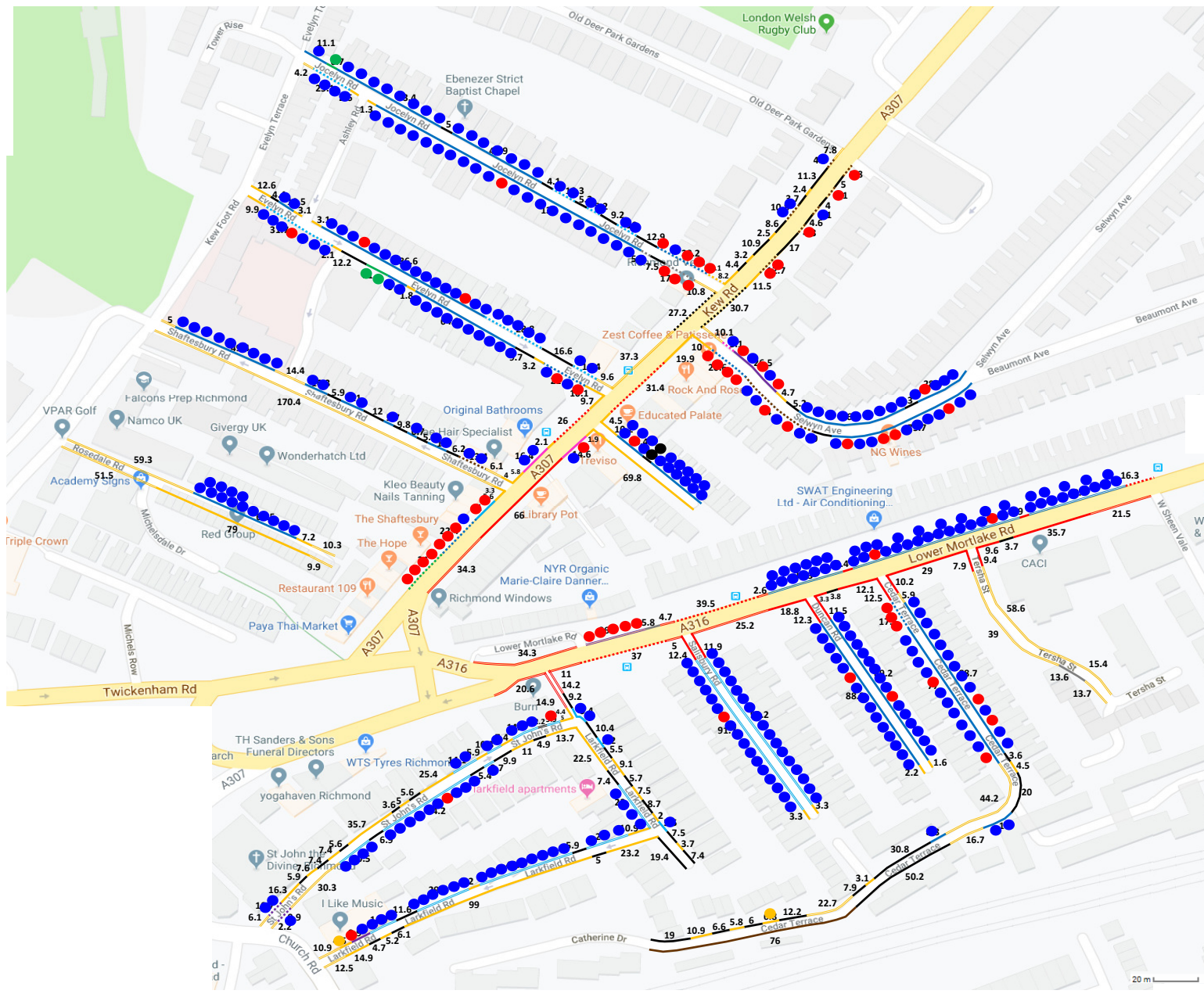
- KEY:**
- = PARKED VEHICLE
  - = OBSERVED SPACE
  - = DROPPED KERB
  - = YELLOW LINES
  - = DISABLED BAY (OCCUPIED)





- KEY:**
- = SINGLE RED LINE
  - = = DOUBLE RED LINE
  - ⋯ = BUS STOP
  - = SINGLE YELLOW LINE
  - ⋯ = SINGLE YELLOW LINE MON-SAT 0800-1830
  - = = DOUBLE YELLOW LINE
  - = DROPPED KERB
  - = KERB BUILD OUT
  - = PEDESTRIAN CROSSING
  - = ACCESS DROPPED KERB
  - = BUSINESS PERMIT MON-SAT 0800-1830
  - = RESIDENT PERMIT MON-SAT 1000-1630
  - = 2 HOUR PAY & DISPLAY MON-SAT 1000-1630
  - = SINGLE RED LINE / 4 HOUR VOUCHER / PERMIT (PAVEMENT)
  - = 30 MINS MON-SAT 1000-1630
  - = 4 HOUR VOUCHER / PERMIT MON-SAT 1000-1630
  - = PERMIT / 4 HOUR PAY & DISPLAY MON-SAT 1000-1630
  - = RESIDENT PERMIT MON-SAT 0830-1830
  - = 2 HOUR PAY & DISPLAY MON-SAT 0830-1830
  - = 4 HOUR PAY & DISPLAY MON-SAT 0830-1830
  - = RED ROUTE BAY LOADING 20 MINS
  - = RED ROUTE LOADING 20 MINS, DISABLED 3 HOURS
  - = DISABLED BAY
  - = LOADING 20 MINS MON-SAT 0830-1830
  - = CAR CLUB

- KEY:**
- = PARKED VEHICLE
  - = OBSERVED SPACE
  - = DROPPED KERB
  - = YELLOW LINES
  - = DISABLED BAY (OCCUPIED)



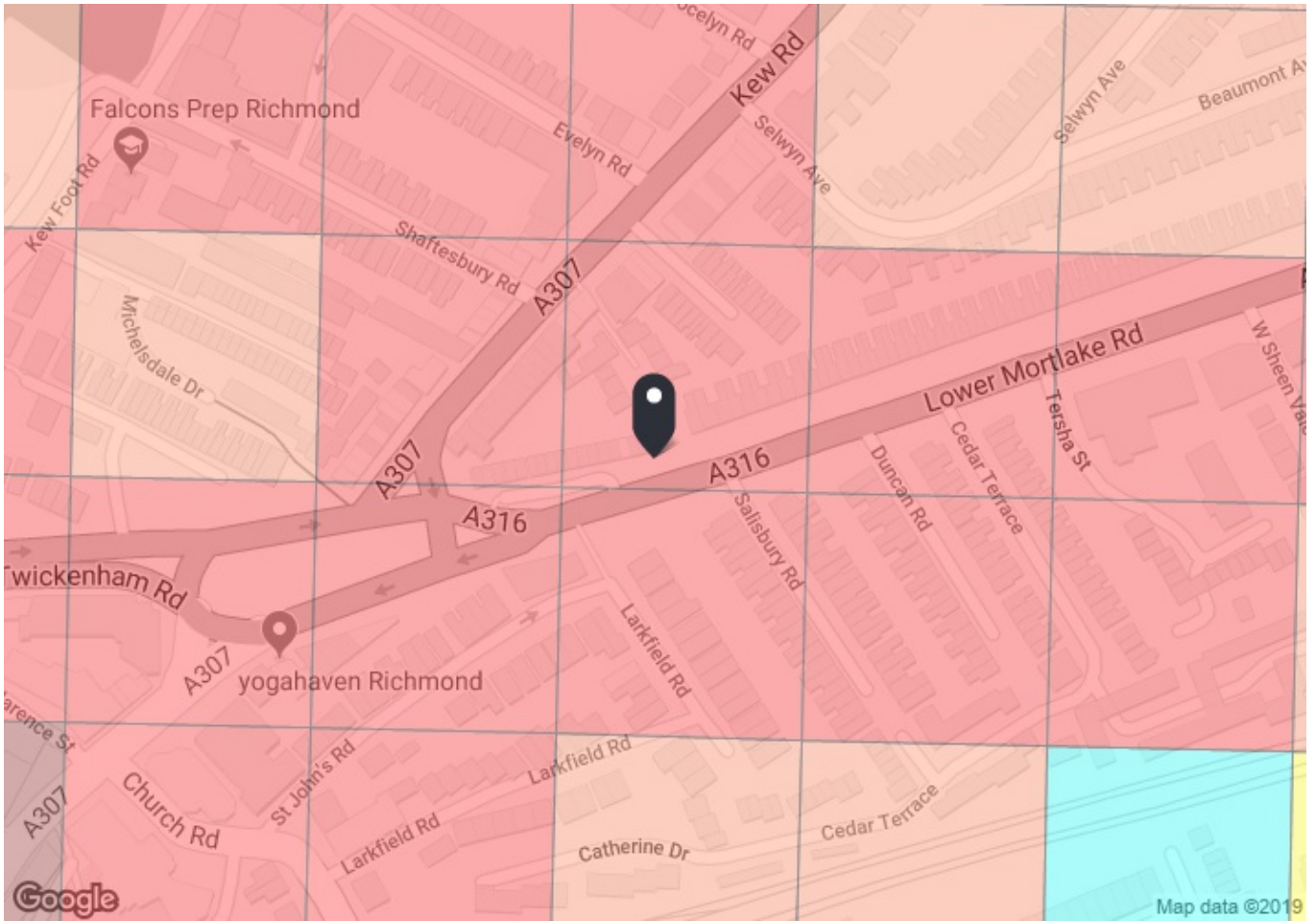
- KEY:
- = SINGLE RED LINE
  - = = DOUBLE RED LINE
  - ⋯ = BUS STOP
  - = SINGLE YELLOW LINE
  - ⋯ = SINGLE YELLOW LINE MON-SAT 0800-1830
  - = = DOUBLE YELLOW LINE
  - = DROPPED KERB
  - = = KERB BUILD OUT
  - ⋯ = PEDESTRIAN CROSSING
  - = = ACCESS DROPPED KERB
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  - ⋯ = 30 MINS MON-SAT 1000-1630
  - = = 4 HOUR VOUCHER / PERMIT MON-SAT 1000-1630
  - ⋯ = PERMIT / 4 HOUR PAY & DISPLAY MON-SAT 1000-1630
  - = = RESIDENT PERMIT MON-SAT 0830-1830
  - ⋯ = 2 HOUR PAY & DISPLAY MON-SAT 0830-1830
  - = = 4 HOUR PAY & DISPLAY MON-SAT 0830-1830
  - ⋯ = RED ROUTE BAY LOADING 20 MINS
  - = = RED ROUTE LOADING 20 MINS, DISABLED 3 HOURS
  - = = DISABLED BAY
  - ⋯ = LOADING 20 MINS MON-SAT 0830-1830
  - = = CAR CLUB

- KEY:
- = PARKED VEHICLE
  - = OBSERVED SPACE
  - = DROPPED KERB
  - = YELLOW LINES
  - = DISABLED BAY (OCCUPIED)

# **Appendix C**

**(PTAL Report)**





**PTAL output for Base Year 6a**

41 Lower Mortlake Rd, Richmond TW9 2LR, UK  
Easting: 518334, Northing: 175407

Grid Cell: 55566

Report generated: 17/09/2019

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**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

**Map key - PTAL**

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

**Map layers**

- PTAL (cell size: 100m)

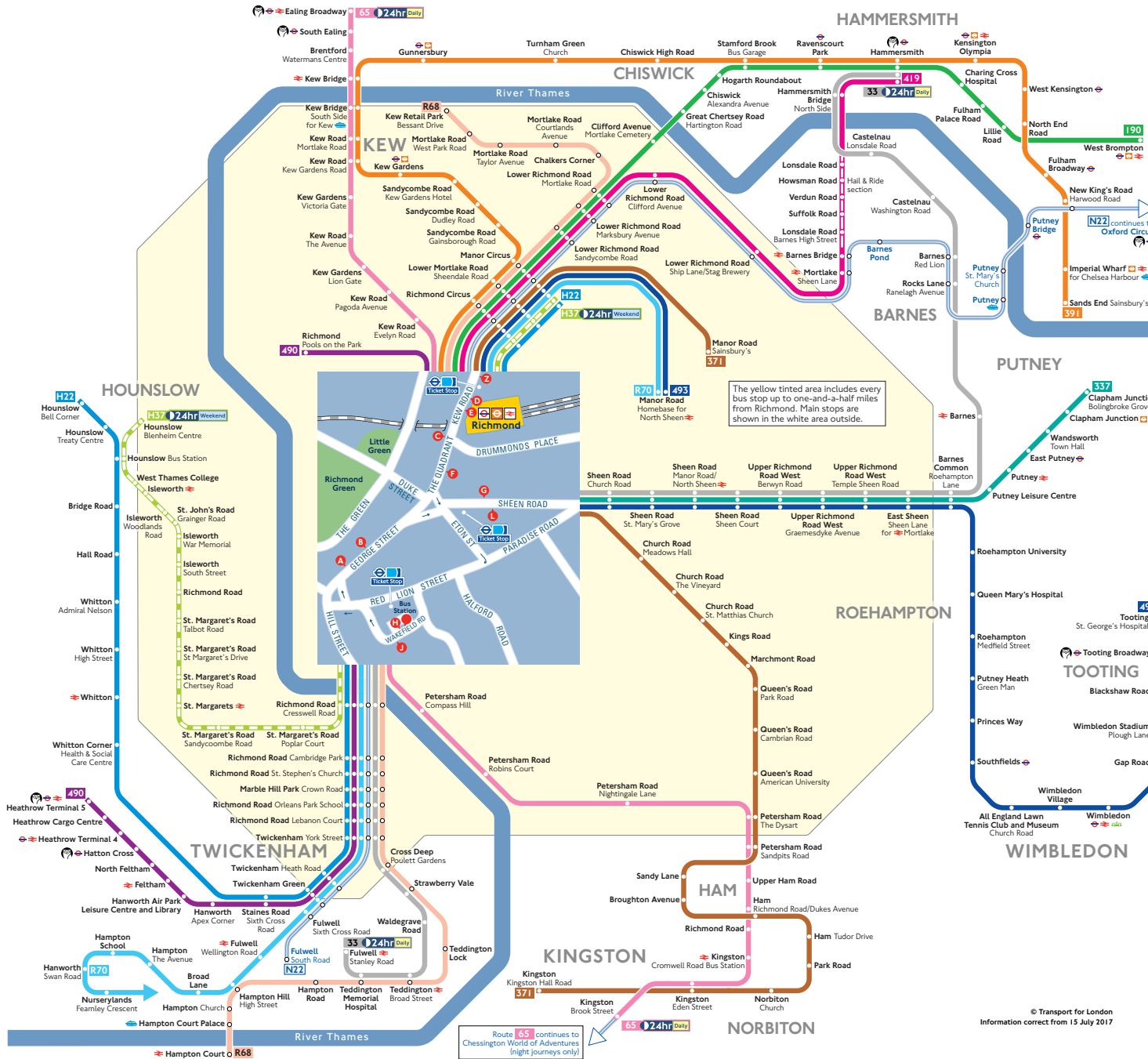
Calculation data

Mode	Stop	Route	Distance (metres)	Frequency (vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	KEWROAD RICHMOND CIRCUS	65	90.43	9	1.13	5.33	6.46	4.64	1	4.64
Bus	RICHMOND CIRCUS (L M RD)	371	354.92	7	4.44	6.29	10.72	2.8	0.5	1.4
Bus	RICHMOND CIRCUS (L M RD)	493	354.92	5	4.44	8	12.44	2.41	0.5	1.21
Bus	RICHMOND CIRCUS (L M RD)	190	354.92	4	4.44	9.5	13.94	2.15	0.5	1.08
Bus	RICHMOND CIRCUS (L M RD)	419	354.92	4	4.44	9.5	13.94	2.15	0.5	1.08
Bus	RICHMOND CIRCUS (L M RD)	H37	354.92	10	4.44	5	9.44	3.18	0.5	1.59
Bus	RICHMOND CIRCUS (L M RD)	R68	354.92	4	4.44	9.5	13.94	2.15	0.5	1.08
Bus	RICHMOND CIRCUS (L M RD)	R70	354.92	6	4.44	7	11.44	2.62	0.5	1.31
Bus	RICHMOND CIRCUS (L M RD)	391	354.92	6	4.44	7	11.44	2.62	0.5	1.31
Bus	RICHMOND CIRCUS (L M RD)	H22	354.92	5	4.44	8	12.44	2.41	0.5	1.21
Bus	RICHMOND STATION	490	476.96	5	5.96	8	13.96	2.15	0.5	1.07
Rail	Richmond	'RICHMND-GUILDFD 2N13'	526.44	0.33	6.58	91.66	98.24	0.31	0.5	0.15
Rail	Richmond	'ALDRSHT-WATRLMN 1N90'	526.44	1	6.58	30.75	37.33	0.8	0.5	0.4
Rail	Richmond	'RDNG4AB-WATRLMN 2C10'	526.44	0.67	6.58	45.53	52.11	0.58	0.5	0.29
Rail	Richmond	'WATRLMN-RDNG4AB 2C13'	526.44	0.67	6.58	45.53	52.11	0.58	0.5	0.29
Rail	Richmond	'RDNG4AB-WATRLMN 2C14'	526.44	0.33	6.58	91.66	98.24	0.31	0.5	0.15
Rail	Richmond	'RDNG4AB-WATRLMN 2C16'	526.44	0.33	6.58	91.66	98.24	0.31	0.5	0.15
Rail	Richmond	'RDNG4AB-WATRLMN 2C17'	526.44	1.33	6.58	23.31	29.89	1	0.5	0.5
Rail	Richmond	'RDNG4AB-WATRLMN 2C18'	526.44	0.67	6.58	45.53	52.11	0.58	0.5	0.29
Rail	Richmond	'WATRLMN-RDNG4AB 2C85'	526.44	0.33	6.58	91.66	98.24	0.31	0.5	0.15
Rail	Richmond	'WATRLMN-RDNG4AB 2C87'	526.44	0.33	6.58	91.66	98.24	0.31	0.5	0.15
Rail	Richmond	'RDNG4AB-WATRLMN 2C90'	526.44	0.33	6.58	91.66	98.24	0.31	0.5	0.15
Rail	Richmond	'SHEPRTN-WATRLMN 2H92'	526.44	1	6.58	30.75	37.33	0.8	0.5	0.4
Rail	Richmond	'WDON-WATRLMN 2K03'	526.44	0.33	6.58	91.66	98.24	0.31	0.5	0.15
Rail	Richmond	'WATRLMN-WATRLMN 2K09'	526.44	2	6.58	15.75	22.33	1.34	1	1.34
Rail	Richmond	'WATRLMN-WATRLMN 2O09'	526.44	2	6.58	15.75	22.33	1.34	0.5	0.67
Rail	Richmond	'WATRLMN-WATRLMN 2R09'	526.44	2	6.58	15.75	22.33	1.34	0.5	0.67
Rail	Richmond	'WSORAER-WATRLMN 2U10'	526.44	2	6.58	15.75	22.33	1.34	0.5	0.67
Rail	Richmond	'WATRLMN-WSORAER 2U13'	526.44	2	6.58	15.75	22.33	1.34	0.5	0.67
Rail	Richmond	'HOUNSLV-WATRLMN 2V05'	526.44	0.33	6.58	91.66	98.24	0.31	0.5	0.15
LUL	Richmond	'Upminster-Richmond'	526.44	6	6.58	5.75	12.33	2.43	1	2.43
LUL	Richmond	'Richmond-DagEast'	526.44	0.67	6.58	45.53	52.11	0.58	0.5	0.29
									<b>Total Grid Cell AI:</b>	<b>27.08</b>

# **Appendix D**

**(TfL Bus Spider Map)**

# Buses from Richmond



## Route finder

Bus route	Towards	Bus stops
33 <b>24hr Daily</b>	Fulwell	J L
	Hammersmith	A G
65 <b>24hr Daily</b>	Ealing Broadway	B C
	Kingston	D F J
	Chessington World of Adventures (nights only)	D F J
190	West Brompton	B C
337	Clapham Junction	A G H
371	Kingston	D F G
	Manor Road Sainsbury's	B C E J L
391	Sands End	B C
419	Hammersmith	B C
490	Heathrow Terminal 5	B F J
	Pools on the Park	B C
493	Manor Road Homebase	B C E J L
	Tooting	D F G
H22	Hounslow	B E J
	Manor Circus	B C
H37 <b>24hr Weekend</b>	Hounslow	B F J
	Manor Circus	B C
R68	Hampton Court	B E J
	Kew Retail Park	B C
R70	Manor Road Homebase	B C
	Nurserylands	B E J

## Night Buses

Bus route	Towards	Bus stops
N22	Fulwell	B F J
	Oxford Circus	B C

## Other Buses

Bus route	Towards	Bus stops
969	Roehampton Vale ASDA ▼	B G
	Whitton ▼	J L

## Key

- 33 Day buses in black
- N22 Night buses in blue
- Connections with London Underground
- Connections with London Overground
- Connections with National Rail
- DLR Connections with DLR
- Connections with London Trams
- Connections with river boats
- One journey on Tuesdays and Fridays only
- Operates daily with 24-hour service Friday and Saturday nights
- Tube station with 24-hour service Friday and Saturday nights

## Ways to pay

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

© Transport for London  
Information correct from 15 July 2017

# **Appendix E**

**(TRICS Report)**

Calculation Reference: AUDIT-752101-190916-0939

## TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

01 GREATER LONDON  
 IS ISLINGTON 2 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: 14 to 15 (units: )  
 Range Selected by User: 9 to 25 (units: )

Parking Spaces Range: Selected: 0 to 0 Actual: 2 to 290

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/11 to 08/11/17

*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

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

Selected survey types:

Manual count 2 days  
 Directional ATC Count 0 days

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

Selected Locations:

Edge of Town Centre 2

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

Selected Location Sub Categories:

Residential Zone 1  
 Built-Up Zone 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 2 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:

50,001 to 100,000	1 days
100,001 or More	1 days

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

Population within 5 miles:

500,001 or More	2 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
-------------	--------

*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	2 days
----	--------

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

PTAL Rating:

6a Excellent	2 days
--------------	--------

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

LIST OF SITES relevant to selection parameters

1	IS-03-C-05 LEVER STREET FINSBURY	BLOCK OF FLATS	ISLINGTON
	Edge of Town Centre Built-Up Zone		
	Total Number of dwellings:	15	
	<i>Survey date: WEDNESDAY</i>		<i>Survey Type: MANUAL</i>
	<i>29/06/16</i>		
2	IS-03-C-06 CALEDONIAN ROAD HOLLOWAY	BLOCK OF FLATS	ISLINGTON
	Edge of Town Centre Residential Zone		
	Total Number of dwellings:	14	
	<i>Survey date: MONDAY</i>		<i>Survey Type: MANUAL</i>
	<i>27/06/16</i>		

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



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

Calculation factor: 1 DWELLS

Estimated TRIP rate value per 16 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS				DEPARTURES				TOTALS			
	No. Days	Ave. DWELLS	Trip Rate	Estimated Trip Rate	No. Days	Ave. DWELLS	Trip Rate	Estimated Trip Rate	No. Days	Ave. DWELLS	Trip Rate	Estimated 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	2	15	0.034	0.552	2	15	0.310	4.966	2	15	0.344	5.518
08:00 - 09:00	2	15	0.034	0.552	2	15	0.586	9.379	2	15	0.620	9.931
09:00 - 10:00	2	15	0.034	0.552	2	15	0.345	5.517	2	15	0.379	6.069
10:00 - 11:00	2	15	0.069	1.103	2	15	0.241	3.862	2	15	0.310	4.965
11:00 - 12:00	2	15	0.069	1.103	2	15	0.069	1.103	2	15	0.138	2.206
12:00 - 13:00	2	15	0.034	0.552	2	15	0.069	1.103	2	15	0.103	1.655
13:00 - 14:00	2	15	0.138	2.207	2	15	0.103	1.655	2	15	0.241	3.862
14:00 - 15:00	2	15	0.034	0.552	2	15	0.069	1.103	2	15	0.103	1.655
15:00 - 16:00	2	15	0.103	1.655	2	15	0.138	2.207	2	15	0.241	3.862
16:00 - 17:00	2	15	0.310	4.966	2	15	0.103	1.655	2	15	0.413	6.621
17:00 - 18:00	2	15	0.276	4.414	2	15	0.034	0.552	2	15	0.310	4.966
18:00 - 19:00	2	15	0.379	6.069	2	15	0.241	3.862	2	15	0.620	9.931
19:00 - 20:00	2	15	0.517	8.276	2	15	0.103	1.655	2	15	0.620	9.931
20:00 - 21:00	2	15	0.241	3.862	2	15	0.138	2.207	2	15	0.379	6.069
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
<b>Total Rates:</b>			2.272	36.415			2.549	40.826			4.821	77.241

*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.*