RINGERS ROAD, BROMLEY

TRANSPORT ASSESSMENT

15 October 2021

EVOKE

RINGERS ROAD, BROMLEY

TRANSPORT ASSESSMENT

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1. Introduction

1.1. Context

1.1.1. Evoke Transport Planning Consultants Ltd (Evoke) has been commissioned by Ringers Road Properties Ltd to produce a Transport Assessment (TA) to support a planning application for the demolition of existing buildings and construction of a mixed use development comprising residential units, ancillary residents' facilities (including co-working space) and commercial floor space (Use Class E) across two blocks, along with associated hard and soft landscaping, amenity spaces, cycle and refuse storage. The local planning authority (LPA) and local highway authority (LHA) are the London Borough of Bromley (LBB).

1.2. Existing Site

1.2.1. The site is located at 2-4 Ringers Road, Bromley and is bordered to the north by Ethelbert Road, to the east by the Salvation Army Church and 64 The High Street, to the south by Ringers Road and to the west by Simpsons Place and residential properties off Ethelbert Road.

1.2.2. The southern section of the site is currently in use as a restaurant / bar (Smoque) which provides 150 covers, while the northern aspect of the site provides 6 studio apartments together with 185sqm of D2 uses which were previously occupied by Double K boxing gym but has more recently been used as a photography studio.

1.2.3. Access to the site is taken from both the north and the south along Ethelbert Road and Ringers Road, respectively. Along Ethelbert Road, there is a pedestrian access at ground floor level as well as a vehicular access into a servicing yard. Along Ringers Road, there is no vehicular access, but there are two pedestrian accesses along the site frontage. A coach bay is located outside the site frontage along Ringers Road.

1.2.4. The site forms part of Site 10 within the Bromley Local Plan which is allocated for redevelopment to provide circa 1,230 residential units along with offices, retail uses and a transport interchange at Bromley South Railway Station. The site is classed in the masterplan as Phase 2a and the frontage on Ringers Road is classed as an area to provide a taller building (13-15 storeys) marking the top of the High Street.

1.3. Proposed Development

1.3.1. The proposed redevelopment will demolish the existing buildings on site (2-4 Ringers Road and 5 Ethelbert Road), and construct two new buildings which will provide a combined total of 94 residential units. Block A will comprise a 14-storey building fronting Ringers Road which will contain 45 residential units with Block B comprising a 12-storey building fronting Ethelbert Road which will contain 49 residential units. A breakdown of the unit types proposed has been provided below:

- 37 x one-bed apartments;
- 57 x two-bed apartments.

1.3.2. In addition to this, a café (160sqm) will also be provided within Block B at ground and first floor level and a total of 389.4sqm co-working office space will be provided at basement and first floor level across both Blocks.

1.3.3. Drawings of the proposed site layout and plans of the buildings are attached at **Appendix A**. With the exception of the disabled car parking space and accessible car club space which will be provided along

the site frontage on Ethelbert Road, the proposals will be car-free as such no vehicle accesses to the site will be provided. To encourage the uptake of active travel from the outset, high quality public realm will be provided, integrating the site to the adjacent Churchill Quarter for access to and from Bromley High Street. High quality cycle parking will also be provided from the outset, in accordance with the London Plan and London Cycling Design Guidance, further reducing any barriers to cycling for future residents.

1.4. Pre-Application Discussions

1.4.1. A pre-application submission was made to LBB on 17th October 2019 for the demolition of existing buildings (2-4 Ringers Road and 5 Ethelbert Road) and the erection of two no. buildings to provide 113 one and two bedroom residential apartments. A follow up pre-application meeting was held on 12th November 2019 with a formal pre-application response issued on 3rd December 2019.

1.4.2. A summary of the pre-application response in relation to transport and highways has been provided below with full correspondence attached at **Appendix B**:

- The sites PTAL rating of 6a/6b was noted along with the site's close proximity to Bromley High Street and Bromley South Station;
- The response states that Officers are, in principle, supportive of the proposal to develop this parcel of land for residential use - it forms part of a Housing Allocation site and the provision of 113 residential units in this sustainable town centre location would make a positive contribution to the Borough's Housing Supply;
- London Plan and BLP Policies encourage sustainable transport modes whilst recognising the need for appropriate parking provision. Car parking standards within the London Plan and BLP should be used as a basis for assessment;
- Highways Officers have raised concern over the lack of parking for the development and have advised that at least 50 on-site parking spaces should be provided;
- The London Plan requires 10% of all new homes to be wheelchair accessible or easily adaptable for occupation by a wheelchair user. This policy references the 'Wheelchair Housing Design Guide' (WHDG) which requires one parking bay for every wheelchair accessible or easily adaptable home (so 10% of the total number of residential units);
- Reference was made to the Accessible London SPG which states that "Any residential development, even when car free should comply with London Plan Policy 3.8 and provide adequate parking for the wheelchair accessible or easily adaptable units, preferably on-site. Para 4.3.20 of the SPG makes allowance for disabled parking to be considered after first occupation of a development and says that a parking management strategy which sets out what mechanisms will be used to ensure that additional provision can be made quickly and easily can be approved at planning application stage. For Major developments with easy access to step-free public transport this could take the form of the delivery of conveniently located on street bays (through a s106 agreement), access to a car club, facilities for the storage and charging of mobility scooters and improvements to local bus tops, including the provision of raised kerbs to facilitate bus-ramps (Para 4.3.21).
- The response states that car-free developments should be justified through the provision of the appropriate assessments and any other relevant information which should include an assessment of the cumulative impacts of extant permissions and other planned developments in the town centre. A strategy for securing appropriate facilities for disabled occupants of the development will also be required.
- A summary of the requirements for the Transport Assessment has been outlined below:
  - Existing Situation - Baseline data
  - Proposed Development and Site Access Arrangement

- Traffic Generation analysis
- A detailed Delivery and Servicing Plan (DSP)
- Traffic Assessment Scenarios (Transport and traffic Modelling)
- Public transport assessment to indicate the impact of development on the public transport network and confirm if mitigation will be required.
- Construction management plan
- Mitigation/ Travel Plan

- It was noted that should parking provision change on site, electric vehicle charging points should be provided in accordance with the relevant London Plan standards;
- Cycle parking storage should be provided in accordance with Table 6.3 of the 2016 London Plan with attention also paid the London Cycle Design Standards;
- Refuse and recycling storage facilities should be provided in accordance with Council's refuse collection note for developers and architects;
- A contribution to linking the development to the cycle network proposed in the LIP and some other minor pedestrian improvements to enhance the walking route to the town centre and Bromley South station may also be sought.

1.4.3. It is of note that the scheme has since been revised since the original pre-application pack was issued and now proposes a total of 94 x residential units; a net reduction of 19 units as well as the addition of a 160sqm café and a 389.4sqm co-working office space for residents compared with the previously provided information.

1.5. Report Structure

1.5.1. Following this introduction, the Transport Assessment is structured as follows in accordance with TfL's Healthy Streets Transport Assessment guidance:

- **Chapter 2: Policy Context -** Provides a summary of the current national and local planning and transport policy that is relevant to the proposed development;
- **Chapter 3: Existing Situation** - Describes the existing transport and highways conditions at the site and within the surrounding area including an assessment of Census 2011 data;
- **Chapter 4: Active Travel Zone (ATZ)** - Outlines the Active Travel Zone (ATZ) surrounding the site and assesses the key routes within the ATZ;
- **Chapter 5: Proposed Development -** Outlines the development proposals, including access arrangements, internal highway layout and car and cycle parking arrangements;
- **Chapter 6: Trip Generation -** Outlines the multi-modal trips associated with the proposed development and comments on the impact of these trips on the surround transport and highways network;
- **Chapter 7: Development Impact –** Assessing the net change in trips as a result of the development across all modes of transport;
- **Chapter 8: Mitigation –** Outlines the proposed mitigation measures considered as part of this application, including a list of design measures, suggested conditions and further documents submitted alongside this Transport Assessment;
- **Chapter 9: Summary -** Outlines the findings of this Transport Assessment and summarises the proposed development in transport and highways terms.

2. Policy and Guidance

2.1. Introduction

2.1.1. The key transport policy documents at a national and Local level have been considered when assessing the development proposals, these include the key policy documents outlined below:

- National Planning Policy Framework (July 2021);
- Planning Practice Guidance Travel Plans, Transport Assessments and Statements in Decision-Taking' (March 2014);
- National Design Guide (October 2019);
- The London Plan (March 2021);
- TfL's Healthy Streets for London;
- Mayor of London's Transport Strategy (MTS, 2018);
- LBB Local Plan (January 2019);
- LBB Third Local Implementation Plan (LIP3) 2019;
- LBB Residential Design Guide (2004);
- LBB The Storage and Collection of Refuse from Residential and Commercial Buildings (October 2011).

2.1.2. The key policy documents promote development where there is a choice of sustainable transport modes such as walking, cycling, public transport and electric vehicles. LBB see that provision or access to car clubs is key to reducing car ownership in the borough. The LIP3 states that to promote sustainable modes, developments may need to incorporate or contribute to improvements to the highway network including traffic management measures and layout. Developments must reduce car dependency through the development of alternatives to car use such as the strategic and local cycle networks.

2.2. National Policy

National Planning Policy Framework (July 2021)

2.2.1. In July 2021, the revised National Planning Policy Framework (NPPF) was published, setting out a number of transport objectives designed to facilitate sustainable development and contribute to a wider sustainability by giving people a wider choice about how they travel.

2.2.2. In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- Appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;
- Safe and suitable access to the site can be achieved for all users;
- The design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code 46; 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.

2.2.3. The NPPF states that development should only be 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'. Within this context, applications for development should:

- 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;
- Address the needs of people with disabilities and reduced mobility in relation to all modes of transport;
- 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;
- Allow for the efficient delivery of goods, and access by service and emergency vehicles; and
- Be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.

2.2.4. The NPPF states that local authorities should consider the accessibility of a development alongside the type, mix and use of the development as well as looking at local car ownership and the need to ensure an adequate provision of spaces for charging plug-in and other ultra-low emission vehicles when determining planning applications.

2.2.5. The revised NPPF still requires the need for a Travel Plan, Transport Statement or Transport Assessment should a development generate 'significant' amounts of movement, so that the likely impacts can be assessed.

Planning Practice Guidance (PPG) – Travel Plans, Transport Assessments and Statements (March 2014)

2.2.6. Whilst a number of PPG guidance documents have recently been updated in line with the Revised NPPF, the current guidance relating to this document was released in March 2014. The PPG document 'Travel Plans, Transport Assessments and Statements in Decision-Taking' provides a concise report on the use, importance of, and content to be provided within Transport Assessments, Transport Statements and Travel Plans.

2.2.7. With regard to whether to provide a Transport Assessment, Transport Statement or no assessment, the PPG states that local planning authorities, developers, relevant transport authorities, and neighbourhood planning organisations should agree what evaluation is needed in each instance. In this instance, the scale of development is such that SGC require a Transport Assessment and Framework Travel Plan.

2.2.8. The Guidance states that Transport Assessments, Transport Statements and Travel Plans can positively contribute to encouraging sustainable travel, lessening traffic generation and its detrimental impacts and reducing carbon emissions and climate impact. In doing so they can create accessible, connected, inclusive communities with improved road safety, health and quality of life.

2.2.9. The Guidance states that Transport Assessments, Transport Statements and Travel Plans should be proportionate to the size and scope of the proposed development, be tailored to particular local circumstances and be established at the earliest practicable possible stage of a development proposal.

National Design Guide (October 2019)

2.2.10. The National Design Guide was published in October 2019 sets out the characteristics of well-designed places and demonstrates what good design means in practice. Paragraph 62 states that well-designed places are walkable with safe, recognisable and legible streets, are accessible by public transport and provide access to services and facilities. Paragraph 76 states that a well-designed movement network;

- is safe and accessible for all;
- functions efficiently to get everyone around, takes account of the diverse needs of all its potential users and provides a genuine choice of sustainable transport modes;
- limits the impacts of car use by prioritising and encouraging walking, cycling and public transport, mitigating impacts and identifying opportunities to improve air quality;
- promotes activity and social interaction, contributing to health, well-being, accessibility and inclusion; and
- incorporates green infrastructure, including street trees to soften the impact of car parking, help improve air quality and contribute to biodiversity.

2.2.11. Paragraph 77 states that priority in developments should be to pedestrian and cycle movements and developments should create routes that are safe, direct, convenient and accessible for people of all abilities (Paragraph 78). Paragraph 79 states;

- "In well-designed places, people should not need to rely on the car for everyday journeys, including getting to workplaces, shops, schools and other facilities, open spaces or the natural environment. Higher densities are dependent upon accessibility to public transport and essential facilities. To optimise density, it may be necessary to provide public transport infrastructure or to improve existing local transport services. A transport hub may represent an opportunity for a local increase in density, where appropriate to local context and character."

2.2.12. With regard to parking the National Design Guide states that car and cycle parking should be safe and should meet the needs of different users including occupants, visitors and people with disabilities (Paragraph 85). With regards to electric vehicle parking, Paragraph 87 states;

- "Electric vehicle spaces and charging points need to be considered, so they are suitably located, sited and designed to avoid street clutter."

2.2.13. Access for servicing including refuse collection, deliveries and removals should be considered in the design of the development. Paragraph 134 states that bin stores should be;

- "Accessible and well-integrated into the design of streets, spaces and buildings, to minimise visual impact, unsightliness and avoid clutter. Where refuse bins are required to be on a street frontage or in a location that is visible from a street, they are sited within well-designed refuse stores that are easy for occupants to use."

2.3. Regional Policy

The London Plan (March 2021)

2.3.1. The London Plan is the statutory Spatial Development Strategy for Greater London and it sets out a framework for how London will develop over the next 20-25 years in a sustainable way.

2.3.2. In terms of planning for London's future, the Plan intents to guide 'Good Growth' through the following policies:

- Building strong and inclusive communities;
- Making the best use of land;
- Creating a healthy city;
- Delivering the homes Londoners need;
- Growing a good economy; and
- Increasing efficiency and resilience.

2.3.3. Policy T1 Strategic Approach to Transport states that development proposals should support 'the delivery of the Mayor's strategic target of 80 per cent of all trips in London to be made by foot, cycle or public transport by 2041' and that 'all development should make the most effective use of land,

reflecting its connectivity and accessibility by existing and future public transport, walking and cycling routes, and ensure that ay impacts on London's transport networks and supporting infrastructure are mitigated.'

2.3.4. Policy T2 Healthy Streets notes that 'development proposals and Development Plans should deliver patterns of land use that facilitate residents making shorter, regular trips by walking or cycling.' Additionally, development proposals should:

- *'promote and demonstrate the application of the Mayor's Healthy Streets Approach to: improve health and reduce health inequalities; reduce car dominance, ownership and use, road danger, severance, vehicle emissions and noise; increase walking, cycling and public transport use; improve street safety, comfort, convenience and amenity; and support these outcomes through sensitively designed freight facilities.*
- *identify opportunities to improve the balance of space given to people to dwell, walk, cycle, and travel on public transport and in essential vehicles, so space is used more efficiently and streets are greener and more pleasant'*
- *'demonstrate how they will deliver improvements that support the ten Healthy Streets Indicators in line with Transport for London guidance*
- *Reduce the dominance of vehicle on London's streets whether stationary or moving*
- *be permeable by foot and cycle and connect to local walking and cycling networks and public transport.'*

2.3.5. Policy T4 Assessing and mitigating transport impacts states that proposals should *'reflect and be integrated with current and planned transport access, capacity and connectivity*'. It also noted that Transport Assessments should be submitted with development proposals to ensure that the impacts of the development on capacity of the transport network, including pedestrian and cycle network, are fully assessed at the local, network wide and strategic levels.

2.3.6. Policy T4 also states that *'transport assessments should focus on embedding the Healthy Streets approach within, and in the vicinity of, new development. Travel Plans, Parking Design and Management Plans, Construction Logistics Plans and Delivery and Servicing Plans will be required having regard to Transport for London guidance'*.

2.3.7. Additionally, Policy T4 notes that:

- '*The cumulative impacts of development on public transport and the road network capacity including walking and cycling, as well as associated effects on public health, should be taken into account and mitigated.*
- *Development proposals should not increase road danger'.*

2.3.8. Policy T5 relates to cycling and removing barriers to cycling to help create a healthy environment where people choose to cycle. Cycle parking should be fit for purpose, secure, well-located and the minimum standards outlined within the Plan are as follows:

Table 1 – London Plan Cycle Parking Standards

Use Class		Long-stay	Short-stay
A2-A5	Financial / professional services; cafes & restaurants; drinking establishments; take-aways above 100 sqm	1 space per 175 sqm (GEA)	• 1 space per 20 sqm (GEA) rest of London: • 1 space per 40 sqm (GEA)
B1	Business offices	• Areas with higher cycle parking standards (see Figure 10.3): 1 space per 75 sqm • Rest of London: 1 space per 150 sqm (GEA)	• First 5,000 sqm: 1 space per 500 sqm • thereafter: 1 space per 5,000 sqm (GEA)
C3-C4	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 dwellings

2.3.9. Cycle parking should be designed in accordance with the London Cycling Design Guidance and parking provision for adapted cycles for disabled people should be included within development proposals.

2.3.10. Policy T6 Car Parking states that '*car parking should be restricted in line with levels of existing and future public transport accessibility and connectivity*' and that '*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'). Car-free development has no general parking but should still provide disabled persons parking*'

2.3.11. Policy T7 notes that development plans should facilitate sustainable freight movement by rail, waterways and road and should seek to:

- '*reduce freight trips to, from and within these areas*
- *coordinate the provision of infrastructure and facilities to manage freight at an area-wide level*
- *reduce road danger, noise and emissions from freight, such as through the use of safer vehicles, sustainable last-mile schemes and the provision of rapid electric vehicle charging points for freight vehicles'.*

2.3.12. Additionally, during the construction phase of development, '*inclusive and safe access for people walking or cycling should be prioritised and maintained at all times*'.

Mayor of London's Transport Strategy (MTS, 2018)

2.3.13. The Mayor's Transport Strategy sets out the Mayor's policies and proposals to 'reshape transport in London over the next two decades.

2.3.14. By using the Healthy Streets Approach, the Strategy aims to prioritise human health and experience in planning the city and change London's transport mix to ensure the city works better for everyone.

2.3.15. The three key themes at the heart of the strategy are:

- Healthy street and healthy people;

- A good public transport experience; and
- New homes and jobs.

2.3.16. The Strategy seeks to deliver the Mayor's vision of creating 'a future London that is not only home to mire people but is a better place for all those people to live in' by reducing Londoners' dependency on cars by favouring walking, cycling and public transport use.

2.3.17. This vision will be delivered by:

- 'Ensuring changing technology contributed positively to the aims of the strategy.
- Working in collaboration with TfL, boroughs, Government, rail and others, and funding transport improvements through more efficient and fairer means.
- Monitoring and reporting to ensure delivery is on track.'

2.3.18. Proposal 80 states that the Mayor, TfL and Boroughs will:

- 'Impose high expectations on developers to deliver transport solutions that will promote a shift to active, efficient and sustainable modes, reduce road congestion, improve air quality and assist in the development of attractive, healthy and active places.
- Restrict car parking provision within new development, with those locations more accessible to public transport expected to be car-free. New developments should contain high levels of cycle parking and storage and contribute to the provision of on-street cycle parking in town centres and other places of high demand.'

2.3.19. The guiding principles for car and cycle parking suggest:

- 'An expectation for car-free development in London's more accessible areas, car-lite development elsewhere
- Any residential parking spaces permitted should make provision for ultra-low emission vehicles to enable carbon-free travel
- Appropriate provision of dedicated spaces for disabled drivers
- Outside the Central Activities Zone (CAZ), car clubs could be provided in lieu of private car parking
- Well-located accessible cycle parking provision'.

2.3.20. Proposal 19 of the strategy states;

- 'The Mayor, through TfL and the boroughs, will support the provision of car clubs for residents when paired with a reduction in the availability of private parking, to enable more Londoners to give up their cars while allowing for infrequent car travel in inner and outer London.'

TfL's Healthy Streets for London

2.3.21. TfL's Healthy Streets Approach was adopted in an attempt to improve air quality, reduce congestion and help make London's diverse communities greener, healthier and more attractive places to live, work, play and do business.

2.3.22. The Healthy Streets Approach is the framework used to create the Mayor's Transport Strategy and is a long-term plan for improving Londoners' and visitors' experiences of London's streets by encouraging activity and the enjoyment of the health benefits of being on London's streets.

2.3.23. The document sets out how people and their health will be put at the centre of decision making by 'prioritising walking, cycling and public transport to create a healthy city'. The document sets out 10 Healthy Streets Indicators, which are as follows:

- ‘Pedestrians from all walks of life’ – London’s streets should be welcoming places for everyone to walk, spend time in and engage in community life’;
- ‘People choose to walk, cycle and use public transport – a successful transport system enables more people to walk and cycle more often’;
- ‘Clean air – improving air quality delivers benefits for everyone and reduces unfair health inequalities’;
- ‘People feel safe – the whole community should feel comfortable and safe on our streets at all times. People should not feel worries about road danger’;
- ‘Not too noisy – reducing the noise impacts of traffic will directly benefit health and improve the ambience of our streets’;
- ‘Easy to cross – making streets easier to cross is important to encourage more walking and to connect communities’;
- ‘Places to stop and rest – a lack of resting places can limit mobility for certain groups of people’;
- ‘Shade and shelter – providing shade and shelter enables everybody to use or streets, whatever the weather’;
- ‘People feel relaxed – more people will walk or cycle if our streets are not dominated by motor traffic, and if pavements and cycle paths are not overcrowded, dirty or in disrepair’; and
- ‘Things to see and do – people are more likely to use out streets when their journey is interesting and stimulating, with attractive views’.

2.3.24. The 10 healthy streets indicators outlined above have been considered in respect of the design of the scheme and through the production of this Transport Assessment.

2.4. Local Policy

LBB Local Plan (January 2019)

2.4.1. Bromley’s Local Plan was adopted in January 2019 and is used to determine planning applications in conjunction with the Landon Plan. The Plan sets out the planning policies, site allocations and land designations across the Borough and is the central document of the Borough’s Development Plan.

2.4.2. The overarching vision for Bromley in the 2030’s is:

- “Bromley is known for the high quality of its living, working and historic and natural environments. The Council, local people, organisations and businesses work together to ensure that we all enjoy a good quality of life, living healthy, full, independent and rewarding lives.
- Bromley values its distinctive neighbourhoods, ranging from the rural to suburban and urban. Neighbourhoods provide a choice of good quality homes, jobs and a range of shops and services appropriate to the different town, district and local centres. Bromley Town Centre is recognised for its cultural and leisure facilities and vibrant high quality shopping experience.
- The protection and enhancement of conservation areas and heritage assets such as Downe, Crystal Palace and Biggin Hill, along with high quality new development have contributed to civic pride and wellbeing.
- The Green Belt fulfils its purpose, and, together with other open spaces, contributes to protecting Bromley’s special character and the health and wellbeing of local residents and visitors alike.
- Bromley has high levels of educational attainment, whilst strong and diverse businesses are able to invest to support a thriving economy.”

2.4.3. This vision is split into nine thematic more detailed visions for the plan period and each contain a series of objectives. The Transport vision of the Plan is that over the plan period:

- ‘Moving around the Borough is easier due to reduced road congestion and improved public transport networks. Commuting traffic has reduced as more people share car journeys and choose alternative ways of working and travelling. Reduced road traffic results in less pollution and greenhouse gases from transportation. Any new development should where appropriately include electric vehicle charging points and more car clubs, increasing travel choices for local people. Walking and cycling to work, school and for leisure, has increased and the road environment is safer for vulnerable users. Public transport is more accessible to those with mobility problems and is safer and more reliable.’

2.4.4. The specific objectives that support the transport vision are to:

- Reduce road congestion at peak times through better management of the network and encouraging patterns of development that reduce the need to travel and by improving road junctions and layouts whenever and wherever possible;
- Support improvements to public transport links, including associated parking, and facilitate environments that encourage walking and cycling;
- Locate major developments where they can maximise the use of public transport;
- Ensure new developments include electric charging points, cycling facilities such as dedicated cycle routes, and car clubs where appropriate, increasing choice for local people;
- Ensure streets are safe, accessible and uncluttered, improve road safety and reduce air and noise pollution from traffic;
- Ensure the efficient movement of freight, whilst minimising its impacts on the transport network; and
- Secure investment in critical public transport infrastructure to improve transport connectivity and orbital movements to East London.

2.4.5. The main transport pressures within Bromley are identified within the plan as:

- Peak time traffic congestion associated with journeys to work and education;
- Unacceptable overcrowding on rail links into Central London during peak periods;
- High car dependency;
- Good public transport accessibility in the denser urban areas contrasting with poorer provision elsewhere, consistent with the rural nature of a large part of the Borough; including identified need to strengthen transport links with employment opportunities at Canary Wharf and in the City generally;
- The lack of an Underground and an extensive Overground network;
- Social exclusion amongst those without car access or unable to use public transport;
- Reasonable levels of walking and cycling which compare well with other Boroughs but with scope for significant increases; and
- External impacts on the local economy including the trends for centralisation of employment, shopping and services.

2.4.6. The following car parking standards are outlined within Policy 30 – Parking within the plan:

Table 2 – LBB Parking Standards

PTAL	1-2 bed	3 bed	4 bed
0-2	Minimum of 1	Minimum of 1.5	Minimum of2
2-6a	0.7 (min) – 1 (max)	1 (min) – 1.5 (max)	1.5 (min) – 2 (max)

2.4.7. As well as adhering to the parking standards outlined in Table 2, developments must also:

- Provide disabled parking as per London Plan Table 6.2;
- Meet minimum cycle parking standards as laid out within London Plan Table 6.3;

- Ensure 1 in 5 spaces have provision (both active and passive) for electric vehicle charge points; and
- Make provision for a car club, if above the minimum TfL threshold.

2.4.8. Policy 31 – Relieving Congestion states that new developments that are likely to generate significant travel movements should be located in accessible locations with good public transport, walking and cycling links and will require the submission of a Transport Assessment that sets out the impacts of the development on the local transport network and strategic toas network (where applicable) and the proposed mitigation measures to deal with the impacts.

2.4.9. Policy 31 also states that developments generating significant levels of traffic will also require the submission pf Travel Plans, Construction Logistics Plans and Delivery and Servicing Plans. They will also need to 'incorporate or contribute to improvements to the highway network including traffic management measures that limit the significant impacts of the development and are designed to be sensitive to the surroundings' and encourage walking and cycling through the provision of suitable facilities.

2.4.10. Policy 33 – Access for All states that the Council will:

- 'Require that proposals are designed to ensure ease of access and movement for people with disabilities, both physical and sensory;
- Consider the potential impacts on people with disabilities, and pedestrians and will seek provision of crossing facilities, designated routes and other improvements to the pedestrian environment as appropriate;
- Consider the potential impact on public transport services and their users, and will seek provision of and contributions to, suitable infrastructure improvements and other facilities, including highway works and bus shelters, services and railway station improvements where such works are necessary and related in scale and kind to the proposed development; and
- Where appropriate, developments may be expected to contribute towards the cost of implementation of the strategic transport schemes either through the Community Infrastructure Levy (CIL) or S106 Agreements.'

2.4.11. The site lies within Site 10 'West of Bromley High Street and land at Bromley South' in the housing site allocations within the Local Plan. Site 10 is 4.54 hectares and is allocated for redevelopment for mixed us including 1230 residential units, offices, retail and transport interchange.

2.4.12. Proposals for development within Site 10 are expected to:

- 'Incorporate a sensitive design which respects the adjoining low rise residential development whilst optimising its key town centre location;
- Improve Bromley South Station;
- Provide a high quality public realm and accessibility to and through the site;
- Provide an attractive and active frontage to the High Street; and
- Be accompanied by a Masterplan to show how the proposed development is consistent with a comprehensive development of the site.

LBB Third Local Implementation Plan (LIP3) 2019

2.4.13. Bromley's Third Local Implementation Plan 'Bromley's transport for the future' was published in 2019 and sets out the Borough's transport strategy for the next three years and is the Local Implementation Plan for the wider transport objectives as set out within the Mayor's Transport Strategy.

2.4.14. Bromley's mode share targets are for 60% of trips to be made by public transport, walking and cycling by 2041, with a shorter-term target of 47% by sustainable modes by 2021.

2.4.15. The LIP sets out objectives to work towards reaching each of the Mayor's Transport Strategy Outcomes. These outcomes are as follows:

- Outcome 1: London's streets will be healthy and more Londoners will travel actively;
- Outcome 2: London's streets will be safe and secure;
- Outcome 3: London's streets will be used more efficiently and have less traffic on them;
- Outcome 4: London's Streets will be clean and green;
- Outcome 5: The public transport network will meet the needs of a growing London;
- Outcome 6: Public transport will be safe, affordable and accessible to all;
- Outcome 7: Journeys by public transport will be pleasant, fast and reliable;
- Outcome 8: Active, efficient and sustainable travel will be the best option in new developments; and
- Outcome 9: Transport investment will unlock the delivery of new homes and jobs.

2.4.16. The Borough Objectives for Outcome 1 include the following proposals:

- Complete the cycle Quietway's proposed for the Borough, lobby for extensions of these and deliver a network of strategic and local cycle routes by 2041;
- Launch an electric cycle hire scheme;
- Delivery cycle parking at key destinations and residential areas;
- Deliver new pedestrian crossings;
- Work with STARS gold accredited schools to deliver infrastructure identified in their School travel plan to deliver healthy routes to school
- Maintain and enhance the Walk London network
- Deliver local neighbourhood schemes that respond to local concerns and unlock potential for walking and cycling.

2.4.17. In order to satisfy Outcome 2, LBB aim to:

- Improve the road infrastructure at collision sites by taking action through and evidence led approach;
- Deliver targeted 20mph limits;
- Review road markings within the Borough with a view to reducing vehicle speeds;
- Deliver local neighbourhood schemes to address local concerns about road danger; and
- Deliver streets that residents feel confident and comfortable using throughout the day.

2.4.18. In relation to car clubs and reducing the number of vehicles on the roads within the Borough, the Plan aims to:

- Deliver car clubs in locations where they support a reduction in car ownership and use (e.g. in CPZs);
- Work with BIDS to promote more efficient freight and servicing;
- Give consideration to micro-consolidation in town centres using cargo bikes;
- Work with TfL, Five AI and the London Borough of Croydon to develop an autonomous vehicle service trial; and
- Deliver a behaviour change package to launch new active travel infrastructure.

2.4.19. Additionally, by 2021/22, LBB aim to have increased the coverage of the car club network to offer more residents the choice to not own a car. This will be particularly focussed in areas with a PTAL rating of 2 or higher with an aim to reduce second car ownership. Furthermore, by 2022, the Council aims for no car clubs operating from on-street bays to be fuelled by diesel and for half of these car club vehicles to be either plug-in hybrid or fully electric.

2.4.20. The Borough also aims to support the adoption of fully electric and plug-in hybrid taxis by delivering fast or rapid charge points for taxis in or near major town centres and stations by 2022.

2.4.21. LIP3 suggests using car clubs to mitigate the impact of new development and states that all residents at a site should be offered two years free membership to the car club operator as well as 20 hours free drive time together with information about the car club upon first occupation and thereafter each year of the free membership offer.

Bromley Town Centre Area Action Plan

2.4.22. The Bromley Town Centre Area Action Plan (AAP) was adopted in October 2010 and sets out the Council's vision for the town centre together with objectives, policies and proposals to guide future development and change.

2.4.23. Within the AAP, a number of Opportunity Sites are highlighted and the proposed development site lies within Opportunity Site G 'West of the High Street'.

2.4.24. Policy OSG: West of the High Street reads:

- 'Detailed development will be on the basis of a Master Plan to be prepared and adopted by the Council. The Master Plan will determine the location, mix and amount of development. The targets for development are:
  - Approximately 20,000 sqm (gross) additional retail floorspace including a new department store
  - Approximately 5,000 sqm (gross) additional food and beverage floorspace
  - Around 1180 residential units, including provision of family housing
  - Up to 2,000 sqm additional community and health facilities and reprovision of facilities for faith uses
  - Around 600 residential car parking spaces
  - 600 public car parking spaces.

2.4.25. The site also lies within the 'Bromley Central' Character Area that is described as:

- 'The main retail and commercial core focussed around the continuous retail frontage of High Street and the covered Glades Shopping Centre. Queens Garden is an important open space but is poorly integrated with the surrounding town centre. There is a strong concentration of activity and retail uses within Bromley Central but limited activity outside standard retail hours'.

2.4.26. Additionally, the spatial strategy for Bromley Central includes:

- 'An extended primary retail area and redevelopment of the western side of the High Street to create an enhanced retail offer/ extended retail core to accommodate future requirements for growth in retail capacity;
- Extension to The Glades to accommodate future requirement for growth in retail capacity;
- An enhanced cultural quarter around the Churchill Theatre/ library to create a stronger arts/ community focus;
- Creation of new active frontages onto the parks and gardens to integrate the open spaces with the rest of the town centre and to provide an attractive setting for new development;
- Accommodation of residential units as part of mixed use schemes'.

2.4.27. Objective 4 of the AAP is to provide residential capacity within the town centre, through mixed use developments that ensure housing meets local needs including the supply of affordable housing.

2.4.28. Objective 8 seeks to improve 'accessibility and travel choice, encouraging greater use of public transport and other sustainable forms of transport and making effective use of existing transport assets'.

2.4.29. Policy BTC2- Residential Development requires development proposals to accord with the Density Matrix within the London Plan while taking into account the site characteristics and surrounding character of the town centre and adjoining residential areas. Additionally, the policy states that 'it will be necessary to demonstrate that associated requirements for education, health, open space and play and other community facilities can be met'.

2.4.30. Policy BTC22 Public Transport states that 'The Council will promote the use of public transport that serves the town centre. The Council will expect:

- Step-change improvements at both Bromley South and Bromley North stations to reflect their increasingly important roles as public transport gateways, including better interchange and disabled access;
- The continued development of the London Bus Network;
- Improvements to bus waiting areas and bus service information (including real time displays);
- Retention of the bus stands at Bromley North (Site A) and at Westmoreland Road (Site K);
- Improvements to pedestrian access to and cycle parking near the stations and bus stops;
- Improvements to interchange between bus services'.

2.4.31. For more active modes of transport, Policy BTC24 Walking and Cycling outlines that the council will promote walking and cycling through the improvement of facilities for both pedestrians and cyclists, including safe and attractive crossings. Furthermore, the Council will seek to ensure the pedestrian network is accessible to people with disabilities, with particular attention paid to routes to schools.

2.4.32. Policy BTC26 Phasing of Transport Improvements states that planning permission will only be granted for schemes where transport measures required be the proposed development are already in place or their provision is 'assured prior to occupation'. Additionally, planning permission will not be granted where a development 'will cause significant adverse physical impacts on transport infrastructure or services that cannot reasonably be mitigated or that would prejudice the implementation of improvements'.

2.4.33. Appropriate provision of car clubs is required for all developments within the AAP area according to Policy BTC28 Car Clubs.

LBB Residential Design Guide (2004)

2.4.34. LBB's Residential Design Guidance is a supplementary planning guidance (SPG) document outlines design guidelines that explain the Council's commitment to maintaining Bromley as a place that is attractive, spacious, safe and green but also economically vibrant and sustainable.

2.4.35. The guidance states that:

- 'The Council is committed to reducing the dominance of cars and car parking on the public realm. Where opportunities present themselves, new parking should be provided at the side or rear of properties and separated by sufficient screening or distance from habitable rooms to protect residential amenity, orientation, and aspect.'

2.4.36. In terms of new developments in established areas, the guidance outlines that:

- 'Where development fronts a busy road or other noisy environment such as a railway, the internal layout of the accommodation can be manipulated to ensure that the principal rooms are protected from the noise source by halls, kitchens and bathrooms.'

2.4.37. Additionally, the creation of parking on hardstanding's on front gardens should be avoided as parked cars in such locations can create a cluttered and unattractive street scene. Where this cannot be avoided, consideration should be given to reducing the impact through the use of screen planting and soft landscaping.

LBB The Storage and Collection of Refuse from Residential and Commercial Buildings (October 2011).

2.4.38. LBB published a Note for Developers and Architects in October 2011 that sets out the storage and collection requirements of refuse from residential and commercial buildings.

2.4.39. The Note states that for developments of six or more dwellings in one block, bulk storage containers should be provided at a rate of one container per six units for the Chamberlain type and one per six units for the Continental 1100L type. These containers should be provided in a suitable enclosure with a minimum of 1.2m x 1.2m clear floor area per Chamberlain and 1.2m x 1.4m per Continental bin. The minimum height for the enclosure must be 1.5m and ideally 2.5m to enable the ids of the bins to be fully opened.

2.4.40. An area for the storage of recyclables should also be considered at a rate of one 240L wheeled bin for paper and one 240L wheeled bin for glass/plastics/cans per six units. The space should also accommodate one 240L wheeled bin for food waster per 20 dwellings.

2.4.41. The bin store must be located within 18m of the nearest accessible point for the refuse vehicle and should be provided with a path no less than 1.4m in width that is free of steps, kerbs and ramps and have an appropriate hardwearing surface with a gradient no steeper than 5% (1 in 20).

2.4.42. The location of the bin store should also be visually unobtrusive and any steps provided within the store these should be covered with a non-slip surface.

2.4.43. If the bin store is located more than 18m from the highway or service road, an access road must be provided that is no less than 4m wide with appropriate turning facilities to accommodate a fully laden vehicle weight of 26 tonnes.

2.4.44. The bin store should be located so that containers can be moved directly to the loading point without passing through any part of the building except a purpose-built passageway.

3. Existing Situation

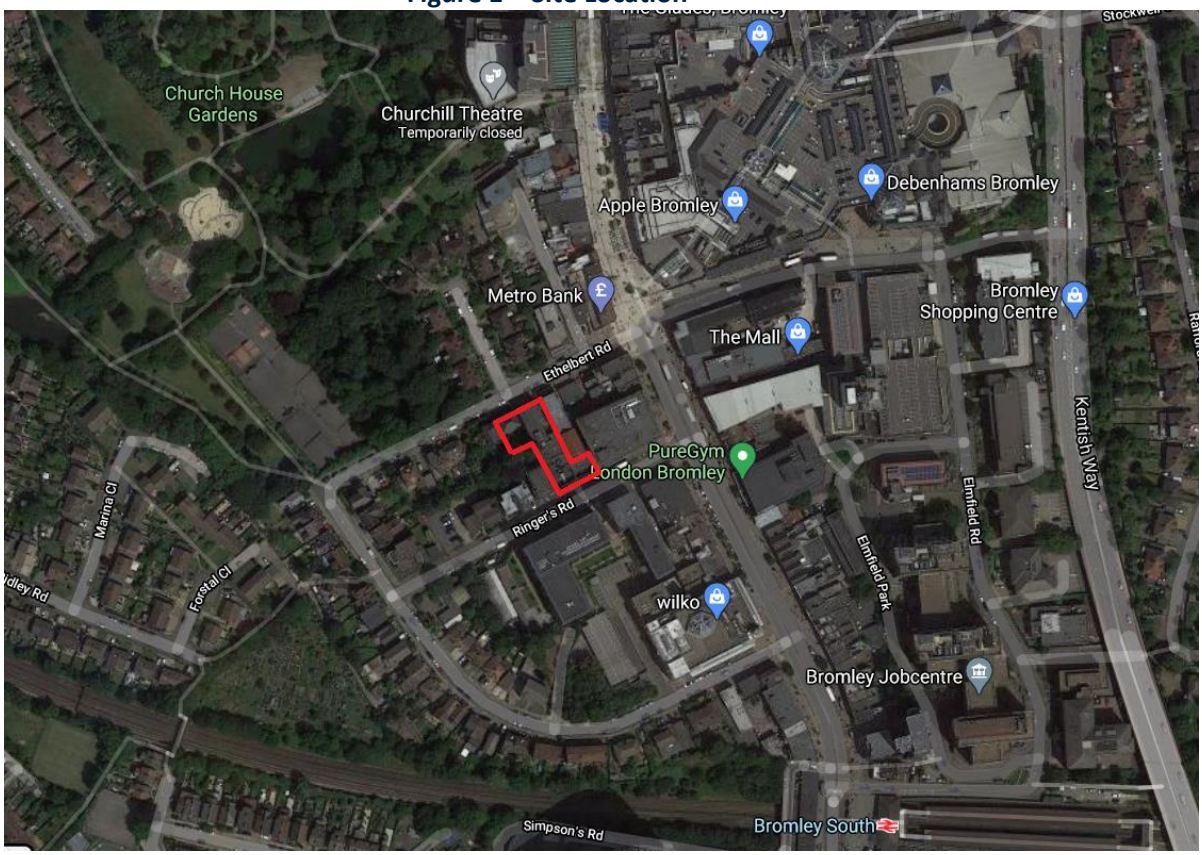
3.1. Introduction

3.1.1. This chapter outlines the baseline transport conditions at the existing site and in the surrounding areas with a focus on local transport infrastructure and services. The baseline conditions need to be established to fully understand the context of the proposed development and the associated traffic and transport impacts. This has been informed by two site audits undertaken by Evoke on 14/10/2020 and 27/10/2020 in addition to desk-based research.

3.2. Site Location and Existing Use

3.2.1. The site is located at 2-4 Ringers Road, Bromley and is bordered to the north by Ethelbert Road, to the east by the Salvation Army Church and 64 The High Street, to the south by Ringers Road and to the west by Simpsons Place and residential properties off Ethelbert Road. Figure 1 shows the site location.

Figure 1 – Site Location



Source: Google Maps

3.2.2. The southern section of the site is currently in use as a restaurant / bar (Smoque) which provides 210 covers, while the northern aspect of the site provides 6 studio apartments together with 185sqm of D2 uses which was previously occupied by Double K boxing gym but has more recently been used as a photography studio.

3.2.3. Access to the site is taken from both the north and the south along Ethelbert Road and Ringers Road, respectively. Along Ethelbert Road, there is a pedestrian access at ground floor level as well as a vehicular access into a servicing yard. Along Ringers Road, there is no vehicular access, but there are

two pedestrian accesses along the site frontage. A coach bay is located outside the site frontage along Ringers Road.

3.2.4. The site forms part of Site 10 within the Bromley Local Plan which is allocated for redevelopment to provide circa 1,230 residential units along with offices, retail uses and a transport interchange at Bromley South Railway Station. The site is classed in the masterplan as Phase 2a and the frontage on Ringers Road is classed as an area to provide a taller building (13-15 storeys) marking the top of the High Street.

3.3. Pedestrian Network

3.3.1. To enable an assessment of the viability of walking between the site and key destinations in the local area, it is appropriate to establish the maximum distance that people are generally prepared to walk and the destinations that exist within these distances. As detailed above, the site is located within Bromley Town Centre, therefore the proximity to a wide range of facilities and the associated routes have been analysed.

3.3.2. The IHT's guidance, Guidelines for Providing for Journeys on Foot (2000) states in paragraph 3.32 and Table 3.2 that the preferred maximum walking distance to facilities and local services is circa 2km. The distances for various land uses, are summarised in Table 3.

Table 3 – IHT's Acceptable Walking Distances

Definition	Town Centres	Commuting / School	Elsewhere
Desirable	200m	500m	400m
Acceptable	400m	1,000m	800m
Preferred Maximum	800m	2,000m	1,200m

3.3.3. Footways measuring approximately 2.0m in width are provided on either side of the carriageway along Ethelbert Road and they are also provided with street lighting. Lit footways measuring 2.0-2.4m in width are also provided along either side of the carriageway on Ringers Road. The footways on Ethelbert Road and Ringers Road are outlined below in Figure 2.

Figure 2 – Ethelbert Road and Ringers Road Footways

3.3.4. A public footpath (Figure 3) is located to the southwest of the site and provides a route from Ravensbourne Road southwest, over the footbridge that crosses the railway line past St Mark's C of E Primary School and down to Winchester Road.

Figure 3 – Footpath Connection

3.3.5. A network of pedestrian footpaths are provided throughout Bromley Park which provide connections north to Glassmill Lane and the High Street.

3.3.6. To the east of the site, wide footways measuring 5.0m in width are provided along either side of the carriageway along the High Street. Formal signalised pedestrian crossings are provided at the junction with Elmfield Road and just north of the junction with Ravensbourne Road in the form of pelican crossings that facilitate the safe movement of pedestrians across the carriageway.

3.3.7. To the north of Ethelbert Road and Elmfield Road, High Street becomes pedestrian-only (Figure 4), routing north until it joins the A222 Market Square. Cyclists must dismount whilst using the pedestrianised area. High Street provides access to a wide range of shops, facilities and services and the car-free nature of this street makes it a safe place for people to walk and shop.

Figure 4 – Bromley High Street

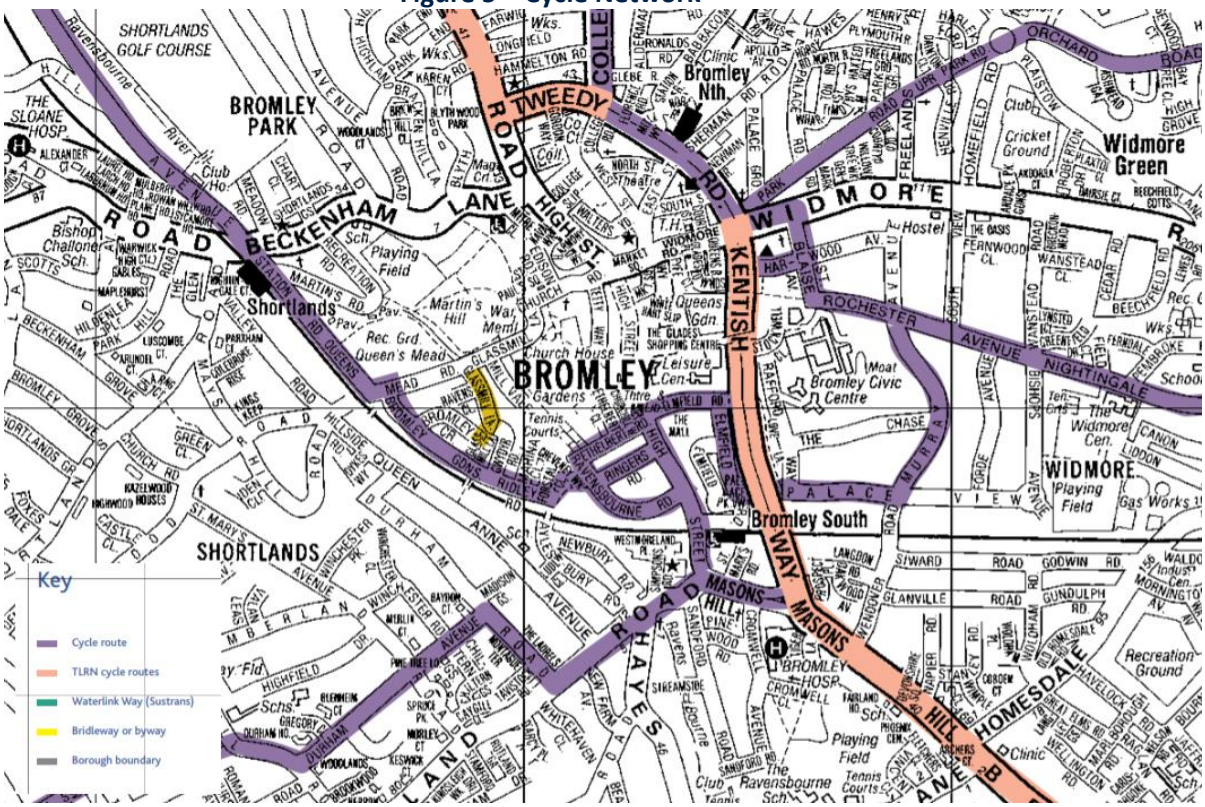
3.3.8. The site is well connected by good pedestrian routes and facilities. Legible London signs are provided throughout Bromley Town Centre which assist pedestrians with getting around and signposting key destinations.

3.3.9. Further to this, the number of retail stores, services and public transport connections that can be reached within a reasonable walking distance ensure that walking is a viable mode to and from the site for potential residents and can readily form part of a multi-modal trip.

3.4. Cycle Network

3.4.1. Cycling is considered an important mode of sustainable travel and is generally considered suitable for distances of up to three miles (4.8km) for regular journeys in urban areas and five miles (8.0km) for commuting journeys (source: LTN2\08, Cycle Infrastructure Design). LBB have produced a map outlining cycle routes within the borough, this has been reproduced in Figure 5 below.

Figure 5 – Cycle Network



Source: London Borough of Bromley

3.4.2. Figure 5 demonstrates that the site is well-connected in terms of cycle routes and cycle infrastructure. On-road cycle routes run along Ethelbert Road, Ringers Road, Ravensbourne Road and High Street to the east and south of the site, providing cycle links to Bromley South Station. Along High Street, the eastern side of the carriageway that routes south provides a bus lane outside its junction with Ringers Road that also permits cyclists to cycle in.

3.4.3. Further east of the site, Kentish Way makes up part of the TLRN Cycle Network and provides shared cycle/footways along wither side of the carriageway that provides a safe off-road route for cyclists. This route provides a connection north to Bromley North Station.

3.4.4. Cycle parking is provided at strategic points throughout Bromley Town Centre, at Bromley South Station and at Bromley North Station. It is considered that the site already benefits from good cycle connections to an array of services and amenities, ensuring that the opportunities for future residents to travel via sustainable modes of transport will be maximised.

3.5. Public Transport

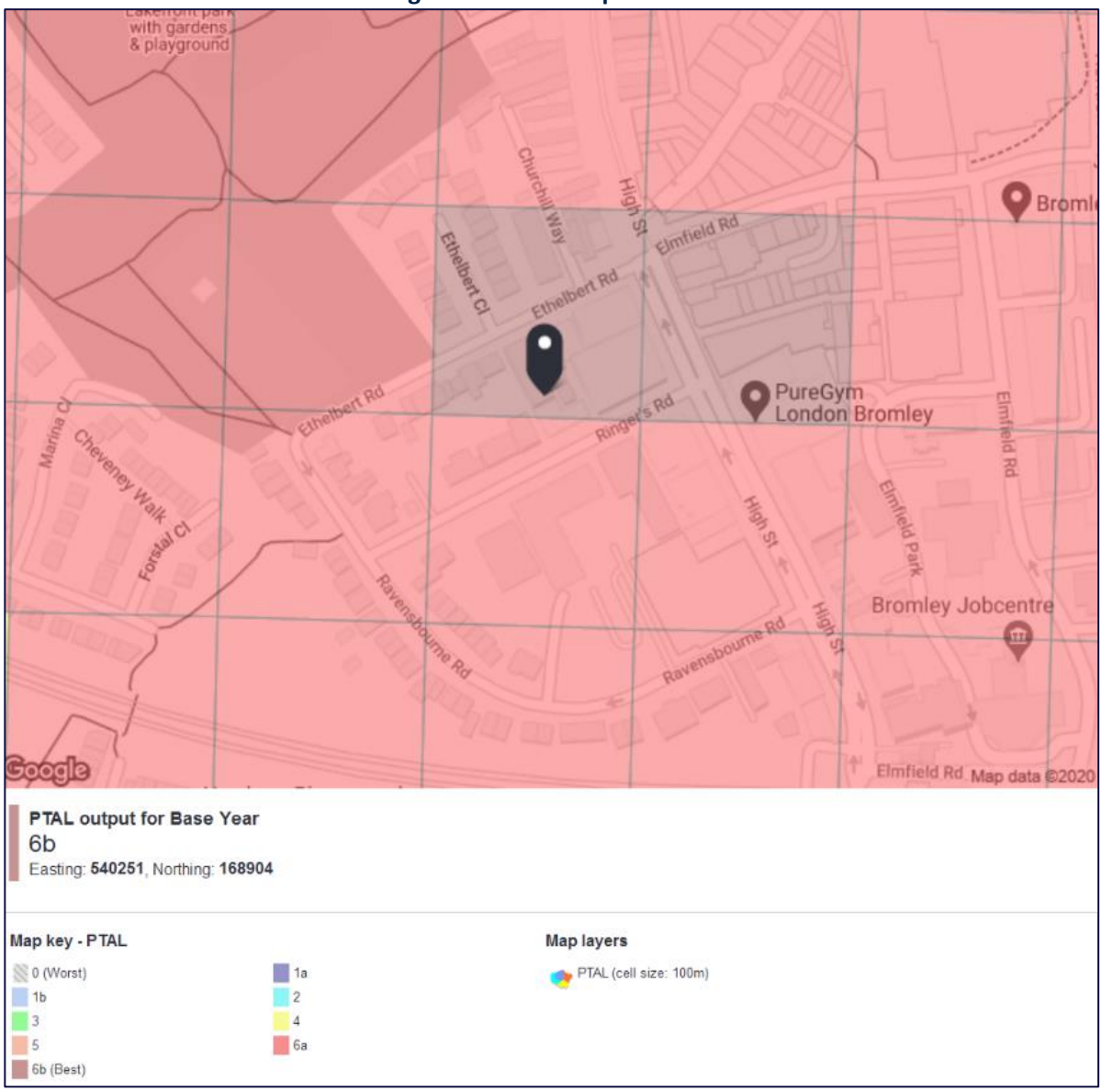
Public Transport Accessibility

3.5.1. Public Transport Accessibility Levels (PTALs) are a measure of accessibility from a point of interest at a side to the local public transport network. The measure considers the walk access time to a station or stop as well as the wait time and reliability of local public transport services.

3.5.2. A PTAL rating is defined by a score of 1a to 6b. A rating of 1a ('Very Poor') is the lowest level obtainable, whilst 6b ('Excellent') is the highest level achievable.

3.5.3. The site's PTAL rating has been calculated using TfL's WebCAT tool, displaying that the site has a PTAL rating of 6b with the southern extent of the site falling within the 6a category, which demonstrates an excellent level of accessibility to public transport services within the vicinity of the site. Figure 6 below shows the PTAL map.

Figure 6 – PTAL Map



Source: TfL WebCAT

3.5.4. The PTAL score does not take into consideration the location of site adjacent to excellent walking and cycling links or its proximity to a number of services and amenities in Bromley Town Centre. A range of key destinations can be accessed by a number of travel modes providing potential site users with a real and genuine choice of travel modes without needing to rely on the private car.

Bus

3.5.5. PTAL guidance considers that people are willing to walk up to eight minutes in order to access bus stop infrastructure. It also assumes that, on average, pedestrians will walk at a speed of 4.8 kilometres per hour (3 miles per hour) whilst travelling to a bus stop. This equates to a walking speed of 80 metres per minute. Thus, TfL consider that bus stops within 640 metres of a development (80 metres x 8 minutes) are considered to be accessible.

3.5.6. The closest bus stop to the site is located along Ringers Road (Stop C) on the northern side of the carriageway and are accessible with a 60m walk northeast of the site. The bus stop is provided with a bus flag and timetable information and is outlined below in Figure 7.

Figure 7 – Ringers Road Bus Stop

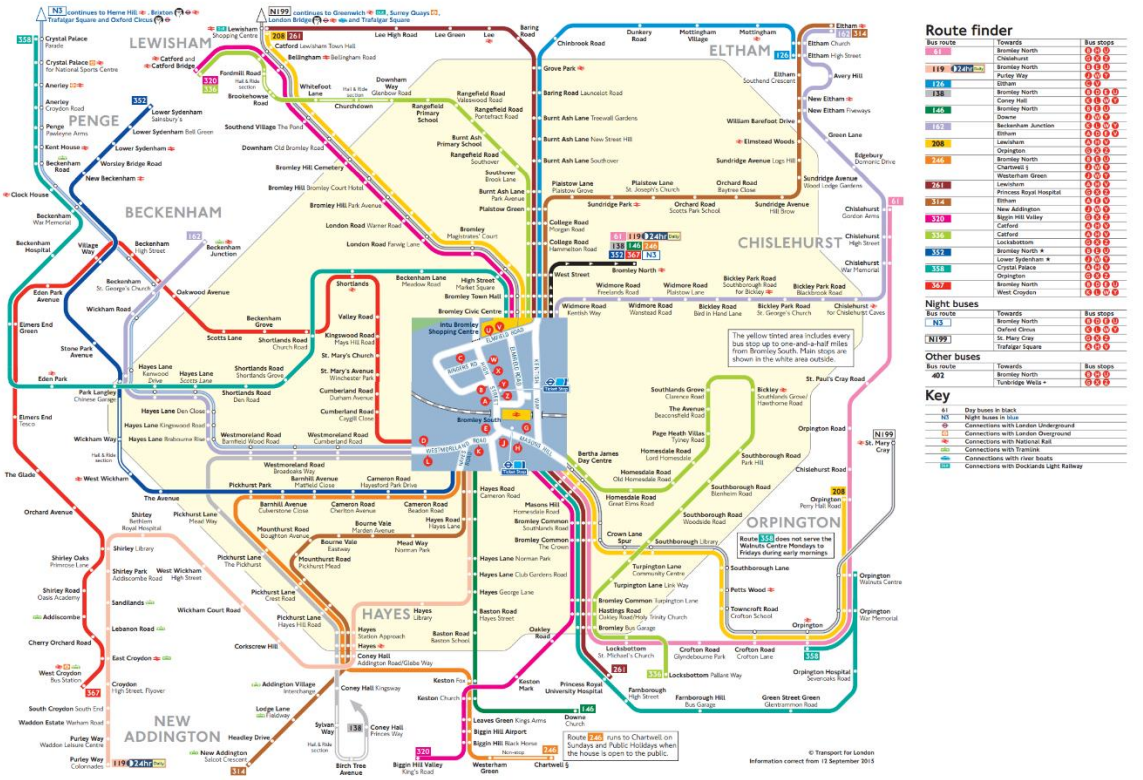
3.5.7. Additional bus stops are located along High Street (Bromley High Street / The Mall W and X) and at Bromley South Station that are provided with seating, shelters and timetable information and are all accessible within a 260m walk from the site. Table 4 outlines the frequency of the services available from the stops along Ringers Road, High Street and by Bromley South Station whilst the TfL bus spider map is shown in Table 4.

Table 4 – Bus Frequencies

No.	Route	Weekday Frequency			Weekend Frequency	
		Frequency	First Bus	Last Bus	Saturday	Sunday
61	Bromley North– Chislehurst / Gordon Arms	16 mins	05:12	00:04	15 mins	20 mins
119	Bromley North– The Colonnades / Croydon Airport	10-14 mins	00:02	23:47	10-12 mins	15 mins
126	Ringers Road – Eltham High Street / Foots Cray Rd	6-11 mins	05:25	23:55	8-11 mins	20 mins
138	Bromley North – Chestnut Avenue	20 mins	05:32	00:22	20 mins	30 mins
146	Bromley North – Downe Church	Hourly	07:30	23:56	Hourly	Hourly
162	Beckenham Jct. / Rectory Road – Eltham Bus Station	15 mins	05:40	00:35	15 mins	20 mins
208	Lewisham Station – Orpington / Perry Hall Road	10-13 mins	05:34	01:11	11-13 mins	15 mins
261	Lewisham Station – Princess Royal Hospital	10-13 mins	05:28	01:31	11-13 mins	15 mins
314	Eltham Bus Station – Salcot Crescent	11-13 mins	05:52	00:49	11-13 mins	30 mins
320	Biggin Hill Valley – Catford Bridge Station	9-12 mins	05:39	23:54	11-14 mins	20 mins
336	Thomas Lane – Locksbottom / Pallant Way	15 mins	06:03	00:37	15 mins	20 mins
352	Bromley North Station – Bell Green / Sainsbury's	20 mins	05:53	00:02	20 mins	30 mins
358	Orpington Bus Station – Crystal Palace Parade	9-13 mins	04:41	01:00	11-14 mins	19-20 mins
367	Bromley North Station – West Croydon Bus Station	20 mins	05:32	00:12	20 mins	30 mins
638	Addington Rd / Glebe Way – Kemnal Tech College	12 services	07:27	16:44	No Service	No Service
N3	Bromley North– Margaret Street / Oxford Circus	30 mins	23:47	05:17	20 mins	30 mins
N199	St Mary Cray Station – Trafalgar Sq. / Charing Cross	30 mins	00:37	04:07	20 mins	30 mins

Source: TfL Accessed July 2021

Figure 8 – Bromley South Bus Routes



Source: National Rail

3.5.8. All these routes are accessible within acceptable walking distance from the site, based on the IHT guidance and provide access to a variety of areas. All TfL bus routes are served by low-floor vehicles with dedicated wheelchair space and access ramps. The buses are accessible with wheelchair spaces and priority seats available on all vehicles. Drivers will also pull in close to the kerb at stops to reduce the gap, lower the bus to reduce the step up and deploy the wheelchair ramps where necessary.

3.5.9. The level and frequency of bus services available within the vicinity of the site to a range of locations allows bus travel to and from the site to be able to readily form part of a multi-modal journey for residents and visitors.

Rail

3.5.10. The PTAL calculation takes account of all railway stations within 960 metres. Bromley South Station is located approximately 270m southeast of the site and is accessible within a four-minute walk or a three-minute cycle. Services from this station run to a number of destinations including London Victoria, London Blackfriars, Sevenoaks, Orpington, Ramsgate, Gillingham (Kent) and Ashford International. Bromley South Station is managed by South Eastern and underwent upgrades in 2011 meaning that the station now provides step free access to all platforms via lifts and ramps are provided for boarding trains. A total of 107 cycle parking spaces are provided outside the station to the right-hand side of the building.

3.5.11. Additionally, Bromley North Station is situated approximately 800m northeast of the site and is accessible within a 10-minute walk or a four-minute cycle. Bromley North Station is also managed by South Eastern and provides step free access to all platforms via lifts and ramps are provided for boarding trains. The station provides a total of 10 cycle parking spaces at the station concourse. Services from this station run to Grove Park.

3.6. Access to Key Services

3.6.1. In transport planning terms, the most sustainable sites are those generating the lowest number of private vehicle trips, which would be achieved by enabling a greater proportion of walking, cycling and public transport journeys.

3.6.2. As aforementioned, the IHT's 'Guidelines for Providing Journeys on Foot' (2000) provides guidance when considering accessibility of specific locations by foot. The IHT suggests an average walking speed of 4.8km/h, or 5 minutes for every 400m. The 'maximum' distances represent a walk of 10 minutes (town centres), 25 minutes (work / education / leisure) and 15 minutes elsewhere.

3.6.3. A range of services, facilities and amenities are located within the 'preferred maximum' walking distance from the site recommended by IHT. Table 5 provides a summary of nearby local amenities, their distance from the site and their associated walking and cycling times. It should be of note that the amenities outlined in Table 5 does not provide an exhaustive list of all facilities available within the vicinity of the site. ATZ Map 1 (Figure 16 in Section 4) also demonstrates the number of facilities, services and amenities that can be reached within a 30-minute walk or 20-minute cycle from the site.

Table 5 – Local Amenities

	Location	Distance (m)	Journey Times (minutes)	
			Walk	Cycle
EDUCATION / EMPLOYMENT				
Primary School:	St Mark's C of E	400	5	2
Secondary School:	Ravensbourne School	1,100	14	4
College:	London South East Colleges	2,400	30	10
Business:	Bromley Town Centre	150	2	1
	Bromley Civic Centre	510	7	2
	Regus, Elmfield Park	300	4	1
HEALTH & COMMUNITY				
Hospital:	The Sloane Hospital	1,700	21	6
	Princess Royal Hospital	5,400	67	20
Doctors:	Dysart Surgery	260	3	1
Dentist:	Bromley Dental Studio	600	8	2
Pharmacy:	Boots, High Street	150	2	1
Library:	Bromley Central Library	270	3	1
SHOPPING/RETAIL				
Post Office:	Bromley Post Office	350	4	1
Convenience Store:	Sainsbury's Local	160	2	1
Shopping Centre:	The Mall	110	1	1
	The Glades	160	2	1
Supermarket:	Waitrose	550	7	2
Town Centre:	High Street	250	3	1
LEISURE				
Cinema:	Vue Cinema	600	8	2
Leisure Centre:	Pavilion	550	7	2
Hotel:	Travelodge London Bromley Town Centre	240	3	1
Gym:	Pure Gym	100	1	1
Public House:	The Richmal Crompton	350	4	1
EXISTING PUBLIC OPEN SPACES				
Recreation Ground:	Queensmead Recreation Ground	700	9	3
	Bromley Park	185	2	1
TRANSPORT				
Bus Stop:	Ringer's Road (Stop C)	42	1	1
Car Club:	Elmfield Park	320	4	1
Season Ticket Car Park:	The Mall	110	1	1
Railway Station:	Bromley South	270	3	1
	Bromley North	800	10	3

3.6.4. It is evident from Table 5 that there are a wide range of facilities such as education, employment, retail, health and leisure uses close to the site, the majority of which are within a reasonable two kilometre walking or five kilometre cycling distance. On that basis, it is clear that the location of the site is exceptionally well placed to maximise the number of shorter distance trips that can be undertaken by alternative methods of travel to the car.

3.6.5. Notably the only two amenities within Table 5that exceed a two kilometres walking distance are London South East Colleges at Rookery Lane and Princess Royal University Hospital at Farnborough

Common. Both are accessible via the 261 and 358 bus services which provide direct bus services to both within 11 minutes.

3.7. Car Clubs

3.7.1. Car clubs provide a cost-effective and flexible alternative to owning a car and can help tackle the challenges of climate change and congestion. Car clubs provide the convenience of owning a car without the hassle or costs of repairs, servicing or parking. Members can book cars locally for just an hour or longer periods. They reduce the need for people to own their own cars by providing access to conveniently located high-quality vehicles on an affordable 'pay-as-you drive' basis.

3.7.2. Car clubs present a cost-efficient way for residents to have the benefits of a car without the need for always travelling by one. Not only does this provide a mode of transport for residents to travel to and from work but car clubs provide a viable option for short trips whereby residents can use a car club for leisure trips or to transport heavy items for example.

3.7.3. The nearest existing car club is Enterprise Car Club (www.enterprisecarclub.co.uk) which has three dedicated car club vehicles within 1.0km of the site:

- 2 Elmfield Park – Hyundai Ioniq – 320m;
- 3 Sherman Road – Toyota Yaris - 840m; and
- 23 Station Road – Vauxhall Corsa - 840m.

3.7.4. An additional two car club bays are planned to be provided along Churchill Way as part of the Churchill Quarter redevelopment and one of these spaces will be provided in the form of an accessible car club bay.

3.8. Local Highway Network

3.8.1. Ethelbert Road lies to the north of the south and connects High Street to Ravensbourne Road. It is a single carriageway road subject to 20mph speed limit restriction and is a one-way street facilitating the movement of traffic southwest from the High Street towards Ravensbourne Road. The carriageway measures approximately 8.5m in width and has parking bays line both sides of the carriageway.

3.8.2. Along the northern border of the site, Ethelbert Road is lined with single yellow lines restricting parking outside the site.

3.8.3. Ringers Road borders the site to the south and provides a one-way route from Ravensbourne Road northeast towards High Street. It is a single carriageway road that is subject to 20mph speed limit restrictions and coach parking bays line the northern side of the carriageway directly to the south of the site. The carriageway measures approximately 7.8m in width. Notably the coach bays were occupied by cars during the site visit as outlined in Figure 9 below.

Figure 9 – Ringers Road Coach Bay

3.8.4. High Street runs north to south and is located to the east of the site. It is a dual carriageway road with a paved central reservation. The western side of the carriageway consists of a single lane routing northbound and measures approximately 3.6m in width. A taxi rank, able to accommodate circa 11 taxis, is located on the western side of the carriageway, north of its junction with Ringers Road and to the south of Ethelbert Road as shown in Figure 10.

Figure 10 – High Street Taxi Rank

3.8.5. The eastern side of the carriageway consists of two lanes routing southbound, one of which is a bus lane that routes approximately 38m south of Ethelbert Road. This lane then becomes open to all traffic and south of its junction with Ravensbourne Road, bus stops line both sides of the carriageway of High Street.

3.8.6. Ravensbourne Road routes southeast from the western extent of Ethelbert Road, past Ringers Road, and routes eastwards to connect to High Street. Between Ethelbert Road and Ringers Road it is a one-way road permitting traffic to travel southbound towards Ringers Road. Between Ringers Road and the High Street the one way flow of traffic also routes towards Ringers Road, westbound from the High Street.

3.8.7. Churchill Way lies to the northeast of the site, branching north from Ethelbert Road, and provides vehicle access to the rear of a number of retail units along High Street. The carriageway measures approximately 5.5m in width and provides a motorcycle bay and four car parking bays along the

western side of the carriageway. When leaving Churchill Way, vehicles must turn left onto Ethelbert Road to adhere with the one-way flow of traffic.

3.9. Taxis

3.9.1. As aforementioned, a taxi rank able to accommodate circa 11 taxis, is located on the western side of the carriageway on the High Street (Figure 10) within 50m of the site boundary. Notably, in London people with mobility difficulties can apply for a Taxicard which gives them subsidised taxi and minicab travel throughout London. The provision of the taxi rank within close vicinity of the site will help to maximise the opportunities for people with mobility difficulties to travel to and from the site by taxi. Seating with back and arm rests is provided at the taxi rank.

3.10. Car Parking

3.10.1. There is currently no formal car parking associated with the site however an informal parking bay is provided to the front of the service yard shutters as shown in Figure 11.

Figure 11 – Site Parking

3.10.2. At present each of the six residential studio units on Ethelbert Road that make up the site are able to apply for on-street parking bays.

3.10.3. There are numerous alternative car parking opportunities located within a 1.0km walk from the site, including on-street parking and public car parks. The site is located within the Bromley Town Centre Controlled Parking Zone (CPZ) Zone A which restricts parking to resident permit holders only Monday to Saturday 08:00-20:00 and on Sundays between 10:00-17:00. There are on-street paid for parking bays available with a maximum stay of two hours during the restricted times. Within 50m of the site, these paid for bays can be found along:

- Ringer's Road (17 bays);
- Ethelbert Road (36 bays); and
- Churchill Way (4 bays).

3.10.4. Figure 12 displays the parking restrictions within 50m of the site.

Figure 12 – Parking Restrictions within 50m of the site

Source: QGIS

3.10.5. Figure 12 also shows that two on-street disabled bays are provided along Ethelbert Road, within close proximity to its junction with High Street and an additional three on-street disabled bays have been proposed to be delivered with the Churchill Quarter Scheme along Churchill Way. All of these disabled bays will be situated within a 50m walk of the site.

3.10.6. To establish the existing parking stress in the area, parking survey data has been analysed from the Churchill Quarter planning application (Ref: 18/02181/FUL). Surveys were undertaken on 18th and 19th July 2017 using the Lambeth Methodology between 12:30-05:30, 08:00-09:00, and 17:00-18:00. Whilst the data is three years old it is still considered reflective of the existing position and is more representative of the area than data at the moment due to COVID-19 restrictions.

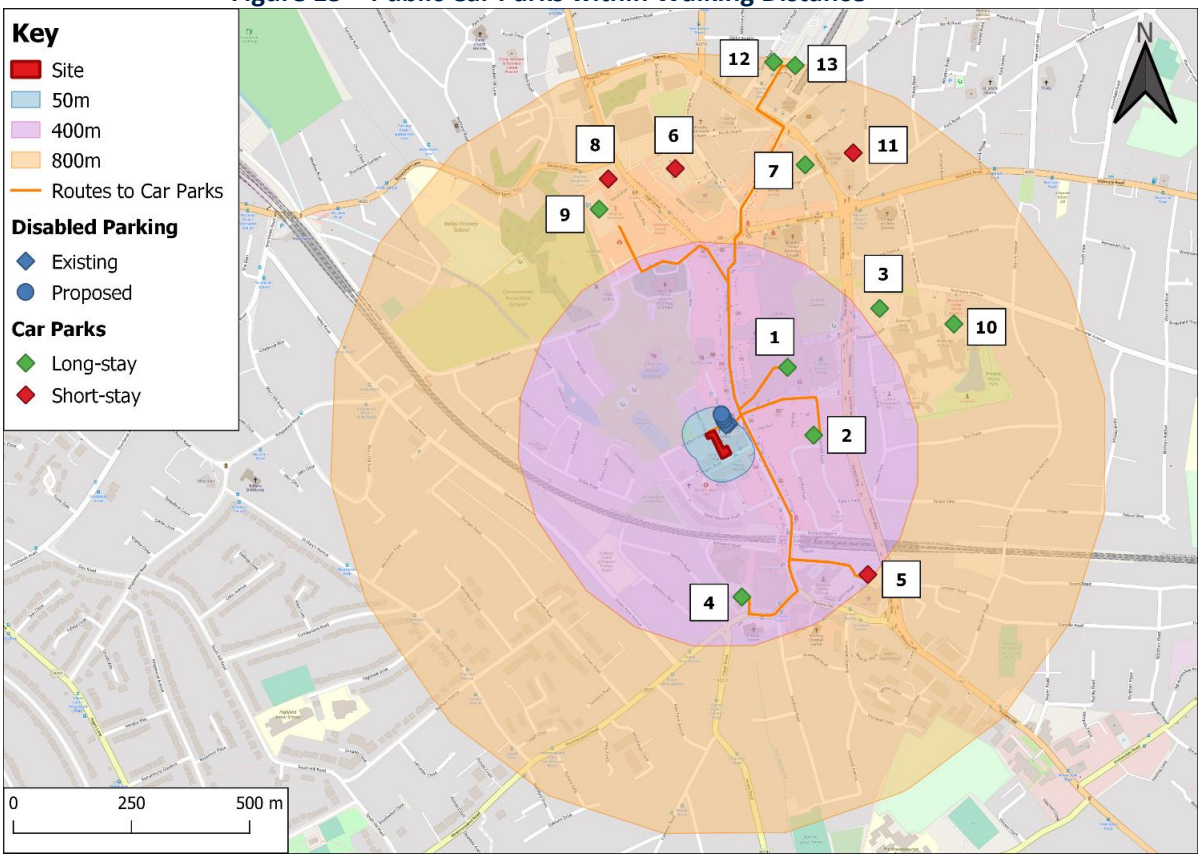
3.10.7. The results of the surveys show that Ethelbert Road, Ringers Road and Ravensbourne Road all have parking capacity as shown in Table 6.

Table 6 – Parking Capacity from 2017 Survey from Churchill Quarter Application

Average	Night	AM	PM
Ethelbert Road	26.4%	29.2%	65.3%
Ravensbourne Road	39.2%	50.0%	52.7%
Ringer's Road	47.6%	59.5%	76.2%

3.10.8. Figure 13 displays the locations of the public car parks within 400m and 800m of the site (as the crow flies) and Table 7 outlines the capacities, maximum stay and walking distance from the site of these car parks.

Figure 13 – Public Car Parks within Walking Distance



Source: QGIS

Table 7 – Public Car Parks Information

No.	Car Park	Capacity	Disabled	Opening Hours	Max. Stay	Walking Distance
1	The Glades	1,500	64	Mon-Sat 07:0-21:00 Sun 09:00-19:00	-	350m
2	The Mall	255	3	24/7	-	350m
3	Civic Centre	691	19	24/7	-	500m
4	St Mark's	300	c.15	24/7	-	600m
5	Waitrose	181	8 (inc. Parent and Child)	Mon-Sat 07:30-21:00 Sun 10:00-16:00	2 hours (free for customers)	600m
6	Sainsbury's	210	23 (inc. Parent and Child)	Mon-Sat 07:00-22:00 Sun 11:00-17:00 24/7 for non-customers	2 hours (free for customers)	650m
7	South Street	50	1	24/7	-	700m
8	Mitre Close	24	0	24/7	4 hours	800m
9	The Hill	752	8	24/7	-	850m
10	St Blaise	120	3	Sat-Sun 08:30-18:30	-	850m
11	Palace Grove	97	2	24/7	4 hours	900m
12	Station Road	88	2	24/7	-	1.0km
13	Bromley North Station	220	4	24/7	-	1.0km
-	**TOTAL**	**4,488**	**152**	-	-	-

3.10.9. The closest long-stay car park to the site is The Glades Shopping Centre car park which is located within a 350m walk of the site (equating to a four-minute walk), providing a total of 1,500 spaces.

Further to this, 255 spaces are provided at The Mall car park which is also situated 350m from the site. The Civic Centre car park and St Mark's underground car park are also located within 600m of the site (equating to an eight-minute walk).

3.10.10. In addition to these long-stay car parking options, a number of short stay car parks are also accessible within a short walking distance of the site, including Waitrose and Sainsbury's car parks that are accessible within a 650m walk of the site (equating to an eight-minute walk) as well as Mitre Close and Palace Grove car parks that are accessible within a 900m walk of the site.

3.10.11. Table 7 demonstrates that a total of 4,488 parking spaces are available within car parks within 1km of the site. Walking routes to the closest car parks are displayed in Figure 13.

3.10.12. Some of the public car park within walking distance of the site offer season tickets for regular users. Table 8 outlines these car parks, their distance from the site and the cost of an annual season ticket.

Table 8 – Public Car Park Season Tickets

Car Park No.	Car Park	Walking Distance	Annual Season Ticket Price	Availability
2	The Mall	350m	£1,511	11+ Available
4	St Mark's	600m	£1,800	Accepting Applications*
9	The Hill	850m	£1,325	Accepting Applications*
12	Station Road	1.0km	£1,325	Accepting Applications*
13	Bromley North Station	1.0km	£1,01.20	Accepting Applications*

**APCOA / Bromley Permit Portal is currently accepting applications for new Season Tickets*

3.10.13. It is evident that there are 1,615 car park spaces for which season tickets can be applied for. Nonetheless, the site is in a highly accessible location with a PTAL rating of 6b/6a (Excellent) and therefore opportunities to travel to the site by sustainable modes of transport can be maximised. Furthermore, the car club bays offer residents the option to use a car for occasional trips where a car may be needed. Residents will be restricted from applying for parking permits to park within the CPZ. All residents will be made aware of the car-free nature of the site and the permit restriction and therefore should they still require a car then they would have to pay for an annual season ticket to park in one of the nearby car parks.

3.11. Transport Classification of Londoners

3.11.1. This section examines the demographics of people within the area, most utilised transport mode and the capacity for behavioural change in terms of transport mode. TfL's Transport Classification of Londoners (TCoL) multi-modal segmentation tool has been utilised to inform this section.

3.11.2. The TCoL Borough Profiles state that the borough of Bromley can be broken down into the following transport classifications:

- 1% City Living;
- 67% Detached Retirement;
- 18% Settled Suburbia;
- 2% Students & Graduates;
- 6% Suburban Moderation; and
- 6% Urban Mobility.

3.11.3. The site is located within the 'Detached Retirement' area; a classification which is predominantly located in Outer London, representative of high car usage and relatively low walking and cycling uptake. Car ownership levels within 'Detached Retirement' areas as outlined within the TCoL are outlined below in Table 9. The has been compared alongside the Census 2011 car ownership levels

for the output areas in which the site lies taking account of the dwelling type which is classed as "Flat, Maisonette, Apartment" within the 2011 Census (LC4415EW).

3.11.4. The site lies within two different output areas (E00003236 and E00003264) as shown in Figure 14, so Census 2011 car ownership data was analysed for both output areas and an average was calculated. This average is shown in Table 9.

Figure 14 – Census Output Areas

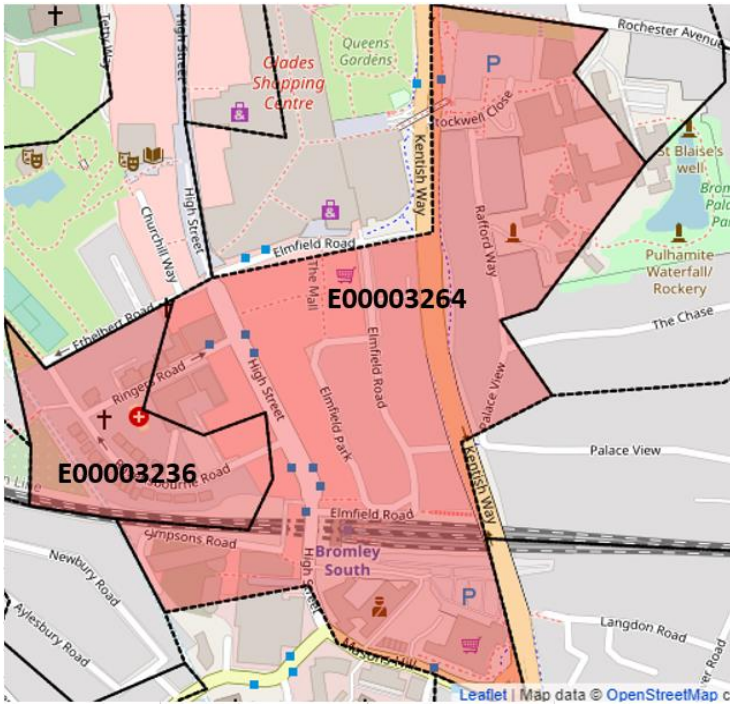


Table 9 – Car Ownership

Car Ownership	TCoL 'Detached Retirement'	E00003236	E00003264	Census 2011
No Cars	19%	49%	52%	50%
1 Car	53%	46%	39%	43%
2+ Cars	29%	5%	9%	7%

3.11.5. The TCoL states that the main motivations for behaviour change within the TCoL area in which the site is located include:

- Changes to roads and driving;
- Health & Fitness;
- Changes to public transport;
- Lifestyle changes; and
- Money.

3.11.6. It is of note that since the 2011 Census data, there have been significant changes to the area including the upgrades to Bromley South Station, the redevelopment of key areas such as Regents Place and St Mark's Square and the provision of car club bays in the area.

3.12. Air Quality Management Areas (AQMA)

3.12.1. The Department for Environment, Food and Rural Affairs website (https://uk-air.defra.gov.uk/aqma) has been accessed to ascertain whether there is an AQMA within the vicinity of the site. The

development site lies within the Bromley AQMA and LBB has produced an Air Quality Action Plan (AQAP) setting out measures to improve the air quality and reduce Nitrogen dioxide NO2 levels.

3.12.2. The site is located within a sustainable location with good accessibility by walking, cycling and public transport. Residents will be encouraged to travel by sustainable modes of transport further supported by the car free nature of the site. As such, it is considered that the scheme would not have a material impact on air quality and would be in accordance with the AQAP.

3.13. Committed Developments

Churchill Quarter

3.13.1. The Churchill Quarter development (Ref: 18/02181/FULL1) lies to the north of the site and includes Ethelbert Close, Churchill Way and 104-108 High Street. The site is pending a decision but seeks to demolish the existing buildings and redevelop the area to provide a mixed use scheme comprising up to 410 residential dwellings with a mix of use classes A1, A2, A3, B1, D1 and D2 at ground floor level.

3.13.2. The development will also include a new vehicular access from Ethelbert Road to a basement-level car and cycle parking. Churchill Way will provide a secondary vehicular access to the development and will provide access for emergency vehicles and servicing for the residential and retail elements of the scheme.

3.13.3. Pedestrian access to the development will be from Ethelbert Road and Bromley High Street and cycle access will be located adjacent to the vehicle access to the basement.

3.13.4. For the residential element of the development 94 car parking spaces, including 12 disabled bays, will be located within the basement-level car park. 20% of these will be provided with active electric vehicle charging points and an additional 20% will have passive provision of EV charging points.

3.13.5. The commercial proposals include five car parking bays, including one disabled bay, for use by Bromley Town Church, two car club spaces (one of which will be disabled), one disabled bay for the commercial units and one short-stay drop-off bay. These will be provided along Churchill Way.

3.13.6. A total of 733 long-stay and 74 short-stay cycle parking spaces will be provided throughout the development. The masterplan is shown below in Figure 15.

Figure 15 – Churchill Quarter

66-70 High Street

3.13.7. An application (Ref: 19/04588/FULL) for the demolition of 66-70 High Street to provide a new 16-storey mixed-use residential building comprising 68 residential dwellings and 581sqm of retail floorspace was submitted in November 2019 and the application was refused by LBB in April 2021 for the following reasons:

- *'The proposal by reason of its scale, bulk, massing, materials and design would appear overly dominant and out of keeping with the immediate surroundings and high street location which would be harmful and detrimental to the significance, character and appearance of the adjacent Bromley Town Centre Conservation Area and the surrounding area'* and
- *'The introduction of an isolated tall building within the allocated site 10 in the Local Plan and Site G in the Bromley Town Centre Area Action Plan and would represent a piecemeal and incongruous development and fail to fully follow the plan-led approach in delivering sustainable development'.*

3.13.8. A revised planning application (Ref: 21/03231/FULL) was submitted for the site in July 2021 for a part 13 and part 16 storey building to provide 559 sqm retail floorspace (Use Class Ea) and 68 residential units with associated disabled car parking spaces, cycle parking and refuse storage area. The revised application is pending consideration.

3.13.9. Pedestrian and cycle access to the residential units is proposed to be taken from Ethelbert Road to the north of the site and pedestrian access to the retail space provided from both Ethelbert Road and High Street. The proposed development is car-free with the exception of three on-site disabled parking spaces. A total of 142 cycle parking spaces for residents are to be provided on the second floor and 8 provided for the retail unit that would be accessed form the back of house area on the southern side of the building.

3.13.10. Both the residential and retail elements of the development were proposed to be serviced from an existing servicing corridor on the southwestern side of the site and refuse collection will take place along Ethelbert Road. Deliveries to both aspects of the scheme will take place within the loading bay provided along High Street.

3.14. Summary

3.14.1. This section has demonstrated that the site is in an extremely accessible location with high quality pedestrian and cycle links into Bromley Town Centre and to a range of public transport services. The closest bus stops provide regular services to a wide range of locations within London, including to local schools and employment. Additionally, Bromley South and Bromley North Stations are both located within walking distance of the site and they provide frequent rail services to a number of destinations both within and outside London.

3.14.2. An array of local amenities and facilities including employment, healthcare and educational facilities are also all located within short walking and cycling distances of the site. The site is therefore considered accessible in highway terms.

4. Active Travel Zone (ATZ)

4.1. Introduction

4.1.1. This chapter of the TA outlines the active travel zone (ATZ) surrounding the site through the provision of a series of maps that identify the key routes and destinations within a 20-minute cycle from the neighbourhood in accordance with TfL's ATZ guidance. This section also provides a review of the neighbourhood safety through an assessment of road traffic collisions within the ATZ which resulted in those involved being Killed or Seriously Injured (KSIs).

4.2. Methodology

4.2.1. In accordance with TfL's ATZ guidance, a series of maps have been produced for the proposed redevelopment that outline the key destinations and routes within the vicinity of the site. Additionally, healthy neighbourhoods and safety of the routes to key destinations have also been mapped and analysed.

4.3. Key Destinations within ATZ

4.3.1. Key destinations within the 30-minute pedestrian isochrone around the site have been mapped and are shown in ATZ Map 1 in Figure 16. These key destinations include public transport stops and stations, education facilities, healthcare services, places of worship, supermarkets, parks and open space, and sports and leisure facilities.

4.3.2. In accordance with TfL's guidance, these key destinations have been prioritised in terms of likelihood of future site users to access these destinations and their importance relating to active travel. Table 10 outlines the priority ranking given to each key destination type and the reasoning behind these assignments.

4.4. ATZ Key Routes

4.4.1. Based upon the data outlined in Table 10, ATZ routes have been calculated from the site to the closest key destinations ranked as high priority. These routes are as follows:

- Route 1 – To bus stops along Ringer's Road;
- Route 2 – To shops and retail facilities along High Street;
- Route 3 – To Bromley South Station;
- Route 4 – To St Mark's C of E Primary School;
- Route 5 – To Ravensbourne Academy;
- Route 6 – To Bromley North Station.

4.4.2. The routes described above are shown on Map 2 in Figure 17.

Table 10 – Prioritisation of Key Destinations

Key Destination	Description	Priority	Justification
Public Transport Stops	Bus	High	The site is located within close proximity to a number of bus stops and routes, meaning that bus travel will likely play an important role in shaping the way residents of the site will travel, especially as the development will be car-free
Public Transport Stations	Rail	High	Bromley South Station is the closest station to the site and is anticipated to be used regularly by future residents of the site to access other areas within and outside of London
	London Underground	Low	London Underground and Overground services are the least likely to be accessed directly from the site as there are no stations within the immediate vicinity of the site. It is anticipated that Rail and bus services will be used to access these stations
Cycle Network		High	London's cycle network runs within close proximity to the site and it is anticipated that residents are likely to make use of this provision, especially given the provision of high quality and adapted cycle paring provided at the site
Town Centres / High Street		High	Bromley High Street is located within short walking distance of the site it is highly likely that future residents of the development will make frequent use of the shops and services available within the town centre
Parks and Sports & Leisure Centres		Low	It is considered that residents of the site may make use of the local parks and leisure centres, but these are not considered as high priority as other key destinations
Education		High	As the site will be residential in nature, schools and other educational facilities will be high priority destinations, especially for families and there are a number of schools within a short walking distance of the site
Healthcare		Low	Whilst there are a number of healthcare facilities and services located within a short walking distance of the site, it is not anticipated that these locations would be accessed as frequently by residents compared to other key destinations
Places of worship		Low	Similarly to healthcare services, it is not anticipated that places of worship will be accessed as frequently as some of the other services and amenities listed above

Figure 16 – ATZ Map 1

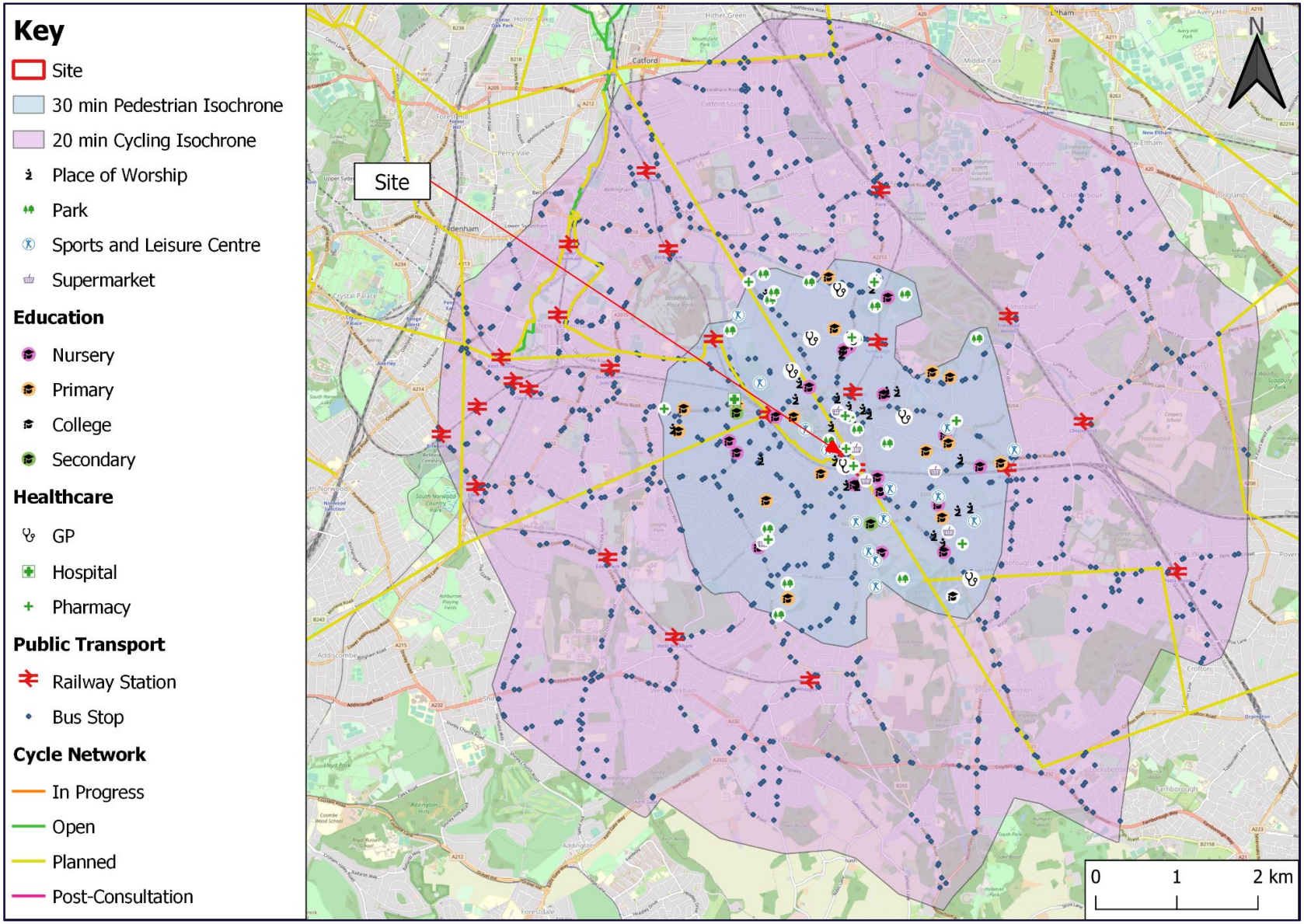
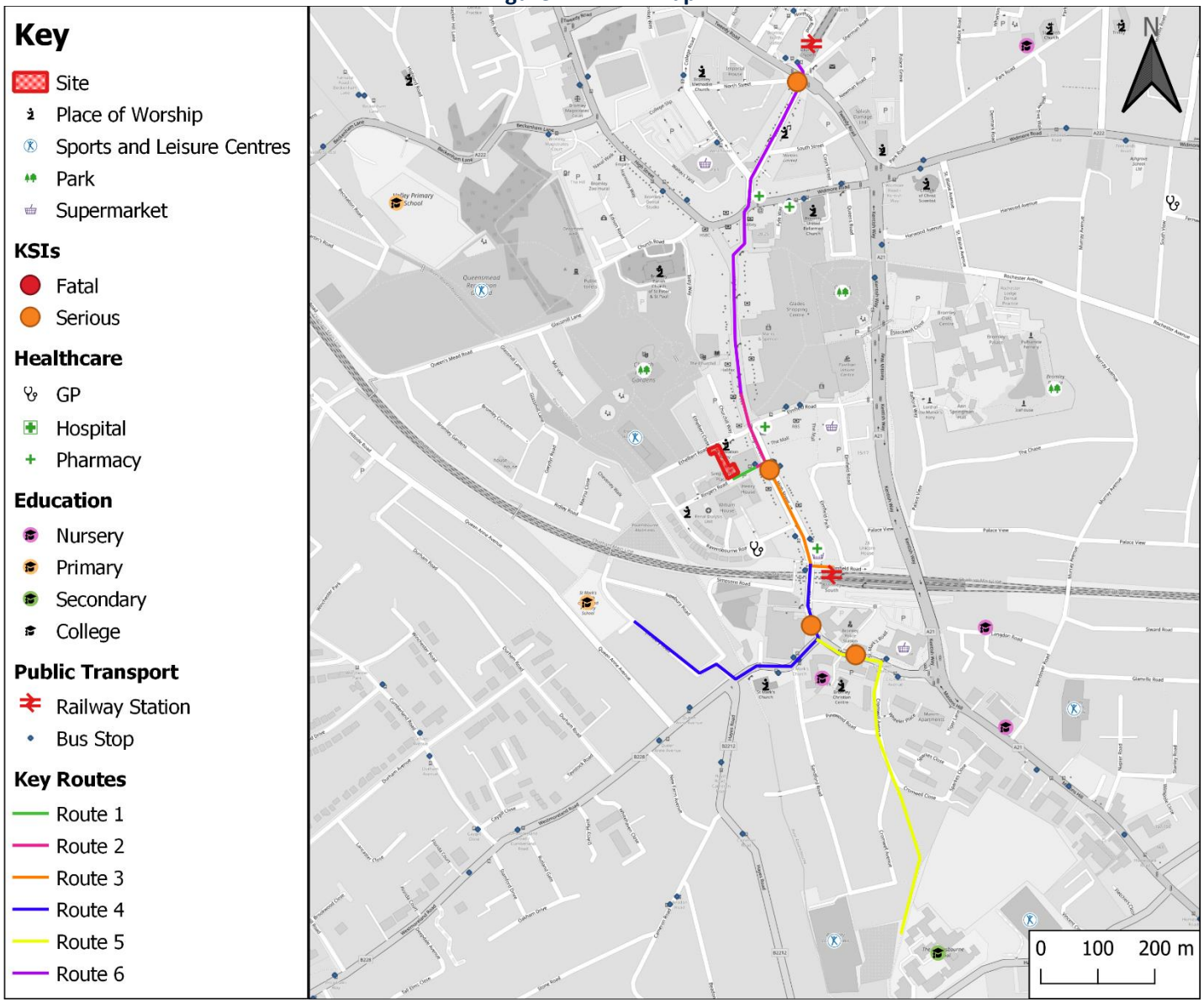


Figure 17 – ATZ Map 2



4.4.3. Each of the routes from the site to the key destinations defined as high priority for site users have been assessed against TfL's Healthy Streets Indicators 3-10 as outlined within TfL's ATZ guidance document and Guide to Healthy Streets Indicators.

4.4.4. Table 11 outlines the Healthy Streets Indicators assessed for each route and the criteria and questions asked for each Indicator.

Table 11 – Healthy Streets Indicators

Indicator	Description
3 – Easy to Cross	Streets without suitable crossing facilities make walking and cycling less appealing. They can be a significant barrier to some people travelling on foot or bike. The types of crossing needed will vary, but on all streets it should be easy for people of all ages and abilities to find a safe place to cross without having to go out of their way
4 – People Feel Safe	People will be less willing to walk, cycle or use public transport if they feel unsafe on a street. The whole community should feel comfortable and safe from crime, intimidation or injury on any street day and night
5 – Things to See and Do	People will be less willing to walk and cycle on streets that are visually unappealing or bland. People are more likely to travel actively when there are things to do locally and will also be less dependent on cars if shops and services are within walking distance
6 – Places to Stop and Rest	Lack of resting places can limit mobility for some people, particularly those who are ill, injured, older or very young. Ensuring there are places where people have room to stop or somewhere to rest benefits everyone, including local business, as people will be more willing to visit, spend time in, or meet other people on these streets
7 – People Feel Relaxed	People are more likely to walk or cycle if they feel relaxed and find it enjoyable. Good quality street design, a clean, well-kept environment and plenty of plants can help create attractive and relaxing places to walk and cycle. Ensuring there is enough space so that people walking and cycling don't feel stressed is important, as is making sure people can find their way around
8 – Not Too Noisy	Motorised road traffic is a primary source of noise pollution in urban areas. This affects the health of people who walk, cycle, shop, work, study and live on noisy streets. Reducing traffic volumes and speeds, quieter vehicles and low noise road surfaces will all benefit health as well as improve the ambience of street environments, encouraging people to interact and travel actively
9 – Clean Air	Improving air quality benefits everyone while also helping to reduce health inequalities. Citywide measures are needed but there are also local actions that can be taken. Anything that significantly reduces that amount of traffic on the road or reduces the number of high polluting vehicles will help improve local air quality and will contribute to any citywide measures
10 – Shade and Shelter	High winds, heavy rain, high temperatures and sun exposure can have a significant effect on people's ability to travel actively and spend time in the street as well as their enjoyment. The need for shade and shelter will increase as the climate changes and London experiences more extreme weather

4.4.5. A summary of the key Healthy Streets routes together with commentary on how they meet the Healthy Streets Indicators has been provided below:

Route 1 – To bus stops along Ringer's Road

4.4.6. As detailed below in Chapter Five, pedestrian access will be provided on both sides of the development including a pedestrian access to the north on Ethelbert Road and to the south on Ringers Road. TfL's recommended distance for the proximity of new developments to bus stops is 640m (equating to an eight-minute walk). The existing bus stop on Ringers Road is approximately 45m to the east of the Ringers Road proposed pedestrian access, equating to less than one minutes' walk. The route between the site and the bus stop is shown below in Figure 18.

Figure 18 – ATZ Route 1

4.4.7. The existing footway condition is of good quality with no barriers to access between the site and the bus stop. There is no need for users of the site to cross the carriageway to reach the bus stop and the route is also overlooked by a number of existing residential units, providing natural surveillance to create a safe and comfortable environment for pedestrians.

4.4.8. As demonstrated above, the route between the site and the nearest bus stop equates to less than one-minute's walk, therefore the need for people to stop and rest and seek shelter along the route is considered to be minimal. However, shelter will be provided within the public realm of the site, providing an opportunity for site users to wait for the bus in a sheltered environment.

Route 2 – To shops and retail facilities along High Street

4.4.9. Similar to Route 1, the site is located within close proximity to a range of shops, services and amenities along the High Street. Through the provision of pedestrian accesses to the north and south of the site,

step-free pedestrian routes are already provided between the site and the High Street which avoid the need to cross the carriageway. However, access to the wider High Street area is provided via the signal-controlled pedestrian crossings shown below in Figure 19.

Figure 19 – ATZ Route 2

4.4.10. As demonstrated above, flush crossing facilities, tactile paving with tapping lines and signal request boxes are located on each arm of the High Street / Ethelbert Road / Elmfield Road junction, ensuring that safe and level access is provided on each of the key desire lines regardless of the direction of travel to and from the site The provision of street lighting, CCTV surveillance and natural surveillance from surrounding land uses creates a pleasant and safe walking environment. There are no barriers to movement, ensuring that access to the High Street on foot is a practical and attractive mode of choice for all regardless of age or mobility.

4.4.11. Resting places, including benches and areas of soft landscaping are provided along the length of High Street, providing an attractive environment for active travel. Likewise, the range of retail facilities along High Street ensure that the route is well populated with plenty of things to see and do for users. Large parts of High Street are car-free, therefore noise levels and air quality levels are conducive to walking, further encouraging walking to be the first mode of choice.

Route 3 – To Bromley South Station

4.4.12. Pedestrian access to Bromley South Station utilises the wide footways along High Street which provide a direct, safe and attractive route for active travel. Numerous crossing facilities are provided along High Street, including those mentioned above for Route 2, further ensuring that the route between the site and Bromley South Station is safe and permeable for all users. The route is shown below in Figure 20.

Figure 20 – ATZ Route 3

4.4.13. As demonstrated above, a flush level crossing is provided between the footways on High Street and the wide area of public realm at the rail station frontage. Whilst the footways are well utilised, they are provided with widths in excess of 3.5m which is sufficient to allow users to stop and rest at various points along the route without impeding the free flow of pedestrians.

4.4.14. The route is streetlit and overlooked by retail and employment uses along its entirety whilst also benefitting from a high level of informal surveillance from passing pedestrians and motorists. This, coupled with the soft landscaping and trees, helps to create a safe and pleasant walking environment. Whilst footways on both sides of High Street are adjacent to the carriageway, noise from motor vehicles is not intrusive. The route is safe and suitable for all users and provides a pleasant and attractive route which is likely to encourage walking, both formally as part of a commuter trip and informally through leisure walks.

Route 4 – To St Mark's C of E Primary School

4.4.15. Pedestrian access to the closest Primary School facility, St Mark's C of E Primary School, utilises the high quality footways previously mentioned as part of Route 3 in addition to the footways along the B228 Westmoreland Road and Aylesbury Road. The B228 Westmoreland Road section of the route is shown below in Figure 21.

Figure 21 – ATZ Route 4

4.4.16. As demonstrated above, Westmoreland Road within the vicinity of the school provides favourable walking conditions for all ages with signal-controlled crossing facilities provided with tactile paving and dropped kerbs to facilitate movement for all. The route is also provided with wide areas of public realm, including soft landscaping and seating areas, to encourage active travel.

4.4.17. The route is bordered by the carriageway, ensuring that informal surveillance through passing traffic is high. However, this is supplemented by CCTV surveillance along the route which helps to create a pleasant and safe walking environment, particularly for younger children. Similar to the High Street, whilst the pedestrian routes border the carriageway, wide areas of public realm and footway widths help to distance pedestrians from the traffic, further limiting the impact of vehicle noise levels. Overall, the route is provided to a good quality throughout, with recently improved areas of public realm further enhancing the attractiveness of the route, particularly for younger children.

Route 5 – To Ravensbourne Academy

4.4.18. Pedestrian access to the closest Secondary School, Ravensbourne Academy, utilises the high-quality footways on High Street in addition to Cromwell Avenue and Bromley Footpath 122, which is streetlit and provides a key pedestrian route to the school during morning arrivals and afternoon departures. The traffic-free section of the route which borders the school is shown below in Figure 22.

Figure 22 – ATZ Route 5

4.4.19. High quality pedestrian facilities along High Street provide favourable walking conditions between the site and Cromwell Avenue, at which point Cromwell Road provides the most direct route between High Street and Ravensbourne Academy. Cromwell Avenue / Cromwell Court is residential in nature, taking the form of a tree-lined avenue with on-street parking along the length of the carriageway. Good quality footways, street lighting and informal surveillance from adjacent properties help to create a pleasant and safe walking environment.

4.4.20. At the easternmost point of Cromwell Court a segregated pedestrian route is provided which borders the school along its western boundary before re-joining the B265 Hayes Lane adjacent to the entrance to the school. The route is level and well utilised, providing a direct route between the site and the school. It is of note that alternative routes, including Hayes Lane and Hayes Road, are also provided which provide good quality and well-lit footways. As such, there are a range of attractive and safe walking routes between the site and Ravensbourne Academy which provide favourable conditions for pedestrians.

Route 6 – To Bromley North Station

4.4.21. As detailed above, the site is in a highly accessible location with two rail stations located within walking distance of the site. Pedestrian access to Bromley North station utilises High Street and East Street. The route is shown below in Figure 23.

Figure 23 – ATZ Route 6

4.4.22. As demonstrated above, the route between the site and Bromley North Station is characterised by large areas of public realm, soft landscaping and car-free or low-car environments. Where vehicle access is permitted, pedestrian permeability is optimised through flush crossings, tactile paving and appropriate surface treatment. Wayfinding boards detailing pedestrian walk times to Bromley North Station in addition to wayfinding flagpoles are strategically placed along the route, further optimising the route for pedestrians.

4.4.23. Areas for shelter, seating and wide, open areas of public realm are provided along the route which allow pedestrians to stop, rest and meet along the route. The route is lined by retail facilities and employment spaces which together with formal CCTV surveillance and street lighting help to create a safe and attractive walking environment. only routes along High Street and a low-car environment along East Street. Overall, the route is of high quality which allows direct and permeable access between the site and the rail station.

4.5. ATZ Safety

4.5.1. Map 2 in Figure 17 displays the serious and fatal injuries (KSIs) that have occurred along the ATZ Key routes. It can be seen that no fatal incidents occurred along the routes between 2014 and 2018 and a total of four serious injuries occurred along all routes combined within the same time period. However, it is of note that there were no clusters of incidents identified from this data with the incidents occurring along High Street and Masons Hill. As such, there are not considered to be any highway safety concerns that would be exacerbated as a result of the proposed redevelopment.

5. Proposed Development

5.1. Context

5.1.1. This section of the Transport Assessment provides a summary of the development proposals, including a breakdown of the accommodation schedule, access provision for all modes, car and cycle parking provision and delivery and servicing strategy.

5.2. Development Proposals

5.2.1. The proposed redevelopment will demolish the existing buildings on site (2-4 Ringers Road and 5 Ethelbert Road), and construct two new buildings which will provide a combined total of 94 residential units. Block A will comprise a 14-storey building fronting Ringers Road which will contain 45 residential units with Block B comprising a 12-storey building fronting Ethelbert Road which will contain 49 residential units. A breakdown of the unit types proposed has been provided below:

- 37 x one-bed apartments;
- 57 x two-bed apartments.

5.2.2. In addition to this, a café (160sqm) will also be provided within Block B at ground and first floor level and a total of 389.4sqm co-working office space will be provided at basement and first floor level across both Blocks. Drawings of the proposed site layout and plans of the buildings are attached at **Appendix A**.

5.3. Access Arrangements

5.3.1. With the exception of the disabled car parking space and the accessible car club bay, which will be provided along the site frontage on Ethelbert Road through the conversion of two on-street bays, the proposals will be car-free. Access to these car parking bays will be provided via the existing dropped kerb arrangement along the site frontage. Owing to the car free nature of the scheme, no formal vehicular access to the site has been provided.

5.3.2. However, as detailed below in section 5.7 of this report, vehicular access for delivery and servicing purposes will be undertaken on-street, using both Ringers Road and Ethelbert Road. This strategy is consistent with the existing residential units on site in addition to the neighbouring residential units on Ringers Road and Ethelbert Road. Swept path analysis demonstrating how delivery and servicing vehicles will utilise the single yellow line restrictions on Ethelbert Road has been attached at **Appendix C.**

5.4. Pedestrian and Cycle Access

5.4.1. As the proposals will be car-free, with the exception of the disabled bay and accessible car club bay, the redevelopment provides an opportunity to maximise the public realm offering along the site frontage and prioritise provision for pedestrians and cyclists.

5.4.2. The two residential blocks will be accessed independently with Block A accessed via a residential entrance off Ringers Road which will also provide a route to the internal lifts and stairways in addition to the cycle store. For Block B, access will be provided off Ethelbert Road which provides a route to the internal lifts and stairways in addition to the cycle store. . High quality public realm space will be provided between the existing footways and the residential entrances, providing further useable space for pedestrians along the site frontage. This provides a continuation of the public realm

proposed as part of the Churchill Quarter development, providing an active travel route between the site and Bromley High Street and Bromley Park.

5.4.3. As detailed in Chapter three, pedestrian facilities within the vicinity of the site are of high quality with minimum footway widths of at least 2.0m provided on both Ringers Road and Ethelbert Road. However, at present the provision of signage and an access ramp to the existing restaurant space reduces the useable footway width along the site frontage to between 1.6m-1.8m, which is below the minimum requirement as outlined within MfS. The proposals will remove this pinch point by reinstating the space as footway to ensure that footway widths of at least 2.0m will be retained along the entirety of Ringers Road. This will further help to reduce any existing barriers to active travel for all site users, regardless of age or mobility.

5.4.4. The measures outlined above comply with the overall health and wellbeing agenda behind the Healthy Streets Approach by encouraging residents to walk and cycle to the range of key destinations outlined within the Active Travel Zone (ATZ).

5.5. Car Parking Provision

5.5.1. Considering the excellent accessibility to a range of employment, educational, leisure and retail facilities within walking and cycling distance of the site, coupled with the excellent PTAL rating of 6b, the site represents a prime opportunity to promote car-free development. Notably the London Plan Policy T6 states that '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'. As such, there will be no on-site car parking facilities.

5.5.2. However, to ensure that parking is available for eligible disabled residents who require access to a car, it is proposed to convert two on-street parking spaces on Ethelbert Road directly outside the site to provide one disabled parking space and one accessible car club bay.

5.5.3. The removal of these two on-street parking bays will be subject to a Traffic Regulation Order (TRO). The applicant agrees to pay LBB an appropriate amount (to be agreed) towards to consultation of the TRO to convert the two on-street bays. The parking survey data analysed in Chapter Three demonstrates that there is sufficient capacity in the network to accommodate the loss of two on-street parking spaces. Further to this, it should be noted that the existing residential units at 5 Ethelbert Close are currently able to apply for parking permits, equating to a demand for six car parking spaces.

5.5.4. A parking permit restriction will be conditioned within a S106 Agreement to remove the ability of future residents obtaining on-street parking permits in the existing CPZ area. As such, the proposals would create a net reduction in demand of four parking permit spaces, further ensuring that there is sufficient capacity for the conversion of two bays.

5.5.5. Policy T6.1 of the London Plan states that for three percent of dwellings at least one designated disabled persons parking bay per dwelling is available from the outset with the potential for an additional seven percent to be provided in the future. For a scheme of 94 units this equates to three spaces from Day 1 and the potential for an additional seven spaces in the future, a total of 10 disabled spaces.

5.5.6. Figure 12 shows that there will be five disabled parking bays within 50m of the site, which combined with the one on-street bay and accessible car club bay proposed as part of the scheme equates to a total of seven bays. Notably two of these bays will provide access to accessible car club vehicles. As such it is considered that this combined with the highly accessible location of the site and the taxi rank within 50m of the site will ensure that access to the site by those with mobility difficulties is

provided. Nonetheless 152 additional disabled parking spaces are provided within public car parks within close proximity of the site.

5.5.7. For those residents that do rely on the use of the private car, as identified within Chapter Three there are approximately 1,615 car parking spaces within walking distance of the site which are eligible for season ticket applications. At the time of writing, the Mall Car Park which is located approximately 350m / four-minute walk from the site has availability for 11 season ticket spaces with other car parks including The Hill, Station Road and Bromley North Station currently accepting applications for new season tickets. As such, there are considered to be ample opportunities for residents to park within the vicinity of the site, should they rely on private car use.

5.5.8. However, through restricting car parking to two disabled parking bays from the outset, the proposals further promote the uptake of sustainable travel from the outset, in accordance with the Mayor's Transport Strategy and TfL's Healthy Streets Approach.

5.5.9. As part of the consented Churchill Quarter application adjacent to the site, two further car club spaces will be provided on Churchill Way, including one disabled car club bay and one conventional bay. As these bays will be occupied by a car club operator, access will not be restricted to use by residents of the Churchill Quarter alone.

5.5.10. As such, the car club bays will be available to hire by future occupiers of the proposed development considered under this application. Whilst the majority of daily trips, including employment, leisure, retail, health and educational needs can be undertaken on foot, by bicycle or by public transport, the car club bays provide a further opportunity for future residents to access a car for essential trips without the need of owning their own.

5.5.11. The Carplus "Car Clubs in Property Developments" 2015 report explicitly states that reducing the levels of car parking helps to make car clubs viable;

- "The experiences of operators suggests that a ratio of 0.8 car parking spaces per residential unit or less creates the conditions in which a car club and parking levels are mutually complementary"
- "The car club works best if not all residents have access to a private car parking space as well as others choosing the service as a lifestyle choice or out of preference as a first or second car."

5.5.12. It is of note that the nearby and comparable site at 66-70 High Street (Ref. 21/03231/FULL) for the demolition of 66-70 High Street to provide a new 13-16 storey mixed-use residential building comprising 68 residential dwellings and 581sqm of retail floorspace is also car free with the exception of disabled parking. Given the similarities of this scheme to this application, in terms of accessibility and location in addition to the total development quantum, it is considered that the same principles of car-free development should be applicable at this site.

5.5.13. Overall, the car-free nature of the scheme is considered entirely appropriate and policy compliant whilst also achieving the key principles to promote sustainable travel and encourage healthy lifestyles, both of which are at the core of the Mayors Transport Strategy (2019) and TfL's Healthy Streets Approach.

5.6. Cycle Parking Provision

5.6.1. Cycle parking provision should take account of the London Plan (2021). Table 12 below summarises these standards and calculates the cycle parking requirements of the proposed development.

Table 12 – Cycle Parking Requirements

Use		Bicycle Parking Standards		Proposed Development (Required)	
		Long Stay Standard	Short Stay Standard	Long Stay	Short Stay
C3	1 bed / 1 person	1 per dwelling	5-40 Dwellings = 2 spaces Thereafter = 1 per 40 dwellings	0	4
	1 bed / 2 person	1.5 per dwelling		56	
	All Other Dwellings	2 per dwelling		114	
A2-A5	Café	1 per 175 sqm (GEA)	1 space per 20 sqm (GEA)	1	8
B1	Business offices	1 space per 75 sqm	First 5,000 sqm: 1 space per 500 sqm	6	1
	Total Provision			**177**	**13**

5.6.2. Evidently the proposed development quantum would require a minimum of 177 long stay cycle parking spaces and 13 short-stay cycle parking spaces. In accordance with the London Cycle Design Standards 5% (10 spaces) should be suitable for accommodating adapted cycles. This level of provision will be provided, ensuring compliance with the London Plan (2021).

5.6.3. The proposed redevelopment will provide a number of separate cycle stores at basement and ground floor level. Block A will be accessed via double doors onto Ringers Road and Block B will be accessed via double doors onto Ethelbert Road.

5.6.4. A total of nine spaces will be provided at ground floor level in Block A, with five spaces for electric adapted cycles provided to the rear of the building and four spaces for electric cycles provided to the front of the building along Ringers Road all in the form of Sheffield stands. Regarding Block B, eight electric cycle parking spaces will be provided within the site curtilage, accessed from Ethelbert Road and these will be in the form of Sheffield stands. All of these spaces will be short-stay spaces for all three uses proposed at the site and they can all be accessed without entering the buildings. This equates to a total provision of 17 short-stay cycle parking spaces, including eight spaces for adapted cycles.

5.6.5. At basement level within Block A, a total of 109 cycle parking spaces will be provided, 99 standard spaces in the form of Josta 2-Tier stackers, six spaces for electric adapted cycles and four spaces for electric cycles in the form of Sheffield stands.

5.6.6. At basement level within Block B, 112 standard cycle parking spaces will be provided in the form of Josta 2-Tier stackers and 12 spaces for electric cycles will be provided in the form of Sheffield stands. All spaces allocated for electric cycles and electric adapted cycles will be provided with electric charging infrastructure. ,

5.6.7. This equates to a total of 233 long-stay cycle parking spaces provided at basement level. It is noted that there is an overprovision of both short-stay and long-stay cycle parking compared to the minimum standards outlined in the London Plan. It is noted that the co-working space will be primarily for residents, however the provision of additional short-stay and long-stay cycle parking will appease any concerns over shortages of cycle parking should the co-working space be used by external site users in the future.

5.6.8. Access to the cycle stores will be provided to all residents, however the use of a key fob entry system / access code will be utilised to provide additional security benefits for the cycle stores.

5.6.9. For the parking for adapted cycles and electric cycles, these will be provided in the form of Sheffield stands. As previously mentioned, a total of 17 visitor cycle parking spaces will be provided within the curtilage of the units in the form of Sheffield stands.

5.6.10. The provision of high quality and accessible cycle parking for all residents will help to encourage more residents to consider cycling as their first mode of choice, either for formal commuting or educational purposes or for leisure cycling trips.

5.7. Delivery and Servicing

5.7.1. Deliveries to the residential units will primarily consist of the following:

- Refuse vehicles;
- Post, parcel and mail deliveries and collections;
- Ad-hoc grocery deliveries / other courier services;
- Occasional Maintenance vehicles; and
- Removals vehicles.

5.7.2. It is of note that the types of delivery and servicing trips outlined above are already likely to be operating at neighbouring sites along both Ringers Road and Ethelbert Road as well as at the existing residential units at the site. This will include both refuse collection as well as postal / courier deliveries. As such, these would not constitute 'new' trips onto the network. To further reduce the dwell time that servicing vehicles will spend at the site, a number of design features have been proposed:

- Provision of communal post boxes at the entrance to the residential units to allow post and parcels to be delivered quickly and safely;
- Location of the bin stores directly adjacent to the highway to minimise the drag distance for refuse operatives from the development to the waste collection vehicle.

5.7.3. There is likely to be the occasional removals vehicle when residents move into / out of properties. This will be most notable when the development is first occupied, subsequent to which, these movements will be infrequent.

5.7.4. As detailed in Chapter Three, a coach bay measuring approximately 25m in lengths is currently provided along the site frontage on Ringers Road. Given the short dwell time for servicing vehicles to load / unload, this is considered to provide a suitable loading area for the proposed site. In the unlikely event that the coach bay is fully occupied, additional loading space is provided to the front of the site on Ethelbert Road in the form of a single yellow line which measures approximately 10.0m in length. In line with LBB guidance, loading and unloading of unwieldy and heavy goods is permitted on single yellow lines for periods of up to 40 minutes. This is considered entirely suitable for the types of delivery and servicing trips anticipated at the site.

5.7.5. The provision of the coach bay on Ringers Road and the single yellow line on Ethelbert Road ensures that vehicles can load / unload without adversely impacting the free flow of traffic on the highway network. The estimated delivery and servicing trips are outlined in Table 13.

Table 13 – Residential Servicing Trip Generation

Delivery	Vehicle	Time of Day	Approx. Frequency
Post	Post Van	09:00-17:00	Daily
Parcel / Couriers	Transit Van	07:00-22:00	1-4 per day
Groceries	Transit Van	07:00-22:00	1-4 per day
Refuse Collection	Small Refuse Vehicle	07:30-17:00	Weekly / Bi-weekly
Recycling Collection	Small Refuse Vehicle	07:30-17:00	Weekly / Bi-weekly
Maintenance Vehicles	Transit Van / Box Van	09:00-17:00	1-2 timer per year
Removals Vehicles	Pantechnicon	09:00-17:00	Infrequent

5.7.6. Based on this, it is anticipated that the residential element of the proposed development is likely to generate 6-13 delivery and servicing trips per day, equating to less than one trip per hour across core delivery hours. It is likely that the majority of delivery and servicing trips will take place outside of the network peak hours.

5.7.7. For the café and co-working space, it is anticipated that these uses will generate up to three delivery and servicing trips per day combined, through the delivery of food/goods, cleaning products and other essential produces and refuse collection. The occupiers will seek to co-ordinate and consolidate deliveries to minimise the number of delivery and servicing trips associated with the site. It is also likely that the majority of delivery and servicing trips associated with these uses will take place outside of the network peak hours.

5.7.8. Based on this, the total development is anticipated to generate between 9-16 delivery and servicing trips per day.

5.7.9. A Framework Delivery and Servicing Plan (DSP) was requested during pre-application discussions with LBB and has been provided (Report Ref: R-20-0061-03A). This will be finalised prior to occupation of the site and agreed with LBB.

5.8. Refuse Storage

5.8.1. The LBB Notes for Developers and Architects: The Storage and Collection of Refuse from Residential and Commercial Buildings (October 2011) states that apartment blocks with six or more dwellings should provide bulk storage at the following rates;

- General Waste: one 1100 Eurobin per six apartments;
- Recyclables - Paper: one 240 litre wheeled bin per six apartments;
- Recyclables - Glass / Plastic / Cans: one 240 litre wheeled bin per six apartments; and
- Recyclables - Food Waste: one 240 wheeled bin for food waste per 20 dwellings.

5.8.2. The proposed development seeks to provide 94 residential apartments, of which 37 would be one-bed apartments and 57 two-bed apartments. This would equate to the need for 16 x 1100L Eurobins to be provided for the general waste, 32 x 240 litre bins for the recyclables and five 240 litre wheeled bins for food waste.

5.8.3. For the residential element of the proposed development, the following bin provision is proposed across both Blocks and these will be provided at ground floor level of Block A and basement level of Block B:

- Eight 1100 litre Eurobins for general refuse;
- Four 1100 litre Eurobins for recyclables; and
- Six 240 litre wheeled bins for food waste.

5.8.4. Where the bins are stored at basement level, a lift is provided to transport the bins to street level.

5.8.5. For the commercial use (café and co-working space), bins will be provided at the same levels in each block as the residential waste, but a separate storeroom will be provided. Within the two blocks the following bins for the commercial uses will be provided:

- Three 1100 litre Eurobins for general refuse;
- Two 1100 litre Eurobins for recyclables; and
- Three 240 litre wheeled bins for food waste.

5.8.6. In accordance with the guidance, Eurobins should not have to be hauled more than 18m to access the refuse vehicle, should not have to be wheeled on gradients in excess of 1:20 (5%) and in accordance with BS 5906:2005 Waste management in buildings, residents should not have to carry their refuse more than 30m from their property.

5.8.7. The proposed redevelopment would be served by a privately operated collection service, managed by the maintenance staff of the site. As detailed above, refuse vehicles will be able to utilise the single yellow line on Ethelbert Road in addition to the coach bay on Ringers Road whilst operating within the vicinity of the site. In the event that the coach parking bay was in use then there is a 19m long section of single yellow lines on Ringers Road approximately 9m south of the site that could be utilised.

5.8.8. Whilst the proposed redevelopment will generate an uplift in the number of residential units at the site, it is not considered that this would give rise to an increase in the number of refuse and recycling vehicles required to serve the existing route. As such, the proposals are considered to fall within the existing routes currently operated by LBB Waste team and therefore no new vehicular trips would be created as a result of refuse and recycling collection.

6. Trip Generation

6.1. Introduction

6.2. This section of the TA outlines the multi-modal trip generation of both the existing site and proposed redevelopment whilst also summarising the overall net change in trips as a result of the proposed redevelopment.

6.3. Existing Trip Generation

6.3.1. As detailed in Chapter 3, the site is currently occupied by a range of independent land uses including 1,175sqm Restaurant space (A3 use), 185sqm Assembly and Leisure Space (D2 use) and six residential units (C3 use). On-site car parking is not provided for any of the land uses at the site, however the existing restaurant is currently served by an off-carriageway servicing access to the north of the site off Ethelbert Road, and informal parking in front of this does take place as outlined in Figure 11. Further to this each of the six studio units are able to apply for an on-street parking permit to park within the CPZ.

6.3.2. A summary of the quantum of development used for the existing trip generation of the site has been summarised below:

- **1,175sqm A3 Restaurant use**: This is currently occupied by the Smoque Bar and Restaurant and operates as a 210 cover restaurant;
- **185sqm D2 Leisure use:** This has previously been occupied by a kickboxing gym (D2 Leisure Use), however more recently it has been used as a photography studio. It is of note that there are a limited number of comparable sites within the TRICS database for photography studios, therefore as the extant use at the site (D2 leisure) could be re-instated at the site without the need for further planning permission, the kickboxing gym (D2 leisure) has been used for the purpose of this assessment;
- **6 x Residential units:** Currently comprise six independent studio apartments on Ethelbert Road.

Restaurant Use

6.3.3. To ascertain the multi-modal trip generation of the existing restaurant use, trip rates for comparable restaurants within Greater London have been obtained from the TRICS database. To represent the anticipated travel patterns of existing site users and to reflect the central location of the site, sites with similar characteristics have been selected. The sites were selected using the following criteria:

- 06 – 'Hotel, Food and Drink';
- B – 'Restaurants';
- Multi-modal surveys;
- Located in the Greater London Region;
- Have between 70 and 110 covers (maximum range);
- Located in areas with a high PTAL of between 5 – 6b.

6.3.4. A summary of the site matching the above criteria has been provided below in Table 14.

Table 14 – Restaurant TRICS Sites (Existing)

Site	Type	Location	Covers	PTAL
BT-06-B-01	Coffee Shop	Brent	70	5 – Very Good
LB-06-B-01	Portuguese Restaurant	Stockwell	110	6b – Excellent

6.3.5. The resultant multi-modal trip rates for the existing restaurant use have been provided below in Table 15 with the full TRICS outputs attached at **Appendix D.** For consistency and to establish the net change

in trip generation as a result of the proposed redevelopment, the network peak hours have been assessed including the AM peak period (08:00-09:00), PM peak period (17:00-18:00) and the daily period (07:00-19:00).

Table 15 – Restaurant Multi-Modal Trip Rates (Per Cover)

Mode of Travel	Weekday AM Peak (08:00 to 09:00 hours)			Weekday PM Peak (17:00 to 18:00 hours)			Weekday Daily (07:00 to 19:00 hours)		
	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.
Underground	0.009	0.000	0.009	0.006	0.006	0.012	0.062	0.071	0.133
Train	0.009	0.000	0.009	0.006	0.006	0.012	0.062	0.071	0.133
Bus	0.018	0.000	0.018	0.017	0.039	0.056	0.187	0.198	0.385
Taxi	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.012	0.024
Motorcycle	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Car Driver	0.000	0.000	0.000	0.033	0.017	0.050	0.225	0.212	0.437
Car Passenger	0.000	0.000	0.000	0.028	0.022	0.050	0.205	0.174	0.379
Bicycle	0.018	0.000	0.018	0.000	0.000	0.000	0.018	0.012	0.030
On foot	0.009	0.018	0.027	0.050	0.033	0.083	0.514	0.510	1.024
Other	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.012	0.024
Total	**0.063**	**0.018**	**0.081**	**0.140**	**0.123**	**0.263**	**1.297**	**1.272**	**2.569**

6.3.6. The trip rates outlined above in Table 15 have been multiplied by the existing number of covers at the restaurant (210 covers) to determine the existing multi-modal trip generation of the restaurant

Table 16 – Restaurant Multi-Modal Trip Generation (Existing)

Mode of Travel	Weekday AM Peak (08:00 to 09:00 hours)			Weekday PM Peak (17:00 to 18:00 hours)			Weekday Daily (07:00 to 19:00 hours)		
	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.
Underground	2	0	2	1	1	2	13	15	28
Train	2	0	2	1	1	2	13	15	28
Bus	4	0	4	4	8	12	39	42	81
Taxi	0	0	0	0	0	0	3	3	6
Motorcycle	0	0	0	0	0	0	0	0	0
Car Driver	0	0	0	7	4	11	47	45	92
Car Passenger	0	0	0	6	5	11	43	37	80
Bicycle	4	0	4	0	0	0	4	3	7
On foot	2	4	6	11	7	18	108	107	215
Other	0	0	0	0	0	0	3	3	6
Total	**14**	**4**	**18**	**30**	**26**	**56**	**273**	**270**	**543**

6.3.7. As detailed above in Table 16, the existing restaurant is anticipated to result in approximately 18 two-way person trips during the AM peak period, all of which would be undertaken by sustainable modes including six trips on foot, four trips by bicycle, four trips by bus, two by train and two by underground. During the PM peak the restaurant is anticipated to generate 56 two-way person trips of which 18 would be undertaken on foot, 12 by bus, 11 by car, 11 as a car passenger, two by train and two by underground. Over the daily period the restaurant is anticipated to generate 543 two-way total trips

of which 92 would be undertaken by car, 80 as a car passenger and six by taxi with the remaining trips undertaken by sustainable modes of travel. Given the car free nature of the site it is considered that the associated car trips would park in nearby public car parks or park on-street within the pay at machine bays.

Leisure Use

6.3.8. The D2 use at the site is currently occupied by a photography studio, however until recently it was occupied by a kickboxing gym. There are no photography studio sites within the TRICS database and therefore the former gym use has been used to ascertain the likely trip generation, as this is more representative of the D2 use class and the site could return to its former use without the need for a planning application.

6.3.9. To ascertain the multi-modal trip generation of the existing D2 Leisure use, trip rates for comparable leisure / fitness clubs within Greater London have been obtained from the TRICS database. To represent the anticipated travel patterns of existing site users and to reflect the central location of the site, sites with similar characteristics have been selected. The sites were selected using the following criteria:

- 07 – 'Leisure';
- K – 'Fitness Club (Private)';
- Multi-modal surveys;
- Located in the Greater London Region;
- Have between 0 – 1,500 sqm GFA;
- Located in areas with a high PTAL of between 5 – 6b.

6.3.10. A summary of the site matching the above criteria has been provided below in Table 17.

Table 17 – Leisure TRICS Sites (Existing)

Site	Type	Location	GFA (sqm)	PTAL
HG-07-K-02	Gym	Haringey	1,440	6b – Excellent
IS-07-K-02	Gym	Islington	1,225	6a – Excellent

6.3.11. The resultant multi-modal trip rates for the existing leisure use have been provided below in Table 18 with the full TRICS outputs attached at **Appendix D.** For consistency and to establish the net change in trip generation as a result of the proposed redevelopment, the network peak hours have been assessed including the AM peak period (08:00-09:00), PM peak period (17:00-18:00) and the daily period (07:00-19:00).

Table 18 – Leisure Multi-Modal Trip Rates (Existing)

Mode of Travel	Weekday AM Peak (08:00 to 09:00 hours)			Weekday PM Peak (17:00 to 18:00 hours)			Weekday Daily (07:00 to 19:00 hours)		
	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.
Underground	0.150	0.413	0.563	1.088	0.525	1.613	8.967	8.333	17.300
Train	0.000	0.000	0.000	0.000	0.038	0.038	0.000	0.529	0.529
Bus	0.600	0.300	0.900	1.576	0.675	2.251	12.457	12.044	24.501
Taxi	0.038	0.038	0.076	0.038	0.038	0.076	0.076	0.076	0.152
Motorcycle	0.038	0.000	0.038	0.113	0.000	0.113	0.454	0.528	0.982
Car Driver	0.188	0.300	0.488	0.450	0.150	0.600	5.442	5.778	11.220
Car Passenger	0.000	0.038	0.038	0.075	0.000	0.075	1.050	0.900	1.950
Bicycle	0.263	0.375	0.638	0.263	0.150	0.413	2.931	3.003	5.934
On foot	1.426	2.214	3.640	4.728	2.064	6.792	39.964	36.699	76.663
Other	0.000	0.000	0.000	0.000	0.000	0.000	0.226	0.226	0.452
Total	**2.703**	**3.678**	**6.381**	**8.331**	**3.640**	**11.971**	**71.567**	**68.116**	**139.683**

6.3.12. The trip rates outlined above in Table 19 have been multiplied by the existing GFA of the kickboxing studio (185sqm) to determine the existing multi-modal trip generation of the D2 leisure use.

Table 19 – Leisure Multi-Modal Trip Generation (Existing)

Mode of Travel	Weekday AM Peak (08:00 to 09:00 hours)			Weekday PM Peak (17:00 to 18:00 hours)			Weekday Daily (07:00 to 19:00 hours)		
	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.
Underground	0	1	1	2	1	3	17	15	32
Train	0	0	0	0	0	0	0	1	1
Bus	1	1	2	3	1	4	23	22	45
Taxi	0	0	0	0	0	0	0	0	0
Motorcycle	0	0	0	0	0	0	1	1	2
Car Driver	0	1	1	1	0	1	10	11	21
Car Passenger	0	0	0	0	0	0	2	2	4
Bicycle	0	1	1	0	0	0	5	6	11
On foot	3	4	7	9	4	13	74	68	142
Other	0	0	0	0	0	0	0	0	0
Total	**4**	**8**	**12**	**15**	**6**	**21**	**132**	**126**	**258**

6.3.13. As detailed above in Table 19, the extant D2 use is anticipated to result in approximately 12 two-way person trips during the AM peak period, of which seven would be undertaken on foot, two by bus, one by bicycle, one by underground and one by car. During the PM peak the kickboxing studio is anticipated to generate 21 two-way person trips of which 13 would be undertaken on foot, four by bus, three by underground and one by car. Over the daily period the site is anticipated to generate 258 two-way total trips of which 21 would be undertaken by car, four as a car passenger and two by motorcycle with the remaining trips undertaken by sustainable modes of travel.

Existing Residential Use

6.3.14. To ascertain the multi-modal trip generation of the existing six residential units, total person trip rates for comparable residential sites within Greater London have been obtained from the TRICS database. To represent the anticipated travel patterns of existing site users and to reflect the central location of the site, sites with similar characteristics have been selected. The sites were selected using the following criteria:

- 03 – 'Residential';
- C – 'Flats Privately Owned';
- Multi-modal surveys;
- Located in the Greater London Region;
- Have between 50 – 200 units;
- Located in areas with a high PTAL of between 5 – 6b.

6.3.15. A summary of the site matching the above criteria has been provided below in Table 20.

Table 20 – Residential TRICS Sites (Existing)

Site	Location	No. Units	PTAL
BM-03-C-01	Bromley	160	6a – Excellent
HM-03-C-02	Hammersmith and Fulham	194	6b – Excellent
IS-03-C-07	Islington	185	5 – Very Good
KN-03-C-03	Kensington and Chelsea	72	5 – Very Good
SK-03-C-01	Southwark	53	6b – Excellent
WF-03-C-01	Waltham Forest	73	5 – Very Good

6.3.16. The total person trip rate and resultant trip generation for the six units has been provided below in Table 21. Full TRICS outputs have been attached at **Appendix D.**

Table 21 – Residential Total Person Trip Rate (Existing)

Mode of Travel	Weekday AM Peak (08:00 to 09:00 hours)			Weekday PM Peak (17:00 to 18:00 hours)			Weekday Daily (07:00 to 19:00 hours)		
	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.
Total Person Trip Rate	0.094	0.564	0.658	0.270	0.148	0.418	2.612	2.693	5.305
Total Person Trip Generation	1	3	4	2	1	3	16	16	32

6.3.17. To calculate the multi-modal trip generation of the existing residential units, methods of travel to work data have been obtained from the Census 2011 database and applied to the total person trip generation for the six existing units. It is of note that 2011 Census data is now nine years old and whilst it provides the most up to date account of local travel patterns, the data doesn't reflect the observed changing travel behaviours outlined within DfT's Road Traffic Forecasts (RTF18) report together with the emerging policy to encourage the uptake of sustainable modes of travel.

6.3.18. Whilst no off-street parking is provided, each of the studio apartments are currently able to obtain on-street parking permits. Therefore, census methods of travel to work data has been used to determine the proportion of car driver trips as opposed to manually adjusting the proportion of car driver trips. A summary of the multi-modal trip generation for the existing residential units has been outlined below in Table 22.

Table 22 – Residential Multi-Modal Trip Generation (Existing)

Mode of Travel	Census Modal Split	Weekday AM Peak (08:00 to 09:00 hours)			Weekday PM Peak (17:00 to 18:00 hours)			Weekday Daily (07:00 to 19:00 hours)		
		Arr.	Dep.	Tot.	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.
Underground	3.6%	0	0	0	0	0	0	1	1	2
Train	37.9%	1	1	2	1	1	2	6	6	12
Bus	10.5%	0	0	0	0	0	0	2	2	4
Taxi	0.4%	0	0	0	0	0	0	0	0	0
Motorcycle	0.4%	0	0	0	0	0	0	0	0	0
Car Driver	25.8%	0	1	1	1	0	1	4	4	8
Car Passenger	1.6%	0	0	0	0	0	0	0	0	0
Bicycle	2.0%	0	0	0	0	0	0	0	0	0
On foot	16.5%	0	1	1	0	0	0	3	3	6
Other	1.2%	0	0	0	0	0	0	0	0	0
Total	**100.0%**	**1**	**3**	**4**	**2**	**1**	**3**	**16**	**16**	**32**

6.3.19. As detailed above in Table 22, the existing residential units are anticipated to result in approximately four two-way person trips during the AM peak period of which two would be undertaken by train, one by car and one on foot. During the PM peak the existing residential units are anticipated to generate approximately three two-way person trips including two rail trips and one car driver trips. Of the 32 two-way person trips over the daily period, 12 are anticipated to be undertaken by rail, eight by car, six on foot, four by bus and two by underground.

Total Existing Trip Generation

6.3.20. A summary of the total existing trip generation taking into account the existing restaurant, leisure and residential uses at the site has been provided below in Table 23.

Table 23 – Total Multi-Modal Trip Generation (Existing)

Mode of Travel	Weekday AM Peak (08:00 to 09:00 hours)			Weekday PM Peak (17:00 to 18:00 hours)			Weekday Daily (07:00 to 19:00 hours)		
	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.
Underground	2	1	3	3	2	5	31	31	62
Train	3	1	4	2	2	4	19	22	41
Bus	5	1	6	7	9	16	64	66	130
Taxi	0	0	0	0	0	0	3	3	6
Motorcycle	0	0	0	0	0	0	1	1	2
Car Driver	0	2	2	9	4	13	61	60	121
Car Passenger	0	0	0	6	5	11	45	39	84
Bicycle	4	1	5	0	0	0	9	9	18
On foot	5	9	14	20	11	31	185	178	363
Other	0	0	0	0	0	0	3	3	6
Total	**19**	**15**	**34**	**47**	**33**	**80**	**421**	**412**	**833**

6.3.21. As detailed above in Table 23, the existing site is anticipated to result in approximately 34 two-way person trips during the AM peak period, of which 14 would be undertaken on foot, six by bus, five by bicycle, four by train, three by underground and two by car. During the PM peak the site is anticipated to generate 80 two-way person trips of which 31 would be undertaken on foot, 16 by bus, 13 by car, 11 by car passengers, five by underground and four by train. Over the daily period the site is anticipated to generate approximately 833 two-way person trips of which 121 would be undertaken by car, 84 by car passenger, six by taxi, two by motorcycle with all remaining trips anticipated to use sustainable modes.

6.4. Proposed Trip Generation

Proposed Residential Trip Generation

6.4.1. The proposed redevelopment will provide 94 residential units, comprising the following unit types:

- 37 x one-bed apartments; and
- 57 x two-bed apartments.

6.4.2. The same total person trip rates outlined in Table 21 will be used to calculate the anticipated trip generation for the proposed development. This method is considered extremely robust and considers the highly accessible location of the site and PTAL rating. A summary of the total person trip rate together with the resultant trip generation based upon the development of 94 residential units has been provided below in Table 24.

Table 24 – Total Person Trip Generation (Proposed Residential)

Mode of Travel	Weekday AM Peak (08:00 to 09:00 hours)			Weekday PM Peak (17:00 to 18:00 hours)			Weekday Daily (07:00 to 19:00 hours)		
	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.
Total Person Trip Rate	0.094	0.564	0.658	0.270	0.148	0.418	2.612	2.693	5.305
Total Person Trip Generation	9	53	62	25	14	39	246	253	499

6.4.3. As demonstrated in Table 24, the proposed residential development is anticipated to result in approximately 62 two-way person trips in the AM peak period, 39 in the PM peak period and 499 over the daily period.

6.4.4. In line with the approach to the existing trip generation, Method of Travel to Work data (2011 Census) has been used to calculate the multi-modal trip generation of the proposed residential units with the multi modal trips shown below in Table 25.

Table 25 – Multi-Modal Trip Generation (Proposed Residential)

Mode of Travel	Adjusted Modal Split	Weekday AM Peak (08:00 to 09:00 hours)			Weekday PM Peak (17:00 to 18:00 hours)			Weekday Daily (07:00 to 19:00 hours)		
		Arr.	Dep.	Tot.	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.
Underground	3.6%	0	2	2	1	1	2	9	9	18
Train	37.9%	4	20	24	10	6	16	93	96	189
Bus	10.5%	1	6	7	3	1	4	26	27	53
Taxi	0.4%	0	0	0	0	0	0	1	1	2
Motorcycle	0.4%	0	0	0	0	0	0	1	1	2
Car Driver	25.8%	2	13	15	6	4	10	63	65	128
Car Passenger	1.6%	0	1	1	0	0	0	4	4	8
Bicycle	2.0%	0	1	1	1	0	1	5	5	10
On foot	16.5%	2	9	11	4	2	6	41	42	83
Other	1.2%	0	1	1	0	0	0	3	3	6
Total	**100.0%**	**9**	**53**	**62**	**25**	**14**	**39**	**246**	**253**	**499**

6.4.5. However, as the proposed redevelopment will be car-free, with the exception of the disabled parking bay and the accessible car club bay, and with future residents being exempt from being able to apply for an on-street parking permit, the proportion of car driver trips has been manually adjusted from 25.8% (Census 2011) to 5.0%. This reduction accounts for the anticipated use of the disabled bay and accessible car club bay being provided in addition to a marginal number of future residents which could use the range of season ticket car parks within the vicinity of the site, as outlined in Chapter Three. This reduction also takes account of likely changes since the 2011 Census, which is nearly ten years old.

6.4.6. The % modal share for all other modes has been proportionately adjusted to reflect this reduction in car driver trips. This approach is considered to provide a more representative estimation of the multi-modal trip generation of the proposed redevelopment and associated impact on all modes of travel. A summary of the multi-modal trip generation for the development of 94 residential units is provided below in Table 26.

Table 26 – Multi-Modal Trip Generation (Proposed Residential Redistributed)

Mode of Travel	Adjusted Modal Split	Weekday AM Peak (08:00 to 09:00 hours)			Weekday PM Peak (17:00 to 18:00 hours)			Weekday Daily (07:00 to 19:00 hours)		
		Arr.	Dep.	Tot.	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.
Underground	4.6%	0	2	2	1	1	2	11	12	23
Train	48.5%	5	26	31	12	7	19	119	123	242
Bus	13.4%	2	8	10	3	2	5	34	34	68
Taxi	0.5%	0	0	0	0	0	0	1	1	2
Motorcycle	0.5%	0	0	0	0	0	0	1	1	2
Car Driver	5.0%	0	3	3	2	1	3	12	13	25
Car Passenger	2.1%	0	1	1	1	0	1	5	5	10
Bicycle	2.6%	0	1	1	1	0	1	6	7	13
On foot	21.2%	2	11	13	5	3	8	53	53	106
Other	1.5%	0	1	1	0	0	0	4	4	8
Total	**100.0%**	**9**	**53**	**62**	**25**	**14**	**39**	**246**	**253**	**499**

6.4.7. Of the 62 two-way total person trips during the AM peak, approximately 31 are anticipated to travel by train, 13 on foot, 10 by bus, three by car, two by underground, one by bicycle, one by a car passenger and one other by other modes of travel. During the PM peak, of the 39 two-way person trips, 19 are anticipated to be undertaken by train, eight on foot, five by bus, three by car, two by underground, one by car passenger and one by bicycle. Over the daily period the development is anticipated to generate approximately 499 two-way person trips of which 25 would be undertaken by car, 10 as a car passenger, two by motorcycles and two by taxis with all other trips anticipated to use sustainable modes.

6.4.8. Through the provision of the Travel Plan being implemented alongside this planning application, together with the highly accessible nature of the site, high quality cycle parking facilities and public realm enhancements it is considered highly likely that the proportion of trips undertaken by active travel modes, including walking and cycling, would be higher than presented in Table 26.

6.4.9. Whilst there will be a small number of car trips associated with the use of the disabled bay and the accessible car club bay, these are likely to comprise of essential vehicle trips. The provision of dropped kerbs, tactile paving, flush crossings and wide footways together with TfL's low-floor buses and step-free access to Bromley North and Bromley South Railway Stations help to ensure that there are no barriers to sustainable travel for all future residents regardless of mobility.

6.4.10. Whilst opportunities to purchase a car park season are available for all future residents, car ownership levels amongst future residents and the uptake of these season ticket options is anticipated to low. From the outset, the encouragement of car-free and active lifestyles will be promoted through the Travel Plan implementation.

Proposed Café Trip Generation

6.4.11. As part of the development proposals, an 160sqm café is proposed in Block B. To ascertain the multi-modal trip generation of the proposed café at the site, total person trip rates for comparable café and restaurant sites within Greater London have been obtained from the TRICS database. To represent the anticipated travel patterns of existing site users and to reflect the central location of the site, sites with similar characteristics have been selected. The sites were selected using the following criteria:

- 06 – 'Hotel, Food and Drink';
- B – 'Restaurants';
- Multi-modal surveys;
- Located in the Greater London Region;
- 'Edge of Town Centre' and 'Suburban Area' locations only;
- GFA between 150 – 341sqm;
- Located in areas with a high PTAL of between 5 – 6b.

6.4.12. A total of two sites were selected and the resultant multi-modal trip rates are outlined in Table 27 below. The full TRICS outputs are attached as **Appendix D.**

Table 27 – Proposed Multi-Modal Cafe Trip Rates

Mode of Travel	Weekday AM Peak (08:00 to 09:00 hours)			Weekday PM Peak (17:00 to 18:00 hours)			Weekday Daily (07:00 to 19:00 hours)		
	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.
Underground	0.515	0.000	0.515	0.291	0.291	0.582	3.290	3.712	7.002
Train	0.515	0.000	0.515	0.291	0.291	0.582	3.290	3.712	7.002
Bus	1.031	0.000	1.031	0.872	2.035	2.907	9.909	10.398	20.307
Taxi	0.000	0.000	0.000	0.000	0.000	0.000	0.582	0.582	1.164
Motorcycle	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Car Driver	0.000	0.000	0.000	1.744	0.872	2.616	11.849	11.046	22.895
Car Passenger	0.000	0.000	0.000	1.454	1.163	2.617	10.694	9.011	19.705
Bicycle	1.031	0.000	1.031	0.000	0.000	0.000	1.031	0.582	1.613
On foot	0.515	1.031	1.546	2.616	1.744	4.360	26.993	26.770	53.763
Other	0.000	0.000	0.000	0.000	0.000	0.000	0.582	0.582	1.164
Total	**3.607**	**1.031**	**4.638**	**7.268**	**6.396**	**13.664**	**68.220**	**66.395**	**134.615**

6.4.13. These trip rates have been factored to calculate the estimated multi-modal trip generation for a café with a GFA of 160sqm. The resultant trip generation is shown in Table 28.

Table 28 – Proposed Multi-Modal Cafe Trip Generation

Mode of Travel	Weekday AM Peak (08:00 to 09:00 hours)			Weekday PM Peak (17:00 to 18:00 hours)			Weekday Daily (07:00 to 19:00 hours)		
	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.
Underground	1	0	1	0	0	0	5	6	11
Train	1	0	1	0	0	0	5	6	11
Bus	2	0	2	1	3	4	16	17	33
Taxi	0	0	0	0	0	0	1	1	2
Motorcycle	0	0	0	0	0	0	0	0	0
Car Driver	0	0	0	3	1	4	19	18	37
Car Passenger	0	0	0	2	2	4	17	14	31
Bicycle	2	0	2	0	0	0	2	1	3
On foot	1	2	3	4	3	7	43	43	86
Other	0	0	0	0	0	0	1	1	2
Total	**7**	**2**	**9**	**10**	**9**	**19**	**109**	**107**	**216**

6.4.14. As demonstrated in Table 28, the proposed café is anticipated to result in approximately nine two-way person trips in the AM peak period, 19 in the PM peak period and 216 over the daily period.

6.4.15. Of the nine two-way total person trips during the AM peak, approximately one is anticipated to travel by train, three on foot, two by bus, one by underground and two by bicycle. During the PM peak, of the 19 two-way person trips, seven are anticipated to be undertaken on foot, four by bus and four by car. Over the daily period the development is anticipated to generate approximately 216 two-way person trips of which 37 would be undertaken by car, 31 as a car passenger and two by taxis with all other trips anticipated to use sustainable modes.

Proposed Co-Working Space Trip Generation

6.4.16. A total of 389.4sqm co-working space will be provided across the two Blocks for primary use by residents at the site. However in order to provide a robust and worst-case assessment of the trip generation, it has been assumed that all trips associated with the co-working space will be external trips and new trips with no reduction applied to the trip generation associated with the trips being from residents already at the site. To ascertain the multi-modal trip generation of the proposed co-working space at the site, total person trip rates for comparable office sites within Greater London have been obtained from the TRICS database. To represent the anticipated travel patterns of existing site users and to reflect the central location of the site, sites with similar characteristics have been selected. The sites were selected using the following criteria:

- 02 – 'Employment';
- A – 'Office';
- Multi-modal surveys;
- Located in the Greater London Region;
- 'Town Centre' and 'Suburban Area' locations only;
- GFA between 0 – 2,000sqm;
- Located in areas with a high PTAL of between 4 – 6b.

6.4.17. A total of four sites were selected and the resultant person trip rates and trip generation are outlined in Table 29 below. The full TRICS outputs are attached as **Appendix D.**

Table 29 – Proposed Co-Working Space Trip Rates and Trip Generation

	Weekday AM Peak (08:00 to 09:00 hours)			Weekday PM Peak (17:00 to 18:00 hours)			Weekday Daily (07:00 to 19:00 hours)		
	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.
Person Trip Rate	3.088	0.328	3.416	0.475	3.180	3.655	16.045	15.516	31.561
389 sqm	12	1	13	2	12	14	62	60	122

6.4.18. As demonstrated in Table 29, the proposed co-working space is anticipated to result in a maximum of 13 two-way person trips in the AM peak period, 14 in the PM peak period and 122 over the daily period. The resultant estimated multi-modal trip generation for 389.4sqm co-working office space is outlined in Table 30.

Table 30 – Proposed Multi-Modal Co-Working Space Trip Generation

Mode of Travel	Modal Split	Weekday AM Peak (08:00 to 09:00 hours)			Weekday PM Peak (17:00 to 18:00 hours)			Weekday Daily (07:00 to 19:00 hours)		
		Arr.	Dep.	Tot.	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.
Underground	2.9%	0	0	0	0	0	0	2	2	4
Train	17.2%	3	0	3	0	3	3	11	10	21
Bus	22.7%	3	0	3	1	3	4	14	14	28
Taxi	0.1%	0	0	0	0	0	0	0	0	0
Motorcycle	0.8%	0	0	0	0	0	0	1	0	1
Car Driver	41.9%	5	1	6	1	5	6	26	25	51
Car Passenger	2.8%	0	0	0	0	0	0	2	2	4
Bicycle	1.4%	0	0	0	0	0	0	1	1	2
On foot	10.0%	1	0	1	0	1	1	6	6	12
Other	0.2%	0	0	0	0	0	0	0	0	0
Total	**100.0%**	**12**	**1**	**13**	**2**	**12**	**14**	**62**	**60**	**122**

6.4.19. Of the 13 two-way total person trips during the AM peak, approximately three are anticipated to travel by train, one on foot, three by bus and six by car. During the PM peak, of the 14 two-way person trips, one is anticipated to be undertaken on foot, four by bus, three by train and six by car. Over the daily period the co-working element of the development is anticipated to generate a maximum of 122 two-way person trips of which 51 would be undertaken by car, four as a car passenger one by motorcycle, with all other trips anticipated to use sustainable modes.

6.4.20. As previously mentioned, the intended use of the co-working space is primarily for residents to be able to 'work from home' in a post pandemic world and it is therefore anticipated that the number of trips generated by this element of the development proposals would be significantly lower as the majority of trips would be internal. Furthermore the provision of the home working space would likely result in a reduction in the number of trips generated by the proposed residential element. However, for the purpose of the TA and to provide a robust and worst-case assessment of the development proposals, it has been assumed that all trips associated with the co-working space will be generated externally.

Total Proposed Trip Generation

6.4.21. The total proposed trip generation for the development proposals has been calculated by summing the proposed residential, café and co-working office space multi-modal trip generation estimates, taking into account the redistribution of trips away from private car use for the residential element of the development. The total proposed multi-modal trip generation is shown in Table 31.

Table 31 – Total Proposed Development Multi-Modal Trip Generation

Mode of Travel	Weekday AM Peak (08:00 to 09:00 hours)			Weekday PM Peak (17:00 to 18:00 hours)			Weekday Daily (07:00 to 19:00 hours)		
	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.
Underground	1	2	3	1	1	2	18	20	38
Train	9	26	35	12	10	22	135	139	274
Bus	7	8	15	5	8	13	64	65	129
Taxi	0	0	0	0	0	0	2	2	4
Motorcycle	0	0	0	0	0	0	2	1	3
Car Driver	5	4	9	6	7	13	57	56	113
Car Passenger	0	1	1	3	2	5	24	21	45
Bicycle	2	1	3	1	0	1	9	9	18
On foot	4	13	17	9	7	16	102	102	204
Other	0	1	1	0	0	0	5	5	10
Total	**28**	**56**	**84**	**37**	**35**	**72**	**418**	**420**	**838**

6.4.22. The total proposed development is anticipated to generate approximately 84 two-way person trips during the AM peak hour period, approximately 72 two-way person trips during the PM peak hour period and approximately 838 two-way person trips across the daily period.

6.4.23. As previously mentioned, the intended use of the co-working space is for residents to be able to 'work from home' and it is therefore anticipated that the number of trips generated by this element of the development proposals would be significantly lower as the majority of trips would be internal. However, for the purpose of the TA and to provide a robust and worst-case assessment of the development proposals, it has been assumed that all trips associated with the co-working space will be generated externally.

6.5. Net Trip Generation

6.5.1. To determine the net change in trips as a result of the proposed development, a comparison of the multi-modal trip generation for the existing site (Table 23) and the multi-modal trip generation for the proposed site (Table 26) has been undertaken. A summary of the net change in trips across all modes has been provided below in Table 32.

Table 32 – Net Change Multi-Modal Trip Generation

Mode of Travel	Weekday AM Peak (08:00 to 09:00 hours)			Weekday PM Peak (17:00 to 18:00 hours)			Weekday Daily (07:00 to 19:00 hours)		
	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.	Arr.	Dep.	Tot.
Underground	-1	1	0	-2	-1	-3	-12	-10	-22
Train	7	25	32	10	8	18	117	118	235
Bus	2	7	9	-2	-1	-3	0	-1	-1
Taxi	0	0	0	0	0	0	-1	-1	-2
Motorcycle	0	0	0	0	0	0	1	0	1
Car Driver	5	2	7	-2	3	1	-4	-4	-8
Car Passenger	0	1	1	-3	-3	-6	-21	-18	-39
Bicycle	-2	0	-2	1	0	1	0	0	0
On foot	-1	4	3	-11	-4	-15	-82	-75	-157
Other	0	1	1	0	0	0	2	2	4
Total	**10**	**41**	**51**	**-9**	**2**	**-7**	**0**	**11**	**11**

6.5.2. As detailed above, the proposed development is anticipated to result in an additional 51 two-way person trips during the AM peak period, a reduction of seven two-way person trips during the PM peak period and an additional 11 two-way person trips over the 12-hour period. This is reflective of the change in use from restaurant and D2 uses to residential, café and co-working space uses.

6.5.3. The impact of this net change in trips is discussed below with regards to the respective modes of travel. Where required, details of the proposed design solution, and / or mitigation measure has been provided.

6.6. Summary

6.6.1. The proposed redevelopment is anticipated to result in up to 84 two-way total person trips during the AM peak, 72 two-way person trips during the PM peak and 838 two-way person trips over the daily period. In terms of net change, the proposed development is anticipated to result in an additional 51 two-way person trips during the AM peak period, a reduction of seven two-way person trips during the PM peak period and an additional 11 two-way person trips over the 12-hour period.

6.6.2. As aforementioned this is considered a robust worst case assessment of the trip generation, given that it assumes all trips associated with the on-site co-working space are external to the site. In reality the vast majority of trips associated with the on-site co-working space are anticipated to be associated with the proposed residential units and therefore the co-working space is unlikely to be a significant trip generator in itself and could result in a significant reduction in the number of trips made by residents with residents opting to work from home more frequently rather than commute to their place of work.

7. Development Impact

7.1. Context

7.1.1. This section of the Transport Assessment assess the impact of the net change in trips across all modes of transport.

7.2. Vehicle Impact

7.2.1. As demonstrated above, with the exception of one on-street disabled car parking bay and one on-street accessible car club bay the proposed redevelopment is car free. As such, any vehicle trips associated with the site are likely to be limited to essential vehicle trips by eligible users of these bays in addition to a small number of residents using season ticket car parks within the vicinity of the site.

7.2.2. Table 32 demonstrates that the proposed development is anticipated to result in a marginal net increase of two two-way car driver trips during the AM peak period when compared to the existing uses at the site. This level of change is considered to be negligible and would be imperceptible to the flow of vehicles along Ethelbert Road / Ringer Road, being likely to fall well within the day to day variation of traffic on the surrounding highway network. As such, the marginal net change in trips would not constitute a severe impact on the operation of the local highway network, nor would it constitute an unacceptable impact on highway safety.

7.2.3. During the PM peak hour, the proposed redevelopment would generate a net reduction of eight two-way car trips over the daily period. The reduction in car trips as a result of the redevelopment are anticipated to result in a number of benefits on the local highway network, including reduced demand for on-street parking within the vicinity in addition to improved air quality within the immediate vicinity as a result of a reduction of vehicle trips.

7.3. Public Transport Impact

Bus Impact

7.3.1. The proposed development is anticipated to generate approximately nine additional two-way bus trips in the AM peak hour (08:00-09:00) and a net reduction of three two-way bus trips in the PM peak hour (17:00-18:00). Table 4 shows that there are circa 67 buses an hour serving the stops in the vicinity of the site. Due to the frequent nature of bus services in the vicinity of the site, these additional bus trips are considered to have an imperceptible impact on the capacity of the services.

Train Impact

7.3.2. As detailed in Chapter Three, the closest station to the site is Bromley South Station, with Bromley North Station also being located within walking distance. In order to provide a realistic assessment, it has been assumed that residents of the site that travel by train will utilise the services provided at both of these stations.

7.3.3. The stations are operated by Southeastern Railway and the services operating at these stations are summarised below during the peak hours are outlined in Table 33.

Table 33 – Total Existing Services (Bromley South and Bromley North)

Route	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	In	Out	Total	In	Out	Total
Grove Park – Bromley North	3	4	7	3	3	6
London – Ashford International (via Bromley South)	1	1	2	1	1	2
London – Gillingham and Ramsgate (via Bromley South)	8	8	16	8	8	16
London – Ashford International and Margate (via Bromley South)	4	4	8	5	5	10
London – Bromley South, Orpington and Sevenoaks	23	23	46	24	24	48
Total	**39**	**39**	**79**	**41**	**41**	**82**

7.3.4. Based on the existing number of services outlined above, it has been assumed that the rail trips generated by the proposed development will be distributed evenly across the services provided from both Bromley North and Bromley South Stations.

7.3.5. The net change in rail trips generated by the proposed redevelopment have been distributed across the existing rail services operating at Bromley North and Bromley South Station. The number of additional passengers per service has also been provided in Table 34.

Table 34 – Impact on Rail Services (Bromley South and Bromley North)

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	In	Out	Total	In	Out	Total
Total No. Services	39	39	78	41	41	82
Net rail trips produced by development	7	25	32	10	8	18
Additional passengers per service	0.18	0.64	0.41	0.24	0.20	0.22

7.3.6. Table 34 demonstrates that the proposed redevelopment will generate an additional 32 rail passengers in the AM peak hour (08:00-09:00), equating to an extra 0.41 passengers per service across the two stations. During the PM peak hour (17:00-18:00), the redevelopment is anticipated to generate an additional 18 rail passengers, equating to an extra 0.22 passengers per service. The marginal increase of less than one person per service during each of the peak hours is not considered to represent a significant increase in the demand for services and is likely to fall within the current fluctuations of passenger numbers per service. As such, the marginal increase in the number of passengers using the services from both Bromley North and Bromley South Stations would have a negligible impact on the operation of the existing services.

7.4. Walking and Cycling Impact

7.4.1. **Section 3** of this Transport Assessment describes the provision of walking and cycling facilities within close proximity of the site and the site's sustainable and accessible location. Table 32 demonstrates the proposed development is anticipated to generate a reduction of 157 two-way pedestrian trips over the daily period daily and the number of two-way cycle trips will remain the same.

7.4.2. It is considered that the number of pedestrian and cyclist trips generated by the proposed development would have a negligible impact on the operation of the pedestrian and cycle routes in the vicinity of the site. The provision of public realm improvements as part of this application together with the public realm enhancements being delivered by the Churchill Quarter development provide an improved route for pedestrians from the site to Bromley High Street for a range of retail and leisure facilities in addition to Bromley Park for recreational activity.

7.4.3. In reality it is likely that the number of pedestrian and cycle trips would be higher through the promotion of the Travel Plan measures and design features of the scheme to encourage walking and cycling as the first modes of choice. Considering the improvements proposed as part of this redevelopment and within the vicinity of the site, this marginal uplift in the number of trips undertaken on foot can be accommodated within the existing network.

7.4.4. In addition to the walking trips outlined above, the likely destinations for cyclists travelling to and from the site are considered to be consistent with the ATZ routes outlined within Chapter Four, comprising mainly of educational, retail, employment and leisure trips. Whilst Table 32 indicates that the number of cycling trips will remain the same as a result of the redevelopment, it is considered highly likely that the number of cycle trips associated with the development would be much higher in reality owing to the provision of high quality cycle parking provided for each resident throughout the development.

7.4.5. For the immediate cycle network, the low speed environment will help to promote safe cycling for all residents, including commuting cycle trips as well as leisure cycling trips. High quality cycle links within the vicinity provide direct and well-maintained links for cyclists of all abilities to use. Even with a marginal uplift in the number of cycle trips were to be achieved through the promotion of the Travel Plan, this can be accommodated within the existing network.

8. Mitigation

8.1. Context

8.1.1. This section of the Transport Assessment outlines the package of improvement measures proposed as part of the application in order to promote sustainable means of travel to and from the site and mitigate any potential future impacts the development may have. This will comprise of physical design measures, through the provision of high-quality cycle parking and public realm enhancement, in addition to securing further reports to ensure the delivery of the site and eventual occupation promotes the same sustainable principles. This package of mitigation is proportionate to the development impact outlined in Chapter 7 whilst also aligning with key regional and local policy aspirations.

8.2. Design Solutions

8.2.1. High quality public realm space will be provided between the existing footways and the residential entrances, providing further useable space for pedestrians along the site frontage. This provides a continuation of the public realm proposed as part of the Churchill Quarter development, providing an active travel route between the site and Bromley High Street and Bromley Park. Further to this, the provision of high quality and accessible cycle parking for all residents will help to encourage more residents to consider cycling as their first mode of choice, either for formal commuting or educational purposes or for leisure cycling trips.

8.2.2. These measures comply with the overall health and wellbeing agenda behind the Healthy Streets Approach by encouraging residents to walk and cycle to the range of key destinations outlined within the Active Travel Zone (ATZ).

8.2.3. Whilst the proposals will be car-free, it is proposed to convert two on-street parking spaces on Ethelbert Road directly outside the site to provide one disabled parking space and one accessible car club bay. The removal of these two on-street parking bays will be subject to a Traffic Regulation Order (TRO). The applicant agrees to pay LBB an appropriate amount (to be agreed) towards to consultation of the TRO to convert the two on-street bays.

8.3. Car Club

8.3.1. In accordance with the LBB LIP3, all residents at the site will be offered two years free membership to the car club operator of choice. In addition to this each resident will be offered 20 hours free drive time together with information about the car club upon first occupation and thereafter each year of the free membership offer. This has been outlined within the Framework Travel Plan and can be secured by a s106 condition.

8.4. Framework Travel Plan

8.4.1. A Framework Travel Plan (FTP) has been produced and submitted as part of this Planning Application. It is of note that the Framework Travel Plan is a working document with a Full Residential Travel Plan to be conditioned at a later stage as part of any planning consent. However, the FTP outlines the indicative range of measures and associated targets for the full Travel Plan.

8.4.2. Travel Plans (TP)s are a tool for the delivery of national, regional and local transport policy as one aspect within the planning process to encourage more sustainable development.

8.4.3. TPs are a strategy for managing multi-modal access to a site or development, focusing on promoting and incentivising access by sustainable modes. A successful TP advise on the choice of travel options and encourage sustainable use.

8.4.4. The TP sets out how a range of measures will be introduced at the development to actively encourage the new residents to use sustainable modes of travel. The overarching objectives which underpin a Travel Plan are to:

- Encourage those travelling to and from the development to use public transport, cycle or walk in a safe and secure manner; and
- Promote healthy lifestyles and sustainable, vibrant local communities in accordance with the Healthy Streets Principles.

8.4.5. The approach and measures set out in the TP accord with national, regional and local Government objectives and seek to:

- Promote equal opportunities to residents by offering wider travel choices;
- Develop places for people that encourage community interaction and avoid a car dominated environment;
- Reduce the cost of personal travel and saving household's money through promoting opportunities for cost savings;
- Improve personal and wider community health; and
- Reduce air and noise pollution.

8.4.6. Whilst the site is already within a highly accessible location, a Travel Plan could include site specific measures to help promote active travel first and foremost in addition to the use of sustainable travel amongst future residents.

8.4.7. As detailed above, the site is well served by public transport connections which are viable modes of transport for commuting purposes in addition to leisure, retail and education related trips. The provision of a Travel Plan would help to promote these services to prospective residents prior to moving to the development, therefore helping to influence travel behaviours and encourage sustainable transport use prior to occupation. The Travel Plan will be subject to discussion with LBB and will be monitored against agreed targets throughout a five-year period.

8.5. Construction Traffic Management

8.5.1. The details of construction for the proposed redevelopment (number of staff, length of works, operational hours etc) are yet to be finalised. However, a Framework Construction Logistics Plan (CLP) has been provided (Report Ref: R-20-0049-04). This will be finalised following the appointment of a construction contractor and agreed with LBB / TfL prior to construction work taking place.

8.5.2. The CLP outlines the full array of construction logistics and mitigation techniques that will be employed at the site. All construction routes to the site will be agreed with LBB/TfL prior to construction. It is likely that all construction vehicles accessing the site will arrive via The High Street which in turn routes south to the B228 Masons Hill for access to the A21 Kentish Way and the wider highway network.

8.5.3. During construction works, it is anticipated that construction vehicles can utilise either the existing single yellow line on Ethelbert Road or the coach bay / single yellow lines on Ringers Road, to minimise any disruption to the free flow of traffic on local highway network. It is not anticipated there will be any abnormal loads, with the exception of potentially a crane which if required the route and hours will be agreed in advance with LBB / TfL and the police.

8.5.4. The site will operate a delivery booking schedule to control deliveries and to ensure as far as reasonably practicable that there are no delivery vehicles held waiting in the vicinity of the site. The booking schedule will be strictly enforced. It is anticipated that all deliveries to the site will be organised to take place between the hours of 08:00 and 18:00 Monday to Friday and 08:00-13:00 on

Saturday, with proper planning and an efficient delivery schedule, unnecessary vehicle trips to the site will be kept to a minimum. Where feasible peak hour deliveries will be minimised.

8.5.5. Mitigation measures will be in operation at the site to include control measure for dust, noise, vibration, lighting, delivery locations and restriction of hours of work. The above measures will help to ensure that construction works are organised and delivered in a manner that minimises the impact of the construction traffic on the local highway network in terms of highway safety and amenity.

8.5.6. The contractor would aim to employ local companies and workers to further reduce the impact of construction on the highway network, as well as providing economic benefits to the local area. Construction workers will be encouraged to car share to the site or use the array of sustainable transport options available to and from the site described in Section 2.

8.5.7. The above measures will help to ensure that works are organised and delivered in a manner that minimises the impact of the construction traffic on the local highway network in terms of highway safety and amenity.

8.6. Delivery and Servicing Management Plan

8.6.1. As detailed within Chapter Five, all servicing will be undertaken directly outside the site on Ringers Road or Ethelbert Road, which given the width of the road, does not impact the free flow of traffic. A Framework Delivery and Servicing Plan (Report Ref: R-20-0049-03) has been submitted alongside this planning application which provides measures to minimise the impact of delivery and servicing at the site. However, a summary of the key delivery and servicing measures and anticipated strategy has been provided within Chapter Five of this report.

8.7. Summary

8.7.1. As demonstrated above in Chapter Seven, the development proposals are considered to result in a negligible impact on the local highway network, public transport network, and local walking and cycling infrastructure. It can therefore be concluded that the development would not result in a severe residual impact in accordance with the NPPF. The proposed mitigation will help to ensure that the impact of the development during both the construction phase and operational phase will be minimised.

9. Summary and Conclusion

9.1.1. Evoke Transport Planning Consultants Ltd (Evoke) has been commissioned by Ringers Road Properties Ltd to produce a Transport Assessment (TA) to support a planning application for the demolition of existing buildings and construction of a mixed use development comprising residential units, ancillary residents' facilities (including co-working space) and commercial floor space (Use Class E) across two blocks, along with associated hard and soft landscaping, amenity spaces, cycle and refuse storage. The local planning authority (LPA) and local highway authority (LHA) are the London Borough of Bromley (LBB).

9.1.2. The site forms part of Site 10 within the Bromley Local Plan which is allocated for redevelopment to provide circa 1,230 residential units along with offices, retail uses and a transport interchange at Bromley South Railway Station. The site is classed in the masterplan as Phase 2a and the frontage on Ringers Road is classed as an area to provide a taller building (13-15 storeys) marking the top of the High Street. The site is in an extremely accessible location with high quality pedestrian and cycle links into Bromley Town Centre and to a range of public transport services. The closest bus stops provide regular services to a wide range of locations within London, including to local schools and employment. Additionally, Bromley South and Bromley North Stations are both located within walking distance of the site and they provide frequent rail services to a number of destinations both within and outside London.

9.1.3. The proposed redevelopment will demolish the existing buildings on site (2-4 Ringers Road and 5 Ethelbert Road), and construct two new buildings which will provide a combined total of 94 residential units. Block A will comprise a 14-storey building fronting Ringers Road which will contain 45 residential units with Block B comprising a 12-storey building fronting Ethelbert Road which will contain 49 residential units.

9.1.4. With the exception of one disabled car parking spaces= and one accessible car club bay which will be provided along the site frontage on Ethelbert Road, the proposals will be car-free as such no vehicle accesses to the site will be provided. This approach is considered to be entirely appropriate given the excellent PTAL rating of the site, access to key services and amenities and emerging and adopted policy with regards to the promotion of sustainable travel. To further encourage the uptake of active travel from the outset, high quality public realm will be provided, integrating the site to the adjacent Churchill Quarter for access to and from Bromley High Street. High quality cycle parking will also be provided from the outset, in accordance with the London Plan and London Cycling Design Guidance, further reducing any barriers to cycling for future residents.

9.1.5. The existing site is anticipated to result in approximately 34 two-way person trips during the AM peak period, 80 two-way person trips during the PM peak hour and approximately 833 two-way person trips over the daily period. The total proposed development is anticipated to generate approximately 84 two-way person trips during the AM peak hour period, approximately 72 two-way person trips during the PM peak hour period and approximately 838 two-way person trips across the daily period. This equates to an additional 51 two-way person trips during the AM peak period, a reduction of seven two-way person trips during the PM peak period and an additional 11 two-way person trips over the 12-hour period. It should be noted that a worst-case assessment of the trip generation for the proposed co-working office space has been undertaken and that the trip generation associated with this element of the development proposals is likely to be lower than estimated within this TA.

9.1.6. This level of change is considered to be negligible and would provide a marginal benefit to the operation of the highway and surrounding network over the course of the day. The change to the flow of vehicles along Ethelbert Road / Ringers Road is considered to be of a marginal benefit and a benefit to the demand for on-street parking bays. As such, the marginal net change in trips would not

constitute a severe impact on the operation of the local highway network, nor would it constitute an unacceptable impact on highway safety.

9.1.7. With regards to public transport, the marginal increase in the number of passengers using the services from both Bromley North and Bromley South Stations would have a negligible impact on the operation of the existing services. Likewise, the net change in bus passenger trips is considered to be marginal and would be imperceptible to the current fluctuation in usage on the network.

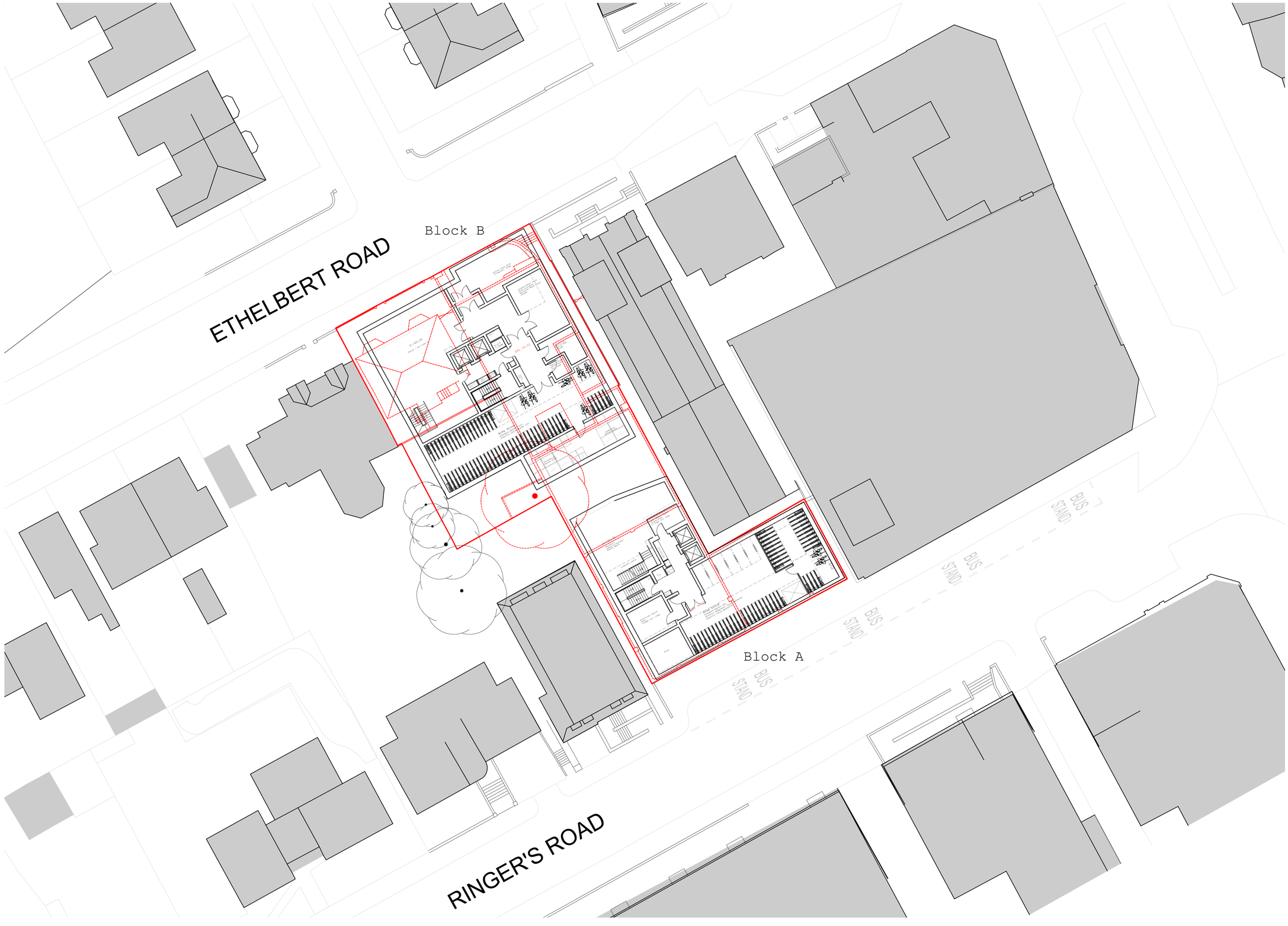
9.1.8. Finally, with regards to active travel, it is considered that the number of pedestrian and cyclist trips generated by the proposed development would have a negligible impact on the operation of the pedestrian and cycle routes in the vicinity of the site. The provision of public realm improvements as part of this application together with the public realm enhancements being delivered by the Churchill Quarter development provide an improved route for pedestrians from the site to Bromley High Street for a range of retail and leisure facilities in addition to Bromley Park for recreational activity.

9.1.9. The proposals comply with the overall health and wellbeing agenda behind the Healthy Streets Approach by encouraging residents to walk and cycle as their first mode of choice from the outset. Further to this, the location of the site together with the design measures outlined within this Transport Assessment and the measures proposed within the Framework Travel Plan ensure the proposals comply with the overall principals of National, Regional and Local policy in promoting sustainable development.

9.1.10. The proposals will bring forward one additional on-street disabled bay and one accessible car club bay, of which one will provide a developer funded car club vehicle in. The developer will fund the consultation of the respective TRO and in accordance with the LBB LIP3, all residents at the site will be offered two years free membership to the car club in addition to 20 hours free drive time.

9.1.11. It is therefore considered that the site is a suitable and sustainable location for the proposed development and the development proposals are considered to result in a negligible impact on the local highway network, public transport network, and local walking and cycling infrastructure and would not have a detrimental impact on highway safety. The development would not result in a severe residual impact in accordance with the NPPF.

Appendix A – Proposed Masterplan



Site Boundary
Demolition

R1	Alterations to internal layouts	LC	21.07.07
R2	General amendments following comments from fire consultant	LC	21.09.10

Hollaway

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Project | Ringers Road
Bromley

Client | The Substantia Group

Title | Proposed Lower Ground Floor Site Plan

Status | PRELIMINARY

Scale@A1 | 1:200 **Date** | 21.01.21 **Drawn** | GG **Chk'd** | LC

Project Number 18.085
Bim Number

Drawing Number 100.03

Revision R2

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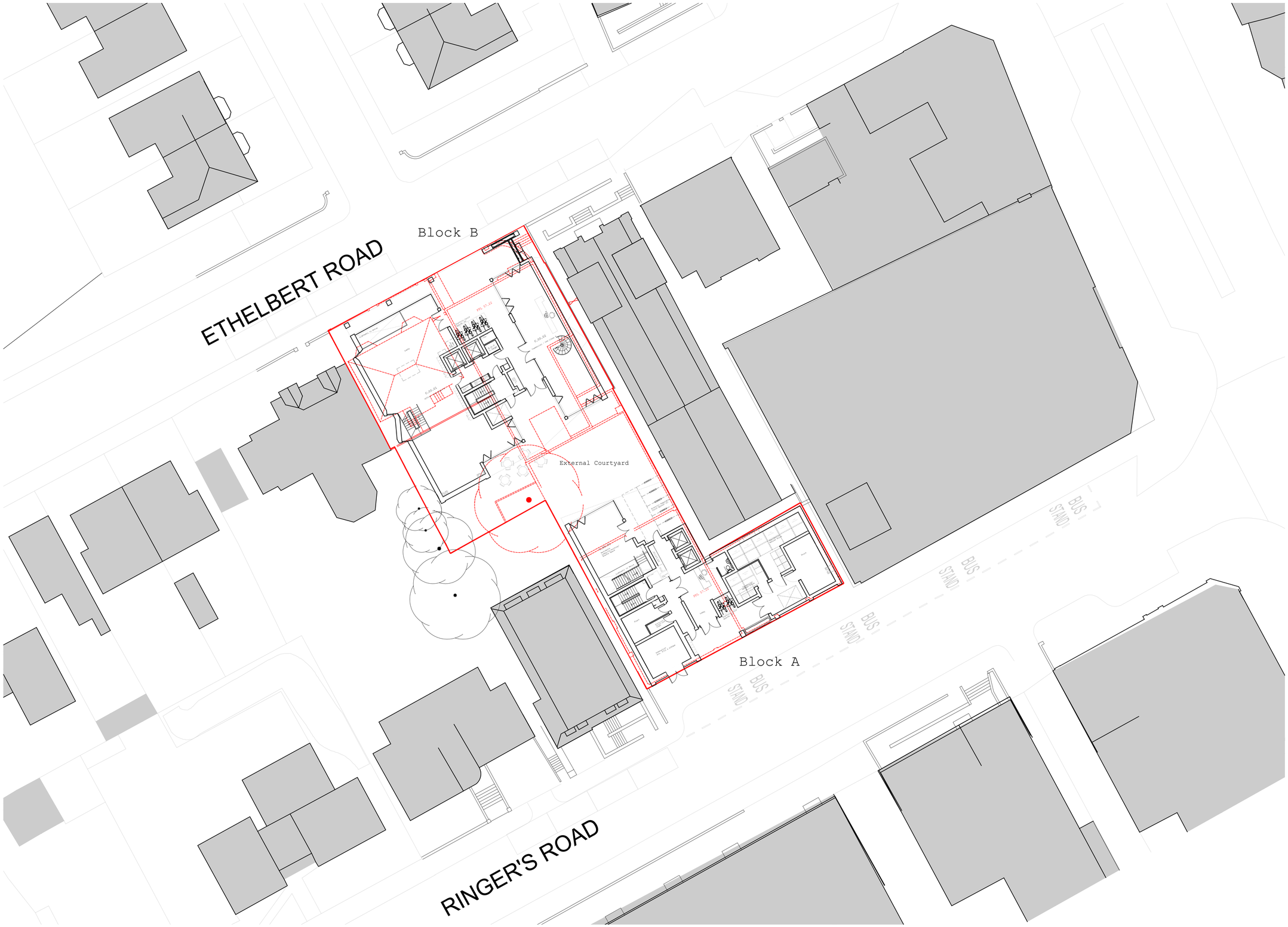

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Project | Ringers Road
Bromley

Client | The Substantia Group

Title | Proposed Ground Floor Site Plan

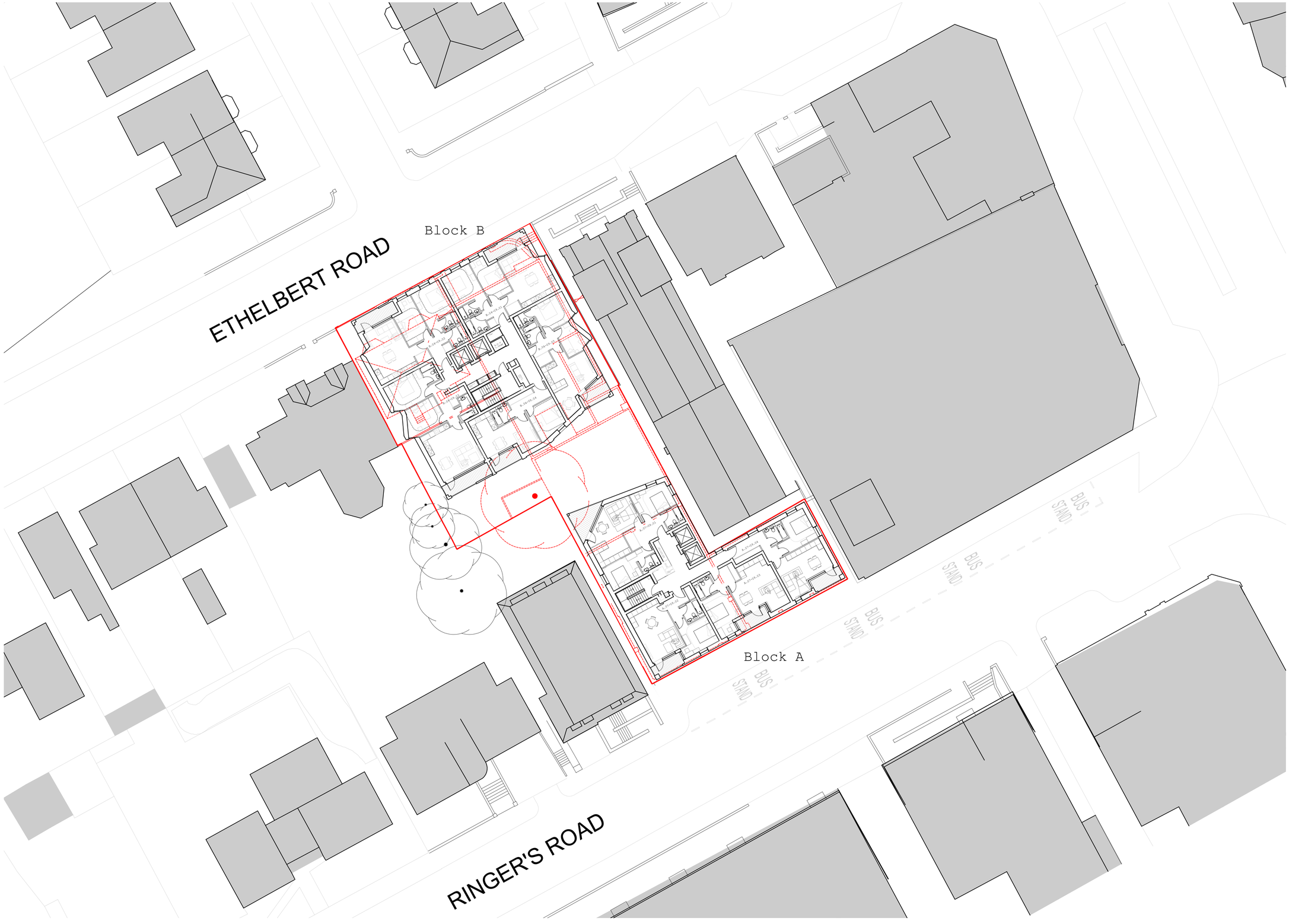
Status | PRELIMINARY

Scale@A1 | 1:200 **Date** | 21.01.21 **Drawn** | GG **Chk'd** | LC

Project Number 18.085
Bim Number

Drawing Number 100.04

Revision R2



Site Boundary
Demolition

R1	Alterations to internal layouts	LC	21.07.07
R2	General amendments following comments from fire consultant	LC	21.09.10

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Project | Ringers Road
Bromley

Client | The Substantia Group

Title | Proposed Typical Floor Site Plan

Status | PRELIMINARY

Scale@A1 | 1:200 **Date** | 21.01.21 **Drawn** | GG **Chk'd** | LC

Project Number
18.085

Drawing Number
100.05

Revision
R2

Bim Number

Appendix B – Pre-Application Responses

THE LONDON BOROUGH
www.bromley.gov.uk

Town Planning
Civic Centre, Stockwell Close, Bromley BR1 3UH

Telephone 020 8313 4956
Direct Line: 020 8313 4893
Fax: 020 8313 0095
Email:Claire.Brew@bromley.gov.uk
DX5727 Bromley

Our ref: PREAPP/19/00321

Ringers Road Properties Ltd
C/O Matthew Blythin

Matthew.blythin@dhaplanning.co.uk

3rd December 2019

Dear Mr Blythin,

Proposal: Demolition of existing buildings (2-4 Ringers Road and 5 Ethelbert Road) and erection of two no. buildings to provide 113 one and two bedroom residential apartments.

2 - 4 Ringers Road, Bromley, BR1 1HT

I refer to your pre-application submissions received 17th October 2019 and our meeting of 12th November 2019.

The submission was supported by the following documents:

- Major Pre-planning application advice request form
- Covering letter dated 16th October 2019
- Pre-Application Planning Statement
- Pre-application design pack (Guy Holloway Architects)
- Daylight and Sunlight Report (RVM)
- Proposed Site Plan

Location and Key Constraints

- Opportunity area – Bromley Town Centre
- Forms part of Housing Site allocation 10

The Pre-application site measures approximately 0.1 hectares and comprises 2 properties numbers 2 to 4 Ringers Road and number 5 Ethelbert Road. The site falls within the boundary and forms part of housing allocation Site 10 '*West of Bromley High Street and land at Bromley South*' in Bromley's Local Plan which is a 4.54ha site.

The site is in close proximity to the High Street and approximately 300m from Bromley South station. The surrounding area is characterised by both residential development and commercial development including a two storey detached house adjoining the site at 7 Ethelbert Road and two storey semi-detached properties to the north of the site in Ethelbert Close. Adjoining the site to the east is the Salvation Army church and to the south of the site in Ringers Road are a number of purpose built

blocks of flats (4 to 11 storeys high). Development further to the east fronting High Street are commercial buildings with some residential uses at upper floors, ranging from 2 to 4 storeys high.

The site's PTAL rating is 6A.

Proposals

- 17 storey building fronting Ethelbert Road providing 68 residential flats (one and two bed)
- 12 storey building fronting Ringers Road providing 45 residential flats (one and two bed)
- A total of 113 units

Relevant Planning History

2-4 Ringers Road
There is a long history of applications related to the ground floor of 2-4 Ringer's Road which was granted planning permission for the change of use from retain to restaurant/bar under application ref.87/03705.

Permission was granted for the change of use of first and second floors to a manager's three bedroom flat under application ref.93/01999.

Planning permission was granted for a gym at part of the ground floor and part of the first floor (use Class D2) on 30.05.2017under ref.17/00004.

5 Ethelbert Road
This site is in residential use as 5 flats.

Policy Context

London Plan (2016)

2.13 Opportunity Areas and Intensification Areas
2.15 Town Centres
3.3 Increasing housing supply
3.4 Optimising housing potential
3.5 Quality and design of housing developments
3.6 Children and young people's play and informal recreation
3.8 Housing choice
3.9 Mixed and balanced communities
4.7 Retail and town centre development
4.8 Supporting a successful and diverse retail sector and related facilities and services
5.2 Minimising carbon dioxide emissions
5.3 Sustainable design and construction
5.9 Overheating and cooling
5.10 Urban greening
5.11 Green Roofs and Development Site Environs
5.12 Flood risk assessment
5.13 Sustainable Drainage
5.14 Water quality and wastewater infrastructure
5.15 Water use and supplies
5.21 Contaminated land
6.3 Assessing effects of development on transport capacity
6.9 Cycling
6.10 Walking
6.13 Parking
7.1 Lifetime neighbourhoods

7.2 An inclusive environment
7.3 Designing out crime
7.4 Local character
7.5 Public Realm
7.6 Architecture
7.8 Heritage assets and archaeology
7.13 Safety, security and resilience to emergency
7.14 Improving Air Quality
7.15 Reducing and managing noise, improving and enhancing the acoustic environment and promoting appropriate soundscapes
7.19 Biodiversity and access to nature
7.21 Trees and woodlands
8.2 Planning obligations
8.3 Community infrastructure levy

Bromley Local Plan (BLP)

1 Housing Supply
2 Provision of Affordable Housing
4 Housing Design
5 Parking of Commercial vehicles
30 Parking
31 Relieving congestion
32 Road Safety
33 Access for all
34 Highway Infrastructure Provision
35 Transport Investment Priorities
37 General Design of Development
38 Statutory Listed Buildings
42 Development adjacent to a conservation area
47 Tall and Large Buildings
48 Skyline
70 Wildlife Features
72 Protected Species
73 Development and Trees
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Bromley Town Centre AAP

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Supplementary Planning Guidance

London Plan:

- Homes for Londoners: Affordable Housing and Viability (2017)
- Housing (March 2016)
- Accessible London: Achieving an Inclusive Environment (2014)
- Sustainable Design and Construction (2014)
- Shaping Neighbourhoods: Character and Context (2014)
- Providing for Children and Young People's Play and Informal Recreation (2012)

London Borough Bromley:

- Planning Obligations (2010) and subsequent addendums
- SPG1 General Design Principles
- SPG 2 Residential Design Guidance

Considerations

The main issues to be considered in respect of this proposal are:

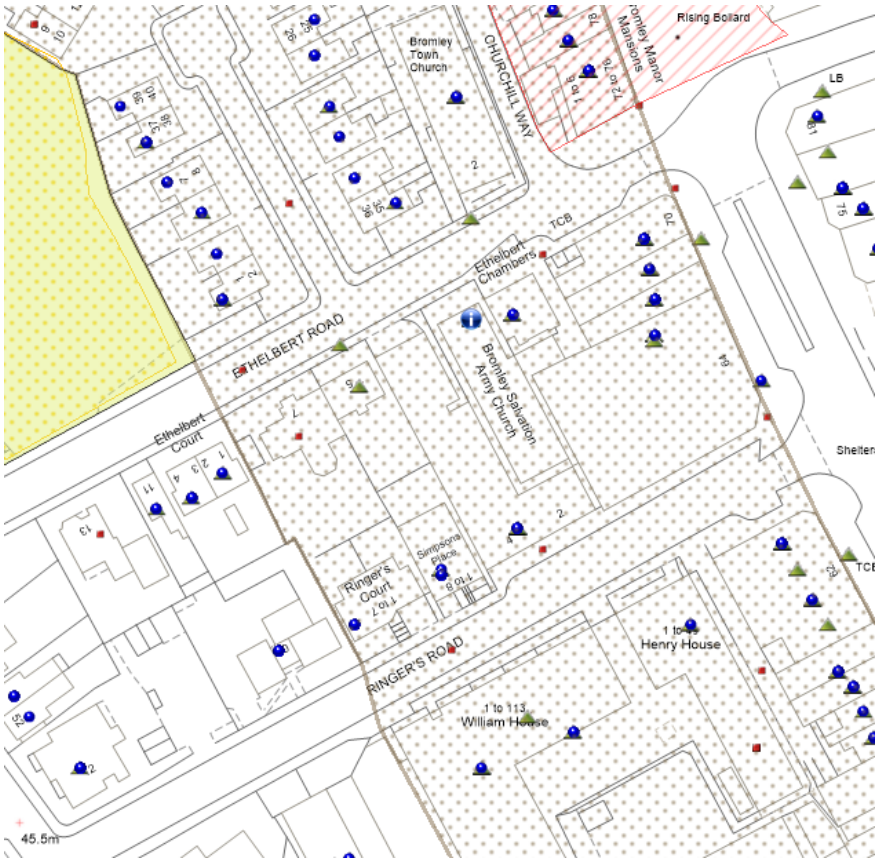
- Principle of development including site allocation and existing and proposed land uses
- Design and Density
- Impact on neighbouring amenities
- Housing Issues
- Highways
- S106 and CIL

Principle/Land use

Site Allocation in Local Plan

Site allocation 10 is for the redevelopment of land to the west of High Street and at Bromley South for mixed use, including 1230 residential units, offices, retail and transport interchange. Proposals for this site will be expected to:

- Incorporate a sensitive design which respects the adjoining low rise residential development whilst optimising its key town centre location.
- Improve Bromley South Station
- Provide a high quality public realm and accessibility to and through the site.
- Provide an attractive and active frontage to the High Street.
- Be accompanied by a Masterplan to show how the proposed development is consistent with a comprehensive development of the site.



Extract from Proposals Map showing part of Site 10

Officers are, in principle, supportive of the proposal to develop this parcel of land for residential use – it forms part of a Housing Allocation site and the provision of 113 residential units in this sustainable town centre location would make a positive contribution to the Borough's Housing Supply. However, it is considered that it would be more appropriate for the site to be developed as part of a Masterplan Framework for the wider site allocation, engaging with other stakeholders to develop a realistic mix of uses and development quantums and setting out a comprehensive vision of how the wider site could be developed to unlock the potential for cohesive regeneration.

It is recognised that there would be obstacles in respect of the timing and deliverability of the different parcels of land under the control of separate landowners, however, without a Masterplan Framework it is difficult for Officers to assess how the development would impact on the delivery of the strategic policy objectives for the wider site.

The principle of the acceptability of the loss of existing uses at the site will also need to be carefully considered and the onus would be on the applicant to justify a completely residential (Class C3) scheme, given the aspirations in the Local Plan to develop Site 10 with mix of uses.

With regard to the loss of the ground floor restaurant/bar use, while the site is outside of any retail frontages which would preclude the loss of the A3/A5 use, being a Town Centre Site and an Opportunity Site, a suitable mix of uses is required which would *"contribute positively to the vitality and viability of the Town Centre"* (BLP policy 92). Policy BTC1 of the AAP sets out minimum targets for additional floorspace, including retail, food and beverage, business, leisure, residential and community facilities, to be provided at the Opportunity sites.

With regard to the existing and proposed land uses on the site, 2-4 Ethelbert currently includes a mix of uses including a bar/restaurant with a servicing area at the rear and a gym (Use Class D2). Historically, the first and second floors were granted permission for use as a Manager's flat in connection with the ground floor bar/restaurant, however, it is not clear what the last use of the upper floor was. This would need to be established through a certificate of lawfulness application.

Policy 20 of the Bromley Local Plan which restricts the loss of community facilities would apply to the loss of D2 use. Planning permission will not be granted for proposals that would lead to the loss of community facilities, unless alternative enhanced provision is to be made in an equally accessible location for the community it serves, or it can be demonstrated that there is no longer a need for them or other forms of social infrastructure. Such a demonstration of need should include consultation with relevant Council departments and third party providers to establish whether any community groups or service providers express a need for the site and are interested in buying or leasing it, as well as a six month period of marketing which is current and robust at a realistic value reflecting its existing use value (supported by a viability assessment which will be reviewed at cost to the developers).

Proposals that involve a change of use between forms of social infrastructure, not permitted under the Use Classes Order, will also be required to demonstrate a six month period of marketing.

Therefore we would strongly encourage the inclusion of the adjacent Salvation Army Church site into the proposed site boundary as this would enable the re-provision of the church and community café (use Class D2) in accordance with policy 20.

If the first and second floors have historically been used as offices then policy 97 '*change in use of upper floors'* would also apply and evidence to demonstrate that it would not be feasible and/or viable to refurbish, renew or modernise the offices in order to meet the current requirements of occupiers should be provided. This should be demonstrated through marketing evidence and an independently validated viability assessment.

You can download a copy of the adopted Local Plan at https://www.bromley.gov.uk/downloads/file/4768/bromley_local_plan.

Design and Density

Scale

London Plan policy 7.7a states that proposals for tall buildings should be part of a plan-led approach to changing or developing an area by the identification of appropriate, sensitive and inappropriate locations. This site has not been identified as an appropriate location for a tall building in the AAP and any application should therefore include an urban design analysis that demonstrates the proposal is part of a strategy that will meet the criteria in London Plan policy 7.7C

The proposed development comprises 2 buildings of 12 and 17 storeys and will therefore exceed the threshold size set for referral to the Mayor.

Bromley Local Plan policies 47 and 48 require tall and large buildings to be of the highest architectural design quality and make a positive contribution to the townscape, ensuring that their massing, scale and layout enhances the character of the surrounding area. Tall buildings should be appropriate to their local location and historic context whilst protecting strategic views and will be subject to an assessment of their impact on the skyline including on views of the Keston Ridge. The impact on the Church House

Gardens/Bromley Park which is designated as 'Local Green Space' will also need to be considered in accordance with policy 56.

The draft Masterplan which you refer to in the pre-application documents was only a consultation document and has not been formally adopted. It is, at best, an indication of how the re-development of this part of Site Allocation 10 could appear, providing an option for uses, layout and heights on this area, albeit as part of the larger comprehensive allocation site. This draft document places the site within Development Zone 2 and earmarks it for residential use, with the Ringers Road block indicatively shown as 13-15 storeys and the Ethelbert Road block below 8 storeys.

A 17 storey building is proposed on the northern side of the site fronting Ethelbert Road with the Pre-Planning Statement, at Para 4.4.2:

…finding that the northern block offers a better and more suitable opportunity to deliver height and a focal point in townscape terms, rather than the southern part of the site as indicated in the draft Masterplan. This approach still allows a stepping down to the west and relates well to the Phase 1 Churchill Quarter development planned to the north.

It is noted that there is a planning application currently being considered relating to Phase 1 of Site10: *Churchill Quarter* (reference DC/18/02181/FULL1) which proposes the demolition of 1-40 Ethelbert Close, 2 Ethelbert Road and 102-108 High Street and the redevelopment of the site with buildings with a maximum height of 16 storeys. And, more recently, an application was submitted relating to 66-70 High Street (reference 19/04588/FULL1) which proposes the demolition of existing buildings and construction of a 16 storey mixed use building to provide retail floorspace and 68 residential units.

However, neither of these applications have been determined and there is no precedent for such tall buildings in this location. At 17 storeys, the pre-application proposal would exceed the height of any surrounding buildings in this part of the town centre. While it is acknowledged that the building would be set back from the High Street along Ethelbert Road, it would still be highly visible from the northern end of the High Street and when approaching from the south, appearing as an incongruous feature and significantly alter the character of this part of the town centre.

Furthermore, the proposed 17 storey building would have a poor relationship with development to the west of the site in Ethelbert Road which are two storey detached and semi-detached dwellings. The height and prominence of the building would be further exacerbated by the topography of the area whereby the site levels fall steeply from east to west along Ethelbert Road and the building would appear particularly overbearing in relation to No.7 Ethelbert Road.

The building height should therefore be reduced and a more transitional and sympathetic approach should be taken, bearing in mind the adjacent low-rise and traditional residential typologies to the north and west and the larger commercial premises and purpose-built flats to the south and east. This approach would be more consistent with the indicative building heights set out in the draft Masterplan document which shows the Ethelbert Road block below 8 storeys.

In the south of the site a 12 storey building is proposed. The southern part of the site would, potentially, be more suitable for a taller building, stepping-up to the increased heights along the High St and the 11 storey flats to the south in Ringers Road, however, at this stage there are concerns over the impact on the occupiers of adjacent sites, in particular the impact on daylight and sunlight at William House and Henry House. The height and density of the development should therefore be determined through a design-led approach, taking into account the impact on the character of the area, the effect on townscape and visual impacts.

A Landscape/Townscape and Views Impact Assessment will need to be undertaken and submitted in respect of any forthcoming planning application. In accordance with draft London Plan policy D2 this development would also need to undergo a design review prior to an application being submitted. Please contact the Council to confirm this has taken place prior to any application being submitted.

Layout

The pre-application site excludes key areas of the Site Allocation from its boundary, notably the Salvation Army church, 7 Ethelbert Road, Simpsons Place and Ringer's Court, and there are concerns that this will prejudice the future re-development of these sites. For example, how will you ensure that these adjacent sites are not overlooked by proposed habitable room windows and outdoor amenity areas, thereby reducing their development potential?

The proposed building in the northern part of the site would project forward beyond the established building line on Ethelbert Road and, overall, it is unclear how the development would function well in conjunction with neighbouring sites. The juxtaposition of such a large form of development against the existing low-rise buildings (particularly in Ethelbert Road) would appear incongruous and over-bearing and could give rise to a loss of outlook and overlooking to neighbouring windows and outside areas, leading to a loss of amenity for existing occupiers.

There is a lack of pedestrian permeability through the site and the proposed open space in between the two buildings would be dark and unattractive for use as amenity area. It is noted that the indicative layout in the draft Masterplan is less dense and provides an open space amongst the buildings.

By including the Salvation Army church site in this proposal it would be possible to re-provide the church and community café on the lower floors of the development which, in view of the siting and height of the existing church in relation to the proposed development, currently restricts the daylight into the proposal site.

The incorporation of the adjacent sites would also enable increased separation distances to be provided between the two blocks and a more stepped approach to height and massing in response to adjacent building typologies. This would help to alleviate some of the concerns in relation to residential amenity and would enable the provision of a high quality landscaping scheme and more functional outdoor open space throughout the site. Urban greening should be promoted throughout the site by incorporating:

- Green roofs and walls, soft landscaping and trees;
- Features for wildlife, such as nesting boxes and beehives;
- A planting mix which encourages biodiversity; and
- Planting which will be resilient to a range of climate conditions.

If it is not feasible to provide a green roof, you should explicitly state why.

The development should address sustainable design and construction principles and include, where appropriate, on-site energy generation. The layout of the scheme should ensure there is sufficient space on site for any equipment and fuel storage, of required, and should investigate implications of fuel delivery. The potential site and form of buildings and flues should be included in the information submitted with the application.

Appearance

Tall buildings are required by policy to incorporate the highest standards of architecture and materials, including sustainable design and construction practices. At this stage limited details have been provided regarding appearance and external finishes. The pre-application document indicates the use of brick, protruding brick features and render, punctuated with double-height windows and more extensive glazing at the upper levels. While there are no objections, in principle, to the use of these materials, the form which the buildings take is overbearing fails to respond well to the existing pattern of development in the area.

The architectural approach should aim to provide elegant buildings which reflect the local vernacular and appear sympathetic to the scale and form of adjacent development. The scale and massing could be addressed by:

- Reducing the height;
- adding more variation in storey heights;
- adding features or breaks to create visual interest;
- use of contrasting materials.

At application stage a detailed report setting out what materials will be used and how the development will be finished externally, aided by detailed elevational drawings and visuals, will be crucial to understanding how the building will appear in the context of its surroundings.

Secured by Design

The proposal should incorporate Secured by Design principles to take account of crime prevention and community safety. It is anticipated that a condition securing measures to minimise the risk of crime will be attached to any planning permission. I would therefore recommend that you contact Mark A P Headley at the Metropolitan Police on 0208 284 8889 or Mark.A.P.Headley@met.police.uk to discuss the Secured by Design requirements for this development at the earliest opportunity and prior to the submission of a formal planning application. If it is possible to identify the Secured by Design requirements for this development and include them within any forthcoming planning application it may not be necessary for a pre-commencement condition to be imposed on any planning permission in relation to this matter.

Density

The adopted London Plan density matrix (Table 3.2) shows a density of 215-405u/ha for sites within a central location with a PTAL of 4 to 6 (with 2.7-3 hr/unit). The application site is approximately 0.11ha and proposes 113 units which equates to a density of 1027u/ha.

The proposed density is high – outside the current London Plan matrix. While it is recognised that the characteristics of this site, being within an opportunity area and town centre with a high PTAL rating, make it suitable for the consideration of higher density development in excess of the density ranges in the plan, without a Masterplan having been submitted setting out the aspirations for the wider site it is difficult to understand the rationale or justification for the building heights and excessive residential density proposed on this parcel of land.

At application stage the acceptability of building at such a high density will be subject to additional scrutiny and you will need to demonstrate that the infrastructure and amenity space requirements arising from the development can be met outside the site. Furthermore, Draft London Plan Policy D6C states:

> The higher the density of a development, the greater the level of scrutiny that is required of its design, particularly the qualitative aspects of the development design described in Policy D4 Housing quality and standards, and the proposed ongoing management. Development proposals with a residential component that are referable to the Mayor must be subject to the particular design scrutiny requirements set out in part F of Policy D2 Delivering good design and submit a management plan if the proposed density is above:
>
> 1. 110 units per hectare in areas of PTAL 0 to 1; or
> 2. 240 units per hectare in areas of PTAL 2 to 3; or
> 3. 405 units per hectare in areas of PTAL 4 to 6.

Draft London Plan Policy D6 also requires the following details to be provided at application stage:

1. the Floor Area Ratio (total Gross External Area of all floors / site area)
2. the Site Coverage Ratio (Gross External Area of ground floors /site area)

3. the maximum height in metres above ground level of each building and at Above Ordnance Datum (above sea level).

Impact on Neighbouring amenities

BLP policy 37 requires development to respect the amenity of occupiers of neighbouring buildings and those of future occupants, providing healthy environments and ensuring they are not harmed by noise and disturbance, inadequate daylight, sunlight, privacy or by overshadowing.

A Daylight/sunlight impact assessment has been provided which concludes that the majority of the windows serving neighbouring premises meet the BRE Guidelines recommendation for Vertical Sky Component (VSC) when applied in strict accordance with the guidance. However there will be a notable impact on Henry House (only 21 out of 45 windows meet guidelines) and William House (only 36 out of 55 windows meet guidelines), and to a lesser extent Bromley Temple, Ringers Court and Simpsons Place.

While it is noted that the site is in an urban location and daylight/sunlight is only one consideration of many, the development also has the potential to significantly overlook the outdoor amenity areas and habitable room windows of neighbouring properties. At this stage it is unclear how proposed windows and private outdoor areas (e.g. balconies) will be designed to respect the privacy of occupiers of adjacent and nearby sites. When taken in combination with the concerns raised above in respect of design and the relationship with existing buildings, Officers would therefore be unlikely to recommend this development favourably should an application be submitted in its current form.

At application stage you would need to demonstrate how the development has been designed to maintain the existing expected levels of privacy and outlook for occupiers of surrounding sites. At application stage any comments received locally will also be taken into account.

Housing issues

Unit Sizes and Affordable Housing

New development is expected to provide mixed and balanced communities. Policies within the Bromley Local Plan do not set a prescriptive breakdown in terms of unit sizes. Individual sites will be considered on a case by case basis in consultation with the Council's Housing Department.

The latest housing mix need in Bromley, in line with the most recent SHMA, is 53% 1-bedroom, 21% 2-bedroom and 20% 3-bedroom units. This development would provide 41 No. one bedroom flats and 72 No. two bedroom flats. Historically, there has been an under-provision of one and three bedroom units being secured in new development in this area and some 3 bedroom units should therefore be provided to reflect local need.

The pre-app proposes 35% affordable housing to achieve the requirements of the Local Plan and London Plan. This will however be subject to viability testing as the scheme develops, to ascertain whether or not it will benefit from the Fastrack approach (para 4.3.2, pre-application planning statement). Policy 2 of the BLP requires a tenure split of 60% social-rented/affordable rented housing and 40% intermediate provision, unless it can be demonstrated that a lower level should be sought or that the 60:40 split would not create mixed and balanced communities.

In this location the Council would expect the onsite provision of the maximum amount of affordable housing which could be reasonably secured and in full compliance with development plan policy. The affordability of different elements of the scheme should not immediately be apparent from the siting, design and layout.

Quality of accommodation

Policy 3.5 of the London Plan and BLP policy 4: *Housing Design* require all new housing developments to achieve a high standard of design and layout whilst enhancing the quality of local places. Housing schemes will also need to respect local character, spatial standards, physical context and density. The Mayor's Housing SPG sets out guidance in respect of the standard required for all new residential accommodation to supplement London Plan policies. Part 2 of the Housing SPG deals with the quality of residential accommodation setting out standards for dwelling size, room layouts and circulation space, storage facilities, floor to ceiling heights, outlook, daylight and sunlight, external amenity space (including refuse and cycle storage facilities) as well as core and access arrangements to reflect the Governments National Technical Housing Standards.

In March 2015 the Government published The National Technical Housing Standards. This document prescribes internal space within new dwellings and is suitable for application across all tenures. It sets out requirements for the Gross Internal (floor) Area of new dwellings at a defined level of occupancy as well as floor areas and dimensions for key parts of the home, notably bedrooms, storage and floor to ceiling height.

No detailed floor plans have been provided at this stage, however, the Accommodation Schedule confirms that the 1 bed flats would have a GIA of 55sqm and the 2 bed flats would have a GIA of 75sqm which accords with the Technical Housing Standards.

The London Plan makes clear that ninety percent of new housing should meet Building Regulation requirement M4 (2) 'accessible and adaptable dwellings' and ten per cent of new housing should meet Building Regulation requirement M4 (3) 'wheelchair user dwellings', i.e. is designed to be wheelchair accessible, or easily adaptable for residents who are wheelchair users. At application stage you should demonstrate that the development would comply with the relevant category of Part M4.

With regard to residential amenity, the proposed buildings would be positioned around only 10m from each other giving rise to concerns about overlooking between the proposed flats, poor outlook and lack of sunlight/daylight, particularly at the lower floors due to the relationship with the existing Salvation Army church.

Habitable room windows and outdoor amenity areas should be orientated to maximise their outlook and avoid mutual overlooking between the proposed dwellings. Single aspect units should be minimised. North facing single aspect units and single aspect units with three bedrooms or more should be avoided altogether. At application stage a break-down of the overall percentage of single aspect units should be provided.

Units should be arranged with living areas stacked over living areas of the flats below to avoid an adverse noise impact for future occupiers. Measures to protect future occupiers from harmful levels of noise from external sources, such as the High Street, will also need to be built into the design of the development and, at application stage; a noise and vibration impact assessment will be required.

Amenity Space and Play Space

All new housing developments are required to provide sufficient external, private amenity space that is accessible and practical. In accordance with the Housing SPG a minimum of 5sqm of private outdoor space should be provided for 1-2 person dwellings and an extra 1sqm should be provided for each additional occupant. The minimum depth and width for all balconies and other private external spaces should be 1500mm.

Development proposals that include housing should also make provision for play and informal recreation, based on the expected child population generated by the scheme and an assessment of future needs. The Mayor's Supplementary Planning Guidance Providing for Children and Young People's Play and Informal Recreation sets out guidance to assist in this process. At application stage the onus would also be on the applicant to demonstrate how the application will meet London Plan requirements in terms of Children's play space.

In this instance, due to the lack of open space on the site, you will need to identify existing play facilities within the identified distance bands in the SPG. This will determine whether there will be potential for enhancing existing provision to accommodate the additional needs arising from the proposed development as an alternative to new provision. This may be done through a map or a photo sequence that indicates the distance from site, direction of travel and presents solutions to overcome any barriers to movement preventing children accessing the play area (e.g. roads, crossings (including for disabled children), way findings, lighting).

If there is existing provision within an acceptable distance of a proposed development, an off-site financial contribution will be required. Alternatively, if no existing facilities are within the identified distance bands, a contribution towards new provision will be sought.

Highways

The NPPF recognises that transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health objectives. The NPPF clearly states that transport issues should be considered from the earliest stage of both plan making and when formulating development proposals and development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.

The 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.

London Plan and BLP Policies encourage sustainable transport modes whilst recognising the need for appropriate parking provision. Car parking standards within the London Plan and BLP should be used as a basis for assessment.

The development is situated in an area with high PTAL rate of 6a (on a scale of 0 – 6b, where 6b is the most accessible).

Parking

Bromley Local Plan Chapter 4, Getting Around (Transport and Accessibility) states the following for residential parking standards:

Bromley Residential Parking Standards (per unit)		
PTAL	**1-2 bed**	**3 bed**
0-2	Minimum of 1	Minimum of 1.5
2-6a	0.7 (min) – 1 (max)	1 (min) 1.5 (max)

London Plan policy 6.13E states:

> *b in locations with high public transport accessibility, car-free developments should be promoted (while still providing for disabled people)*

No vehicular access is indicated and no car parking is provided for the development which would be “car-free”. Highways Officers have raised concern over the lack of parking for the development and have advised that at least 50 on-site parking spaces should be provided.

The London Plan requires 10% of all new homes to be wheelchair accessible or easily adaptable for occupation by a wheelchair user. This policy references the 'Wheelchair Housing Design Guide' (WHDG) which requires one parking bay for every wheelchair accessible or easily adaptable home (so 10% of the total number of residential units).

In addition, the *Accessible London SPG*, at Para 4.3.18, states "*Any residential development, even when car free should comply with London Plan Policy 3.8 and provide adequate parking for the wheelchair accessible or easily adaptable units, preferably on-site".* Para 4.3.20 of the SPG makes allowance for disabled parking to be considered after first occupation of a development and says that a parking management strategy which sets out what mechanisms will be used to ensure that additional provision can be made quickly and easily can be approved at planning application stage. For Major developments with easy access to step-free public transport this could take the form of the delivery of conveniently located on street bays (through a s106 agreement), access to a car club, facilities for the storage and charging of mobility scooters and improvements to local bus tops, including the provision of raised kerbs to facilitate bus-ramps (Para 4.3.21).

If you are not proposing parking you should justify this through the provision of the appropriate assessments and any other relevant information which should include an assessment of the cumulative impacts of extant permissions and other planned developments in the town centre. A strategy for securing appropriate facilities for disabled occupants of the development will also be required.

The Transport Assessment should include the following:

- Existing Situation -Baseline data
- Proposed Development and Site Access Arrangement
- Traffic Generation analysis
- A detailed Delivery and Servicing Plan (DSP)
- Traffic Assessment Scenarios (Transport and traffic Modelling)
- Public transport assessment to indicate the impact of development on the public transport network and confirm if mitigation will be required.
- Construction management plan
- Mitigation/ Travel Plan

Electric Vehicle Charging points:

I note that no parking is included in the proposal, however should this change at any time as the application progresses then evidence that the ratio of electric charging points provided for the development complies with the relevant London Plan standards, will be required.

Cycle Parking and Waste and Recycling storage:

Bicycle parking and storage facilities should be provided in accordance with the standards set out in Table 6.3 of the 2016 London Plan. Your attention is drawn to the London Cycle Design Standards: http://content.tfl.gov.uk/lcds-chapter2-toolsandtechniques.pdf.

Refuse and recycling storage facilities should be provided in accordance with the Council's refuse collection note for developers and architects: https://www.bromley.gov.uk/downloads/file/3164/refuse_collection__notes_for_developers_and_architects

A contribution to linking the development to the cycle network proposed in the LIP and some other minor pedestrian improvements to enhance the walking route to the town centre and Bromley South station may also be sought.

Planning obligations and Community Infrastructure Levy (CIL)

Given the scale and type of development proposed, its relationship to the High Street and the town centre and also taking into account that the Council does not currently implement a Local CIL charge, it is considered appropriate that this development makes a significant contribution towards local infrastructure.

The Council's Local CIL which is not expected to be implemented before Spring 2020, is currently proposed at £100/sqm for Residential C3 uses. Planning submissions made after the implementation of the Local CIL may still be subject to Section 106 contributions.

It is anticipated that a Section 106 (S106) Legal Agreement will be required and use of the Council's standard template can simplify this work. The standard template can be found in the Councils Planning Obligations SPD which is available on the website. The Council expects that the draft Heads of Terms will have been agreed by the time an application is submitted for formal consideration. This will ensure early instruction to the Council's Legal Advisor to prepare a draft S106 can be made, thereby avoiding delay in issuing a permission.

Without prejudice to the determination of an application, the potential head of terms are identified below:

- Contribution toward Bromley High Street regeneration works: **TBC;**
- Contribution to Health: **£138,651.00** (market scheme)/ **£124,142.00** (policy compliant scheme);
- Contribution to Education: **£261,272.19** (market scheme)/ **£305,708.30** (policy compliant scheme);
- Contribution to off-site play/open space: **£45,200;**
- Contribution to Highways infrastructure and setting up of car club: **TBC;**
- Carbon off-setting payment in-lieu: **to be confirmed as part of energy assessment**
- Monitoring and legal costs: **TBC**

The Mayor of London's CIL is a material consideration. CIL would be payable on this proposal. The Mayor approved the adoption of the MCIL2 charging schedule on 4th February 2019 and from 1st April the new rate of £60 per sqm applies.

A CIL information form should be submitted including calculations of the additional floor space created. If the above is liable, this charge is payable after development begins. Further information on CIL can be found on the Planning Portal.

Other Technical issues

Climate change and carbon offsetting

An energy assessment/strategy to demonstrate that climate change mitigation measures are integral to the scheme's design and evolution, and that they are appropriate to the context of the development should be provided. The energy assessment should be prepared in line with the GLA's guidance (Energy Planning – GLA guidance on preparing energy assessment – March 2016).

The Draft New London Plan (policy S12) requires Major development to be net zero-carbon. This means reducing carbon dioxide emissions from construction and operation, and minimising both annual and peak energy demand in accordance with the following energy hierarchy:

1. Be lean: use less energy and manage demand during construction and operation.

2. Be clean: exploit local energy resources (such as secondary heat) and supply energy efficiently and cleanly. Development in Heat Network Priority Areas should follow the heating hierarchy in Policy SI3 Energy infrastructure.

3. Be green: generate, store and use renewable energy on-site.

The proposal is required to achieve carbon zero and should achieve a minimum of 35% carbon reduction on site for both residential and any planned commercial development. Residential development should aim to achieve 10 per cent (of the 35% reduction) through energy efficiency measures. Where it is clearly demonstrated that the zero-carbon target cannot be fully achieved on-site, any shortfall should be provided:

1. through a cash in lieu contribution to the relevant borough's carbon offset fund, and/or

2. off-site provided that an alternative proposal is identified and delivery is certain.

Pollution and Contamination

The site is within an Air Quality Management Area (AQMA). An Air quality assessments and Dust Risk Assessment are required for proposals which are likely to have an adverse effect on nearby sensitive receptors and/or are likely to bring new sensitive receptors into an area of poor air quality. The Air Quality Assessment should include Air Quality Neutral Calculations. NO2 diffusion tube monitoring shall be carried out for a period of at least six months and the subsequent data report submitted to and approved in writing, by the local planning authority. Locations and methodology of monitoring shall be agreed by Bromley Council prior to commencement of monitoring. This baseline monitoring report will provide verification for modelling exposure levels and will establish whether a scheme of proposed air quality mitigation measures to protect the future occupiers from air pollution exposure shall be required to be submitted to and approved in writing by the local planning authority.

The Site is in a Groundwater Source Protection Zone (Zone I - Inner Protection Zone). A Phase 1 Geotechnical Report (Land Contamination study) to identify any potential sources of contamination and determine whether further investigation and/or remediation is necessary, is therefore required.

The development would introduce noise-sensitive receptors adjacent to the High Street. An Acoustic Assessment to include BS4142 assessment of all external plant as well as impact of the pre-existing noise from the town centre on future residents and how this will be mitigated is required.

A construction and demolition plan and evidence that a pre-demolition intrusive asbestos survey has been carried out in the existing buildings will also be required (or could be subsequently conditioned).

Flooding and Drainage

The site is in Flood Zone 1.

At application stage the following should be demonstrated:

- Opportunities to implement sustainable drainage techniques at the site have been maximised;
- The incorporation of green roofs on top of flat roofs;
- Surface water from the site reflects greenfield run-off rate, typically 2 to 8l/s/ha;
- The surface water attenuation system is able to accommodate any storm event up to the critical duration 1 in 100 year plus climate change storm event for the site without the flow balancing system being bypassed (sufficient information must be provided to demonstrate that the critical duration has been used);
- A Management plan for future maintenance of all SUDS.

Trees and Ecology

London Plan policies 2.18 and 7.19 highlight the importance of green infrastructure. Green infrastructure is an overarching term for a number of discrete elements (parks, street trees, green roofs etc) that go to make up a functional network of green spaces and green features. Both London Plan and Bromley Local Plan policy require biodiversity enhancements to be considered from the start of the development process. New development should improve existing or create new habitats or use design (green roofs, living walls, nest boxes and nest bricks, etc) to enhance biodiversity and provide for its on-going

management. A high quality landscaping scheme for all of the external areas of the site will be required, which should include soft landscaping and green roofs.

There are trees within and adjacent to the pre-application site. Any future application should be submitted with an Arboricultural Impact Assessment. There are also a number of features on the site which have the potential to support species habitats. A Biodiversity and Geological survey report would therefore be required in order to assess the existing biodiversity interest of the site, possible impacts and mitigation and/or enhancement measures.

Application requirements

Statement of Community Involvement

The Council's adopted Statement of Community Involvement (SCI) strongly encourages applicants for major developments to consult the local community. An SCI is one of the documents included in the Local Requirements (see above). As such, the Council can decline to validate an application that is not accompanied by a statement setting out how the requirements for pre-application consultation have been complied with and demonstrating that the views of the local community have been sought and taken into account in the formulation of development proposals.

Application documents

I would draw your attention to the fact that the Council has a published Local Information Requirements document. The adopted document can be viewed on the Councils website and sets out material that will be considered essential to accompany your application.

At Officer's discretion, the Council can decline to validate an application not accompanied by relevant documents. At this stage, I consider it likely that the following should be submitted with the application –

- Completed Application Form
- Application fee
- Signed Ownership and Agricultural Holdings Certificate
- CIL Additional Information form
- Site location and block plan
- Application drawings:
    - Existing and proposed site layout plans
    - Existing and proposed elevations
    - Existing and proposed floor plans
    - Existing and proposed roof plans
    - Existing and proposed sections
    - Site sections and finished floor levels
    - Existing and proposed street elevations
- Accommodation Schedule
- Air quality assessment
- Biodiversity and Geological Survey
- Construction Environmental Management Plan to include details of measures to address the effects of demolition and construction noise and dust management (can be conditioned)
- Daylight and Sunlight Assessment
- Design and Access Statement to include sustainability statement, refuse/recycling storage and collection details, Secured by Design information and materials
- Draft Heads of Terms
- Energy Assessment/Strategy
- Land contamination Assessment
- Landscape/townscape and Views Impact Assessment
- Landscaping Scheme

- Living Roof/wall details
- Marketing Information
- Material Samples
- Noise and Vibration Impact Assessment
- Parking provision for Cars and Bicycles
- Photographs of existing site
- Planning statement
- Play Space and open space assessment
- Statement of Community Involvement (SCI)
- Surface Water Drainage Assessment
- Transport Assessment
- Travel Plan – only if the development is likely to have significant transport implications (as determined by the TA)
- Tree survey and arboricultural assessment
- Wheelchair housing statement

Further Advice

Environmental Impact Assessment

The relevant regulations are Directive 2011/92/EU of the European Parliament and the Town & Country Planning (Environmental Impact Assessment) (Amendment) Regulations 2015 (the Regulations). Guidance on procedures under the Regulations is set out within the Planning Practice Guidance (April 2015).

The Regulations identify two types of development projects: Schedule 1 developments, for which an EIA is mandatory, and Schedule 2 developments, for which EIA may be required.

If you would like a formal opinion as to whether the proposed development requires an Environmental Impact Assessment, you may apply to the Council to provide a screening opinion on the need for Environmental Impact Assessment. The request should include as a minimum a plan indicating the proposed location of the development, a brief description of the nature and purpose of the proposal, and its possible environmental effects, giving a broad indication of their likely scale. Please note that a screening opinion can be sought prior to submission of an application.

Defibrillators

The London Ambulance Service (LAS) has asked the Council to advise potential applicants of their Defibrillator Accreditation Scheme. The scheme offers formal guidance and support to organisations about having a defibrillator on their premises. Further information on the scheme, including the potentially life-saving benefits of having more defibrillators in public places, is available on the LAS website which can be accessed using the link below:
https://www.londonambulance.nhs.uk/calling-us/emergency-heart-care/cardiac-arrest/shockingly-easy-campaign/

External consultees

You may wish to contact other relevant organisations external to the Council that will be consultees during the processing of a planning application, prior to finalising the proposal for submission for a planning decision. It is the case that consultees may raise issues that cannot be identified during the Council's consideration of a pre-application enquiry. This may include Thames Water and the Environment Agency.

Summary of Principle issues

Subject to the robust justification for the loss of the existing uses at the site (as required by planning policy) Officers are, in principle, supportive of the proposal to develop this parcel of land for residential use. However at this stage insufficient information has been supplied to demonstrate that this would

not prejudice the aims of the wider site allocation including the provision of a mix of uses and a high quality public realm and accessibility through the site. Furthermore, there is sufficient justification for the quantum and scale of development being proposed and, as set out in this letter, there are significant concerns regarding the layout, height and massing of the development; its relationship to adjacent buildings and areas; and its impact on the wider townscape and neighbouring amenities.

Should an isolated development proposal for this particular site come forward you should clearly show how the proposed development would function well both as a stand-alone development *and* in conjunction with the comprehensive development of the wider site allocation. In addition, there would be a number of development plan requirements which would need to be satisfied, including the provision of the maximum reasonable amount of affordable housing and a unit mix reflective of local need. The highways impacts of the development would also be a key consideration.

I would encourage further pre-application discussions once the proposals have been worked-up in more detail, having regard to the comments raised in this letter.

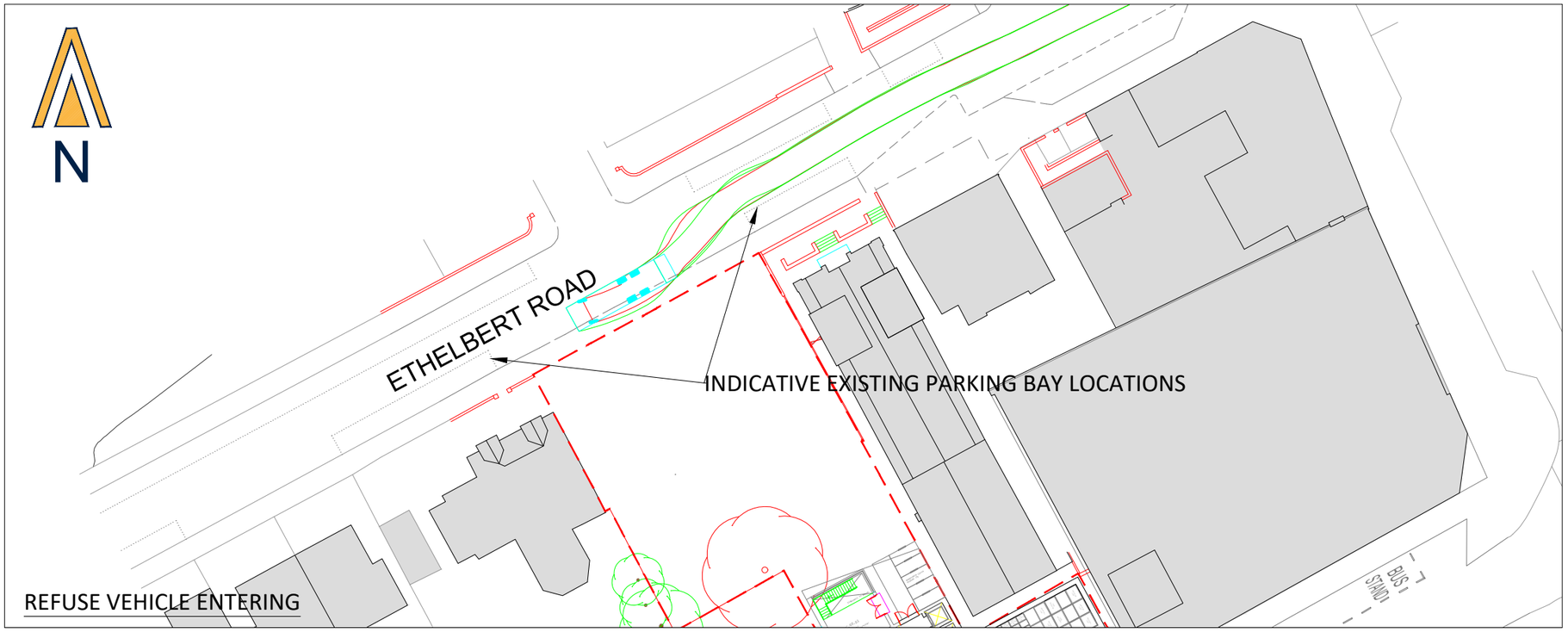
Please note that the above advice is based on the written material submitted with your pre-application request and any additional information and/or change to the scheme may alter the planning issues and our response to the proposal. Also it is the case that, on occasions, new issues do arise during processing of a formal planning or other application which could not be identified during the pre-application process, such as those raised by local residents.

I trust that you appreciate that all pre application advice given is without prejudice to the recommendation or final decision on any application submitted.

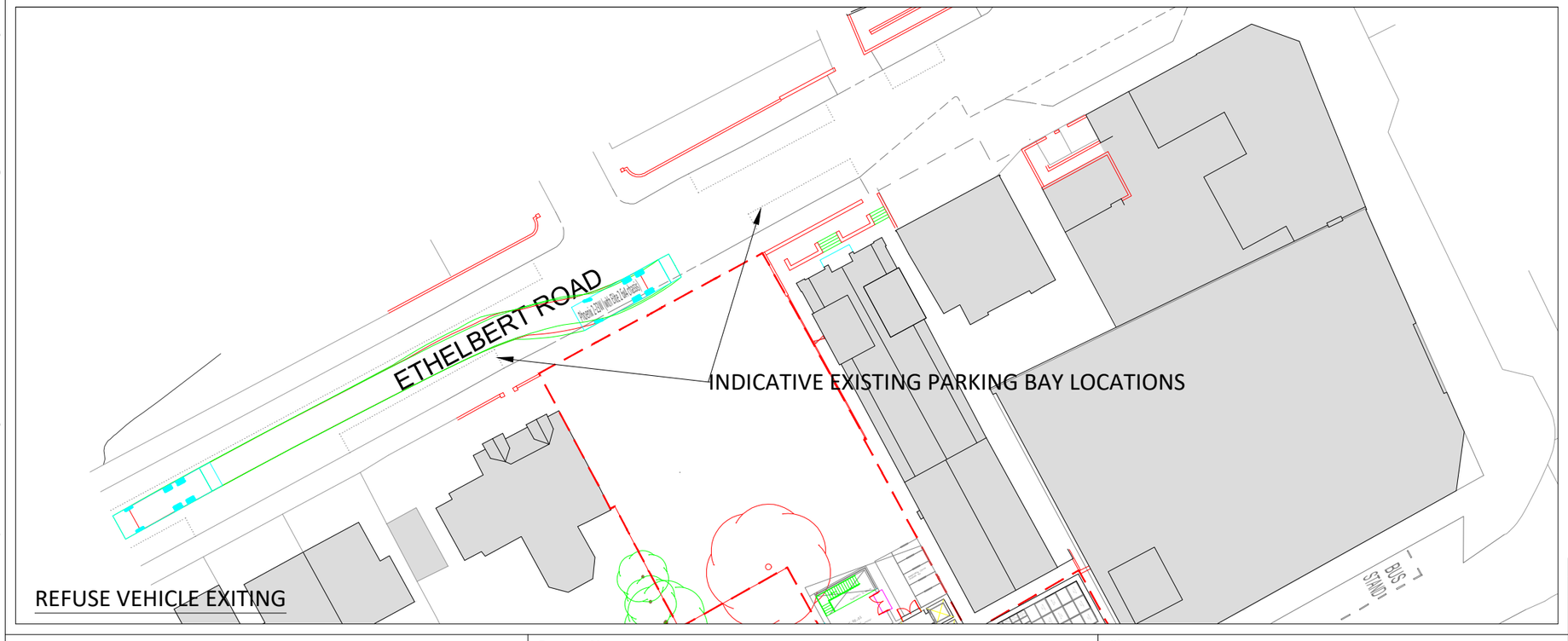
Yours sincerely,

Claire Brew
Principal Planner
London Borough Bromley

Appendix C – Swept Path Analysis



REFUSE VEHICLE ENTERING

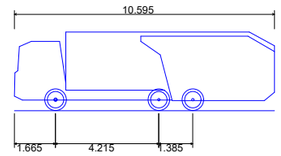


REFUSE VEHICLE EXITING

NOTES

1. DO NOT SCALE FROM THIS DRAWING. WORK FROM FIGURED DIMENSIONS ONLY.
2. EVOKE TRANSPORT PLANNING CONSULTANTS LIMITED ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF THIRD PARTY INFORMATION - THIS MUST BE TREATED AS INDICATIVE ONLY.

REFUSE VEHICLE PROFILE



Phoenix 2-23W (with Elite 2 6x4 chassis)	
Overall Length	10.595m
Overall Width	2.530m
Overall Body Height	3.205m
Min Body Ground Clearance	0.410m
Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	9.250m

Rev	Amendment	Drn	App	Date

Evoke Transport Consultants Limited
The White Building
33 King's Road
Reading RG1 3AR

Telephone: 01183 800 182
E: info@evoketransport.co.uk
W: www.evoketransport.co.uk

Project Name	RINGERS ROAD BROMLEY
Drawing Title	REFUSE VEHICLE SWEPT PATH ANALYSIS
Client	RINGERS ROAD PROPERTIES LTD
Drawn by	MH
Approved by	BW
Date	16.07.21
Scale	1:500 @ A3
Job No	R-20-0049
Drawing No	R-20-0049/001
Rev	-

C:\Users\MegHopkins\Evoke Transport\Evoke Projects - Documents\R-20-0049 Ringers Road, Bromley\50 Drawings\51 AutoCAD\R-20-0049-001.dwg

Appendix D – TRICS Outputs

Calculation Reference: AUDIT-708731-201021-1058

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE
Category : K - FITNESS CLUB (PRIVATE)
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	HG	HARINGEY	1 days
	IS	ISLINGTON	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 1225 to 1440 (units: sqm)
Range Selected by User: 0 to 1500 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/12 to 28/06/16

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

Selected survey days:

Tuesday	1 days
Thursday	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 undertaking 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:

Built-Up Zone	2

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:

D2	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®.

Population within 500m Range:
All Surveys Included

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	1 days
0.6 to 1.0	1 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	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	HG-07-K-02 LORDSHIP LANE WOOD GREEN	THE GYM		HARINGEY
	Edge of Town Centre Built-Up Zone			
	Total Gross floor area:		1440 sqm	
	Survey date: THURSDAY		*18/09/14*	*Survey Type: MANUAL*
2	IS-07-K-02 GOSWELL ROAD ANGEL	THE GYM		ISLINGTON
	Edge of Town Centre Built-Up Zone			
	Total Gross floor area:		1225 sqm	
	Survey date: TUESDAY		*28/06/16*	*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 07 - LEISURE/K - FITNESS CLUB (PRIVATE)
MULTI-MODAL TOTAL VEHICLES
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	2	1333	0.638	2	1333	0.413	2	1333	1.051
07:00 - 08:00	2	1333	0.338	2	1333	0.788	2	1333	1.126
08:00 - 09:00	2	1333	0.188	2	1333	0.300	2	1333	0.488
09:00 - 10:00	2	1333	0.375	2	1333	0.075	2	1333	0.450
10:00 - 11:00	2	1333	0.263	2	1333	0.413	2	1333	0.676
11:00 - 12:00	2	1333	0.263	2	1333	0.225	2	1333	0.488
12:00 - 13:00	2	1333	0.188	2	1333	0.225	2	1333	0.413
13:00 - 14:00	2	1333	0.150	2	1333	0.188	2	1333	0.338
14:00 - 15:00	2	1333	0.113	2	1333	0.225	2	1333	0.338
15:00 - 16:00	2	1333	0.225	2	1333	0.150	2	1333	0.375
16:00 - 17:00	2	1333	0.150	2	1333	0.188	2	1333	0.338
17:00 - 18:00	2	1333	0.450	2	1333	0.150	2	1333	0.600
18:00 - 19:00	2	1333	0.600	2	1333	0.450	2	1333	1.050
19:00 - 20:00	2	1333	0.638	2	1333	1.013	2	1333	1.651
20:00 - 21:00	2	1333	0.600	2	1333	0.600	2	1333	1.200
21:00 - 22:00	2	1333	0.263	2	1333	0.375	2	1333	0.638
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.442			5.778			11.220

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.*

Parameter summary

Trip rate parameter range selected:	1225 - 1440 (units: sqm)
Survey date date range:	01/01/12 - 28/06/16
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)
MULTI-MODAL TAXIS
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	2	1333	0.000	2	1333	0.000	2	1333	0.000
07:00 - 08:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
08:00 - 09:00	2	1333	0.038	2	1333	0.038	2	1333	0.076
09:00 - 10:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
10:00 - 11:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
11:00 - 12:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
12:00 - 13:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
13:00 - 14:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
14:00 - 15:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
15:00 - 16:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
16:00 - 17:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
17:00 - 18:00	2	1333	0.038	2	1333	0.038	2	1333	0.076
18:00 - 19:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
19:00 - 20:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
20:00 - 21:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
21:00 - 22:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.076			0.076			0.152

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.*

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)
MULTI-MODAL CYCLISTS
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	2	1333	0.113	2	1333	0.075	2	1333	0.188
07:00 - 08:00	2	1333	0.413	2	1333	0.225	2	1333	0.638
08:00 - 09:00	2	1333	0.263	2	1333	0.375	2	1333	0.638
09:00 - 10:00	2	1333	0.188	2	1333	0.225	2	1333	0.413
10:00 - 11:00	2	1333	0.113	2	1333	0.113	2	1333	0.226
11:00 - 12:00	2	1333	0.150	2	1333	0.188	2	1333	0.338
12:00 - 13:00	2	1333	0.188	2	1333	0.038	2	1333	0.226
13:00 - 14:00	2	1333	0.113	2	1333	0.150	2	1333	0.263
14:00 - 15:00	2	1333	0.038	2	1333	0.038	2	1333	0.076
15:00 - 16:00	2	1333	0.113	2	1333	0.038	2	1333	0.151
16:00 - 17:00	2	1333	0.075	2	1333	0.075	2	1333	0.150
17:00 - 18:00	2	1333	0.263	2	1333	0.150	2	1333	0.413
18:00 - 19:00	2	1333	0.263	2	1333	0.300	2	1333	0.563
19:00 - 20:00	2	1333	0.225	2	1333	0.263	2	1333	0.488
20:00 - 21:00	2	1333	0.188	2	1333	0.375	2	1333	0.563
21:00 - 22:00	2	1333	0.225	2	1333	0.375	2	1333	0.600
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.931			3.003			5.934

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.*

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)
MULTI-MODAL VEHICLE OCCUPANTS
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	2	1333	0.563	2	1333	0.300	2	1333	0.863
07:00 - 08:00	2	1333	0.413	2	1333	0.750	2	1333	1.163
08:00 - 09:00	2	1333	0.188	2	1333	0.338	2	1333	0.526
09:00 - 10:00	2	1333	0.450	2	1333	0.075	2	1333	0.525
10:00 - 11:00	2	1333	0.300	2	1333	0.450	2	1333	0.750
11:00 - 12:00	2	1333	0.338	2	1333	0.300	2	1333	0.638
12:00 - 13:00	2	1333	0.188	2	1333	0.263	2	1333	0.451
13:00 - 14:00	2	1333	0.188	2	1333	0.263	2	1333	0.451
14:00 - 15:00	2	1333	0.150	2	1333	0.300	2	1333	0.450
15:00 - 16:00	2	1333	0.300	2	1333	0.150	2	1333	0.450
16:00 - 17:00	2	1333	0.150	2	1333	0.225	2	1333	0.375
17:00 - 18:00	2	1333	0.525	2	1333	0.150	2	1333	0.675
18:00 - 19:00	2	1333	0.788	2	1333	0.450	2	1333	1.238
19:00 - 20:00	2	1333	0.826	2	1333	1.313	2	1333	2.139
20:00 - 21:00	2	1333	0.750	2	1333	0.826	2	1333	1.576
21:00 - 22:00	2	1333	0.375	2	1333	0.525	2	1333	0.900
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			6.492			6.678			13.170

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.*

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)
MULTI-MODAL PEDESTRIANS
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	2	1333	2.176	2	1333	0.938	2	1333	3.114
07:00 - 08:00	2	1333	1.651	2	1333	1.914	2	1333	3.565
08:00 - 09:00	2	1333	1.426	2	1333	2.214	2	1333	3.640
09:00 - 10:00	2	1333	1.801	2	1333	1.351	2	1333	3.152
10:00 - 11:00	2	1333	1.839	2	1333	1.463	2	1333	3.302
11:00 - 12:00	2	1333	1.764	2	1333	1.614	2	1333	3.378
12:00 - 13:00	2	1333	3.490	2	1333	1.876	2	1333	5.366
13:00 - 14:00	2	1333	2.627	2	1333	3.340	2	1333	5.967
14:00 - 15:00	2	1333	1.839	2	1333	1.914	2	1333	3.753
15:00 - 16:00	2	1333	1.576	2	1333	1.839	2	1333	3.415
16:00 - 17:00	2	1333	1.914	2	1333	2.026	2	1333	3.940
17:00 - 18:00	2	1333	4.728	2	1333	2.064	2	1333	6.792
18:00 - 19:00	2	1333	5.103	2	1333	3.302	2	1333	8.405
19:00 - 20:00	2	1333	4.390	2	1333	4.991	2	1333	9.381
20:00 - 21:00	2	1333	2.289	2	1333	3.039	2	1333	5.328
21:00 - 22:00	2	1333	1.351	2	1333	2.814	2	1333	4.165
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			39.964			36.699			76.663

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.*

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)
MULTI-MODAL BUS/TRAM PASSENGERS
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	2	1333	0.450	2	1333	0.263	2	1333	0.713
07:00 - 08:00	2	1333	0.338	2	1333	0.375	2	1333	0.713
08:00 - 09:00	2	1333	0.600	2	1333	0.300	2	1333	0.900
09:00 - 10:00	2	1333	0.788	2	1333	0.563	2	1333	1.351
10:00 - 11:00	2	1333	0.338	2	1333	0.413	2	1333	0.751
11:00 - 12:00	2	1333	0.750	2	1333	0.600	2	1333	1.350
12:00 - 13:00	2	1333	0.600	2	1333	0.563	2	1333	1.163
13:00 - 14:00	2	1333	0.713	2	1333	0.488	2	1333	1.201
14:00 - 15:00	2	1333	0.338	2	1333	0.450	2	1333	0.788
15:00 - 16:00	2	1333	0.563	2	1333	0.600	2	1333	1.163
16:00 - 17:00	2	1333	0.713	2	1333	0.713	2	1333	1.426
17:00 - 18:00	2	1333	1.576	2	1333	0.675	2	1333	2.251
18:00 - 19:00	2	1333	1.876	2	1333	1.163	2	1333	3.039
19:00 - 20:00	2	1333	1.238	2	1333	2.026	2	1333	3.264
20:00 - 21:00	2	1333	0.976	2	1333	1.839	2	1333	2.815
21:00 - 22:00	2	1333	0.600	2	1333	1.013	2	1333	1.613
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			12.457			12.044			24.501

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.*

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)
MULTI-MODAL TOTAL RAIL PASSENGERS
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	2	1333	0.450	2	1333	0.150	2	1333	0.600
07:00 - 08:00	2	1333	0.413	2	1333	0.263	2	1333	0.676
08:00 - 09:00	2	1333	0.150	2	1333	0.413	2	1333	0.563
09:00 - 10:00	2	1333	0.263	2	1333	0.263	2	1333	0.526
10:00 - 11:00	2	1333	0.150	2	1333	0.150	2	1333	0.300
11:00 - 12:00	2	1333	0.263	2	1333	0.338	2	1333	0.601
12:00 - 13:00	2	1333	0.525	2	1333	0.263	2	1333	0.788
13:00 - 14:00	2	1333	0.450	2	1333	0.488	2	1333	0.938
14:00 - 15:00	2	1333	0.225	2	1333	0.263	2	1333	0.488
15:00 - 16:00	2	1333	0.375	2	1333	0.300	2	1333	0.675
16:00 - 17:00	2	1333	0.600	2	1333	0.750	2	1333	1.350
17:00 - 18:00	2	1333	1.088	2	1333	0.563	2	1333	1.651
18:00 - 19:00	2	1333	2.064	2	1333	1.238	2	1333	3.302
19:00 - 20:00	2	1333	0.938	2	1333	1.576	2	1333	2.514
20:00 - 21:00	2	1333	0.750	2	1333	1.163	2	1333	1.913
21:00 - 22:00	2	1333	0.263	2	1333	0.675	2	1333	0.938
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			8.967			8.856			17.823

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.*

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)
MULTI-MODAL PUBLIC TRANSPORT USERS
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	2	1333	0.901	2	1333	0.413	2	1333	1.314
07:00 - 08:00	2	1333	0.750	2	1333	0.638	2	1333	1.388
08:00 - 09:00	2	1333	0.750	2	1333	0.713	2	1333	1.463
09:00 - 10:00	2	1333	1.051	2	1333	0.826	2	1333	1.877
10:00 - 11:00	2	1333	0.488	2	1333	0.563	2	1333	1.051
11:00 - 12:00	2	1333	1.013	2	1333	0.938	2	1333	1.951
12:00 - 13:00	2	1333	1.126	2	1333	0.826	2	1333	1.952
13:00 - 14:00	2	1333	1.163	2	1333	0.976	2	1333	2.139
14:00 - 15:00	2	1333	0.563	2	1333	0.713	2	1333	1.276
15:00 - 16:00	2	1333	0.938	2	1333	0.901	2	1333	1.839
16:00 - 17:00	2	1333	1.313	2	1333	1.463	2	1333	2.776
17:00 - 18:00	2	1333	2.664	2	1333	1.238	2	1333	3.902
18:00 - 19:00	2	1333	3.940	2	1333	2.402	2	1333	6.342
19:00 - 20:00	2	1333	2.176	2	1333	3.602	2	1333	5.778
20:00 - 21:00	2	1333	1.726	2	1333	3.002	2	1333	4.728
21:00 - 22:00	2	1333	0.863	2	1333	1.689	2	1333	2.552
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			21.425			20.903			42.328

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.*

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)
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	2	1333	3.752	2	1333	1.726	2	1333	5.478
07:00 - 08:00	2	1333	3.227	2	1333	3.527	2	1333	6.754
08:00 - 09:00	2	1333	2.627	2	1333	3.640	2	1333	6.267
09:00 - 10:00	2	1333	3.490	2	1333	2.477	2	1333	5.967
10:00 - 11:00	2	1333	2.739	2	1333	2.589	2	1333	5.328
11:00 - 12:00	2	1333	3.265	2	1333	3.039	2	1333	6.304
12:00 - 13:00	2	1333	4.991	2	1333	3.002	2	1333	7.993
13:00 - 14:00	2	1333	4.090	2	1333	4.728	2	1333	8.818
14:00 - 15:00	2	1333	2.589	2	1333	2.964	2	1333	5.553
15:00 - 16:00	2	1333	2.927	2	1333	2.927	2	1333	5.854
16:00 - 17:00	2	1333	3.452	2	1333	3.790	2	1333	7.242
17:00 - 18:00	2	1333	8.180	2	1333	3.602	2	1333	11.782
18:00 - 19:00	2	1333	10.094	2	1333	6.454	2	1333	16.548
19:00 - 20:00	2	1333	7.617	2	1333	10.169	2	1333	17.786
20:00 - 21:00	2	1333	4.953	2	1333	7.242	2	1333	12.195
21:00 - 22:00	2	1333	2.814	2	1333	5.403	2	1333	8.217
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			70.807			67.279			138.086

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.*

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)
MULTI-MODAL CARS
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	2	1333	0.450	2	1333	0.338	2	1333	0.788
07:00 - 08:00	2	1333	0.300	2	1333	0.600	2	1333	0.900
08:00 - 09:00	2	1333	0.113	2	1333	0.263	2	1333	0.376
09:00 - 10:00	2	1333	0.338	2	1333	0.038	2	1333	0.376
10:00 - 11:00	2	1333	0.225	2	1333	0.375	2	1333	0.600
11:00 - 12:00	2	1333	0.225	2	1333	0.225	2	1333	0.450
12:00 - 13:00	2	1333	0.188	2	1333	0.188	2	1333	0.376
13:00 - 14:00	2	1333	0.150	2	1333	0.150	2	1333	0.300
14:00 - 15:00	2	1333	0.113	2	1333	0.225	2	1333	0.338
15:00 - 16:00	2	1333	0.188	2	1333	0.150	2	1333	0.338
16:00 - 17:00	2	1333	0.150	2	1333	0.150	2	1333	0.300
17:00 - 18:00	2	1333	0.300	2	1333	0.113	2	1333	0.413
18:00 - 19:00	2	1333	0.488	2	1333	0.375	2	1333	0.863
19:00 - 20:00	2	1333	0.638	2	1333	0.863	2	1333	1.501
20:00 - 21:00	2	1333	0.600	2	1333	0.563	2	1333	1.163
21:00 - 22:00	2	1333	0.263	2	1333	0.375	2	1333	0.638
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.729			4.991			9.720

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.*

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)
MULTI-MODAL LGVS
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	2	1333	0.150	2	1333	0.075	2	1333	0.225
07:00 - 08:00	2	1333	0.000	2	1333	0.075	2	1333	0.075
08:00 - 09:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
09:00 - 10:00	2	1333	0.038	2	1333	0.038	2	1333	0.076
10:00 - 11:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
11:00 - 12:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
12:00 - 13:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
13:00 - 14:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
14:00 - 15:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
15:00 - 16:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
16:00 - 17:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
17:00 - 18:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
18:00 - 19:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
19:00 - 20:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
20:00 - 21:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
21:00 - 22:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.188			0.188			0.376

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.*

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)
MULTI-MODAL MOTOR CYCLES
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	2	1333	0.038	2	1333	0.000	2	1333	0.038
07:00 - 08:00	2	1333	0.038	2	1333	0.113	2	1333	0.151
08:00 - 09:00	2	1333	0.038	2	1333	0.000	2	1333	0.038
09:00 - 10:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
10:00 - 11:00	2	1333	0.038	2	1333	0.038	2	1333	0.076
11:00 - 12:00	2	1333	0.038	2	1333	0.000	2	1333	0.038
12:00 - 13:00	2	1333	0.000	2	1333	0.038	2	1333	0.038
13:00 - 14:00	2	1333	0.000	2	1333	0.038	2	1333	0.038
14:00 - 15:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
15:00 - 16:00	2	1333	0.038	2	1333	0.000	2	1333	0.038
16:00 - 17:00	2	1333	0.000	2	1333	0.038	2	1333	0.038
17:00 - 18:00	2	1333	0.113	2	1333	0.000	2	1333	0.113
18:00 - 19:00	2	1333	0.113	2	1333	0.075	2	1333	0.188
19:00 - 20:00	2	1333	0.000	2	1333	0.150	2	1333	0.150
20:00 - 21:00	2	1333	0.000	2	1333	0.038	2	1333	0.038
21:00 - 22:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.454			0.528			0.982

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.*

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)
MULTI-MODAL Underground Passengers
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	2	1333	0.450	2	1333	0.150	2	1333	0.600
07:00 - 08:00	2	1333	0.413	2	1333	0.263	2	1333	0.676
08:00 - 09:00	2	1333	0.150	2	1333	0.413	2	1333	0.563
09:00 - 10:00	2	1333	0.263	2	1333	0.263	2	1333	0.526
10:00 - 11:00	2	1333	0.150	2	1333	0.150	2	1333	0.300
11:00 - 12:00	2	1333	0.263	2	1333	0.338	2	1333	0.601
12:00 - 13:00	2	1333	0.525	2	1333	0.263	2	1333	0.788
13:00 - 14:00	2	1333	0.450	2	1333	0.488	2	1333	0.938
14:00 - 15:00	2	1333	0.225	2	1333	0.263	2	1333	0.488
15:00 - 16:00	2	1333	0.375	2	1333	0.263	2	1333	0.638
16:00 - 17:00	2	1333	0.600	2	1333	0.713	2	1333	1.313
17:00 - 18:00	2	1333	1.088	2	1333	0.525	2	1333	1.613
18:00 - 19:00	2	1333	2.064	2	1333	1.126	2	1333	3.190
19:00 - 20:00	2	1333	0.938	2	1333	1.501	2	1333	2.439
20:00 - 21:00	2	1333	0.750	2	1333	1.051	2	1333	1.801
21:00 - 22:00	2	1333	0.263	2	1333	0.563	2	1333	0.826
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			8.967			8.333			17.300

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.*

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)
MULTI-MODAL Overground Passengers
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	2	1333	0.000	2	1333	0.000	2	1333	0.000
07:00 - 08:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
08:00 - 09:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
09:00 - 10:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
10:00 - 11:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
11:00 - 12:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
12:00 - 13:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
13:00 - 14:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
14:00 - 15:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
15:00 - 16:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
16:00 - 17:00	2	1333	0.000	2	1333	0.038	2	1333	0.038
17:00 - 18:00	2	1333	0.000	2	1333	0.038	2	1333	0.038
18:00 - 19:00	2	1333	0.000	2	1333	0.075	2	1333	0.075
19:00 - 20:00	2	1333	0.000	2	1333	0.038	2	1333	0.038
20:00 - 21:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
21:00 - 22:00	2	1333	0.000	2	1333	0.075	2	1333	0.075
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.264			0.264

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.*

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)
MULTI-MODAL National Rail Passengers
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	2	1333	0.000	2	1333	0.000	2	1333	0.000
07:00 - 08:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
08:00 - 09:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
09:00 - 10:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
10:00 - 11:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
11:00 - 12:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
12:00 - 13:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
13:00 - 14:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
14:00 - 15:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
15:00 - 16:00	2	1333	0.000	2	1333	0.038	2	1333	0.038
16:00 - 17:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
17:00 - 18:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
18:00 - 19:00	2	1333	0.000	2	1333	0.038	2	1333	0.038
19:00 - 20:00	2	1333	0.000	2	1333	0.038	2	1333	0.038
20:00 - 21:00	2	1333	0.000	2	1333	0.113	2	1333	0.113
21:00 - 22:00	2	1333	0.000	2	1333	0.038	2	1333	0.038
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.265			0.265

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.*

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)
MULTI-MODAL Bus Passengers
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	2	1333	0.450	2	1333	0.263	2	1333	0.713
07:00 - 08:00	2	1333	0.338	2	1333	0.375	2	1333	0.713
08:00 - 09:00	2	1333	0.600	2	1333	0.300	2	1333	0.900
09:00 - 10:00	2	1333	0.788	2	1333	0.563	2	1333	1.351
10:00 - 11:00	2	1333	0.338	2	1333	0.413	2	1333	0.751
11:00 - 12:00	2	1333	0.750	2	1333	0.600	2	1333	1.350
12:00 - 13:00	2	1333	0.600	2	1333	0.563	2	1333	1.163
13:00 - 14:00	2	1333	0.713	2	1333	0.488	2	1333	1.201
14:00 - 15:00	2	1333	0.338	2	1333	0.450	2	1333	0.788
15:00 - 16:00	2	1333	0.563	2	1333	0.600	2	1333	1.163
16:00 - 17:00	2	1333	0.713	2	1333	0.713	2	1333	1.426
17:00 - 18:00	2	1333	1.576	2	1333	0.675	2	1333	2.251
18:00 - 19:00	2	1333	1.876	2	1333	1.163	2	1333	3.039
19:00 - 20:00	2	1333	1.238	2	1333	2.026	2	1333	3.264
20:00 - 21:00	2	1333	0.976	2	1333	1.839	2	1333	2.815
21:00 - 22:00	2	1333	0.600	2	1333	1.013	2	1333	1.613
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			12.457			12.044			24.501

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.*

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)
MULTI-MODAL Servicing Vehicles
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	2	1333	0.000	2	1333	0.000	2	1333	0.000
07:00 - 08:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
08:00 - 09:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
09:00 - 10:00	2	1333	0.038	2	1333	0.038	2	1333	0.076
10:00 - 11:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
11:00 - 12:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
12:00 - 13:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
13:00 - 14:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
14:00 - 15:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
15:00 - 16:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
16:00 - 17:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
17:00 - 18:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
18:00 - 19:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
19:00 - 20:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
20:00 - 21:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
21:00 - 22:00	2	1333	0.000	2	1333	0.000	2	1333	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.038			0.038			0.076

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-708731-201019-1002

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

01	GREATER LONDON		
	BM	BROMLEY	1 days
	HM	HAMMERSMITH AND FULHAM	1 days
	IS	ISLINGTON	1 days
	KN	KENSINGTON AND CHELSEA	1 days
	SK	SOUTHWARK	1 days
	WF	WALTHAM FOREST	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
Actual Range: 53 to 194 (units:)
Range Selected by User: 50 to 200 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/12 to 05/11/19

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
Tuesday	2 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	6 days
Directional ATC Count	0 days

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

Selected Locations:

Town Centre	2
Edge of Town Centre	4

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:

Development Zone	1
Residential 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:

C3	6 days

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

Population within 500m Range:

All Surveys Included

Population within 1 mile:

5,001 to 10,000	1 days
25,001 to 50,000	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:

125,001 to 250,000	1 days
500,001 or More	5 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	4 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	2 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:

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

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

LIST OF SITES relevant to selection parameters

1 BM-03-C-01 BLOCKS OF FLATS BROMLEY
RINGER'S ROAD
BROMLEY

Town Centre
Built-Up Zone
Total No of Dwellings: 160
Survey date: MONDAY *12/11/18* *Survey Type: MANUAL*

2 HM-03-C-02 BLOCKS OF FLATS HAMMERSMITH AND FULHAM
GLENTHORNE ROAD
HAMMERSMITH

Town Centre
Built-Up Zone
Total No of Dwellings: 194
Survey date: TUESDAY *30/04/19* *Survey Type: MANUAL*

3 IS-03-C-07 BLOCK OF FLATS ISLINGTON
CITY ROAD
ISLINGTON

Edge of Town Centre
Development Zone
Total No of Dwellings: 185
Survey date: THURSDAY *06/06/19* *Survey Type: MANUAL*

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

Edge of Town Centre
Residential Zone
Total No of Dwellings: 72
Survey date: FRIDAY *11/05/12* *Survey Type: MANUAL*

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

Edge of Town Centre
Built-Up Zone
Total No of Dwellings: 53
Survey date: FRIDAY *19/09/14* *Survey Type: MANUAL*

6 WF-03-C-01 BLOCKS OF FLATS WALTHAM FOREST
ERSKINE ROAD
WALTHAMSTOW

Edge of Town Centre
Residential Zone
Total No of Dwellings: 73
Survey date: TUESDAY *05/11/19* *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.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
BE-03-C-01	Low PTAL
BT-03-C-01	Low PTAL
EN-03-C-02	Low PTAL
HO-03-C-03	Low PTAL
RD-03-C-04	Low PTAL
TH-03-C-04	Low PTAL

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

	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	6	123	0.019	6	123	0.046	6	123	0.065
08:00 - 09:00	6	123	0.030	6	123	0.072	6	123	0.102
09:00 - 10:00	6	123	0.045	6	123	0.046	6	123	0.091
10:00 - 11:00	6	123	0.042	6	123	0.033	6	123	0.075
11:00 - 12:00	6	123	0.026	6	123	0.042	6	123	0.068
12:00 - 13:00	6	123	0.039	6	123	0.045	6	123	0.084
13:00 - 14:00	6	123	0.030	6	123	0.034	6	123	0.064
14:00 - 15:00	6	123	0.023	6	123	0.023	6	123	0.046
15:00 - 16:00	6	123	0.052	6	123	0.041	6	123	0.093
16:00 - 17:00	6	123	0.052	6	123	0.041	6	123	0.093
17:00 - 18:00	6	123	0.056	6	123	0.030	6	123	0.086
18:00 - 19:00	6	123	0.072	6	123	0.060	6	123	0.132
19:00 - 20:00	4	153	0.062	4	153	0.051	4	153	0.113
20:00 - 21:00	4	153	0.028	4	153	0.028	4	153	0.056
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.576			0.592			1.168

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.*

Parameter summary

Trip rate parameter range selected:	53 - 194 (units:)
Survey date date range:	01/01/12 - 05/11/19
Number of weekdays (Monday-Friday):	6
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	3
Surveys manually removed from selection:	6

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

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	6	123	0.053	6	123	0.290	6	123	0.343
08:00 - 09:00	6	123	0.094	6	123	0.564	6	123	0.658
09:00 - 10:00	6	123	0.104	6	123	0.259	6	123	0.363
10:00 - 11:00	6	123	0.123	6	123	0.163	6	123	0.286
11:00 - 12:00	6	123	0.114	6	123	0.123	6	123	0.237
12:00 - 13:00	6	123	0.156	6	123	0.130	6	123	0.286
13:00 - 14:00	6	123	0.147	6	123	0.140	6	123	0.287
14:00 - 15:00	6	123	0.132	6	123	0.128	6	123	0.260
15:00 - 16:00	6	123	0.244	6	123	0.160	6	123	0.404
16:00 - 17:00	6	123	0.225	6	123	0.164	6	123	0.389
17:00 - 18:00	6	123	0.270	6	123	0.148	6	123	0.418
18:00 - 19:00	6	123	0.456	6	123	0.185	6	123	0.641
19:00 - 20:00	4	153	0.332	4	153	0.141	4	153	0.473
20:00 - 21:00	4	153	0.162	4	153	0.098	4	153	0.260
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.612			2.693			5.305

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-708731-201021-1018

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK
Category : B - RESTAURANTS
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	BT	BRENT	1 days
	LB	LAMBETH	1 days

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

Primary Filtering selection:

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

Parameter: Number of seats
Actual Range: 70 to 110 (units:)
Range Selected by User: 70 to 110 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/12 to 24/06/19

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	2 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 undertaking using machines.

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of 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:

Development 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:

A3	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®.

Population within 500m Range:
All Surveys Included

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:

0.6 to 1.0	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:

Yes	1 days
No	1 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:

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 BT-06-B-01 COFFEE SHOP & RESTAURANT BRENT
EMPIRE WAY
WEMBLEY

Suburban Area (PPS6 Out of Centre)
Development Zone
Total Number of seats: 70
Survey date: MONDAY *18/05/15* *Survey Type: MANUAL*

2 LB-06-B-01 PORTUGUESE RESTAURANT LAMBETH
STOCKWELL ROAD
STOCKWELL

Edge of Town Centre
No Sub Category
Total Number of seats: 110
Survey date: MONDAY *24/06/19* *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 06 - HOTEL, FOOD & DRINK/B - RESTAURANTS
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 1 SEATS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. SEATS	Trip Rate	No. Days	Ave. SEATS	Trip Rate	No. Days	Ave. SEATS	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	1	110	0.000	1	110	0.000	1	110	0.000
08:00 - 09:00	1	110	0.000	1	110	0.000	1	110	0.000
09:00 - 10:00	1	110	0.009	1	110	0.000	1	110	0.009
10:00 - 11:00	2	90	0.011	2	90	0.011	2	90	0.022
11:00 - 12:00	2	90	0.017	2	90	0.017	2	90	0.034
12:00 - 13:00	2	90	0.017	2	90	0.006	2	90	0.023
13:00 - 14:00	2	90	0.006	2	90	0.011	2	90	0.017
14:00 - 15:00	2	90	0.011	2	90	0.011	2	90	0.022
15:00 - 16:00	2	90	0.011	2	90	0.022	2	90	0.033
16:00 - 17:00	2	90	0.011	2	90	0.000	2	90	0.011
17:00 - 18:00	2	90	0.033	2	90	0.017	2	90	0.050
18:00 - 19:00	2	90	0.033	2	90	0.033	2	90	0.066
19:00 - 20:00	2	90	0.033	2	90	0.022	2	90	0.055
20:00 - 21:00	2	90	0.011	2	90	0.006	2	90	0.017
21:00 - 22:00	2	90	0.011	2	90	0.039	2	90	0.050
22:00 - 23:00	2	90	0.011	2	90	0.017	2	90	0.028
23:00 - 24:00	2	90	0.000	2	90	0.000	2	90	0.000
Total Rates:			0.225			0.212			0.437

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.*

Parameter summary

Trip rate parameter range selected:	70 - 110 (units:)
Survey date date range:	01/01/12 - 24/06/19
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/B - RESTAURANTS
MULTI-MODAL TAXIS
Calculation factor: 1 SEATS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. SEATS	Trip Rate	No. Days	Ave. SEATS	Trip Rate	No. Days	Ave. SEATS	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	1	110	0.000	1	110	0.000	1	110	0.000
08:00 - 09:00	1	110	0.000	1	110	0.000	1	110	0.000
09:00 - 10:00	1	110	0.000	1	110	0.000	1	110	0.000
10:00 - 11:00	2	90	0.000	2	90	0.000	2	90	0.000
11:00 - 12:00	2	90	0.000	2	90	0.000	2	90	0.000
12:00 - 13:00	2	90	0.000	2	90	0.000	2	90	0.000
13:00 - 14:00	2	90	0.000	2	90	0.000	2	90	0.000
14:00 - 15:00	2	90	0.006	2	90	0.006	2	90	0.012
15:00 - 16:00	2	90	0.006	2	90	0.006	2	90	0.012
16:00 - 17:00	2	90	0.000	2	90	0.000	2	90	0.000
17:00 - 18:00	2	90	0.000	2	90	0.000	2	90	0.000
18:00 - 19:00	2	90	0.000	2	90	0.000	2	90	0.000
19:00 - 20:00	2	90	0.000	2	90	0.000	2	90	0.000
20:00 - 21:00	2	90	0.000	2	90	0.000	2	90	0.000
21:00 - 22:00	2	90	0.000	2	90	0.000	2	90	0.000
22:00 - 23:00	2	90	0.000	2	90	0.000	2	90	0.000
23:00 - 24:00	2	90	0.000	2	90	0.000	2	90	0.000
Total Rates:			0.012			0.012			0.024

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.*

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/B - RESTAURANTS
MULTI-MODAL CYCLISTS
Calculation factor: 1 SEATS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. SEATS	Trip Rate	No. Days	Ave. SEATS	Trip Rate	No. Days	Ave. SEATS	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	1	110	0.000	1	110	0.000	1	110	0.000
08:00 - 09:00	1	110	0.018	1	110	0.000	1	110	0.018
09:00 - 10:00	1	110	0.000	1	110	0.000	1	110	0.000
10:00 - 11:00	2	90	0.000	2	90	0.006	2	90	0.006
11:00 - 12:00	2	90	0.000	2	90	0.000	2	90	0.000
12:00 - 13:00	2	90	0.000	2	90	0.006	2	90	0.006
13:00 - 14:00	2	90	0.000	2	90	0.000	2	90	0.000
14:00 - 15:00	2	90	0.000	2	90	0.000	2	90	0.000
15:00 - 16:00	2	90	0.000	2	90	0.000	2	90	0.000
16:00 - 17:00	2	90	0.000	2	90	0.000	2	90	0.000
17:00 - 18:00	2	90	0.000	2	90	0.000	2	90	0.000
18:00 - 19:00	2	90	0.000	2	90	0.000	2	90	0.000
19:00 - 20:00	2	90	0.000	2	90	0.000	2	90	0.000
20:00 - 21:00	2	90	0.000	2	90	0.000	2	90	0.000
21:00 - 22:00	2	90	0.000	2	90	0.000	2	90	0.000
22:00 - 23:00	2	90	0.000	2	90	0.000	2	90	0.000
23:00 - 24:00	2	90	0.000	2	90	0.000	2	90	0.000
Total Rates:			0.018			0.012			0.030

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.*

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/B - RESTAURANTS
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 1 SEATS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. SEATS	Trip Rate	No. Days	Ave. SEATS	Trip Rate	No. Days	Ave. SEATS	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	1	110	0.000	1	110	0.000	1	110	0.000
08:00 - 09:00	1	110	0.000	1	110	0.000	1	110	0.000
09:00 - 10:00	1	110	0.018	1	110	0.000	1	110	0.018
10:00 - 11:00	2	90	0.017	2	90	0.017	2	90	0.034
11:00 - 12:00	2	90	0.017	2	90	0.017	2	90	0.034
12:00 - 13:00	2	90	0.022	2	90	0.006	2	90	0.028
13:00 - 14:00	2	90	0.006	2	90	0.017	2	90	0.023
14:00 - 15:00	2	90	0.011	2	90	0.006	2	90	0.017
15:00 - 16:00	2	90	0.006	2	90	0.022	2	90	0.028
16:00 - 17:00	2	90	0.017	2	90	0.000	2	90	0.017
17:00 - 18:00	2	90	0.061	2	90	0.039	2	90	0.100
18:00 - 19:00	2	90	0.094	2	90	0.083	2	90	0.177
19:00 - 20:00	2	90	0.106	2	90	0.067	2	90	0.173
20:00 - 21:00	2	90	0.022	2	90	0.017	2	90	0.039
21:00 - 22:00	2	90	0.022	2	90	0.067	2	90	0.089
22:00 - 23:00	2	90	0.011	2	90	0.028	2	90	0.039
23:00 - 24:00	2	90	0.000	2	90	0.000	2	90	0.000
Total Rates:			0.430			0.386			0.816

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.*

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/B - RESTAURANTS
MULTI-MODAL PEDESTRIANS
Calculation factor: 1 SEATS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. SEATS	Trip Rate	No. Days	Ave. SEATS	Trip Rate	No. Days	Ave. SEATS	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	1	110	0.009	1	110	0.000	1	110	0.009
08:00 - 09:00	1	110	0.009	1	110	0.018	1	110	0.027
09:00 - 10:00	1	110	0.027	1	110	0.018	1	110	0.045
10:00 - 11:00	2	90	0.028	2	90	0.006	2	90	0.034
11:00 - 12:00	2	90	0.028	2	90	0.028	2	90	0.056
12:00 - 13:00	2	90	0.028	2	90	0.028	2	90	0.056
13:00 - 14:00	2	90	0.061	2	90	0.039	2	90	0.100
14:00 - 15:00	2	90	0.017	2	90	0.050	2	90	0.067
15:00 - 16:00	2	90	0.039	2	90	0.033	2	90	0.072
16:00 - 17:00	2	90	0.056	2	90	0.039	2	90	0.095
17:00 - 18:00	2	90	0.050	2	90	0.033	2	90	0.083
18:00 - 19:00	2	90	0.050	2	90	0.050	2	90	0.100
19:00 - 20:00	2	90	0.050	2	90	0.033	2	90	0.083
20:00 - 21:00	2	90	0.039	2	90	0.056	2	90	0.095
21:00 - 22:00	2	90	0.017	2	90	0.056	2	90	0.073
22:00 - 23:00	2	90	0.000	2	90	0.017	2	90	0.017
23:00 - 24:00	2	90	0.006	2	90	0.006	2	90	0.012
Total Rates:			0.514			0.510			1.024

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.*

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/B - RESTAURANTS
MULTI-MODAL TOTAL RAIL PASSENGERS
Calculation factor: 1 SEATS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. SEATS	Trip Rate	No. Days	Ave. SEATS	Trip Rate	No. Days	Ave. SEATS	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	1	110	0.009	1	110	0.000	1	110	0.009
08:00 - 09:00	1	110	0.009	1	110	0.000	1	110	0.009
09:00 - 10:00	1	110	0.009	1	110	0.009	1	110	0.018
10:00 - 11:00	2	90	0.006	2	90	0.000	2	90	0.006
11:00 - 12:00	2	90	0.000	2	90	0.000	2	90	0.000
12:00 - 13:00	2	90	0.011	2	90	0.000	2	90	0.011
13:00 - 14:00	2	90	0.006	2	90	0.000	2	90	0.006
14:00 - 15:00	2	90	0.000	2	90	0.000	2	90	0.000
15:00 - 16:00	2	90	0.000	2	90	0.006	2	90	0.006
16:00 - 17:00	2	90	0.000	2	90	0.011	2	90	0.011
17:00 - 18:00	2	90	0.006	2	90	0.006	2	90	0.012
18:00 - 19:00	2	90	0.000	2	90	0.017	2	90	0.017
19:00 - 20:00	2	90	0.006	2	90	0.011	2	90	0.017
20:00 - 21:00	2	90	0.000	2	90	0.011	2	90	0.011
21:00 - 22:00	2	90	0.000	2	90	0.000	2	90	0.000
22:00 - 23:00	2	90	0.000	2	90	0.000	2	90	0.000
23:00 - 24:00	2	90	0.000	2	90	0.000	2	90	0.000
Total Rates:			0.062			0.071			0.133

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.*

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/B - RESTAURANTS
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 SEATS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. SEATS	Trip Rate	No. Days	Ave. SEATS	Trip Rate	No. Days	Ave. SEATS	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	1	110	0.027	1	110	0.000	1	110	0.027
08:00 - 09:00	1	110	0.055	1	110	0.018	1	110	0.073
09:00 - 10:00	1	110	0.064	1	110	0.036	1	110	0.100
10:00 - 11:00	2	90	0.050	2	90	0.039	2	90	0.089
11:00 - 12:00	2	90	0.056	2	90	0.056	2	90	0.112
12:00 - 13:00	2	90	0.072	2	90	0.056	2	90	0.128
13:00 - 14:00	2	90	0.078	2	90	0.067	2	90	0.145
14:00 - 15:00	2	90	0.039	2	90	0.056	2	90	0.095
15:00 - 16:00	2	90	0.056	2	90	0.083	2	90	0.139
16:00 - 17:00	2	90	0.089	2	90	0.056	2	90	0.145
17:00 - 18:00	2	90	0.133	2	90	0.117	2	90	0.250
18:00 - 19:00	2	90	0.167	2	90	0.172	2	90	0.339
19:00 - 20:00	2	90	0.183	2	90	0.128	2	90	0.311
20:00 - 21:00	2	90	0.078	2	90	0.106	2	90	0.184
21:00 - 22:00	2	90	0.044	2	90	0.133	2	90	0.177
22:00 - 23:00	2	90	0.011	2	90	0.044	2	90	0.055
23:00 - 24:00	2	90	0.006	2	90	0.006	2	90	0.012
Total Rates:			1.208			1.173			2.381

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.*

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/B - RESTAURANTS
MULTI-MODAL Underground Passengers
Calculation factor: 1 SEATS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. SEATS	Trip Rate	No. Days	Ave. SEATS	Trip Rate	No. Days	Ave. SEATS	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	1	110	0.009	1	110	0.000	1	110	0.009
08:00 - 09:00	1	110	0.009	1	110	0.000	1	110	0.009
09:00 - 10:00	1	110	0.009	1	110	0.009	1	110	0.018
10:00 - 11:00	2	90	0.006	2	90	0.000	2	90	0.006
11:00 - 12:00	2	90	0.000	2	90	0.000	2	90	0.000
12:00 - 13:00	2	90	0.011	2	90	0.000	2	90	0.011
13:00 - 14:00	2	90	0.006	2	90	0.000	2	90	0.006
14:00 - 15:00	2	90	0.000	2	90	0.000	2	90	0.000
15:00 - 16:00	2	90	0.000	2	90	0.006	2	90	0.006
16:00 - 17:00	2	90	0.000	2	90	0.011	2	90	0.011
17:00 - 18:00	2	90	0.006	2	90	0.006	2	90	0.012
18:00 - 19:00	2	90	0.000	2	90	0.017	2	90	0.017
19:00 - 20:00	2	90	0.006	2	90	0.011	2	90	0.017
20:00 - 21:00	2	90	0.000	2	90	0.011	2	90	0.011
21:00 - 22:00	2	90	0.000	2	90	0.000	2	90	0.000
22:00 - 23:00	2	90	0.000	2	90	0.000	2	90	0.000
23:00 - 24:00	2	90	0.000	2	90	0.000	2	90	0.000
Total Rates:			0.062			0.071			0.133

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.*

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/B - RESTAURANTS
MULTI-MODAL Bus Passengers
Calculation factor: 1 SEATS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. SEATS	Trip Rate	No. Days	Ave. SEATS	Trip Rate	No. Days	Ave. SEATS	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	1	110	0.009	1	110	0.000	1	110	0.009
08:00 - 09:00	1	110	0.018	1	110	0.000	1	110	0.018
09:00 - 10:00	1	110	0.009	1	110	0.009	1	110	0.018
10:00 - 11:00	2	90	0.000	2	90	0.011	2	90	0.011
11:00 - 12:00	2	90	0.011	2	90	0.011	2	90	0.022
12:00 - 13:00	2	90	0.011	2	90	0.017	2	90	0.028
13:00 - 14:00	2	90	0.006	2	90	0.011	2	90	0.017
14:00 - 15:00	2	90	0.011	2	90	0.000	2	90	0.011
15:00 - 16:00	2	90	0.011	2	90	0.022	2	90	0.033
16:00 - 17:00	2	90	0.017	2	90	0.006	2	90	0.023
17:00 - 18:00	2	90	0.017	2	90	0.039	2	90	0.056
18:00 - 19:00	2	90	0.022	2	90	0.022	2	90	0.044
19:00 - 20:00	2	90	0.022	2	90	0.017	2	90	0.039
20:00 - 21:00	2	90	0.017	2	90	0.022	2	90	0.039
21:00 - 22:00	2	90	0.006	2	90	0.011	2	90	0.017
22:00 - 23:00	2	90	0.000	2	90	0.000	2	90	0.000
23:00 - 24:00	2	90	0.000	2	90	0.000	2	90	0.000
Total Rates:			0.187			0.198			0.385

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.*