

Transport Statement
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EAS

412 Muswell Hill Broadway

London Borough of Haringey
Crawford Partnership

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The content of this report is based on information available as of 21/04/2022, the validity of the statements made may therefore vary over time as planning guidance / policies and the evidence base change.

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1 Introduction

- 1.1 This Transport Statement has been prepared by EAS on behalf of Crawford Partnership regarding the proposed redevelopment of 412 Muswell Hill Broadway, LB Haringey.
- 1.2 The proposed development is redevelopment of the existing ground floor and first floor rear retail space, change of use of the front block first and second floors of the existing building to residential use, combined with construction of a third floor on the front block and second floor to the rear block to provide 9 residential flats above the commercial unit.
- 1.3 The proposed development builds on an already consented scheme that has yet to be implanted.
- 1.4 A location plan is contained in **Appendix A** and the proposed development plans are contained in **Appendix B**.
- 1.5 This Assessment has been prepared with regard to the Department of Communities and Local Government Guidance on Travel Plans, Transport Assessments and Statements in Decision Taking (March 2014); also to guidance that Transport for London have published on their website.
- 1.6 The contents of this Transport Statement are:
 - Section 2 – sets the national, London and local policy context;
 - Section 3 – describes the existing site conditions;
 - Section 4 – describes the proposed development;
 - Section 5 – identifies the likely trip generation and traffic impact; and
 - Section 6 – concludes the statement.

2 Policy Context

Introduction

- 2.1 This section sets out the policy context. Development and growth are encouraged at National, London and local level. How this is made sustainable in the longer term is by encouraging walking, cycling and public transport use.

National Planning Policy Framework

- 2.2 The revised National Planning Policy Framework ('NPPF') was published in February 2019 and sets out the government's planning policies for England and how these are expected to be applied.
- 2.3 Planning law requires that applications for planning permission be determined in accordance with the development plan unless material considerations indicate otherwise. The National Planning Policy Framework must be taken into account in preparing the development plan and it is a material consideration in planning decisions. Planning policies and decisions must also reflect relevant international obligations and statutory requirements.
- 2.4 The purpose of the planning system is to contribute to the achievement of sustainable development. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs.
- 2.5 In respect of that, Paragraph 10 of the NPPF states:
- "So that sustainable development is pursued in a positive way, at the heart of the Framework is a presumption in favour of sustainable development (original emphasis)."*
- 2.6 Section 9 of the NPPF on Promoting Sustainable Transport states, in paragraphs 102 and 103:
- "Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:*
- the potential impacts of development on transport networks can be addressed;*
 - opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*
 - opportunities to promote walking, cycling and public transport use are identified and pursued;*
 - the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*
 - patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places.*

The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.”

2.7 Paragraph 105, in relation to parking standards, states that the following should be taken into account:

- “the accessibility of the development;
- the type, mix and use of development;
- the availability of and opportunities for public transport;
- local car ownership levels; and
- the need to ensure an adequate provision of spaces for charging plug-in and other ultra-low emission vehicles.”

2.8 Paragraph 106 adds that:

“Maximum parking standards for residential and non-residential development should only be set where there is a clear and compelling justification that they are necessary for managing the local road network, or for optimising the density of development in city and town centres and other locations that are well served by public transport. In town centres, local authorities should seek to improve the quality of parking so that it is convenient, safe and secure, alongside measures to promote accessibility for pedestrians and cyclists.”

2.9 Paragraphs 108 and 109 state that in assessing applications for development it should be ensured that:

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

- a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- b) safe and suitable access to the site can be achieved for all users; and*
- c) 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.*

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

2.10 Furthermore, paragraphs 110 and 111 continue:

“110. Within this context, applications for development should:

- a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality*

public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

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

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

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

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

111. 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."

The London Plan 2021

- 2.11 The latest London Plan was formally published on the 2nd of March 2021 by the Mayor of London. This document is now the main material consideration in planning decisions within Greater London. This document is defined as:

"The new London Plan marks a break with previous London Plans, it represents a step-change in our approach and serves as a blueprint for the future development and sustainable, inclusive growth of our city.

The new London Plan encourages developments with greater public transport accessibility, lower parking provisions and higher housing density."

- 2.12 The is is the most up to date version of the version of the New London Plan was published following the Examination in Public (EiP), the Inspectors Panel Report and the comments from the Secretary of State. Despite not being formally adopted, this Publication document version is however now considered a material consideration in planning decisions.
- 2.13 Policy T1 'Strategic approach to transport' states that development proposals should facilitate the delivery of the Mayor's strategic target of 80% of all trips in London to be made by foot, cycle or public transport by 2041. 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 any impacts on London's transport networks and supporting infrastructure are mitigated.
- 2.14 Policy T2 accordingly states that development proposals should deliver patterns of land use that facilitate residents making shorter, regular trips by walking or cycling. Development proposals should:
- 2) "...reduce the dominance of vehicles on London's streets whether stationary or moving; and
 - 3) be permeable by foot and cycle and connect to local walking and cycling networks as well as public transport."

2.15 Policy T4 states that:

- A) *“Development proposals should reflect and be integrated with current and planned transport access, capacity and connectivity.*
- B) *When required in accordance with national or local guidance, transport assessments/statements should be submitted with development proposals to ensure that any impacts on the capacity of the transport network (including impacts on pedestrians and the cycle network), at the local, network-wide and strategic level, are fully assessed. ... 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.*
- C) *Where appropriate, mitigation, either through direct provision of public transport, walking and cycling facilities and highways improvements or through financial contributions, will be required to address any adverse transport impacts that are identified.*
- D) *Where the ability to absorb increased travel demand through active travel modes has been exhausted, existing public transport capacity is insufficient to allow for the travel generated by proposed developments, and no firm plans and funding exist for an increase in capacity to cater for the increased demand, planning permission will be contingent on the provision of necessary public transport and active travel infrastructure.*
- E) *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.*
- F) *Development proposals should not increase road danger.”*

2.16 Policy T5 states that developments should provide cycle parking in accordance with the minimum standards set out in Table 10.2 and should be designed and laid out in accordance with the guidance contained in the London Cycling Design Standards. Table 10.2 sets the minimum provision for residential developments as:

- One-bed one-person units – one long-term space/unit;
- One-bed two-person units – 1.5 long-term spaces/unit;
- Two-bed units and larger dwellings – 2 long-term spaces/unit;
- Developments of between 5 and 40 dwellings – 2 short-term spaces; and
- For Places of Worship – 1 long-term space per 8 full-time staff plus 1 short-term space per 100sqm of floorspace.

2.17 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, with developments elsewhere designed to provide the minimum necessary parking ('car-lite'). Although, disabled parking should be provided for 'car-free' developments, in line with Part E of this Policy.

2.18 Policy T6 also requires that purpose built shared-living and other sui generis residential accommodation should be car free.

2.19 In this regard, Table 10.3 of the London Plan states that Outer London Boroughs with a PTAL level of 4 should provide between 0.5 and 0.75 spaces per dwelling. It is also noted

that PTAL 2 locations within Outer London Boroughs (i.e., locations circa 100m of the site) are allowed up to 1 space per dwelling.

- 2.20 Where car parking is provided in new developments, provision should be made for infrastructure for electric or other Ultra-Low Emission vehicles. Adequate provision should be made for efficient deliveries and servicing.
- 2.21 Boroughs should not seek to adopt more generous standards borough-wide.

Haringey's Local Plan: Strategic Policies 2013 (with Alterations 2017) (2013 – 2026)

- 2.22 Transport policy SP7 sets out the Boroughs strategic infrastructure proposals and also provides the following information on Delivering Action on Climate Change and Quality and Healthy Places:

In line with the London Plan, the Council will work with its partners to promote the following travel demand management schemes to tackle climate change, improve local place shaping and public realm, and environmental and transport quality and safety by:

- *Minimising congestion and addressing the environmental impacts of travel;*
- *Promoting public transport, walking and cycling (including minimum cycle parking standards);*
- *Promoting road safety and pedestrian movement particularly in town centres and close to local services;*
- *Promoting car sharing and establishing car clubs;*
- *Seeking to locate major trip generating developments in locations with good access to public transport and so better integrate transport and land use planning;*
- *Adopting maximum car parking standards and car free housing wherever feasible;*
- *Seeking to mitigate the impact of road based freight and promote alternatives;*
- *Supporting measures to influence behavioural change such as promoting low carbon vehicles; and*
- *Requiring the submission of transport assessments and travel plans for large scale proposals in line with TfL guidance.*

Haringey Local Plan: Development Management DPD (2017)

- 2.23 Section 5 of the London Borough of Haringey Local Plan DPD 2017 sets out the policies that relate to transport and parking. The relevant policies are as follows:
- 2.24 Policy DM31: Sustainable Transport:

- A) *The Council will require that developments with high trip generating characteristics locate where public transport accessibility is high and car parking is minimised to mitigate generated car travel.*
- B) *The Council will support the protection, improvement and creation of pedestrian and cycle routes in the Borough to encourage walking and cycling both as a means of*

transport and as recreational activity. The Council will also encourage improved links between pedestrian and cycle routes and public transport facilities, particularly at transport hubs.

- C) The Council will require the submission of a Travel Plan and a Transport Assessment / Statement in support of development proposals in accordance with the Transport for London thresholds.

2.25 Policy DM32: Parking

- A) Development proposals will be assessed against the car parking and cycle parking standards set out in the London Plan.
- B) The Council will strongly encourage contributions to car club schemes or the provision of a car club bays as an alternative to on-site parking.
- C) The Council will support proposals for new development with limited or no on-site parking where:
- a) There are alternative and accessible means of transport available;
 - b) Public transport accessibility is at least 4 as defined in the Public Transport Accessibility Index;
 - c) A Controlled Parking Zone (CPZ) exists or will be provided prior to the occupation of the development;
 - d) Parking is provided for disabled people; and
 - e) Parking is designated for occupiers of developments specified as car capped.

2.26 Paragraph 5.8 states:

“Appropriately located on-site disabled parking will be required with at least one on or off-site disabled parking space for each car-free development. Disabled parking spaces should be provided for all wheelchair accessible housing in car-free developments. The Council will not issue residents on-street parking permits for car free or car capped developments, which have a limited number of on-site parking spaces. However, occupiers of defined car free or car capped developments would be eligible for visitor’s permits. The Council will use legal agreements to require landowners to advise occupiers of the car free or car capped status of a development. For family sized dwellings (3 or more bedrooms) the Council would expect car parking provision in line with its car parking standards.”

2.27 Paragraph 5.9 states:

“Although residents of car-free housing are less likely to park a long distance away from their home, the Council will seek, in the longer term, extensions to existing controlled parking zones. Where public transport provision can be improved to increase the levels of public transport accessibility and facilitate car-free residential development, the Council may seek to augment provision through a section 106 or other legal agreement. The Council will require a section 106 or other legal agreement for all new car-free developments of more than 4 residential units.”

2.28 Paragraph 5.9 continues:

“For larger developments the parking requirement will be assessed on an individual bases as part of the Transport Assessment or Statement.”

2.29 Policy DM35: Cycle Storage in Front Gardens

- A) *Cycle storage in front gardens should be of high quality design, should not be visually intrusive and should not harm the amenity of surrounding properties. Planning applications for cycle storage should have regard to the following:*
- a) *The size of the shed or storage shelter, the building and the garden;*
 - b) *Its location;*
 - c) *Level of screening; and*
 - d) *The nature of the materials used.*

3 Existing Site Assessment

Site Location and Local Facilities

- 3.1 **Appendix A** contains a location plan showing the site's location within Muswell Hill and also shows the local services and facilities.
- 3.2 Muswell Hill is located in the north-west of Haringey Borough. The top of Muswell Hill forms the town centre, with residential streets radiating outwards in all directions. With the town centre serving the surrounding communities as well as being a node for the area.
- 3.3 Muswell Hill Broadway therefore forms the heart of this community. East of the Broadway is the Victorian Alexandra Palace which sits on the edge of a large landscaped park and includes views to St Paul's Cathedral. North leads into Barnet Council, with Crouch End to the south, and Highgate to the west.
- 3.4 The area benefits from numerous amenities, from schools and places of worship, to the nearby Alexandra Palace Park and similar greenery. The site is located within the District Centre, there are a host of commercial, retail and leisure facilities that may need to be accessed by local residents within a short radius of the site including:
 - Local Supermarkets;
 - Convenience Stores;
 - Banks;
 - Pharmacy;
 - Doctors;
 - Dentists; and
 - A wide range of shops and businesses.
- 3.5 There are also a range of schools within walking distance of the proposed development together with a number of places of worship. These are highlighted on the facilities and services plan contained in **Appendix A**.

Existing Site Function

- 3.6 The site is currently occupied by 748m² of A1 retail development on the ground floor, currently occupied by a branch of Poundland, with service access from Muswell Mill Broadway and also potentially from the rear from Muswell Mews. There is also 847m² of storage/B1 office space on two floors above the retail unit. The building was previously a branch of Woolworth.
- 3.7 Muswell Mews, to the rear of the unit, is relatively narrow and also serves the rear of the adjacent post office and a number of other properties. It is however understood that it is only the senior management of the current tenant (the store manager and area manager when visiting) that has ever benefited from the access from Muswell Mews and that the

alternative options ensure that vehicular access is not actually required for the functioning of the shop.

- 3.8 The existing building, in use by a single commercial tenant, is one of the larger shops in this part of Muswell Hill.. Currently, the site is primarily surrounded by other commercial uses, with some residential accommodation above the ground floors fronting onto Muswell Hill Broadway. To the south and east are predominantly residential, with Wellfield Avenue's gardens adjoining the site with significant greenery providing a visual and acoustic 'buffer' between the two uses. A new development, believed to be recently completed lies to the south but is a new dense 'mews'-style project, which is surrounded on all sides by a variety of uses.
- 3.9 Significant works to the existing building, including demolition, have already been approved (HGY/2018/1402 & HGY/2021/2711). This includes carving the massing to remove part of the first floor in order to create two distinct blocks, with the front block becoming residential above ground floor level, with a set-back third floor added. The ground floor remains allocated for retail usage, with a reduced first floor in the rear block providing ancillary spaces and storage for the shop.
- 3.10 The first floor has been extended to align with the ground floor. Above the commercial spaces, three new flats have been added in a new configuration, designed to maximise distances to neighbouring properties and avoiding overlooking or impact on others. Apart from some minor works this consent has though yet to be implemented.

Public Transport

- 3.11 The Public Transport Accessibility Level Index is used to derive accessibility maps for London. Details of the methodology can be found in the Transport for London Transport Assessment Best Practice guidance document Appendix B (April 2010). This guidance states that:

" Public Transport Accessibility Levels (PTALS) are a detailed and accurate measure of the accessibility of a point to the public transport network, taking into account walk access time and service availability. The method is essentially a way of measuring the density of the public transport network at any location within Greater London."
- 3.12 A full PTAL assessment for the site undertaken using the TfL web-PTAL tool is included in **Appendix C**. A full PTAL assessment for the site undertaken using the TfL WebCAT-PTAL tool. A PTAL level rating of 5 was calculated which within London is defined as very good, especially so here where there are no railway stations within a km of the site, and is the best value possible locally. This shows that the site has an excellent level of public transport provision.

Bus

- 3.13 The nearest bus stops are located on Colney Hatch Lane (Queens Avenue Stop A & Muswell Hill Stop B), around 10m (stop A) and 40m (stop B) from the development, from where bus routes 43, 102, 134, 234 and 299 can be boarded. A local bus map is included as **Appendix D**.
- 3.14 Route 43 is operated by Metroline on contracted to London Buses between Friern Barnet and London Bridge, via Muswell Hill, Holloway, Islington and Moorgate. Route 43 is a high

frequency 24 hour operation and has a day time frequency of every 7-8 minutes Monday to Friday, every 8 minutes on a Saturday and a ten minute frequency on a Sunday.

- 3.15 Route 102 is operated by Arriva London on contracted to London Buses between Edmonton Green and Brent Cross, via Palmers Green, Muswell Hill, East Finchley and Golders Green. Route 102 is a high frequency 24 hour operation and has a day time frequency of every 8 minutes Monday to Friday, every 8 minutes on a Saturday and every 12 minutes on a Sunday
- 3.16 Route 134 is operated by Metroline on contracted to London Buses between North Finchley and Tottenham Court Road, via Friern Barnet, Muswell Hill, Archway and Camden Town. Route 134 is a high frequency 24 hour operation and has a day time frequency of every 6 minutes Monday to Friday, every 6 minutes on a Saturday and every 6-7 minutes on a Sunday
- 3.17 Route 234 is operated by Metroline on contracted to London Buses between Barnet and Highgate Wood, via Whetstone, Friern Barnet, Coppetts Road, Muswell Hill and East Finchley. Route 234 is a high frequency operation and has a day time frequency of every 12 minutes Monday to Friday, every 12 minutes on a Saturday and every 20 minutes on a Sunday
- 3.18 Route 299 is operated by Sullivan Bus on contracted to London Buses between Cockfosters and Muswell Hill, via Reservoir Road, Southgate and Bounds Green. Route 299 has a day time frequency of every 15 minutes Monday to Friday, every 15 minutes on a Saturday and every 30 minutes on a Sunday
- 3.19 There are also bus stops on Muswell Hill Broadway (Stop T) around 100m from the development and Muswell Hill (Muswell Hill Primary School Stop C) around 260m from the development from where bus routes 144 and W7 can be boarded.
- 3.20 Route 144 is operated by Arriva London on contracted to London Buses between Edmonton Green and Muswell Hill, via Upper Edmonton, Wood Green and Hornsey. Route 144 is a high frequency operation and has a day time frequency of every 7-8 minutes Monday to Friday, every 7-8 minutes on a Saturday and every 10 minutes on a Sunday
- 3.21 Route W7 is operated by Metroline on contracted to London Buses between Muswell Hill and Finsbury Park, via Hornsey, Crouch End and Stroud Green. Route W7 is a high frequency operation, with 24 hour service on Saturday and Sunday mornings and has a day time frequency of every 6 minutes Monday to Friday, every 6 minutes on a Saturday and every 7-8 minutes on a Sunday
- 3.22 From the above it can therefore be seen that the area has many local bus services with almost 50 buses an hour, which is reflected in the PTAL of 5. The local bus spider map is included in **Appendix D**.

Rail

- 3.23 While there are no railway stations in Muswell Hill itself there are three railway stations within 2km of the site, Highgate, East Finchley and Alexandra Palace. Of these both Highgate and East Finchley stations are on the High Barnet branch of the London Underground Northern Line. Train frequencies vary during the day and are between every 3 to 7 minutes. Highgate station can be reached on the 43 and 134 buses and East Finchley station on the 234 bus.

- 3.24 Alexandra Palace station is a National Rail station on the Great Northern Route, and all trains serving it, are operated by Great Northern to and from Moorgate. Alexandra Palace currently has the following weekday off-peak services (all operated by Great Northern), 6 trains per hour (tph) to London Moorgate, 3 tph to Welwyn Garden City and 3 tph to Hertford North (with 1 tph extended to Letchworth). A few weekday business peak trains to/from Kings Cross also stop at Alexandra Palace during the am and pm peak periods.
- 3.25 Other rail stations relatively close by include Bounds Green, London Underground Piccadilly Line (2.3km), Hornsey, National Rail Great Northern (2.5km), Bowes Park, National Rail Great Northern (2.6km) and Wood Green, London Underground Piccadilly Line (2.9km).

Walking

- 3.26 The immediate pedestrian environment around 412 Muswell Hill Broadway is typical of a town centre site with excellent quality wide footways on both sides of Muswell Hill Broadway and other local roads with frequent at grade crossings, either 'zebra' or signalised. There is also some existing signage for pedestrians,
- 3.27 The footways also provide pedestrian access to the many local bus routes, which are detailed below.

Cycling

- 3.28 The TfL Guidance on Transport Assessments says that a transport assessment (TA) needs to contain an analysis of the current environment for cyclists, identifying any barriers to cycling and exploring opportunities to make the environment more conducive to cycling. This should include the location and capacity of existing onsite cycle parking facilities, existence of Santander Cycles docking stations where applicable, existing cycle routes including Cycle Superhighways and other cycle facilities.
- 3.29 The surrounding area should also be reviewed in terms of how far it meets the London Cycling Design Standards, identifying problems for cyclists that could be addressed.
- 3.30 Both TfL and Cyclestreets have online cycle journey planners available for determining suitable cycle routes from Cottrell House.
- 3.31 Details of the likely numbers of cyclists and their effect on the local network is covered in Section 5 which describes the impact of the development.
- 3.32 There are currently no Santander Cycle docking stations close to Muswell Hill as the network is so far broadly confined to central London and has not as yet reached as far as this part of Haringey. The nearest current docking stations are in Chalk Farm.
- 3.33 Haringey has a network of cycle routes across the borough including cycle lanes on main roads, separated cycle lanes and special fully signed, quiet routes.
- 3.34 Haringey is part of the London Cycle Network and details of local cycle routes previously could be found in the TfL Local Cycle Guides, however these are no longer available and that which includes the Muswell Hill area appears not to have been updated since 2013.
- 3.35 TfL now have a new online cycle route map, for which an extract showing the Muswell Hill area is attached as **Appendix E**. This however shows no formal cycle routes currently exist in the local area, although this only tells part of the situation in reality as there remains a

number of 'quieter' roads in the area that remain suitable for cyclists along with on road cycle lanes and this includes Muswell Hill Broadway itself.

The Local Road Network

- 3.36 412 Muswell Hill Broadway also has good road connections with easy links north to the A406 North Circular Road via Colney Hatch Lane (B550), the continuation of Muswell Hill Broadway, and also to the A1, Falloden Way, to the south, via Muswell Hill Broadway and Muswell Hill Road, also both B550.
- 3.37 Muswell Hill Broadway also connects with the A504 just to the south of 412 Muswell Hill Broadway. The A504 runs essentially east-west and provides a further connection westward to the A406, via Queens Avenue, Fortis Green and East End Road, and eastwards to Hornsey, and beyond, via Muswell Hill, Priory Road and Hornsey High Street.
- 3.38 The site also currently has a rear access onto Muswell Mews, a local shared surface street. This is however used infrequently as access to the site.

Local Parking Provision

- 3.39 The local Muswell Mews area is not currently covered by a Controlled Parking Zone (CPZ), and is not currently proposed to be included in a CPZ, although an area to the west has, in October 2016, been the subject of consultation for a CPZ.
- 3.40 For the previous planning applications the local parking stress in the area was assessed by means of a 'Lambeth' specification parking survey undertaken by independent consultants. This looked at the area within 200m of the proposed development, as people are unlikely to walk further than this parking their vehicle.
- 3.41 The 'Lambeth' specification parking survey looks at the parking available, within a 200m walk, over two weekday nights and the survey for this area indicated that there were at least 70 spaces available overnight. Therefore, even if the development followed the car availability from the 2011 census, which is very unlikely, there would still be overnight parking available to accommodate the potential number of vehicles. It is considered that the situation is unlikely to have altered materially since the survey was undertaken.

Local Car Ownership

- 3.42 Data from the 2011 Census has been used to assess local levels of car ownership for both the local Super Output Area and the smaller Local Output Area within which 412 Muswell Hill Broadway lies. The data is included in **Appendix F** and summarized in table 3.1 below.

	Haringey 014D Area		Haringey E01001997 Area	
	Total Households	Percentage	Total Households	Percentage
All Households	730	100%	174	100%
No Cars or Vans in Household	345	47.26%	102	58.62%
1 Car or Van in Household	264	38.16%	57	32.76%
2 Cars or Vans in Household	101	13.84%	12	6.90%
3 Cars or Vans in Household	15	2.05%	2	1.15%

4 or More Cars or Vans in Household	5	0.68%	1	0.57%
		Ave cars per household		Ave cars per household
All Cars or Vans in Area	538	0.737	92	0.529

Table 3.1: 2011 Census Local Car & Van Ownership

- 3.43 Table 3.1 shows the number of households with no access to a car in the local Super Output Area (SOA), Haringey 014D, and the smaller Census Output Area, E01001997. The smaller census area is likely to most accurately reflect the characteristics of the site being most focussed on the local residential properties around 412 Muswell Hill Broadway. However these are 2011 Census figures as the 2021 Census results are not yet available.
- 3.44 It can be seen from the above data that the average car and van availability per household in the SOALL in 2011 is 0.737, also that over 47% of households do not have access to a car or van at all, and that a further 38% of households have a single vehicle. Only around 16% of all households in the area have access to more than one vehicle.
- 3.45 Breaking the statistics down further and looking at the smaller E00002977 area, the average car and van availability per household is 0.529 vehicles, and nearly 60% of households do not have access to a car or van with nearly 33% of households having access to a single vehicle. Less than 9% of all households in the immediate area have access to more than one vehicle.

Local Journey to Work Data

- 3.46 Data from the 2011 Census has also been used to assess local levels of car ownership for both the local Super Output Area and the smaller Local Output Area within which 412 Muswell Hill Broadway lies. The full 2011 census data is included as **Appendix F** and summarized in table 3.2 below.

	Haringey 014D Area		Haringey E01001997 Area	
	Total	Percentage	Total	Percentage
All Residents	1290		319	
Work from home	79	7.85%	13	4.98%
Underground, Metro, Tram	390	38.77%	109	41.76%
Train	35	3.48%	7	2.68%
Bus	180	17.89%	60	22.99%
Taxi	0	0.00%	0	0.0%
Motorcycle, Scooter, Moped	17	1.69%	3	1.15%
Car driver	187	18.59%	45	17.24%
Car passenger	4	0.40%	0	0.00%
Bicycle	45	4.47%	9	3.45%
Foot	63	6.26%	13	4.98%
Other	6	0.60%	2	0.77%
Not in Employment	284		58	
Residents in Employment	1006	100%	261	100%

Table 3.2: 2011 Census Local Journey to Work Data

- 3.47 Table 3.2 above shows the method of journey to work in the local Super Output Area (SOA), Haringey 014D, and the smaller Census Output Area, E01001997. The smaller census area probably most accurately reflects the characteristics of the site being most focussed on the local residential properties around 412 Muswell Hill Broadway.
- 3.48 It can be seen from the above data that in the larger Haringey 014D area, 17.89% take the bus to work, 42.25% use rail or the Underground, 6.26% travel on foot, 4.47% cycle to work and 18.59% are car drivers, with 0.40% being car passengers.
- 3.49 Breaking the statistics down further and looking at the smaller E01001997 local area, 22.99% take the bus to work, 44.44% use rail or the Underground, 4.98% travel on foot, 3.45% cycle and only 17.24% are car drivers with 0.00% car passengers. This shows that most local residents are already using sustainable means, such as walking, cycling or public transport, to travel to work.

Summary

- 3.50 412 Muswell Hill Broadway is located on the eastern side of Muswell Hill Broadway around 80m from where it crosses the east-west A504 route..
- 3.51 Muswell Hill Town Centre is located immediately to the south of the site, a few minutes' walk, away. It has a wide range of shops and businesses that includes all of the day-to-day facilities that may need to be accessed by local residents.
- 3.52 A PTAL assessment for the site shows that the site is classed as a PTAL of 5 or "Very Good" and there are around 50 buses an hour available within 400m of 412 Muswell Hill Broadway and others a little further away.
- 3.53 This indicates that the site has an excellent level of public transport provision close by and is therefore suitable for car free development.
- 3.54 The local walking environment around 412 Muswell Hill Broadway is good with good quality footways leading to all local destinations mostly with appropriate road crossing facilities and tactile paving provided where necessary.
- 3.55 412 Muswell Hill Broadway also has good road connections with easy links north to the North Circular Road via Colney Hatch Lane (B550), the continuation of Muswell Hill Broadway, to the A1, Falloden Way, to the south, via Muswell Hill Broadway and Muswell Hill Road, also both B550.
- 3.56 The A504 runs essentially east-west just to the south of 412 Muswell Hill Broadway and provides a further connection westwards to the A406, via Queens Avenue, Fortis Green and East End Road, and eastwards to Hornsey, and beyond, via Muswell Hill, Priory Road and Hornsey High Street.
- 3.57 2011 Census data indicates that around 60% of local residents do not have access to a car and that only just over 17% use their car to go to work.

4 The Proposed Development

The Development Proposals

- 4.1 Significant works to the existing building, including demolition, have already been approved (HGY/2018/1402 & HGY/2021/2711). This includes carving the massing to remove part of the first floor in order to create two distinct blocks (A to the front, B to the rear). Block A becomes residential above ground floor level, with a set-back third floor added and alterations to the front elevation enabling a more respectful and contextual design facing the Broadway.
- 4.2 The ground floor remains allocated for retail usage, with a reduced first floor in Block B providing ancillary spaces and storage for the shop. The first floor has been extended to align with the ground floor. Above the commercial spaces, three new flats have been added in a new configuration, designed to maximise distances to neighbouring properties and avoiding overlooking or impact on others.
- 4.3 A Masterplan Layout for the development is included in **Appendix B**. The changes being put forward within this application are predominantly concerned with Block B at the rear. Block A remains essentially as approved, with only minor modifications to the elevations and internal arrangements to accommodate the most efficient entrance and delivery strategy.
- 4.4 At the rear, the ground floor is extended towards the boundary, leaving a 1.5m Forecourt giving access to the cycle, refuse and plant areas as well as for a reconfigured external escape staircase from the flat roof above.
- 4.5 The new stepped rear facade also provides a suitable location for commercial plant equipment. Given the desire to increase flexibility for the shop space at ground floor, the circulation (both stairs and lift) have also been changed. However, the number of units remains as 9 which is the same as previously consented.
- 4.6 In essence therefore effectively the proposed development remains effectively the same as that already consented with a commercial unit to the front and 9 flatted residential units.

Pedestrian Facilities

- 4.7 Pedestrian customer access to the commercial unit will be from Muswell Hill Broadway, with an emergency only access onto Muswell Mews, representing no change from the existing situation.
- 4.8 The primary pedestrian access for the residential element will also be from Muswell Hill Broadway, although there is also a secondary pedestrian access onto Muswell Mews as the cycle store is located here.

Cycle Facilities

- 4.9 There will be secure cycle storage available within the residential element of the development for 18 cycles, representing two for each residential unit and which complies with the standards contained in the London Plan.

Vehicle Access

- 4.10 Owing to the site having no car parking and all servicing taking place outside of the site, there is no vehicle access onto the site.
- 4.11 The proposals remove the potential for rear servicing to the commercial unit from Muswell Mews, which although not previously, or currently, used, did potentially remain possible from a road where it would have been impractical. The proposed arrangement therefore is a benefit to the remaining users of Muswell Mews.

Car Parking

- 4.12 Saved Policy M9 in the London Borough of Haringey Unitary Development Plan (2006,2013) on Car-free Residential Developments states that proposals for new development without the provision of car parking will be permitted in locations where:
- there are alternative and accessible means of transport available;
 - public accessibility is good; and
 - a Controlled Parking Zone (CPZ) exists or will be provided prior to occupation of the development.
- 4.13 The proposed development site has good accessibility and is within close proximity to public transport links, although there is currently no CPZ is currently in operation or planned. There have been consultations on two CPZ's locally, Muswell Hill South, which covers the area to the south and Alexandra Palace West, which covers Muswell Mews itself and although the formal reports have yet to be published, it is understood from the comments made so far by Haringey that both areas are not in favour of the CPZ being implemented.
- 4.14 The current London Borough of Haringey parking standards are contained in the Haringey Development Management DPD, adopted July 2017 where POLICY DM32: PARKING. says that;
- “Development proposals will be assessed against the car parking and cycle parking standards set out in the London Plan.”*
- 4.15 Under the 2021 London Plan the car parking requirement in Policy T6 says
- “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’)”*
- 4.16 The site is located in a highly sustainable area, with a PTAL of 5, and as a result of this is proposed to be car free, with no parking, and therefore complies with the current London Plan, as has been accepted in the previous planning consents.

Servicing

- 4.17 The retail unit will require servicing which will all take place from Muswell Hill Broadway, as at present, where there is an on-street loading bay immediately to the south of the site.

Loading here is restricted to 40 minutes between 10am and 6.30pm Monday to Saturday, with no loading allowed Monday to Friday 7am to 10am.

- 4.18 The expected usual frequency of deliveries is likely to be one HGV per day for a supermarket (as the most intensive scenario). There might be seasonal/occasional variances in number of deliveries, however they would be short term and limited to two deliveries per date maximum. This is broadly similar to the existing arrangements at the commercial unit, which has around one or two deliveries daily. It is likely that the operator of the commercial unit will prepare their own Servicing and Delivery Management Plan to assist the coordination of deliveries in the area.
- 4.19 Waste and recycling for the commercial unit will be stored within the first floor ancillary commercial space and be collected concurrent to deliveries (exchanging incoming deliveries for outgoing waste and recycling). This should be the most efficient servicing strategy for the site.
- 4.20 The refuse store for both residential element is located off the secondary access onto Muswell Mews. This allows the residential refuse and recycling to be collected from Muswell Mews as it is at present from other residential properties on Muswell Mews.

Summary

- 4.21 The proposals are essentially for a broadly similar development to that previously consented in 2018 and 2021 with a revised commercial (retail) element along with 9 residential flats.
- 4.22 Pedestrian access to both the commercial and residential elements of the development will be from Muswell Hill Broadway. There will also be secondary a pedestrian and cycle access to the residential element from Muswell Mews.
- 4.23 Secure cycle storage proposed within the residential element for 18 cycles, which is compliant with the current London Plan requirements. These cycle spaces are directly accessible from the secondary access onto Muswell Mews.
- 4.24 There is no car parking proposed within the development and therefore the residential element is considered as car-free.
- 4.25 Trade waste/recycling from the commercial element will be collected from the existing bay located outside Cottrell House on Muswell Hill Mews.
- 4.26 Refuse and recycling from the residential units will be collected from Muswell Mews, in line with the existing residential units located nearby.

5 Development Impact

Introduction

- 5.1 This section discusses the sustainability and predicted transport impacts of the Cottrell House development proposals.

Sustainability Assessment

- 5.2 The site is in a very sustainable location with easy access to all necessary day-to-day facilities. It is within easy walking distance of the retail and leisure facilities located within the area.
- 5.3 The site has a PTAL level rating of 5, which within London is defined as very good, especially so here where there are no railway stations with a kilometre of the site, and is in fact the best value possible locally. There are almost 50 bus services per hour, within 400m of the site.
- 5.4 There are no railway (surface rail or Underground) stations within the TfL PTAL rail walking distance of 960m but there are several that are within a 20 to 30 minute walk time, including Highgate, East Finchley, Alexandra Palace and Hornsey.
- 5.5 There are currently no Car Club location close to the site, however as the network expands it is likely that this situation will change in the future.
- 5.6 The site is therefore considered to be in a highly sustainable location and is clearly suitable for those with no access to a car as there are many alternative means of accessing services.

Parking

- 5.7 Saved Policy M9 in the London Borough of Haringey Unitary Development Plan (2006,2013) on Car-free Residential Developments states that proposals for new development without the provision of car parking will be permitted in locations where:
- there are alternative and accessible means of transport available;
 - public accessibility is good; and
 - a Controlled Parking Zone (CPZ) exists or will be provided prior to occupation of the development.
- 5.8 The proposed development site has good accessibility and is within close proximity to public transport links, although there is currently no CPZ is currently in operation.
- 5.9 The current London Borough of Haringey parking standards are contained in the Haringey Development Management DPD, adopted July 2017 where POLICY DM32: PARKING. says that;

“Development proposals will be assessed against the car parking and cycle parking standards set out in the London Plan.”

- 5.10 Under the London Plan the car parking requirement for 2 bed flats would be up to 1 space per unit, and therefore theoretically the provision of zero parking, making the development 'car free', complies with the London Plan Policy.
- 5.11 There has been concern as to whether 'car free' development proposed here would be appropriate for the area. To assess this the existing car availability, or car ownership, has been obtained from the data contained in the 2011 census. The overall car/van availability in the local area is 0.737 per unit, compared to the average across the Borough of 0.603, with 47.3% of homes having no availability to a car, compared to 51.8% over the whole Borough.
- 5.12 This is however only part of the overall picture as the data can then be further broken down into the car/van availability for houses and flats separately and this shows that for houses the car/van availability is 1.383 per unit, with only 15% of houses having no access to a car, while for flats the data shows car/van availability is 0.542 per unit, with 56% of flats not having access to a car.
- 5.13 It is recognised that this data relates to a 'snapshot' in 2011 however it is likely that this rate would be lower now as comparison with the overall data for 2001 for the area shows the overall car availability has fallen from 0.775 in 2001 to 0.737 in 2011 and the percentage of homes without access to a car or van has increased from 38.8% in 2001 to 47.3% in 2011. This trend is likely to continue. Details of the local car availability from the 2011 census is contained in Appendix F.
- 5.14 We have already seen that the location of the site, close to local services and with an excellent PTAL score, makes it suitable for 'car lite' or 'car free' development. However, should people still want to have a car applying the car availability rate from the 2011 census to the development here would indicate a maximum of 5 cars would be owned and if these are not accommodated on site then they would have to be parked on the local roads.
- 5.15 The Muswell Mews area is not currently covered by a Controlled Parking Zone (CPZ) and is not currently proposed to be included in a CPZ, although areas to the west have, in October 2016 and February 2020, been the subject of consultation for a CPZ.
- 5.16 As part of the previous application to assess the existing local parking stress in the area a 'Lambeth' specification parking survey was undertaken by independent consultants K&M Surveys over the area within 200m of the proposed development, as people are unlikely to walk further than this parking their vehicle.
- 5.17 The 'Lambeth' specification looks at the parking available, within a 200m walk, over two weekday nights and the survey for this area indicated that there were at least 70 spaces available overnight. It is not considered that this situation would have materially changed since then. Therefore, even if the development followed the car availability from the 2011 census, which is very unlikely, there would still be overnight parking available to accommodate the potential number of vehicles.

Multi Modal Trip Rates

- 5.18 In accordance with best practice multi modal trip rates have been considered. There are two ways to readily provide information for multi modal trips, one is to review TRICS sites where multi modal data has been collected and the other is to look at census data to determine the mode of travel to work.

- 5.19 Both have pitfalls. The TRICS data is based on surveys of other sites selected because of geographical similarities but there are of course many variables at the detailed level for example proximity to a cycle route or bus route. And the journey to work census data by definition does not include the multitude of other trip purposes taking place throughout the day. In this assessment we have looked at TRICS sites only;

TRICS multi modal data

- 5.20 The TRICS data below was previously accepted for the consented scheme for which sites were selected that included multi modal information for sites with no onsite parking. The results of the TRICS assessment were:

	All Day Trip Rate (07:00 to 22:00)			All Day Trip Number (9 units)		
	In	Out	Two Way	In	Out	Two Way
Vehicle	0.170	0.170	0.340	2	2	4
Occupants	0.205	0.239	0.444	2	2	4
Walk	0.481	0.618	1.099	4	6	10
Cycle	0.068	0.068	0.136	1	1	2
Bus	0.377	0.343	0.720	3	3	6
Rail	0.585	0.516	1.101	5	5	10
Total People	1.722	1.792	3.514	15	16	31

Table 5.3 TRICS based All Day multi modal trips. (Allowing for rounding).

	AM Peak Trip Rate (08:00 to 09:00)			AM Peak Trip Number (9 units)		
	In	Out	Two Way	In	Out	Two Way
Vehicle	0.000	0.000	0.000	0	0	0
Occupants	0.000	0.000	0.000	0	0	0
Walk	0.034	0.172	0.206	0	1	1
Cycle	0.000	0.034	0.034	0	0	0
Bus	0.000	0.103	0.103	0	1	1
Rail	0.069	0.103	0.172	1	1	2
Total People	0.103	0.414	0.517	1	4	5

Table 5.4 TRICS based AM Peak multi modal trips. (Allowing for rounding).

	PM Peak Trip Rate (17:00 to 18:00)			PM Peak Trip Number (9 units)		
	In	Out	Two Way	In	Out	Two Way
Vehicle	0.000	0.000	0.000	0	0	0
Occupants	0.000	0.000	0.000	0	0	0
Walk	0.034	0.138	0.172	0	1	1
Cycle	0.034	0.000	0.034	0	0	0
Bus	0.103	0.000	0.103	1	0	1
Rail	0.138	0.000	0.138	1	0	1

Total People	0.310	0.138	0.448	3	1	4
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Table 5.5 TRICS based PM Day multi modal trips. (Allowing for rounding).

- 5.21 Based on the TRICS multi modal data, shown in Tables 5.3 to 5.5 above, it is likely that the residential element of the site would generate of the order of 27 non car trips throughout the course of the day, with 5 in the AM peak period and 4 in the PM peak period; these being split over walking, bus & rail trips in each of the peak periods.
- 5.22 The actual breakdown of mode may vary from the figures indicated by TRICS but the overall amount of trips would be likely to be similar.

Transport Impact

- 5.23 As can be seen from the figures in Table 5.3 to 5.5 above overall predicted vehicular traffic numbers, with the exception of deliveries and servicing to the commercial unit, are not high with just 4 movements (2 arrivals & 2 departures) over the 12 hours between 07:00 and 19:00. This level of vehicular traffic generation is likely to be imperceptible on the local highway network.
- 5.24 The commercial units, with no parking being provided, will generate no vehicular trips, other than for servicing. Overall, therefore the vehicular effect of the commercial element of the development on the local highway network will be negligible.
- 5.25 It is believed there is sufficient capacity in the local public transport networks, bus, tube and rail, to accommodate the level of additional trips expected from the development.
- 5.26 The development is expected to produce probably just in excess of 30 person trips during the day, although these would be spread through the day with 5 indicated in the AM peak period and 4 in the PM peak period.
- 5.27 It is considered that the local footway, bus and rail infrastructure is well capable of handling this relatively minor increase in trips.
- 5.28 TfL guidance says that the Transport Assessment needs to set out how many cycling trips will be expected to be generated by the proposal and how these will impact on existing and proposed on and off-street cycle routes. The TA should set out how additional trips will be catered for safely and conveniently on the existing network, or alternatively how the development will provide for these movements through mitigation measures. Any proposed changes to the highway network and public realm need to consider cycling and should aim to improve cycle infrastructure and safety.
- 5.29 Any Improvements or changes to cycling infrastructure that have been identified and which are located on part of the Transport for London Road Network (TLRN) will need to be agreed with TfL and would have to be subject to a section 278 agreement.
- 5.30 TfL may also request a financial contribution from schemes which are located in an area where there is a wider cycling improvement programme, as a result of developments coming forward in the vicinity and growing demand for cycle infrastructure. This would normally be secured through a section 106 agreement.
- 5.31 The TRICS multi modal data above indicates that the development is expected to produce around 2 daily (weekday) cycle trips, this would be a single journey out and a corresponding return journey. The data in the 2011 census suggests a similar level of cycle journeys.

5.32 It is likely that this level of cycle trips can be easily accommodated on the local network.

Summary

- 5.33 The site is in a very sustainable location with easy access to all necessary day-to-day facilities and has a PTAL of 5, which is classed as very good and is the best available in the local area.
- 5.34 In line with the previously consented scheme no car parking spaces are proposed for either the residential or commercial elements of the proposed development.
- 5.35 Overall predicted traffic flows from the development are not high with just 4 movements (2 in/2 out) over the day, which are all likely to be taxi/Uber or similar movements. This level of traffic generation is likely to be imperceptible on the local highway network.
- 5.36 The non-car trips are predicted to be 5 (1 in/4 out) in the AM peak hour and 4 (3 in/1 out) in the PM peak hour, with 31 (15 in/16 out) over the course of the day between 07.00 and 19.00.
- 5.37 Of the non-car trips these are expected to be split roughly equally between walking, bus & rail trips with a smaller numbers of cycle trips. None of these are likely to cause any problem on the existing local networks.
- 5.38 The level of trips predicted is broadly similar to that expected from the already consented scheme and therefore the development is unlikely to have any noticeable effect on the local transport services, such as bus and rail (main line and underground).

6 Summary and Conclusions

Summary

- 6.1 412 Muswell Hill Broadway is located on the eastern side of Muswell Hill Broadway around 80m from where it crosses the east-west A504 route.
- 6.2 Muswell Hill Town Centre is located immediately to the south of the site, a few minutes' walk, away. It has a wide range of shops and businesses that includes all of the day-to-day facilities that may need to be accessed by local residents.
- 6.3 A PTAL assessment for the site shows that the site is classed as a PTAL of 5 or "Very Good" and there are around 50 buses an hour available within 400m of 412 Muswell Hill Broadway and others a little further away.
- 6.4 This indicates that the site has an excellent level of public transport provision close by and is therefore suitable for car free development.
- 6.5 The local walking environment around 412 Muswell Hill Broadway is good with good quality footways leading to all local destinations mostly with appropriate road crossing facilities and tactile paving provided where necessary.
- 6.6 412 Muswell Hill Broadway also has good road connections with easy links north to the North Circular Road via Colney Hatch Lane (B550), the continuation of Muswell Hill Broadway, to the A1, Falloden Way, to the south, via Muswell Hill Broadway and Muswell Hill Road, also both B550.
- 6.7 The A504 runs essentially east-west just to the south of 412 Muswell Hill Broadway and provides a further connection westwards to the A406, via Queens Avenue, Fortis Green and East End Road, and eastwards to Hornsey, and beyond, via Muswell Hill, Priory Road and Hornsey High Street.
- 6.8 2011 Census data indicates that around 60% of local residents do not have access to a car and that only just over 17% use their car to go to work.
- 6.1 The proposals are essentially for a broadly similar development to that previously consented in 2018 and 2021 with a revised commercial (retail) element along with 9 residential flats.
- 6.2 Pedestrian access to both the commercial and residential elements of the development will be from Muswell Hill Broadway. There will also be secondary a pedestrian and cycle access to the residential element from Muswell Mews.
- 6.3 Secure cycle storage proposed within the residential element for 18 cycles, which is compliant with the current London Plan requirements. These cycle spaces are directly accessible from the secondary access onto Muswell Mews.
- 6.4 There is no car parking proposed within the development and therefore the residential element is considered as car-free.
- 6.5 Trade waste/recycling from the commercial element will be collected from the existing bay located outside Cottrell House on Muswell Hill Mews.
- 6.6 Refuse and recycling from the residential units will be collected from Muswell Mews, in line with the existing residential units located nearby.

- 6.1 The site is in a very sustainable location with easy access to all necessary day-to-day facilities and has a PTAL of 5, which is classed as very good and is the best available in the local area.
- 6.2 In line with the previously consented scheme no car parking spaces are proposed for either the residential or commercial elements of the proposed development.
- 6.3 Overall predicted traffic flows from the development are not high with just 4 movements (2 in/2 out) over the day, which are all likely to be taxi/Uber or similar movements. This level of traffic generation is likely to be imperceptible on the local highway network.
- 6.4 The non-car trips are predicted to be 5 (1 in/4 out) in the AM peak hour and 4 (3 in/1 out) in the PM peak hour, with 31 (15 in/16 out) over the course of the day between 07.00 and 19.00.
- 6.5 Of the non-car trips these are expected to be split roughly equally between walking, bus & rail trips with a smaller numbers of cycle trips. None of these are likely to cause any problem on the existing local networks.
- 6.6 The level of trips predicted is broadly similar to that expected from the already consented scheme and therefore the development is unlikely to have any noticeable effect on the local transport services, such as bus and rail (main line and underground).

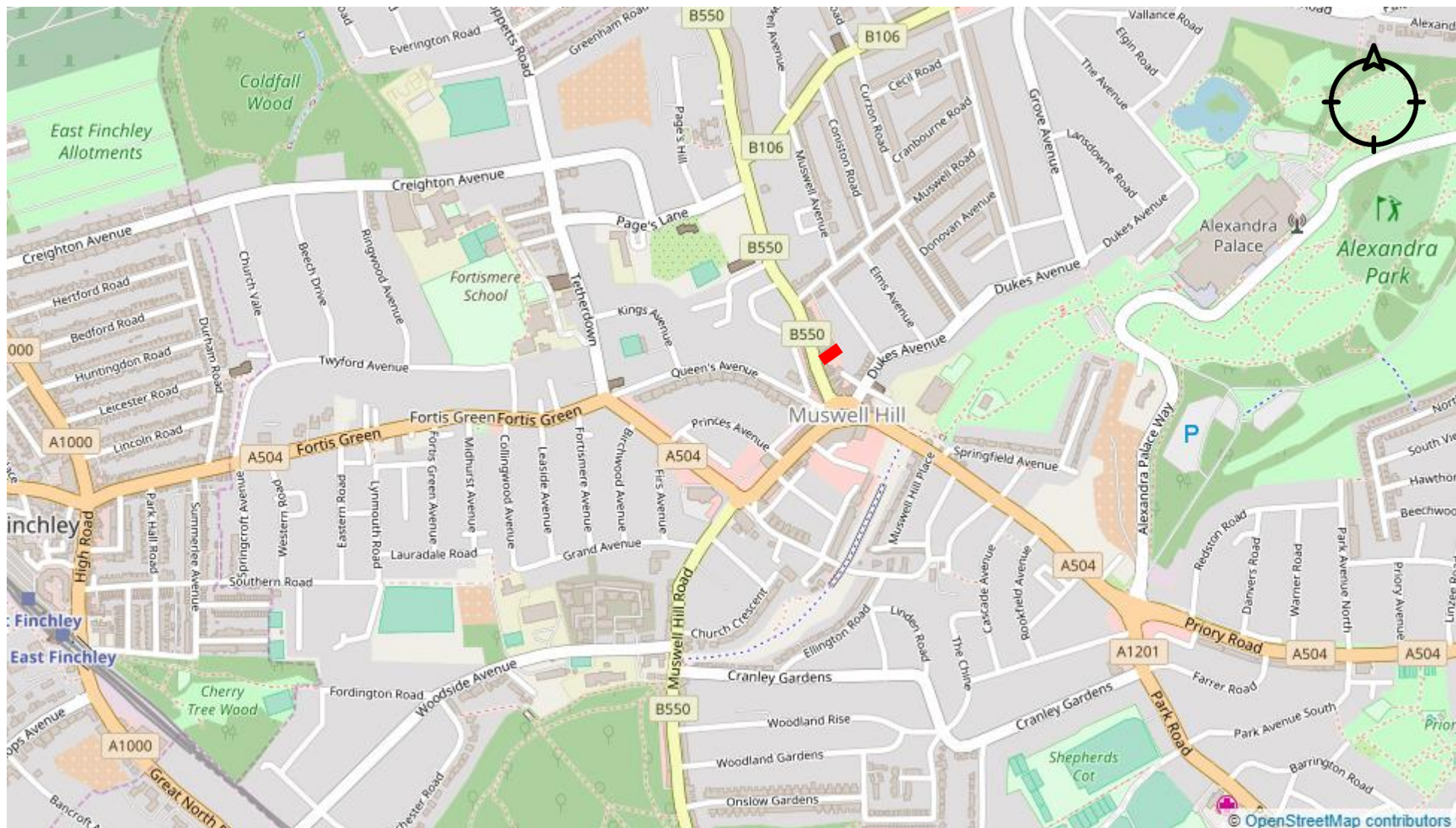
Conclusion

- 6.7 The proposed development is compliant with national and local policies and will have negligible effect on the local highway network. It is also identical in scale to the scheme already consented in 2018 and renewed in 2021. There is therefore no highways or transportation reason why the proposed development should not be granted planning consent.

7 Appendices

Appendix: A - Location Plan
Appendix: B – Proposed Development
Appendix: C - PTAL Report
Appendix: D – Local Bus Map
Appendix: E – Local Cycle Network
Appendix: F – Census Data
Appendix: G - TRICS Data

Appendix: A - Location Plan

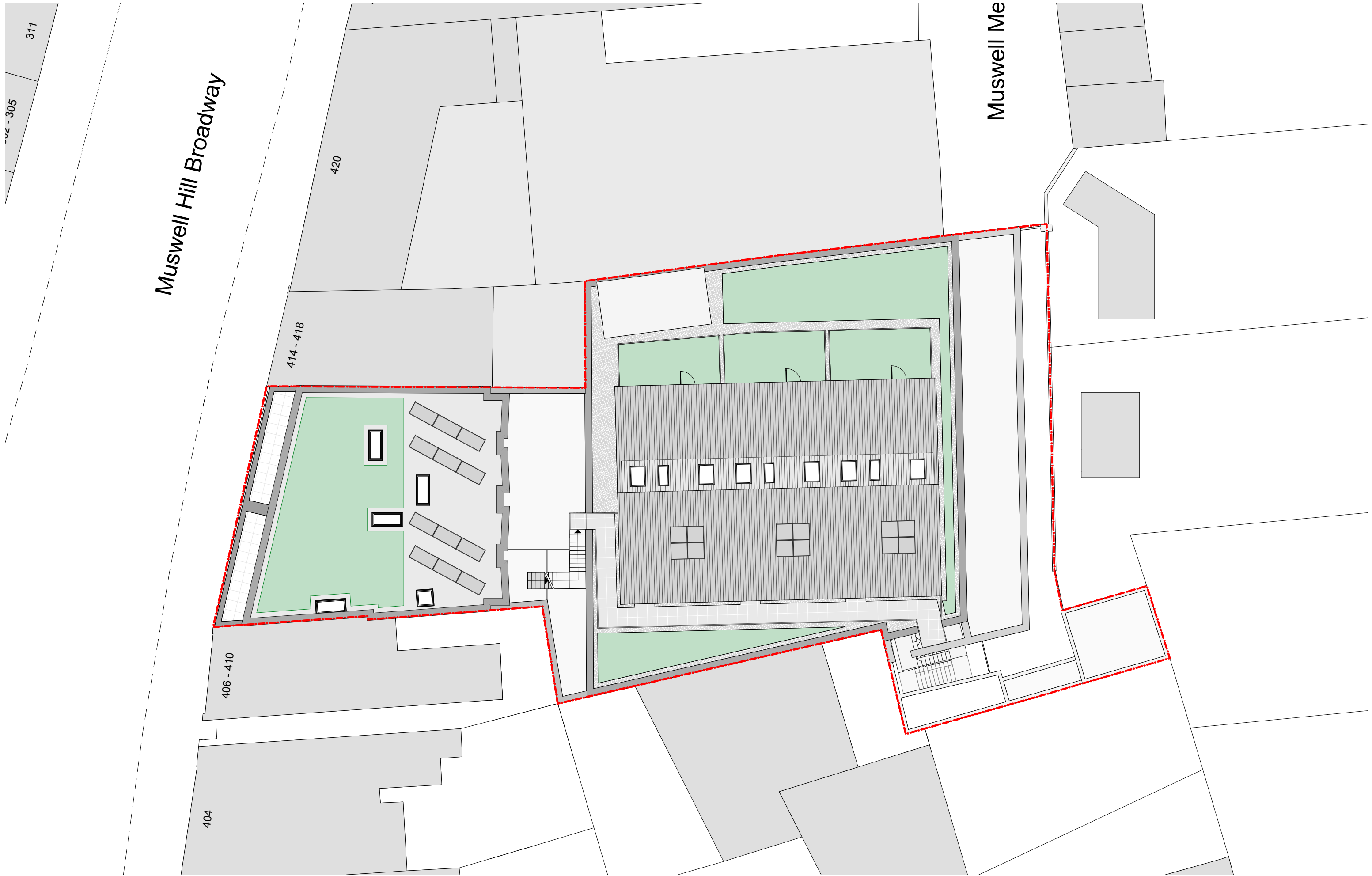


Location Plan

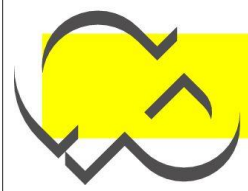
 412 Muswell Hill Broadway
N10 1DJ

EAS

Appendix: B – Proposed Development







**CRAWFORD
PARTNERSHIP**

Architecture &
Interior Design

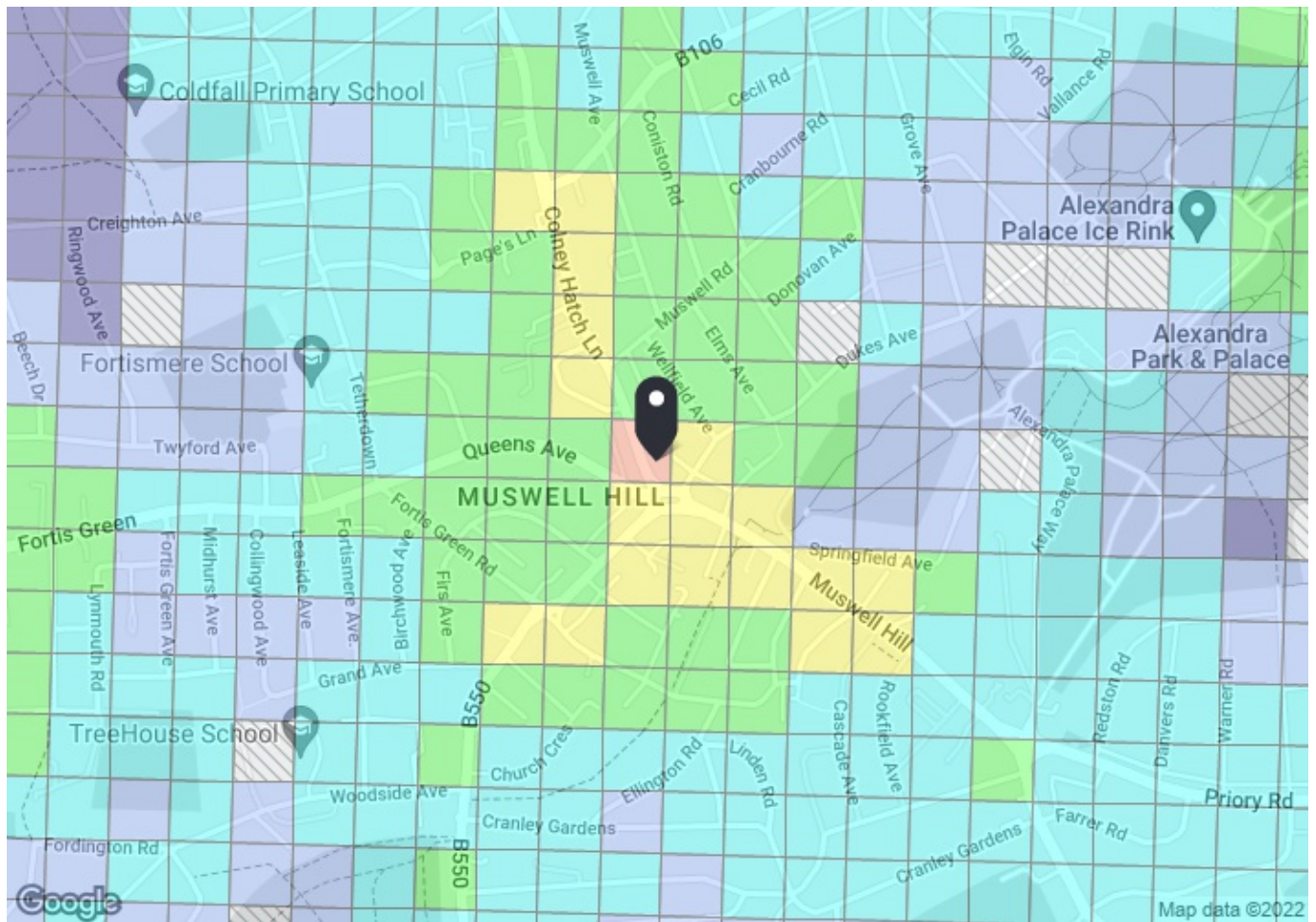
a. 1a Muswell Hill
London, N10 3TH
t. 0208 444 2070
w. crawfordpartnership.co.uk

PROJECT: 412 Muswell Hill Broadway, N10 1DJ		
DRAWING TITLE: Ground Floor Plan		
DRAWING NO.: 2017-335/02-101-A	DRAWN: TS	CHECKED: AC
STATUS: Lease & Legals	DATE: 05 April 2022	
SCALE: 1:100 @ A2	REV:	
CLIENT: Imrose Properties Limited		

NOTES:
Report all errors and discrepancies promptly to architects before proceeding with the works.
Do not scale from drawing. Figured dimensions to be worked to in all cases.
The contractor is responsible for checking dimensions, tolerances and references.
All structural information to be taken from the structural engineer's drawings.



Appendix: C - PTAL Report



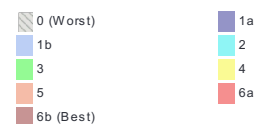
PTAL output for Base Year 5

N10 1DJ
Muswell Hill Broadway Muswell Hill, London N10 1DJ, UK
Easting: 528775, Northing: 189722

Grid Cell: 130094

Report generated: 21/04/2022

Map key - PTAL



Map layers

 PTAL (cell size: 100m)

Calculation Parameters

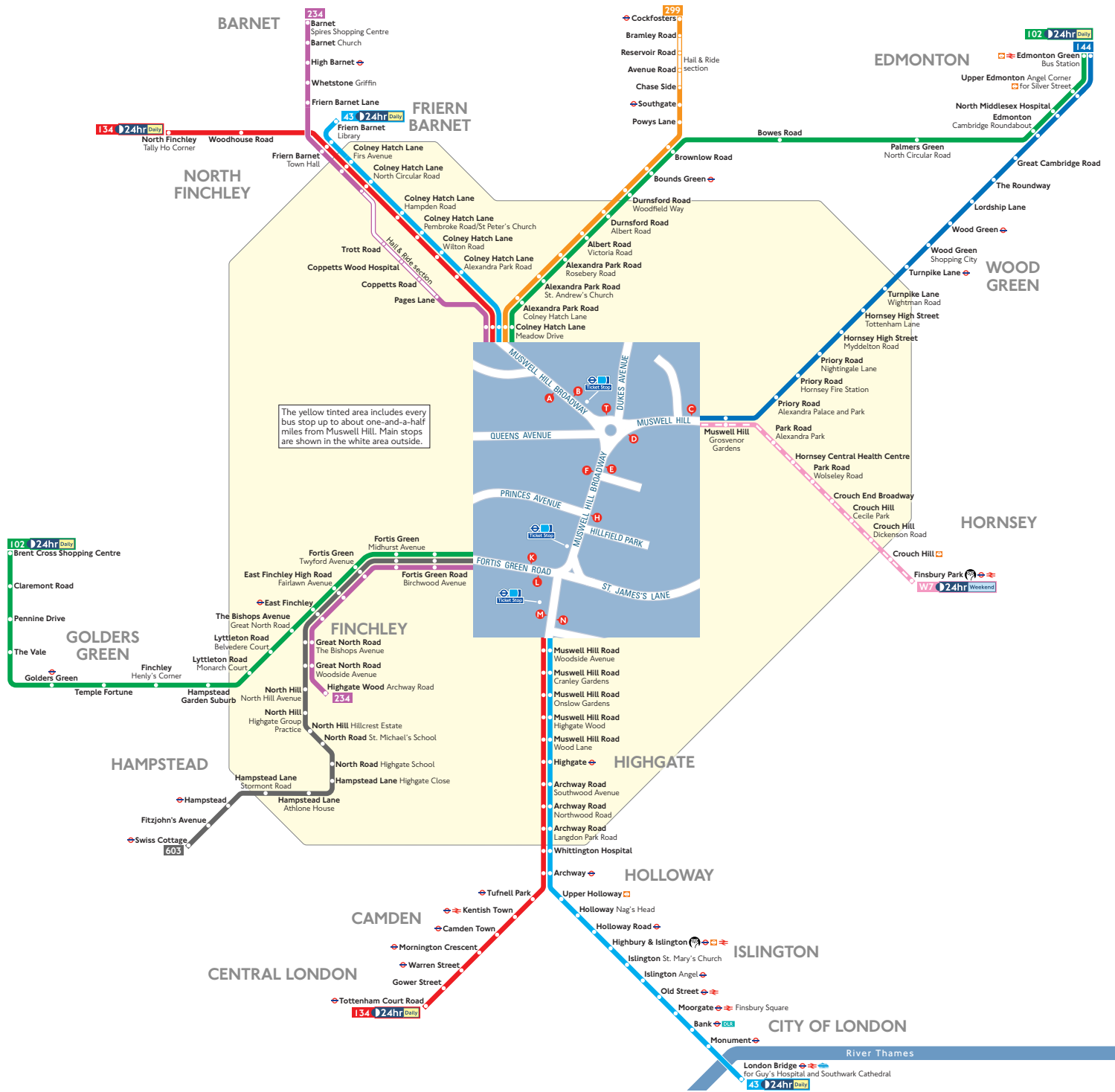
Day of Week	M-F
Time Period	AM Peak
Walk Speed	4.8 kph
Bus Node Max. Walk Access Time (mins)	8
Bus Reliability Factor	2.0
LU Station Max. Walk Access Time (mins)	12
LU Reliability Factor	0.75
National Rail Station Max. Walk Access Time (mins)	12
National Rail Reliability Factor	0.75

Calculation data

Mode	Stop	Route	Distance (metres)	Frequency(vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	MUSWELL HL BDY C HATCH L	234	30.99	5	0.39	8	8.39	3.58	0.5	1.79
Bus	MUSWELL HL BDY C HATCH L	134	30.99	12	0.39	4.5	4.89	6.14	0.5	3.07
Bus	MUSWELL HL BDY C HATCH L	299	30.99	4	0.39	9.5	9.89	3.03	0.5	1.52
Bus	MUSWELL HL BDY C HATCH L	144	30.99	8	0.39	5.75	6.14	4.89	0.5	2.44
Bus	MUSWELL HL BDY C HATCH L	W7	30.99	19	0.39	3.58	3.97	7.56	1	7.56
Bus	MUSWELL HL BDY C HATCH L	102	30.99	7.5	0.39	6	6.39	4.7	0.5	2.35
Bus	MUSWELL HL BDY C HATCH L	43	30.99	10	0.39	5	5.39	5.57	0.5	2.78
Total Grid Cell AI:										21.52

Appendix: D – Local Bus Map

Buses from Muswell Hill



Route finder

Bus route	Towards	Bus stops
43 	Friern Barnet London Bridge	A F M B E N
102 	Brent Cross Edmonton Green	B H L A F K
134 	North Finchley Tottenham Court Road	A F M B E N
144 234	Edmonton Green Barnet	C T A F K
299 603	Highgate Wood Cockfosters	B H L A
W7 	Swiss Cottage Finsbury Park	H L C T

Other buses

Bus route	Towards	Bus stops
634 Sch	Barnet Galley Lane	A
653 Sch	Kingsbury Jewish Free School	H L

Key

	Connections with London Underground
	Connections with London Overground
	Connections with National Rail
	Connections with Docklands Light Railway
	Connections with river boats
	Operates daily with 24-hour service Friday and Saturday nights
	Tube station with 24-hour service Friday and Saturday nights
	Monday to Fridays only
	School journey

Ways to pay

	Use your contactless debit or credit card. It's the same fare as Oyster and there is no need to top up.
	Top up your Oyster pay as you go credit or buy Travelcards and bus & tram passes at around 4,000 shops across London.
	Sign up for an online account to top up online and see your travel history and spending.

Appendix: E – Local Cycle Network



(Data from TfL)

Local Cycle Routes

■ Site



Appendix: F – Census Data

KS017 - Cars or Vans

ONS Crown Copyright Reserved [from Nomis on 12 April 2018]

population All households
units Persons and Households
date 2001

Cars	ualad09:Haringey		soalow:E01001997 : Haringey 014D		gor:London	
All categories: Car or van availability	92,170		668		3,015,997	
No cars or vans in household	42,820	46.46	259	38.77	1,130,649	37.49
1 car or van in household	38,005	41.23	313	46.86	1,298,481	43.05
2 cars or vans in household	9,622	10.44	82	12.28	476,185	15.79
3 cars or vans in household	1,374	1.49	11	1.65	86,470	2.87
4 or more cars or vans in household	349	0.38	3	0.45	24,212	0.80
sum of all cars or vans in the area	62,949		518		2,616,328	
Totals		100.00		100.00		100.00
Cars Per Household	0.683		0.775		0.867	

Cells in this dataset have been randomly adjusted to avoid the release of confidential data.

Appendix: G - TRICS Data

Calculation Reference: AUDIT-743101-170705-0712

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

01 GREATER LONDON
SK SOUTHWARK 1 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
Actual Range: 29 to 29 (units:)
Range Selected by User: 29 to 29 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/09 to 23/04/15

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:

Thursday 1 days

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

Selected survey types:

Manual count 1 days
Directional ATC Count 0 days

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

Selected Locations:

Edge of Town Centre 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:

Built-Up Zone 1

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

Secondary Filtering selection:

Use Class:

C3 1 days

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

Secondary Filtering selection (Cont.):

Population within 1 mile:

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 1 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

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

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:

6b (High) Excellent 1 days

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

LIST OF SITES relevant to selection parameters

1	SK-03-C-02	BLOCK OF FLATS	SOUTHWARK
	LAMB WALK		
	BERMONDSEY		
	Edge of Town Centre		
	Built-Up Zone		
	Total Number of dwellings:	29	
	Survey date: THURSDAY	23/04/15	Survey Type: MANUAL

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

MULTI-MODAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	1	29	0.000	1	29	0.000	1	29	0.000
08:00 - 09:00	1	29	0.000	1	29	0.000	1	29	0.000
09:00 - 10:00	1	29	0.034	1	29	0.034	1	29	0.068
10:00 - 11:00	1	29	0.000	1	29	0.000	1	29	0.000
11:00 - 12:00	1	29	0.000	1	29	0.000	1	29	0.000
12:00 - 13:00	1	29	0.034	1	29	0.034	1	29	0.068
13:00 - 14:00	1	29	0.034	1	29	0.000	1	29	0.034
14:00 - 15:00	1	29	0.000	1	29	0.034	1	29	0.034
15:00 - 16:00	1	29	0.000	1	29	0.000	1	29	0.000
16:00 - 17:00	1	29	0.034	1	29	0.034	1	29	0.068
17:00 - 18:00	1	29	0.000	1	29	0.000	1	29	0.000
18:00 - 19:00	1	29	0.034	1	29	0.034	1	29	0.068
19:00 - 20:00	1	29	0.000	1	29	0.000	1	29	0.000
20:00 - 21:00	1	29	0.000	1	29	0.000	1	29	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.170			0.170			0.340

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:	29 - 29 (units:)
Survey date range:	01/01/09 - 23/04/15
Number of weekdays (Monday-Friday):	1
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 shown. 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 TAXIS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	1	29	0.000	1	29	0.000	1	29	0.000
08:00 - 09:00	1	29	0.000	1	29	0.000	1	29	0.000
09:00 - 10:00	1	29	0.000	1	29	0.000	1	29	0.000
10:00 - 11:00	1	29	0.000	1	29	0.000	1	29	0.000
11:00 - 12:00	1	29	0.000	1	29	0.000	1	29	0.000
12:00 - 13:00	1	29	0.000	1	29	0.000	1	29	0.000
13:00 - 14:00	1	29	0.000	1	29	0.000	1	29	0.000
14:00 - 15:00	1	29	0.000	1	29	0.000	1	29	0.000
15:00 - 16:00	1	29	0.000	1	29	0.000	1	29	0.000
16:00 - 17:00	1	29	0.000	1	29	0.000	1	29	0.000
17:00 - 18:00	1	29	0.000	1	29	0.000	1	29	0.000
18:00 - 19:00	1	29	0.034	1	29	0.034	1	29	0.068
19:00 - 20:00	1	29	0.000	1	29	0.000	1	29	0.000
20:00 - 21:00	1	29	0.000	1	29	0.000	1	29	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.034			0.034			0.068

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:	29 - 29 (units:)
Survey date range:	01/01/09 - 23/04/15
Number of weekdays (Monday-Friday):	1
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 shown. 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 CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	1	29	0.000	1	29	0.034	1	29	0.034
08:00 - 09:00	1	29	0.000	1	29	0.034	1	29	0.034
09:00 - 10:00	1	29	0.000	1	29	0.000	1	29	0.000
10:00 - 11:00	1	29	0.000	1	29	0.000	1	29	0.000
11:00 - 12:00	1	29	0.000	1	29	0.000	1	29	0.000
12:00 - 13:00	1	29	0.000	1	29	0.000	1	29	0.000
13:00 - 14:00	1	29	0.000	1	29	0.000	1	29	0.000
14:00 - 15:00	1	29	0.000	1	29	0.000	1	29	0.000
15:00 - 16:00	1	29	0.000	1	29	0.000	1	29	0.000
16:00 - 17:00	1	29	0.000	1	29	0.000	1	29	0.000
17:00 - 18:00	1	29	0.034	1	29	0.000	1	29	0.034
18:00 - 19:00	1	29	0.000	1	29	0.000	1	29	0.000
19:00 - 20:00	1	29	0.034	1	29	0.000	1	29	0.034
20:00 - 21:00	1	29	0.000	1	29	0.000	1	29	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.068			0.068			0.136

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:	29 - 29 (units:)
Survey date range:	01/01/09 - 23/04/15
Number of weekdays (Monday-Friday):	1
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 shown. 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 VEHICLE OCCUPANTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	1	29	0.000	1	29	0.000	1	29	0.000
08:00 - 09:00	1	29	0.000	1	29	0.000	1	29	0.000
09:00 - 10:00	1	29	0.103	1	29	0.103	1	29	0.206
10:00 - 11:00	1	29	0.000	1	29	0.000	1	29	0.000
11:00 - 12:00	1	29	0.000	1	29	0.000	1	29	0.000
12:00 - 13:00	1	29	0.034	1	29	0.034	1	29	0.068
13:00 - 14:00	1	29	0.034	1	29	0.000	1	29	0.034
14:00 - 15:00	1	29	0.000	1	29	0.034	1	29	0.034
15:00 - 16:00	1	29	0.000	1	29	0.000	1	29	0.000
16:00 - 17:00	1	29	0.034	1	29	0.034	1	29	0.068
17:00 - 18:00	1	29	0.000	1	29	0.000	1	29	0.000
18:00 - 19:00	1	29	0.000	1	29	0.034	1	29	0.034
19:00 - 20:00	1	29	0.000	1	29	0.000	1	29	0.000
20:00 - 21:00	1	29	0.000	1	29	0.000	1	29	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.205			0.239			0.444

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:	29 - 29 (units:)
Survey date range:	01/01/09 - 23/04/15
Number of weekdays (Monday-Friday):	1
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 shown. 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 PEDESTRIANS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	1	29	0.000	1	29	0.069	1	29	0.069
08:00 - 09:00	1	29	0.034	1	29	0.172	1	29	0.206
09:00 - 10:00	1	29	0.000	1	29	0.034	1	29	0.034
10:00 - 11:00	1	29	0.000	1	29	0.000	1	29	0.000
11:00 - 12:00	1	29	0.000	1	29	0.000	1	29	0.000
12:00 - 13:00	1	29	0.000	1	29	0.000	1	29	0.000
13:00 - 14:00	1	29	0.000	1	29	0.034	1	29	0.034
14:00 - 15:00	1	29	0.000	1	29	0.000	1	29	0.000
15:00 - 16:00	1	29	0.000	1	29	0.000	1	29	0.000
16:00 - 17:00	1	29	0.103	1	29	0.034	1	29	0.137
17:00 - 18:00	1	29	0.034	1	29	0.138	1	29	0.172
18:00 - 19:00	1	29	0.138	1	29	0.034	1	29	0.172
19:00 - 20:00	1	29	0.103	1	29	0.000	1	29	0.103
20:00 - 21:00	1	29	0.069	1	29	0.103	1	29	0.172
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.481			0.618			1.099

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:	29 - 29 (units:)
Survey date range:	01/01/09 - 23/04/15
Number of weekdays (Monday-Friday):	1
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 shown. 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 RAIL PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	1	29	0.000	1	29	0.069	1	29	0.069
08:00 - 09:00	1	29	0.069	1	29	0.103	1	29	0.172
09:00 - 10:00	1	29	0.000	1	29	0.207	1	29	0.207
10:00 - 11:00	1	29	0.000	1	29	0.000	1	29	0.000
11:00 - 12:00	1	29	0.000	1	29	0.000	1	29	0.000
12:00 - 13:00	1	29	0.000	1	29	0.000	1	29	0.000
13:00 - 14:00	1	29	0.034	1	29	0.034	1	29	0.068
14:00 - 15:00	1	29	0.069	1	29	0.069	1	29	0.138
15:00 - 16:00	1	29	0.000	1	29	0.000	1	29	0.000
16:00 - 17:00	1	29	0.034	1	29	0.000	1	29	0.034
17:00 - 18:00	1	29	0.138	1	29	0.000	1	29	0.138
18:00 - 19:00	1	29	0.069	1	29	0.000	1	29	0.069
19:00 - 20:00	1	29	0.138	1	29	0.000	1	29	0.138
20:00 - 21:00	1	29	0.034	1	29	0.034	1	29	0.068
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.585			0.516			1.101

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:	29 - 29 (units:)
Survey date range:	01/01/09 - 23/04/15
Number of weekdays (Monday-Friday):	1
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 shown. 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 PUBLIC TRANSPORT USERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	1	29	0.000	1	29	0.172	1	29	0.172
08:00 - 09:00	1	29	0.069	1	29	0.207	1	29	0.276
09:00 - 10:00	1	29	0.034	1	29	0.241	1	29	0.275
10:00 - 11:00	1	29	0.000	1	29	0.034	1	29	0.034
11:00 - 12:00	1	29	0.034	1	29	0.000	1	29	0.034
12:00 - 13:00	1	29	0.034	1	29	0.000	1	29	0.034
13:00 - 14:00	1	29	0.034	1	29	0.034	1	29	0.068
14:00 - 15:00	1	29	0.069	1	29	0.069	1	29	0.138
15:00 - 16:00	1	29	0.000	1	29	0.000	1	29	0.000
16:00 - 17:00	1	29	0.034	1	29	0.000	1	29	0.034
17:00 - 18:00	1	29	0.241	1	29	0.000	1	29	0.241
18:00 - 19:00	1	29	0.138	1	29	0.000	1	29	0.138
19:00 - 20:00	1	29	0.241	1	29	0.069	1	29	0.310
20:00 - 21:00	1	29	0.034	1	29	0.034	1	29	0.068
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.962			0.860			1.822

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: 29 - 29 (units:)
 Survey date range: 01/01/09 - 23/04/15
 Number of weekdays (Monday-Friday): 1
 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 shown. 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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	1	29	0.000	1	29	0.276	1	29	0.276
08:00 - 09:00	1	29	0.103	1	29	0.414	1	29	0.517
09:00 - 10:00	1	29	0.138	1	29	0.379	1	29	0.517
10:00 - 11:00	1	29	0.000	1	29	0.034	1	29	0.034
11:00 - 12:00	1	29	0.034	1	29	0.000	1	29	0.034
12:00 - 13:00	1	29	0.069	1	29	0.034	1	29	0.103
13:00 - 14:00	1	29	0.069	1	29	0.069	1	29	0.138
14:00 - 15:00	1	29	0.069	1	29	0.103	1	29	0.172
15:00 - 16:00	1	29	0.000	1	29	0.000	1	29	0.000
16:00 - 17:00	1	29	0.172	1	29	0.069	1	29	0.241
17:00 - 18:00	1	29	0.310	1	29	0.138	1	29	0.448
18:00 - 19:00	1	29	0.276	1	29	0.069	1	29	0.345
19:00 - 20:00	1	29	0.379	1	29	0.069	1	29	0.448
20:00 - 21:00	1	29	0.103	1	29	0.138	1	29	0.241
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		1.722			1.792			3.514	

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:	29 - 29 (units:)
Survey date range:	01/01/09 - 23/04/15
Number of weekdays (Monday-Friday):	1
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 shown. 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 MOTOR CYCLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	1	29	0.000	1	29	0.000	1	29	0.000
08:00 - 09:00	1	29	0.000	1	29	0.000	1	29	0.000
09:00 - 10:00	1	29	0.000	1	29	0.000	1	29	0.000
10:00 - 11:00	1	29	0.000	1	29	0.000	1	29	0.000
11:00 - 12:00	1	29	0.000	1	29	0.000	1	29	0.000
12:00 - 13:00	1	29	0.000	1	29	0.000	1	29	0.000
13:00 - 14:00	1	29	0.000	1	29	0.000	1	29	0.000
14:00 - 15:00	1	29	0.000	1	29	0.000	1	29	0.000
15:00 - 16:00	1	29	0.000	1	29	0.000	1	29	0.000
16:00 - 17:00	1	29	0.000	1	29	0.000	1	29	0.000
17:00 - 18:00	1	29	0.000	1	29	0.000	1	29	0.000
18:00 - 19:00	1	29	0.000	1	29	0.000	1	29	0.000
19:00 - 20:00	1	29	0.000	1	29	0.000	1	29	0.000
20:00 - 21:00	1	29	0.000	1	29	0.000	1	29	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.000			0.000			0.000	

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:	29 - 29 (units:)
Survey date range:	01/01/09 - 23/04/15
Number of weekdays (Monday-Friday):	1
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 shown. 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 Bus Passengers

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	1	29	0.000	1	29	0.103	1	29	0.103
08:00 - 09:00	1	29	0.000	1	29	0.103	1	29	0.103
09:00 - 10:00	1	29	0.034	1	29	0.034	1	29	0.068
10:00 - 11:00	1	29	0.000	1	29	0.034	1	29	0.034
11:00 - 12:00	1	29	0.034	1	29	0.000	1	29	0.034
12:00 - 13:00	1	29	0.034	1	29	0.000	1	29	0.034
13:00 - 14:00	1	29	0.000	1	29	0.000	1	29	0.000
14:00 - 15:00	1	29	0.000	1	29	0.000	1	29	0.000
15:00 - 16:00	1	29	0.000	1	29	0.000	1	29	0.000
16:00 - 17:00	1	29	0.000	1	29	0.000	1	29	0.000
17:00 - 18:00	1	29	0.103	1	29	0.000	1	29	0.103
18:00 - 19:00	1	29	0.069	1	29	0.000	1	29	0.069
19:00 - 20:00	1	29	0.103	1	29	0.069	1	29	0.172
20:00 - 21:00	1	29	0.000	1	29	0.000	1	29	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.377			0.343			0.720

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.

Parameter summary

Trip rate parameter range selected:	29 - 29 (units:)
Survey date range:	01/01/09 - 23/04/15
Number of weekdays (Monday-Friday):	1
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.