

**Proposed Residential Development
2 Midcroft, Ruislip
London, HA4 8ES**

Transport Statement

For

Midcroft Self Service





Document Control Sheet

Transport Statement

Proposed Residential Development, 2 Midcroft, Ruislip, London

Midcroft Self Service

This document has been issued and amended as follows:

Date	Issue	Prepared by	Approved by
10/02/2021	1 st Draft	D.K.	D.K.
12/02/2021	Final	D.K.	D.K.

Contents

1.0	Introduction.....	1
2.0	Policy Context.....	2
3.0	Baseline Conditions.....	8
4.0	Development Proposals and Assessment	11
5.0	Summary and Conclusions.....	14

Figures

- 3.1 Site Location Plan

Tables

2.1	London Plan Vehicle Parking Standards (maximum)
2.2	London Plan Cycle Parking Standards (minimum)
2.3	Intend to Publish London Plan Cycle Parking Standards (minimum)
2.4	Local Plan Part 2 Vehicle Parking Standards (maximum)
2.5	Local Plan Part 2 Cycle Parking Standards (maximum)
3.1	Bus Services

Appendices

- A Existing Site Layout Plan
- B Public Transport Accessibility Level (PTAL) Report
- C Time Mapping (TIM) Report
- D Proposed Site Layout Plan
- E TRICS Output Report

1.0 Introduction

- 1.1 DIRMACK Transport Planning has been appointed by Midcroft Self Service to prepare a Transport Statement to accompany a planning application in respect of a proposed residential development located on land off Midcroft, Ruislip within the administrative boundary of the London Borough of Hillingdon (LBH).
- 1.2 The site is located to the north of Midcroft, just east of its junction with the High Street (A4180). The surrounding area consists predominately of retail, commercial and residential uses. The site was previously occupied by a petrol station that is no longer in use. Currently a car washing facility is in operation.
- 1.3 The development proposals comprise the construction of a block of residential dwellings (Use Class C3) alongside on-site car parking, secure cycle parking, refuse store and amenity space.
- 1.4 This Transport Statement is focused on investigating of the proposed residential development from a traffic engineering and transport planning perspective. The key elements of the proposal are as follows:
 - Construction of a single block of 9 residential units consisting of 1 bedroom (x1), 2 bedroom (x3) and 3 bedroom (x5) self-contained flats; and
 - Provision of 6 on-site car parking spaces (including 1 accessible space) as well as safe and secure parking for 20 bicycles.
- 1.5 The remainder of this report is structured as follows:
 - **Section 2** – Policy Context (outlines the transport policies that are considered pertinent to this application);
 - **Section 3** – Baseline Conditions (considers the existing use / arrangements of the site and reviews site accessibility by all modes of transport);
 - **Section 4** - Development Proposals and Assessment (provides an overview of the proposed development and sets out the access, traffic generation, parking and servicing strategies that will be adopted);
 - **Section 5** - Summary and Conclusion (summarises the key findings and conclusions of this report).

2.0 Policy Context

Planning History

2.1 A planning application (Ref. 4918/APP/2014/1274) was submitted in 2014 for full planning permission in relation to the provision of a four-storey block of flats containing 14 residential dwellings with office space on the ground floor. This application was refused with some of the reasons given relating to siting, scale, height and the design being out of character with the area.

2.2 In 2018 a further planning application was made (Ref. 4918/APP/2018/738) for the provision of a four-storey building containing 9 residential flats. However, this application was withdrawn.

2.3 A planning application (Ref. 4918/APP/2018/4227) was submitted on December 2018 for full planning permission in relation to the construction of a single block of 9 residential units consisting of 1 bedroom (x2), 2 bedroom (x3) and 3 bedroom (x4) self-contained flats. In addition to this, on-site basement car parking (14 spaces), secure cycle parking, refuse store and amenity space were proposed. The application was refused on 29 March 2019 via a Delegated Decision based on a schedule of reasons. The transport related reasons for refusal are quoted below:

'The proposal, fails to demonstrate that that sufficient manoeuvring and access arrangements for service delivery vehicles and car parking would be maintained for adjoining commercial premises which would result in driver confusion and unexpected vehicle movements for other highway users and deliveries and parking taking place from the road. The development is therefore considered to be detrimental to highway and pedestrian safety and prejudicial to the free flow of traffic on the adjoining highway, including access by service delivery vehicles the adjacent buildings at 53 - 61 High Street Ruislip, contrary to Policy AM7 of the adopted Hillingdon Local Plan: Part Two Saved UDP Policies (November 2012) and Policy 6.3 of the London Plan (2016).'

Applicable Planning Policy

2.4 There are a number of documents that contain planning policies relevant to transport. The key documents which set the context for the development proposals are as follows:

- National Planning Policy Framework (2019);
- The Mayor's Transport Strategy (2018);
- The London Plan (2016) and Publication London Plan (2020); and
- London Borough of Hillingdon Development Plan.

National Planning Policy Framework (NPPF)

2.5 The 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.

2.6 The NPPF reiterates that *'the purpose of the planning system is to contribute to the achievement of sustainable development'* and *'at the heart of the Framework is a presumption in favour of sustainable development.'*

2.7 In relation to parking policy, the NPPF states that *'if setting local parking standards for residential and non-residential development, local planning authorities should take 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 of the NPPF states 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 accordance with chapter 11 of this Framework). 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 Paragraph 108 states that '*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.'*

2.10 Furthermore, paragraph 109 states that '*development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.*'

The Mayor's Transport Strategy

2.11 The Mayor's Transport Strategy sets out the Mayor's policies and proposals to reshape transport in London over the next two decades. At the heart of this document is the aim for 80% of all trips in London to be made on foot, by cycle or using public transport by 2041.

2.12 In order to help achieve this, the Transport Strategy uses the 'Healthy Streets Approach,' which makes health and experience the priority as development occurs in London. The Healthy Streets Approach is the system of policies and strategies to help Londoners reduce single occupancy vehicle movements and encourage walking, cycling and the use public transport. The overall aim, of the Healthy Streets Approach, is to help create a vibrant city where people can live active and healthy lives, by putting this ethos at the heart of decision making.

The London Plan

2.13 The London Plan (2016) is the overall strategic plan for the development of the capital to 2031. Chapter six of the London Plan sets out the context of integrating transport and development. Policy 6.3 relates to the effects of development on transport capacity and states:

'Development proposals should ensure that impacts on transport capacity and the transport network, at both a corridor and local level, are fully assessed. Development should not adversely affect safety on the transport network; and

Where existing transport capacity is insufficient to allow for the travel generated by proposed developments, and no firm plans exist for an increase in capacity to cater for this, boroughs should ensure that development proposals are phased until it is known these requirements can be met, otherwise they may be refused. The cumulative impacts of development on transport requirements must be taken into account.'

2.14 Policy 6.13 relates to parking and states:

"The Mayor wishes to see an appropriate balance being struck between promoting new development and preventing excessive car parking provision that can undermine cycle, walking and public transport use".

2.15 The table below sets out the maximum car parking standards set out within the London Plan in relation to proposed residential dwellings.

Number of Beds	Maximum Number of Spaces
1-2 bedroom(s)	Less than 1
3 bedrooms	Up to 1.5
4+ bedrooms	Up to 2

Table 2.1: London Plan Vehicle Parking Standards (maximum)

2.16 Adequate parking spaces for disabled persons must be provided (preferably on site). In relation to electric vehicles, 20% of all spaces must be for active provision with an additional 20% passive provision for electric vehicles in the future.

2.17 Minimum cycle parking standards contained within the current London Plan are set out in the table below.

Use Class	Description of Use	Long-Stay	Short-Stay
C3-C4	Dwellings (all)	1 space per studio and 1 bedroom unit 2 spaces per all other dwellings	1 space per 40 units

Table 2.2: London Plan Cycle Parking Standards (minimum)

Publication London Plan

2.18 The Mayor has formally approved a new London Plan which is currently referred to as the 'Publication London Plan' (December 2020). The Plan is undergoing Secretary of State consideration prior to determination of formal publication. Upon publication, it will become the Spatial Development Plan for London and form part of the statutory Development Plan for Greater London.

2.19 Chapter 10 of the Plan pertains to transport and more precisely car parking. Policy T6 (Car Parking) states:

'A. Car parking should be restricted in line with levels of existing and future public transport accessibility and connectivity.

'B. 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')

2.20 Table 10.3 of the Publication London Plan sets out the relationship between location and maximum parking provision. It states that for Outer London locations with a PTAL of 4 the maximum car parking provision should be 0.5 to 0.75 spaces per dwelling.

2.21 The Publication London Plan puts an onus on reduced car parking provision at new developments, particularly those that are in accessible locations in order to meet the Mayor's aim for 80% of all trips in London to be made on foot, by cycle or using public transport by 2041.

2.22 With regard to disabled parking, the Plan states that 'disabled persons parking should be provided for new residential developments.' For residential developments delivering 10 or more units there must as a minimum be at least one designated disabled persons parking bay per dwelling for three percent of dwellings and these need to be from the outset. In addition, it should be demonstrated how an additional seven percent of dwellings could be provided with one designated disabled persons parking space per dwelling if requested in the future.

2.23 The minimum cycle parking standards contained within the Publication London Plan are set out in the table below.

Use Class	Description of Use	Long-Stay	Short-Stay
C3-C4	Dwellings (all)	1 space per studio / 1 person 1 bedroom unit 1.5 spaces per 2 person 1 bedroom unit 2 spaces per all other dwellings	2 spaces for 5 to 40 dwellings 1 space per 40 units thereafter

Table 2.3: Intend to Publish London Plan Cycle Parking Standards (minimum)

London Borough of Hillingdon Development Plan

2.24 The London Borough of Hillingdon Development Plan consists of the following:

- The Hillingdon Local Plan: Part 1 – Strategic Policies
- The Hillingdon Local Plan: Part 2 – Development Management Policies
- The Hillingdon Local Plan: Part 2 – Site Allocations and Designations
- The West London Waste Plan
- The London Plan

2.25 The Local Plan Part 1 (Strategic policies) sets out the overall level and broad locations of growth up to 2026.

2.26 The Local Plan Part 2 consists of the Development Management Policies, Site Allocations and Designations and Policies Map. It delivers the detail of the strategic policies set out in the Local Plan Part 1. The detail policies contained forms the basis of the Council's decisions on individual planning applications. Within the Local Plan Part 2 – Policies Map, the application site is located within the extents of Ruislip District Town Centre.

2.27 Policy DMT 1: Managing Transport Impacts states the following:

'Development proposals will be required to meet the transport needs of the development and address its transport impacts in a sustainable manner. In order for developments to be acceptable they are required to:

- i) be accessible by public transport, walking and cycling either from the catchment area that it is likely to draw its employees, customers or visitors from and/or the services and facilities necessary to support the development;*
- ii) maximise safe, convenient and inclusive accessibility to, and from within developments for pedestrians, cyclists and public transport users;*
- iii) provide equal access for all people, including inclusive access for disabled people;*
- iv) adequately address delivery, servicing and drop-off requirements; and*
- v) have no significant adverse transport or associated air quality and noise impacts on the local and wider environment, particularly on the strategic road network.'*

2.28 Policy DMT 2: Highway Impacts states the following:

'Development proposals must ensure that:

- i) safe and efficient vehicular access to the highway network is provided to the Council's standards;*
- ii) they do not contribute to the deterioration of air quality, noise or local amenity or safety of all road users and residents;*
- iii) safe, secure and convenient access and facilities for cyclists and pedestrian are satisfactorily accommodated in the design of highway and traffic management schemes;*
- iv) impacts on local amenity and congestion are minimised by routing through traffic by the most direct means to the strategic road network, avoiding local distributor and access roads; and*

v) there are suitable mitigation measures to address any traffic impacts in terms of capacity and functions of existing and committed roads, including along roads or through junctions which are at capacity.'

2.29 Policy DMT 4: Public Transport states that 'the Council will support and promote the enhancement of public transport facilities.'

2.30 Policy DMT 5: Pedestrian and Cyclists states that 'development proposals will be required to ensure that safe, direct and inclusive access for pedestrians and cyclists is provided on the site connecting it to the wider network.'

2.31 Policy DMT 6: Vehicle Parking states the following:

'A) Development proposals must comply with the parking standards outlined in Appendix C Table 1 in order to facilitate sustainable development and address issues relating to congestion and amenity. The Council may agree to vary these requirements when:

i) the variance would not lead to a deleterious impact on street parking provision, congestion or local amenity; and/or

ii) a transport appraisal and travel plan has been approved and parking provision is in accordance with its recommendations.

B) All car parks provided for new development will be required to contain conveniently located reserved spaces for wheelchair users and those with restricted mobility in accordance with the Council's Accessible Hillingdon SPD.'

2.32 Relevant requirements set out within Appendix C of the Local Plan Part 2 are highlighted below:

- 'The minimum dimensions of a standard car parking bay are 2400mm x 4800mm for spaces and for a wheelchair accessible car parking bay 2400mm x 4800mm plus shared 1200mm transfer zone.'
- 'The minimum dimensions for a bicycle space are 600mm x 1800mm.'
- 'Sufficient space for the standing and manoeuvring of all goods and service vehicles likely to serve the development at any one time is essential.'
- 'Development layouts should allow all vehicles to load/unload and enter and leave the site in a forward gear.'
- 'Car parking areas must be designed from the outset in accordance with the principles of secured by design (where necessary access controlled), sustainable drainage (SuDS) and inclusive access.'
- 'Car parking areas must be designed to allow vehicles to exit and enter in a forward gear.'
- 'For residential development, car parking areas must include 10% of spaces suitable for a wheelchair user.'
- 'Parking for electric vehicles should be provided at a current minimum of 5% of car parking spaces with 5% passive provision to meet the Mayor's targets.'
- 'Parking for bicycles must be located in a safe, secure and accessible location. Covered parking should be provided where possible. Cycle spaces should be located as near as possible to the building entrance(s).'
- 'As a minimum, cycle parking should normally take the form of Sheffield stands or a similar stand which allows both the frame and wheels of a cycle to be secured without risk of damage. Further design guidance is available in Transport for London's London Cycling Design Standards.'
- 'In addition to car and bicycle parking, parking spaces for motorised two wheelers (motorcycles, moped and scooters) must also be provided at the rate of 5% of car parking spaces.'

2.33 The table below sets out the maximum car parking standards set out within the Local Plan Part 2 in relation to proposed residential dwellings (flats).

Number of Beds	Maximum Number of Spaces
Studio	1 space per 2 units
1-2 bedrooms	1.5-1 spaces per unit
3-4+ bedrooms	2 spaces per unit

Table 2.4: Local Plan Part 2 Vehicle Parking Standards (maximum)

2.34 Policy also requires car parking spaces to be allocated to dwellings and visitor car parking to be accommodated on-site in addition to the above provision.

2.35 Cycle parking standards contained within the Local Plan Part 2 are set out in the table below. It is noted that the cycle parking standards set out within the London Plan are minimums whilst the LBH Local Plan are maximums.

Number of Beds	Maximum Number of Spaces
Studio, 1 or 2 bedroom unit	1 space per unit
3+ bedroom unit	2 spaces per unit

Table 2.5: Local Plan Part 2 Cycle Parking Standards (maximum)

3.0 Baseline Conditions

Site Location and Surrounding Road Network

3.1 The site is located to the north of Midcroft, east of its junction with the High Street (A4180) in Ruislip District Town Centre within the administrative boundary of the London Borough of Hillingdon (LBH). The surrounding area is predominately made up of retail, commercial and residential uses.

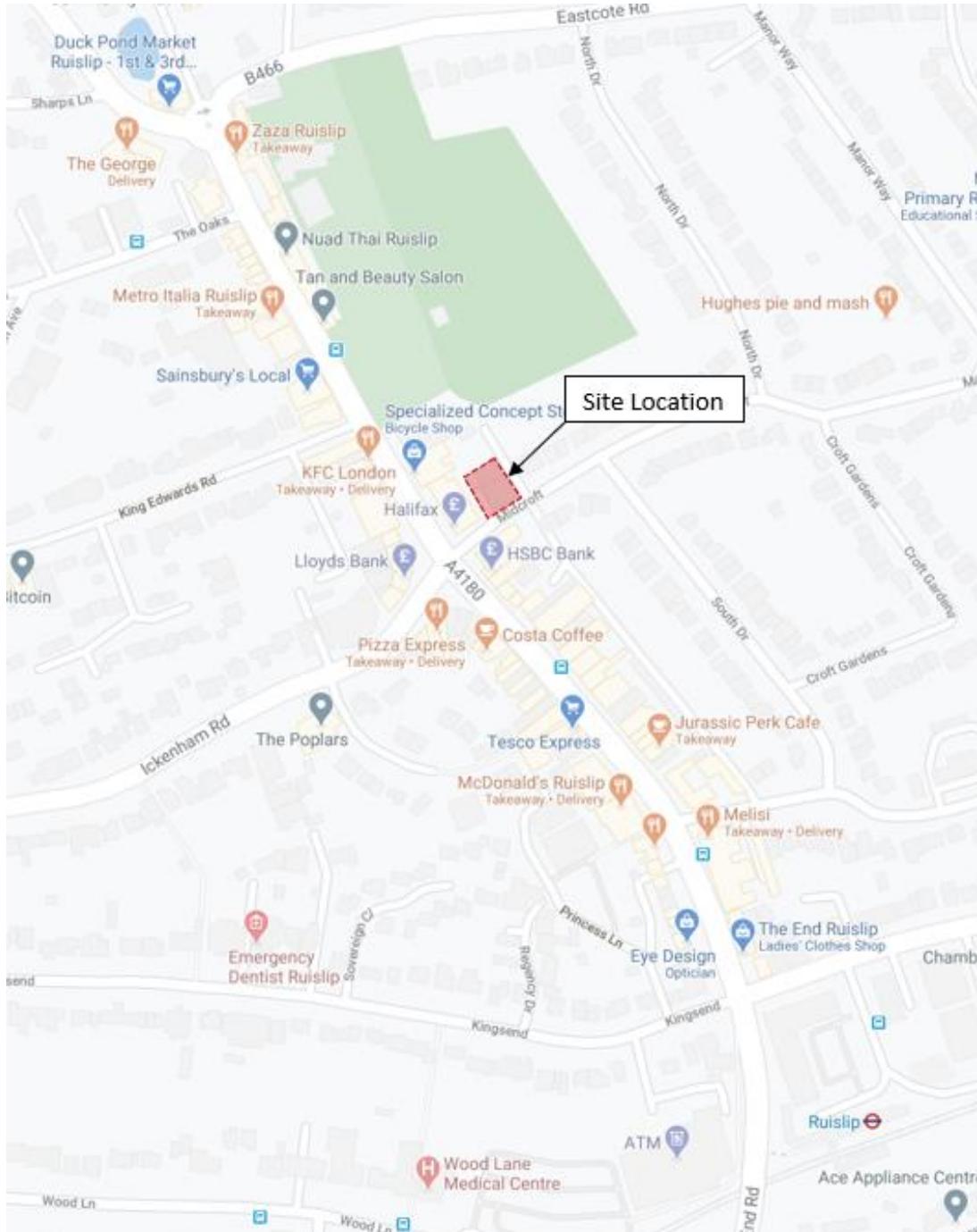


Figure 3.1: Site Location Plan (Source: Google Maps)

- 3.2 Midcroft is a single carriageway residential street with footways on each side and a carriageway width of approximately 7m in vicinity of the application site. There are double yellow 'No loading at any time' restrictions on both sides of Midcroft in vicinity of the site, with marked 'Disabled badge holders only' car parking bays on the southern side. The site is located within a Controlled Parking Zone (CPZ).
- 3.3 Jebson House (53-61 High Street) is located directly to the west of the site and accommodates commercial, retail and office uses. Surface car parking for this site is located within the rear courtyard area that adjoins the application site.
- 3.4 Directly to the east of the application site is an access road (right of way) serving a car parking area and service yard for the business units located to the north of the site.
- 3.5 A pedestrian route to the Church Field Gardens open space area and a through connection to Eastcote Road is also located to the east of the site.

Current Land Use and Access

- 3.6 The site was previously occupied by a petrol station with surface level car parking that is no longer in use. Currently a car washing facility is in operation.
- 3.7 Vehicle, pedestrian and cycle access are provided directly off Midcroft via two crossovers located on the eastern and western extents of the site. The eastern crossover also facilitates access to the business units located to the north of the site whilst the western crossover also facilitates access to the rear parking area of Jebson House. The existing site layout plan is contained within **Appendix A**.

Accessibility

Public Transport Accessibility Level

- 3.8 The Public Transport Accessibility Level (PTAL) methodology has been adopted by TfL as a means by which to quantify and compare accessibility to public transport services for given sites. PTAL considers the time taken to access the public transport network and includes the following factors:
 - The walk time to various public transport services;
 - The average waiting time for each service; and
 - The reliability of each service.
- 3.9 The PTAL methodology is based on a walk speed of 4.8kph and considers railway station within a 12-minute walk (960m) of a site and bus stops within an 8-minute walk (640m). The PTAL assessment is undertaken using the AM peak hour operation of existing services.
- 3.10 An Equivalent Doorstep Frequency (EDF) is calculated for each of the public transport services accessible from the site, based on the criteria described above. The individual EDF values are weighted to provide an accessibility index (AI) value for each service accessible from the site. The sum of the AI's for each mode are aggregated to provide a single measure of accessibility.
- 3.11 TfL's web-based calculator has been utilised to determine the existing PTAL of the application site. The site achieves a PTAL score of 4 which indicates that the site benefits from good levels of accessibility by public transport. A copy of the PTAL report is attached within **Appendix B**.
- 3.12 Time Mapping (TIM) is a TfL measure that looks at how far one can travel in a given journey time. The TIM mapping shows the key employment, town centres, health services and educational establishments that are located within 15-minute travel time intervals (up to a 2.5 hours) from the application site. A copy of the TIM report is attached within **Appendix C**.

Accessibility by Foot

3.13 Midcroft has footway provision on both the northern and southern sides of the road adjacent to the site. These local footways link the site to wider areas including the High Street, local bus stops, Ruislip London Underground Station to the south and West Ruislip London Underground and National Rail Station to the west.

Accessibility by Cycle

3.14 In terms of cycling routes, LBH recommends the following which pass nearby the application site:

- Eastcote Station to Uxbridge High Street (passes a number of underground stations as well as Ruislip Manor and Ickenham District Centres). The nearest connection from the site to this route is from Pembroke Road / Kingsend; and
- Northwood Hills Station to Uxbridge High Street (a route using quieter residential roads and includes access to Ruislip and Ickenham District Centres. The nearest connection from the site to this route is from Eastcote Road (B466) / Sharps Lane.

Accessibility by Bus

3.15 The nearest bus stops are located approximately 100 metres (northbound) and 130 meters (southbound) to the south of the site along the High Street. There are also several additional bus stops located further away but still within an acceptable walking distance from the site. A summary of the bus services located in vicinity of the site are listed in Table 3.1 below.

Service Number	Service Route
278	Heathrow Central Bus Station – Brickwall Lane
331	Ruislip Station – Belmont Road
E7	Ruislip Station – Ealing Broadway Station / Haven Green
H13	St Vincent's Nursing Home – Ruislip Lido
U1	Ruislip Station - West Drayton Station
U10	Uxbridge Station – Glenhurst Avenue

Table 3.1: Bus Services

Accessibility by Rail

3.16 Ruislip London Underground Station is located approximately 450 metres to the south of the application site. This station is located on the Uxbridge branch of both the Metropolitan Line and Piccadilly Line and is within Zone 6.

3.17 West Ruislip Station is located approximately 1.1 kilometres to the west of the application site. This station offers both London Underground (Zone 6 Central Line) and National Rail services

Highway Safety

3.18 A review of the highway safety records using 'Crashmap' for the area in proximity to the site demonstrated that there was only one collision recorded in the most recent 3-year period (2017 to 2019) on the High Street, south of its junction with Midcroft / Ickenham Road. This incident occurred in June 2017, was of slight severity and included one vehicle. Given the nature and location of the proposed development, no further consideration of this matter is proposed.

4.0 Development Proposals and Assessment

4.1 The development proposals seek to construct a single block containing 9 residential dwellings (Use Class C3) alongside on-site basement car parking, secure cycle storage, refuse store and amenity space. The breakdown of residential provision is as follows (refer to **Appendix D** for relevant plans of the proposed development):

- 1 x 1 bedroom flat;
- 3 x 2 bedroom flats; and
- 5 x 3 bedroom flats.

Access

4.2 Vehicle, pedestrian and cycle access are currently provided directly off Midcroft via two crossovers located on the eastern and western extent of the site. As noted previously the eastern crossover also facilitates access to the business units located to the north of the site whilst the western crossover also facilitates access to the rear parking area of Jebson House. Whilst maintaining the existing access arrangements for the adjoining properties, the proposals are to limit the number of vehicle site access points to the single existing crossover located to the west of the site and to provide a formalised pedestrian forecourt / landscaping area to eliminate the secondary access point located to the east of the site.

4.3 The above proposals would necessitate the extension of the kerb line along Midcroft and result in an extension of the footway. A new pedestrian access (separated from vehicles) at the site frontage will connect directly to the existing footway and encourage the safe movement of pedestrians.

4.4 As the proposed arrangements result in the reduction of the number of vehicle access points serving the site, provide a separate pedestrian access as well as an extension of the existing footway along Midcroft, it is considered that the development would result in an overall improvement in terms of safety and pedestrian amenity.

Cycle Parking

4.5 The application of the LBH Local Plan cycle parking standards to the proposed development yields a maximum cycle parking requirement of 14 spaces. The application of the London Plan standards to the proposed development yields a minimum cycle parking requirement of 18 spaces. Whilst the application of the Publication London Plan standards to the proposed development yields a minimum cycle parking requirement of 20 spaces.

4.6 In light of the above Local and Regional policy requirements, a total of 20 cycle parking spaces are to be provided within a dedicated cycle storage unit that is accessed from ground level (refer to layout plans contained in Appendix D). This facility provides accessible, secure, safe and sheltered cycle parking for the development which exceeds the LBH Local Plan standards. It is suggested that the details of cycle parking provision be conditioned as part of the planning consent.

Car Parking

4.7 The application of the LBH Local Plan car parking standards to the proposed development yields a maximum car parking provision of up to 14 to 16 spaces. The application of the London Plan standards to the proposed development yields a maximum car parking provision of 12 spaces. Whilst the application of the Publication London Plan standards to the proposed development yields a maximum car parking provision of up to 5 to 7 spaces.

4.8 It is proposed to provide 6 on-site car parking spaces (including 1 accessible space) which is in accordance with the Local and Regional policy requirements set out above. Of these spaces, 1 space shall have active provision and 1 space shall have passive provision for electric vehicles.

4.9 The proposed dimensions for the perpendicular car parking bays are 2.4 m (wide) x 4.8 m (length) with a 1.2 m wide loading zone provided adjacent to the disabled car parking space. The internal aisle width shall have a 6 m width to cater for two-way vehicle movements and ensure that vehicles would be able to manoeuvre into and out from the perpendicular parking spaces with ease (this applies to both the application site as well as the adjoining Jebson House site located to the west). The proposed layout also helps facilitate vehicles to safely enter and leave the site in a forward direction.

Refuse and Delivery Arrangements

4.10 It is proposed that refuse collection / deliveries occur on-street fronting the site. The refuse store is located within the standard recommended refuse container trolleying distance of 10 m to the kerb line on Midcroft. This refuse collection arrangement would be consistent with the neighbouring residential properties along Midcroft.

4.11 In order to facilitate the above, it is proposed to alter the Traffic Orders by shortening the length of the current double yellow 'No loading at any time' restrictions on the northern side of Midcroft by approximately 15 m so that it ends at the eastern extent of the site vehicle access crossover.

Traffic Generation

4.12 When considering residential use (Use Class C3), it is generally accepted that the critical period in terms of traffic generation and potential impact is during the weekday AM and PM peak hour periods. It is during this period that the cumulative total of both the traffic flows associated with the development and those on the surrounding highway network is likely to be at its highest. The application site is currently not in operation and therefore the potential traffic generation of the existing permitted use of the site has not been taken into account as part of this assessment. It is recognised that by not providing a net impact / comparison between the existing and proposed land uses the assessment and conclusions made in this report are considered robust.

4.13 The TRICS database has been interrogated for land uses and sites that are considered similar to the proposed development to estimate the potential traffic generation of the proposed scheme. The following criteria was applied to the TRICS database search:

- Land Use: Class C3 Residential / Flats privately owned
- Regions: Greater London
- Number of Dwellings: 14 to 30 units
- Survey Day: Weekdays
- Date Range: 01/01/12 to 06/03/20

4.14 Table 4.1 presents the forecast vehicle trip rates for the proposed residential land use (C3) during the weekday AM and PM peak hour periods. The full TRICS output files are contained within **Appendix E**.

Time Period	Vehicle Trip Rates (per 100 square metres)		
	Arrivals	Departures	Total
Weekday AM Peak Hour (08:00 – 09:00)	0.056	0.148	0.204
Weekday PM Peak Hour (17:00 – 18:00)	0.102	0.000	0.102

Table 4.1 – Forecast Vehicle Trip Rates for proposed Residential Use

4.15 The vehicle trip rates presented in the table above have been applied to the proposed number of dwellings in order to calculate the expected vehicle trips associated with the proposed development. Table 4.2 presents the forecast vehicle trips during the weekday AM and PM peak hour periods.

Time Period	Vehicle Trip Generation		
	Arrivals	Departures	Total
Weekday AM Peak Hour (08:00 – 09:00)	1	1	2
Weekday PM Peak Hour (17:00 – 18:00)	1	0	1

Table 4.2 – Vehicle Trip Generation for proposed Residential Use

4.16 Based on the information summarised above, it is anticipated that the proposed development will generate a total of 2 and 1 two-way weekday trips during the weekday AM and PM peak hour periods respectively. This equates to approximately 1 vehicle per 30 and 60 minutes during the AM and PM peak hour periods respectively. If a net assessment were to be undertaken and the vehicle trip generation of the previous petrol station use were to be deducted from the vehicle trips anticipated by the proposed development, it is considered that there would be a net overall reduction in vehicle numbers travelling to and from the site. It is therefore considered that the anticipated traffic generation of the proposed development will not result in demonstrable harm to the operations of the surrounding highway network. Indeed, it is considered that there would be an overall benefit achieved through a net reduction in vehicle numbers generated by the site.

5.0 Summary and Conclusions

5.1 DIRMak Transport Planning has been appointed by Midcroft Self Service to prepare a Transport Statement to accompany a planning application in respect of a proposed residential development located on land off Midcroft, Ruislip within the administrative boundary of the London Borough of Hillingdon (LBH).

5.2 The site is located to the north of Midcroft, just east of its junction with the High Street (A4180). The surrounding area consists predominately of retail, commercial and residential uses. The site was previously occupied by a petrol station that is no longer in use. Currently a car washing facility is in operation.

5.3 The development proposals comprise the construction of a block of 9 residential dwellings (Use Class C3) alongside on-site car parking, secure cycle parking, refuse store and amenity space.

5.4 The key conclusions of this assessment are as follows:

- The development is in an accessible location with local bus stops and amenities within walking distance of the site;
- A new pedestrian access (separated from vehicles) at the site frontage will connect directly to the existing footway and encourage the safe movement of pedestrians;
- The proposed development would result in an overall improvement in terms of safety and pedestrian amenity as the number of vehicle access points serving the site is to be reduced, a separate pedestrian access is to be provided as well as an extension of the existing footway along Midcroft;
- Secure, safe and sheltered cycle parking is to be provided in accordance with policy to help facilitate more sustainable / active modes of travel to and from the site;
- There is sufficient car parking provision, in accordance with policy, to meet the anticipated needs of the development;
- The on-site car parking and aisle design shall cater for two-way vehicle movements and ensure that vehicles would be able to manoeuvre into and out from the parking spaces with ease (this applies to both the application site as well as the adjoining Jebson House site located to the west). The proposed layout also helps facilitate vehicles to safely enter and leave the site in a forward direction.
- Consistent with the neighbouring residential properties along Midcroft, refuse collection / deliveries are propose to occur on-street fronting the site with the refuse store located within the standard recommended refuse container trolleying distance. In order to facilitate this, slight changes to the Traffic Orders on the northern side of Midcroft are proposed.
- The anticipated traffic generation of the proposed development will not result in a material impact to the operations of the surrounding highway network. Indeed, it is considered that there would be an overall benefit achieved through a net reduction in vehicle numbers generated by the site when compared against the previous permitted use.

5.5 Based on the above, it is not considered that '*there would be an unacceptable impact on highway safety, or the residual cumulative impacts of development are severe.*' Therefore, the planning application for the proposed development should be supported on traffic and transport grounds.

Appendix A – Existing Site Layout Plan

NOTES
Drawings for sketch purposes only
and not for construction.

This drawing is copyright
USL Architects.



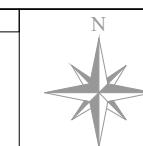
Ground floor
7 Progress Business Centre
Whittle Parkway
Bunham SL1 6DQ
England
usl@uslarchitects.co.uk

Job No.
19/ MRH
Date
04/01/2021

Job
MIDCROFT
2 Midcroft
HA4 8ES - Ruislip
England

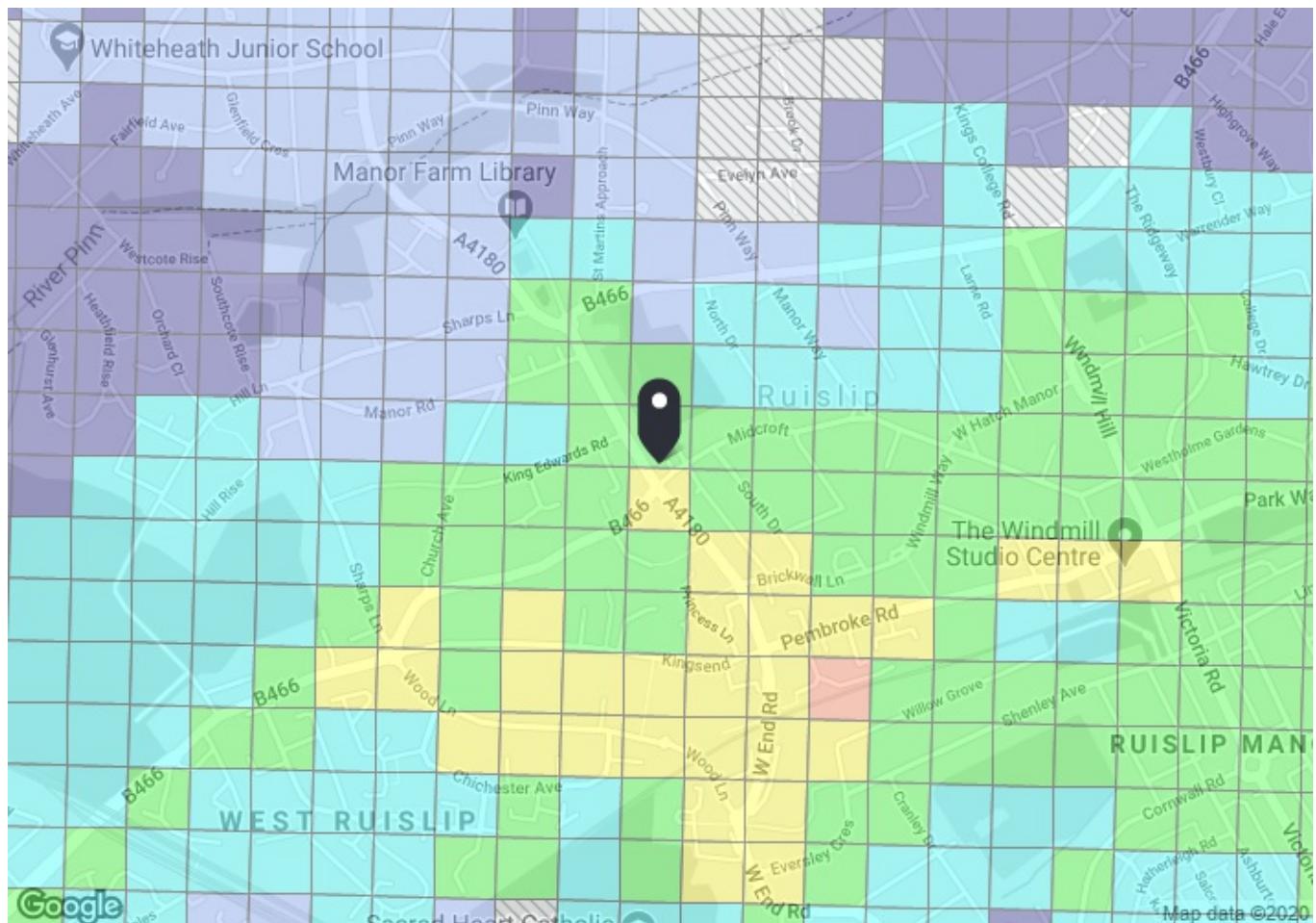
Drawing
EXISTING SITE PLAN

Drawing No.
MRH/EX/100
Dm Chk
CDG BK



0 2 4 6 8 10 20 30 40 50
PAPER SIZE: A3
SCALE 1:500

Appendix B – Public Transport Accessibility Level (PTAL) Report



PTAL output for Base Year
4

2 Midcroft
2 Midcroft, Ruislip HA4 8ES, UK
Easting: 509249, Northing: 187394

Grid Cell: 116869

Report generated: 18/08/2020

Map key- PTAL

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

Map layers

PTAL (cell size: 100m)

Calculation Parameters

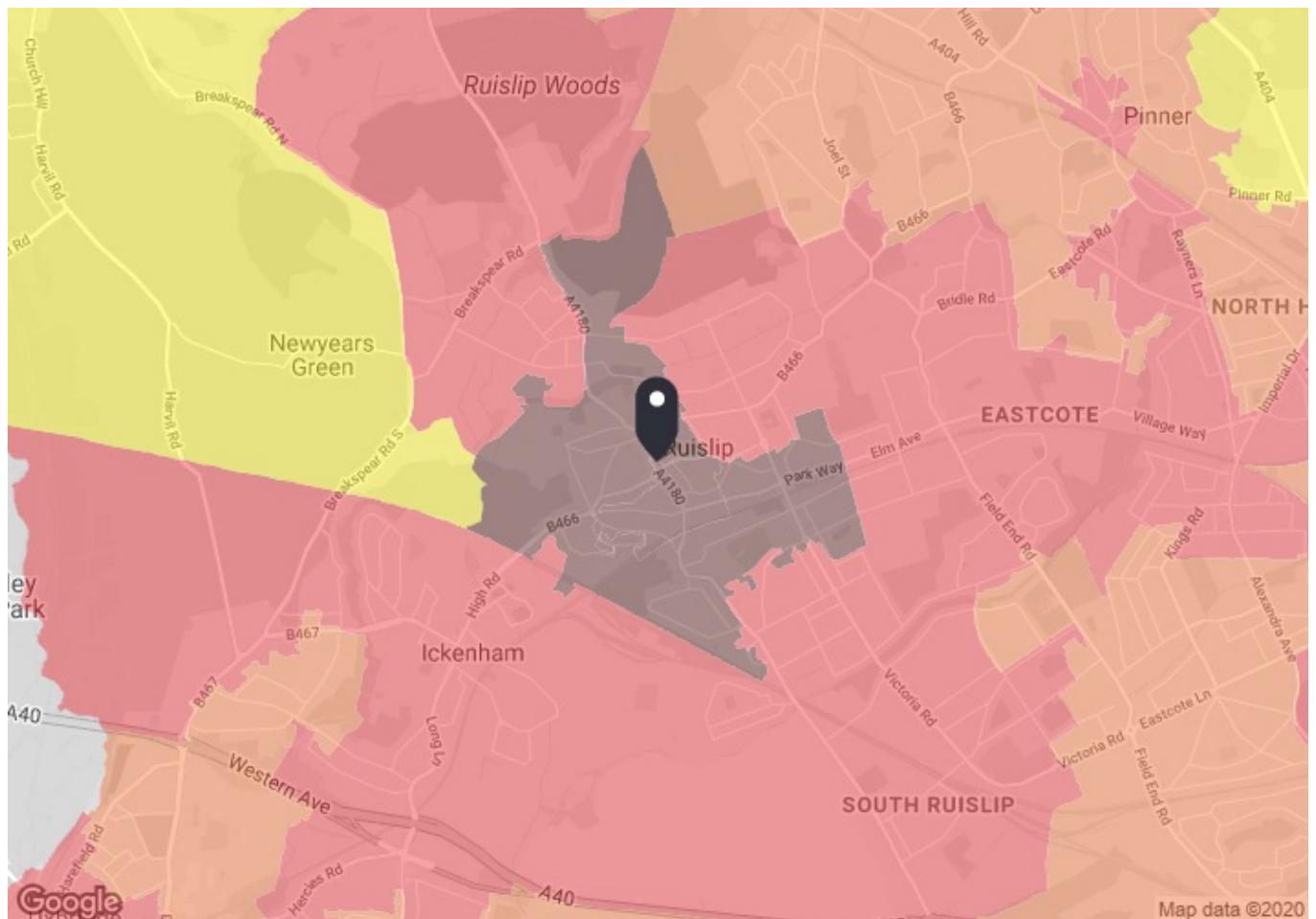
Day of Week	M-F
Time Period	AM Peak
Walk Speed	4.8 kph
Bus Node Max. Walk Access Time (mins)	8
Bus ReliabilityFactor	2.0
LU Station Max. Walk Access Time (mins)	12
LU ReliabilityFactor	0.75
National Rail Station Max. Walk Access Time (mins)	12
National Rail ReliabilityFactor	0.75

Calculation data

Mode	Stop	Route	Distance (metres)	Frequency(vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	RUISLIP STATION	398	461	2	5.76	17	22.76	1.32	0.5	0.66
Bus	RUISLIP STATION	114	461	6	5.76	7	12.76	2.35	0.5	1.18
Bus	RUISLIP STATION	E7	461	5	5.76	8	13.76	2.18	0.5	1.09
Bus	HIGH STREET ICKENHAM RD	U10	61.37	1	0.77	32	32.77	0.92	0.5	0.46
Bus	HIGH STREET ICKENHAM RD	331	61.37	3	0.77	12	12.77	2.35	0.5	1.17
Bus	HIGH STREET ICKENHAM RD	H13	61.37	3	0.77	12	12.77	2.35	0.5	1.17
Bus	HIGH STREET ICKENHAM RD	U1	61.37	4	0.77	9.5	10.27	2.92	1	2.92
LUL	Ruislip	'Uxbridge-AldSlow'	485.11	5.33	6.06	6.38	12.44	2.41	1	2.41
LUL	Ruislip	'BkStr-UxbridgeSFast'	485.11	2.33	6.06	13.63	19.69	1.52	0.5	0.76
LUL	Ruislip	'Uxbridge-BStreetSl'	485.11	3.67	6.06	8.92	14.99	2	0.5	1
LUL	Ruislip	'HarrowHill-Uxbridge'	485.11	0.67	6.06	45.53	51.59	0.58	0.5	0.29
LUL	Ruislip	'Uxbridge-Cockfosters'	485.11	3.67	6.06	8.92	14.99	2	0.5	1
LUL	Ruislip	'Ruislip-Cockfosters'	485.11	2.33	6.06	13.63	19.69	1.52	0.5	0.76
LUL	Ruislip	'ArnosGrove-Uxbridge'	485.11	1	6.06	30.75	36.81	0.81	0.5	0.41
LUL	Ruislip	'Oakwood-Uxbridge'	485.11	0.33	6.06	91.66	97.72	0.31	0.5	0.15
LUL	Ruislip	'Oakwood-Ruislip'	485.11	0.33	6.06	91.66	97.72	0.31	0.5	0.15

Total Grid Cell AI: 15.58

Appendix C – Time Mapping (TIM) Report



TIM output for Base Year

Scenario: Base Year Mode: All public transport modes, Time of day: AM peak, Direction: From location

2 Midcroft
2 Midcroft, Ruislip HA4 8ES, UK
Easting: 509249, Northing: 187394

Report generated: 18/08/2020

Population and employment: GLA forecasts 2016
Town Centres: GLA 2016
Education: EduBase 2016
Health: NHS Direct, CQC 2016

Code: NT086A05A

Map key - Travel Time

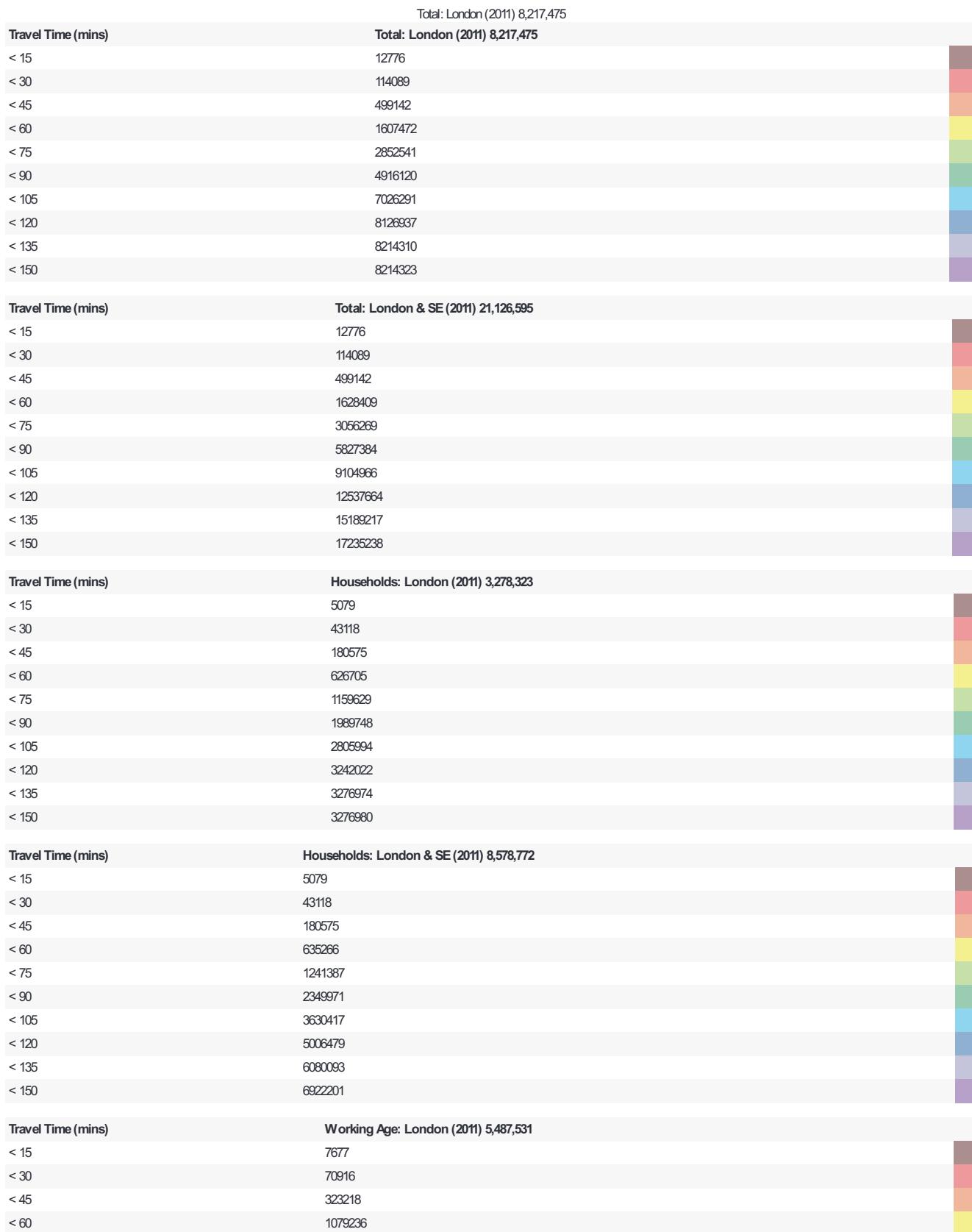
< 15 mins	15 - 30 mins
30 - 45 mins	45 - 60 mins
60 - 75 mins	75 - 90 mins
90 - 105 mins	105 - 120 mins
120 - 135 mins	135 - 150 mins

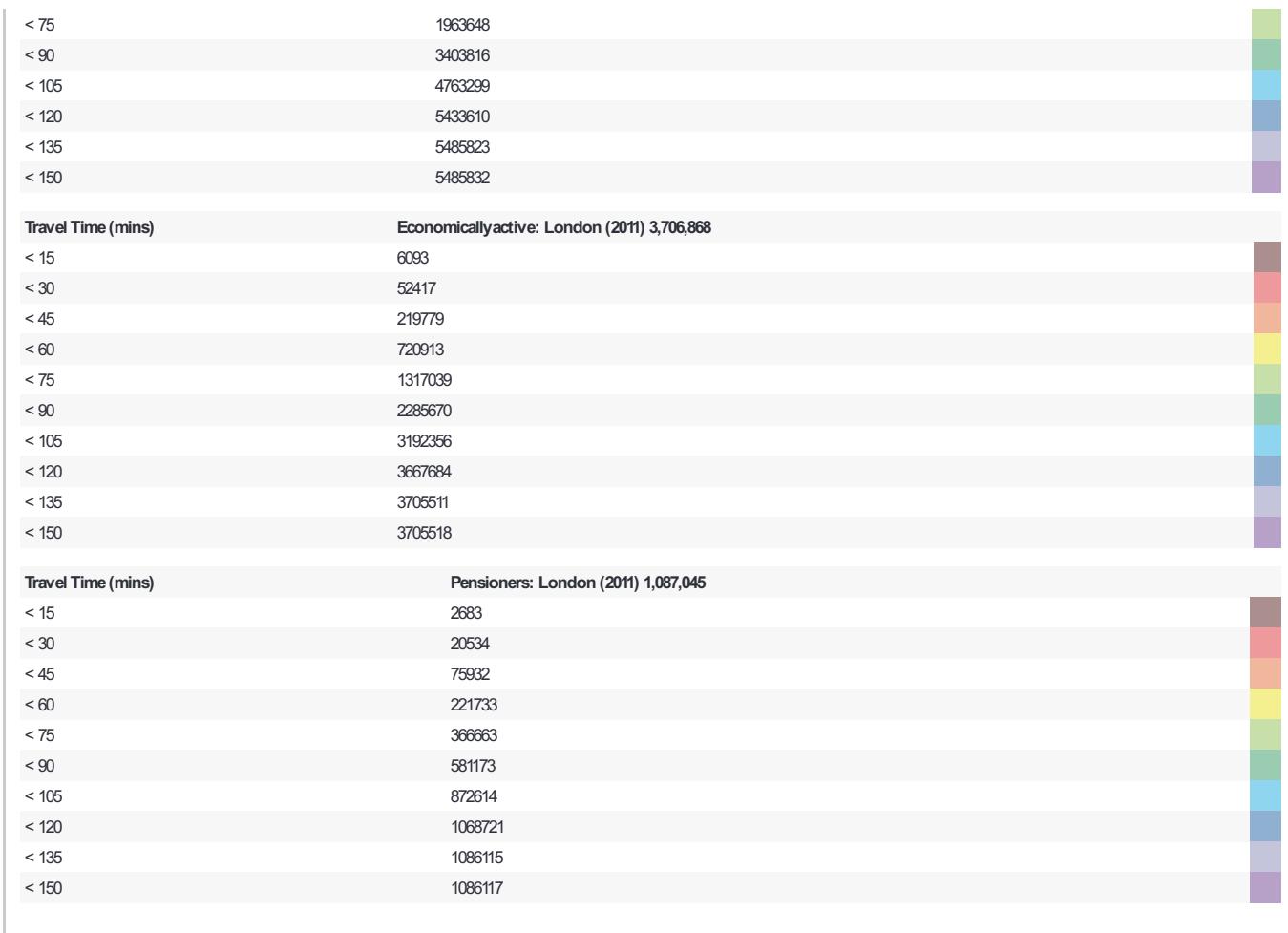
Map layers

 Travel Times

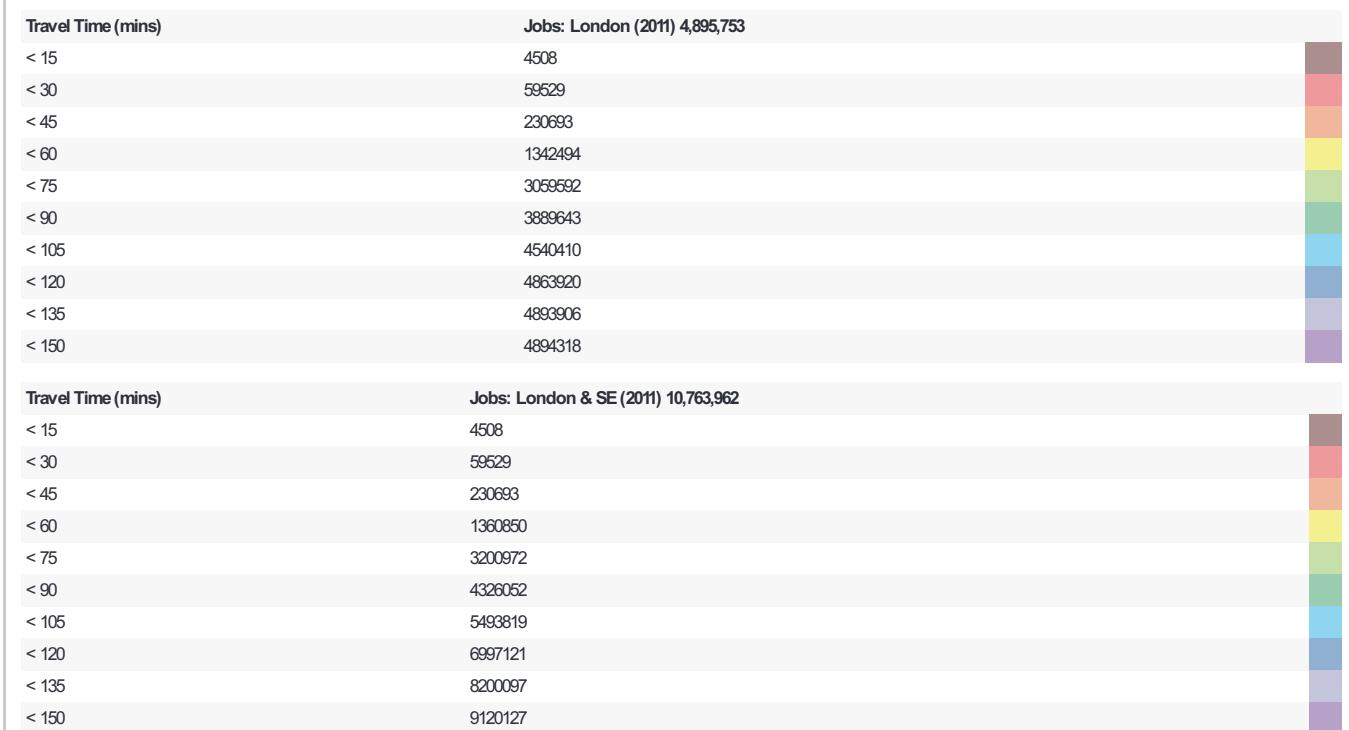
Catchment data for your current selection

Population - Total: London 2011

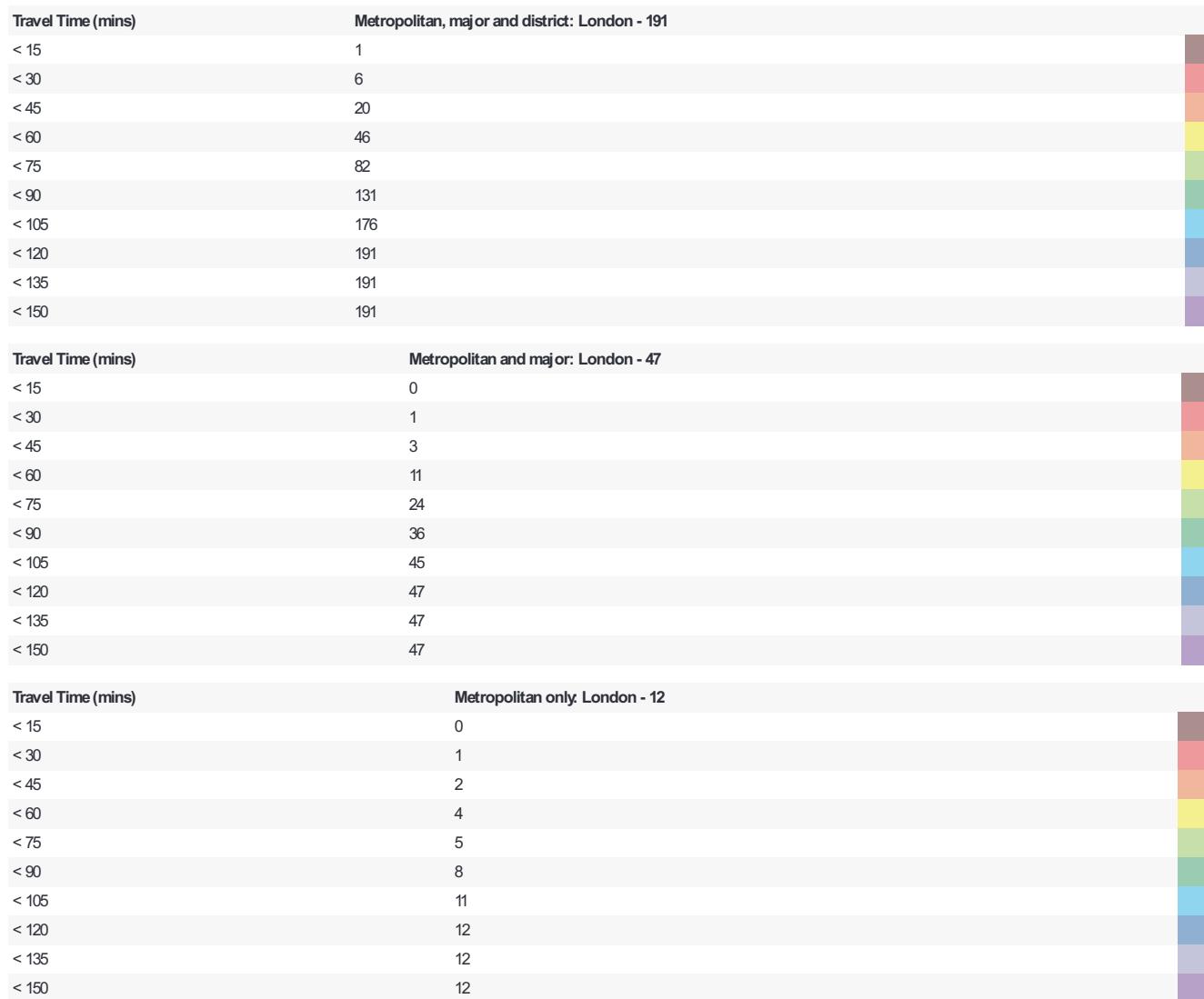




Employment - Jobs: London 2011



Town centres - Metropolitan, major and district: London



Health services - GP Surgeries: London





Education establishments - Primary schools: London

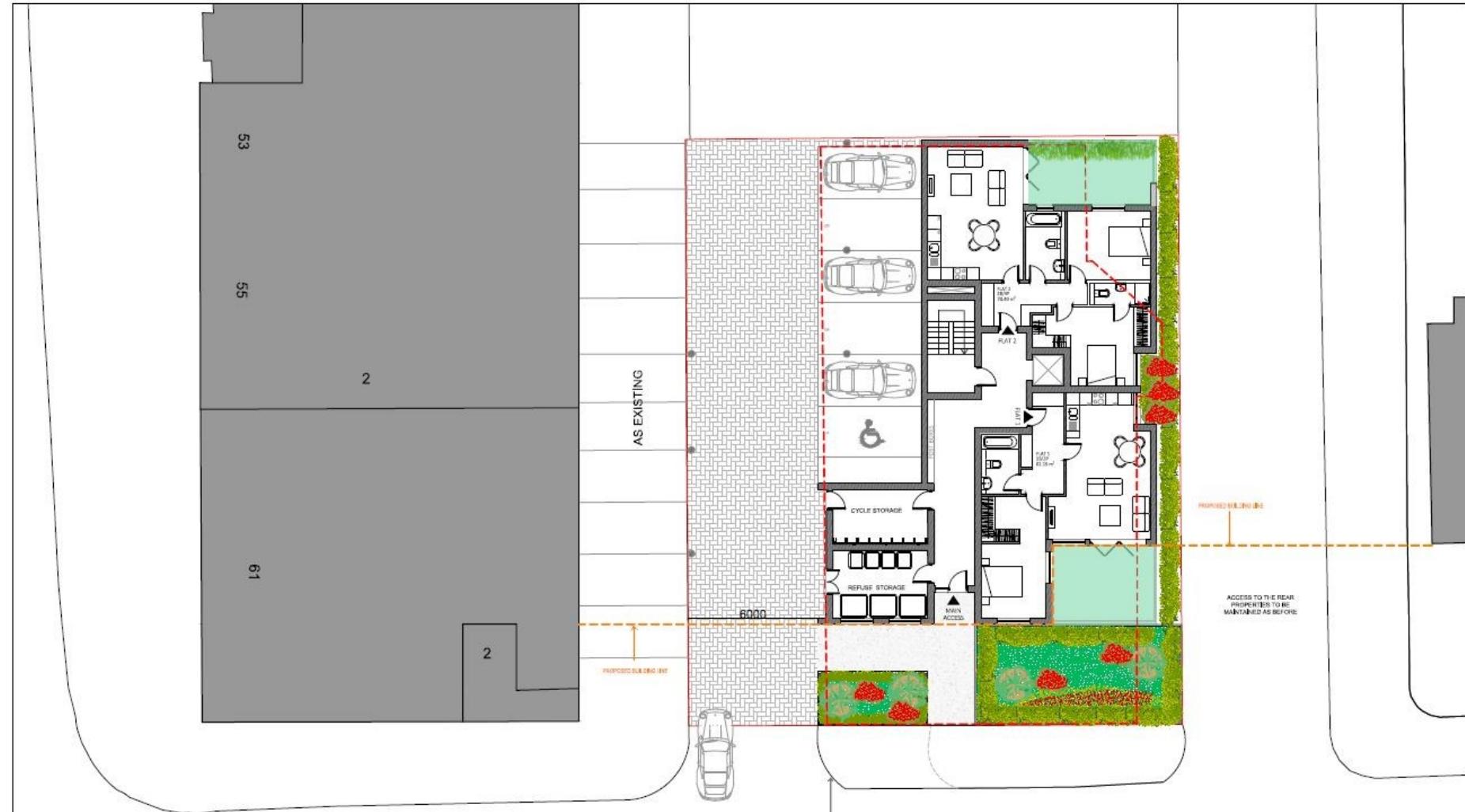


Travel Time (mins)	Further education colleges: London - 50	
< 15	0	
< 30	0	
< 45	3	
< 60	8	
< 75	20	
< 90	34	
< 105	41	
< 120	49	
< 135	50	
< 150	50	

Appendix D – Proposed Site Layout Plan

NOTES

Drawings for sketch purposes only
and not for construction.



EXISTING GARAGE TO
BE DEMOLISHED

This drawing is copyright
USL Architects,



Ground floor
7 Progress Business Centre
Whittle Parkway
Bunham SL1 6DQ
England
usl@uslarchitects.co.uk

Job No.	Job	Drawing	Drawing No.	Revision	N	0m	2m	4m	6m	8m	10m	12m	14m	16m	18m	20m
19/ MRH	MIDCROFT	PROPOSED SITE PLAN	MRH/PL/100													
Date	2 Midcroft HA4 8ES - Ruislip England		Dra	Chk												
12/02/2021			CDG	BK												



PAPER SIZE: A3

SCALE 1:200

Appendix E – TRICS Output Report

Filtering Summary

Land Use	03/C	RESIDENTIAL/FLATS PRIVATELY OWNED
Selected Trip Rate Calculation Parameter Range 9-30 DWELLS		
Actual Trip Rate Calculation Parameter Range	14-30 DWELLS	
Date Range	Minimum: 01/01/12	Maximum: 06/03/20
Parking Spaces Range	All Surveys Included	
Parking Spaces Per Dwelling Range:	All Surveys Included	
Bedrooms Per Dwelling Range:	All Surveys Included	
Percentage of dwellings privately owned:	All Surveys Included	
Days of the week selected	Monday Wednesday Thursday	2 2 1
Main Location Types selected	Edge of Town Centre	5
Population within 500m	All Surveys Included	
Population <1 Mile ranges selected	10,001 to 15,000 25,001 to 50,000 50,001 to 100,000 100,001 or More	1 1 1 2
Population <5 Mile ranges selected	250,001 to 500,000 500,001 or More	1 4
Car Ownership <5 Mile ranges selected	0.5 or Less 0.6 to 1.0 1.1 to 1.5	3 1 1
PTAL Rating	2 Poor 6a Excellent 6b (High) Excellent	1 2 2

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

01 GREATER LONDON

IS	ISLINGTON	2 days
KI	KINGSTON	1 days
SK	SOUTHWARK	1 days
WH	WANDSWORTH	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
Actual Range: 14 to 30 (units:)
Range Selected by User: 9 to 30 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/12 to 06/03/20

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

Selected survey days:

Monday	2 days
Wednesday	2 days
Thursday	1 days

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

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	5
---------------------	---

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

Selected Location Sub Categories:

Residential Zone	3
Built-Up Zone	2

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

Secondary Filtering selection:

Use Class:

C3	5 days
----	--------

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

Population within 500m Range:

All Surveys Included

Population within 1 mile:

10,001 to 15,000	1 days
25,001 to 50,000	1 days
50,001 to 100,000	1 days
100,001 or More	2 days

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

Population within 5 miles:

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

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

Car ownership within 5 miles:

0.5 or Less	3 days
0.6 to 1.0	1 days
1.1 to 1.5	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
No	4 days

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

PTAL Rating:

2 Poor	1 days
6a Excellent	2 days
6b (High) Excellent	2 days

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

LIST OF SITES relevant to selection parameters

1	IS-03-C-05	BLOCK OF FLATS	ISLINGTON
	LEVER STREET		
	FINSBURY		
	Edge of Town Centre		
	Built-Up Zone		
	Total No of Dwellings:	15	
	Survey date: WEDNESDAY	29/06/16	Survey Type: MANUAL
2	IS-03-C-06	BLOCK OF FLATS	ISLINGTON
	CALEDONIAN ROAD		
	HOLLOWAY		
	Edge of Town Centre		
	Residential Zone		
	Total No of Dwellings:	14	
	Survey date: MONDAY	27/06/16	Survey Type: MANUAL
3	KI-03-C-03	BLOCK OF FLATS	KINGSTON
	PORTSMOUTH ROAD		
	SURBITON		
	Edge of Town Centre		
	Residential Zone		
	Total No of Dwellings:	20	
	Survey date: MONDAY	11/07/16	Survey Type: MANUAL
4	SK-03-C-02	BLOCK OF FLATS	SOUTHWARK
	LAMB WALK		
	BERMONDSEY		
	Edge of Town Centre		
	Built-Up Zone		
	Total No of Dwellings:	29	
	Survey date: THURSDAY	23/04/15	Survey Type: MANUAL
5	WH-03-C-01	BLOCKS OF FLATS	WANDSWORTH
	AMIES STREET		
	CLAPHAM JUNCTION		
	Edge of Town Centre		
	Residential Zone		
	Total No of Dwellings:	30	
	Survey date: WEDNESDAY	09/05/12	Survey Type: MANUAL

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

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

MULTI-MODAL TOTAL 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	5	22	0.028	5	22	0.148	5	22	0.176
08:00 - 09:00	5	22	0.056	5	22	0.148	5	22	0.204
09:00 - 10:00	5	22	0.074	5	22	0.028	5	22	0.102
10:00 - 11:00	5	22	0.019	5	22	0.065	5	22	0.084
11:00 - 12:00	5	22	0.028	5	22	0.028	5	22	0.056
12:00 - 13:00	5	22	0.056	5	22	0.037	5	22	0.093
13:00 - 14:00	5	22	0.074	5	22	0.046	5	22	0.120
14:00 - 15:00	5	22	0.028	5	22	0.102	5	22	0.130
15:00 - 16:00	5	22	0.102	5	22	0.009	5	22	0.111
16:00 - 17:00	5	22	0.037	5	22	0.046	5	22	0.083
17:00 - 18:00	5	22	0.102	5	22	0.000	5	22	0.102
18:00 - 19:00	5	22	0.074	5	22	0.056	5	22	0.130
19:00 - 20:00	4	20	0.064	4	20	0.051	4	20	0.115
20:00 - 21:00	4	20	0.051	4	20	0.077	4	20	0.128
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.793			0.841				1.634

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.

The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

Parameter summary

Trip rate parameter range selected:	14 - 30 (units:)
Survey date date range:	01/01/12 - 06/03/20
Number of weekdays (Monday-Friday):	5
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	5	22	0.009	5	22	0.009	5	22	0.018
08:00 - 09:00	5	22	0.000	5	22	0.000	5	22	0.000
09:00 - 10:00	5	22	0.000	5	22	0.000	5	22	0.000
10:00 - 11:00	5	22	0.009	5	22	0.009	5	22	0.018
11:00 - 12:00	5	22	0.000	5	22	0.000	5	22	0.000
12:00 - 13:00	5	22	0.000	5	22	0.000	5	22	0.000
13:00 - 14:00	5	22	0.000	5	22	0.000	5	22	0.000
14:00 - 15:00	5	22	0.000	5	22	0.000	5	22	0.000
15:00 - 16:00	5	22	0.000	5	22	0.000	5	22	0.000
16:00 - 17:00	5	22	0.009	5	22	0.009	5	22	0.018
17:00 - 18:00	5	22	0.000	5	22	0.000	5	22	0.000
18:00 - 19:00	5	22	0.009	5	22	0.009	5	22	0.018
19:00 - 20:00	4	20	0.000	4	20	0.000	4	20	0.000
20:00 - 21:00	4	20	0.000	4	20	0.000	4	20	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.036			0.036			0.072	

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

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

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

MULTI-MODAL OGVS**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	5	22	0.000	5	22	0.000	5	22	0.000
08:00 - 09:00	5	22	0.000	5	22	0.000	5	22	0.000
09:00 - 10:00	5	22	0.000	5	22	0.000	5	22	0.000
10:00 - 11:00	5	22	0.000	5	22	0.000	5	22	0.000
11:00 - 12:00	5	22	0.000	5	22	0.000	5	22	0.000
12:00 - 13:00	5	22	0.009	5	22	0.000	5	22	0.009
13:00 - 14:00	5	22	0.000	5	22	0.009	5	22	0.009
14:00 - 15:00	5	22	0.000	5	22	0.000	5	22	0.000
15:00 - 16:00	5	22	0.000	5	22	0.000	5	22	0.000
16:00 - 17:00	5	22	0.000	5	22	0.000	5	22	0.000
17:00 - 18:00	5	22	0.000	5	22	0.000	5	22	0.000
18:00 - 19:00	5	22	0.000	5	22	0.000	5	22	0.000
19:00 - 20:00	4	20	0.000	4	20	0.000	4	20	0.000
20:00 - 21:00	4	20	0.000	4	20	0.000	4	20	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.009			0.009			0.018	

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

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

TRIP RATE for Land Use 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	5	22	0.000	5	22	0.009	5	22	0.009
08:00 - 09:00	5	22	0.009	5	22	0.046	5	22	0.055
09:00 - 10:00	5	22	0.009	5	22	0.028	5	22	0.037
10:00 - 11:00	5	22	0.000	5	22	0.000	5	22	0.000
11:00 - 12:00	5	22	0.000	5	22	0.000	5	22	0.000
12:00 - 13:00	5	22	0.000	5	22	0.000	5	22	0.000
13:00 - 14:00	5	22	0.009	5	22	0.000	5	22	0.009
14:00 - 15:00	5	22	0.000	5	22	0.009	5	22	0.009
15:00 - 16:00	5	22	0.000	5	22	0.000	5	22	0.000
16:00 - 17:00	5	22	0.000	5	22	0.009	5	22	0.009
17:00 - 18:00	5	22	0.028	5	22	0.000	5	22	0.028
18:00 - 19:00	5	22	0.000	5	22	0.009	5	22	0.009
19:00 - 20:00	4	20	0.064	4	20	0.000	4	20	0.064
20:00 - 21:00	4	20	0.000	4	20	0.000	4	20	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.119			0.110			0.229	

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

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

TRIP RATE for Land Use 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	5	22	0.000	5	22	0.194	5	22	0.194
08:00 - 09:00	5	22	0.065	5	22	0.231	5	22	0.296
09:00 - 10:00	5	22	0.120	5	22	0.056	5	22	0.176
10:00 - 11:00	5	22	0.009	5	22	0.083	5	22	0.092
11:00 - 12:00	5	22	0.028	5	22	0.028	5	22	0.056
12:00 - 13:00	5	22	0.037	5	22	0.046	5	22	0.083
13:00 - 14:00	5	22	0.102	5	22	0.056	5	22	0.158
14:00 - 15:00	5	22	0.046	5	22	0.111	5	22	0.157
15:00 - 16:00	5	22	0.204	5	22	0.009	5	22	0.213
16:00 - 17:00	5	22	0.046	5	22	0.037	5	22	0.083
17:00 - 18:00	5	22	0.111	5	22	0.000	5	22	0.111
18:00 - 19:00	5	22	0.065	5	22	0.056	5	22	0.121
19:00 - 20:00	4	20	0.064	4	20	0.051	4	20	0.115
20:00 - 21:00	4	20	0.051	4	20	0.090	4	20	0.141
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.948			1.048			1.996	

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

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

TRIP RATE for Land Use 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	5	22	0.019	5	22	0.083	5	22	0.102
08:00 - 09:00	5	22	0.019	5	22	0.139	5	22	0.158
09:00 - 10:00	5	22	0.009	5	22	0.102	5	22	0.111
10:00 - 11:00	5	22	0.009	5	22	0.056	5	22	0.065
11:00 - 12:00	5	22	0.028	5	22	0.019	5	22	0.047
12:00 - 13:00	5	22	0.074	5	22	0.009	5	22	0.083
13:00 - 14:00	5	22	0.019	5	22	0.037	5	22	0.056
14:00 - 15:00	5	22	0.019	5	22	0.046	5	22	0.065
15:00 - 16:00	5	22	0.056	5	22	0.028	5	22	0.084
16:00 - 17:00	5	22	0.111	5	22	0.028	5	22	0.139
17:00 - 18:00	5	22	0.074	5	22	0.074	5	22	0.148
18:00 - 19:00	5	22	0.120	5	22	0.074	5	22	0.194
19:00 - 20:00	4	20	0.090	4	20	0.077	4	20	0.167
20:00 - 21:00	4	20	0.115	4	20	0.077	4	20	0.192
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.762			0.849				1.611

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

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

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

MULTI-MODAL BUS/TRAM 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	5	22	0.009	5	22	0.065	5	22	0.074
08:00 - 09:00	5	22	0.000	5	22	0.083	5	22	0.083
09:00 - 10:00	5	22	0.009	5	22	0.065	5	22	0.074
10:00 - 11:00	5	22	0.000	5	22	0.019	5	22	0.019
11:00 - 12:00	5	22	0.009	5	22	0.000	5	22	0.009
12:00 - 13:00	5	22	0.009	5	22	0.000	5	22	0.009
13:00 - 14:00	5	22	0.009	5	22	0.000	5	22	0.009
14:00 - 15:00	5	22	0.000	5	22	0.000	5	22	0.000
15:00 - 16:00	5	22	0.028	5	22	0.009	5	22	0.037
16:00 - 17:00	5	22	0.009	5	22	0.009	5	22	0.018
17:00 - 18:00	5	22	0.037	5	22	0.000	5	22	0.037
18:00 - 19:00	5	22	0.037	5	22	0.000	5	22	0.037
19:00 - 20:00	4	20	0.064	4	20	0.026	4	20	0.090
20:00 - 21:00	4	20	0.013	4	20	0.000	4	20	0.013
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.233			0.276			0.509	

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

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

TRIP RATE for Land Use 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	5	22	0.000	5	22	0.065	5	22	0.065
08:00 - 09:00	5	22	0.019	5	22	0.130	5	22	0.149
09:00 - 10:00	5	22	0.009	5	22	0.056	5	22	0.065
10:00 - 11:00	5	22	0.000	5	22	0.019	5	22	0.019
11:00 - 12:00	5	22	0.000	5	22	0.019	5	22	0.019
12:00 - 13:00	5	22	0.000	5	22	0.019	5	22	0.019
13:00 - 14:00	5	22	0.009	5	22	0.009	5	22	0.018
14:00 - 15:00	5	22	0.019	5	22	0.019	5	22	0.038
15:00 - 16:00	5	22	0.019	5	22	0.009	5	22	0.028
16:00 - 17:00	5	22	0.009	5	22	0.000	5	22	0.009
17:00 - 18:00	5	22	0.083	5	22	0.009	5	22	0.092
18:00 - 19:00	5	22	0.065	5	22	0.009	5	22	0.074
19:00 - 20:00	4	20	0.154	4	20	0.000	4	20	0.154
20:00 - 21:00	4	20	0.064	4	20	0.013	4	20	0.077
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.450			0.376			0.826	

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

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

TRIP RATE for Land Use 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	5	22	0.009	5	22	0.130	5	22	0.139
08:00 - 09:00	5	22	0.019	5	22	0.213	5	22	0.232
09:00 - 10:00	5	22	0.019	5	22	0.120	5	22	0.139
10:00 - 11:00	5	22	0.000	5	22	0.037	5	22	0.037
11:00 - 12:00	5	22	0.009	5	22	0.019	5	22	0.028
12:00 - 13:00	5	22	0.009	5	22	0.019	5	22	0.028
13:00 - 14:00	5	22	0.019	5	22	0.009	5	22	0.028
14:00 - 15:00	5	22	0.019	5	22	0.019	5	22	0.038
15:00 - 16:00	5	22	0.046	5	22	0.019	5	22	0.065
16:00 - 17:00	5	22	0.019	5	22	0.009	5	22	0.028
17:00 - 18:00	5	22	0.120	5	22	0.009	5	22	0.129
18:00 - 19:00	5	22	0.102	5	22	0.009	5	22	0.111
19:00 - 20:00	4	20	0.218	4	20	0.026	4	20	0.244
20:00 - 21:00	4	20	0.077	4	20	0.013	4	20	0.090
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.685			0.651			1.336	

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

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

TRIP RATE for Land Use 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	5	22	0.028	5	22	0.417	5	22	0.445
08:00 - 09:00	5	22	0.111	5	22	0.630	5	22	0.741
09:00 - 10:00	5	22	0.157	5	22	0.306	5	22	0.463
10:00 - 11:00	5	22	0.019	5	22	0.176	5	22	0.195
11:00 - 12:00	5	22	0.065	5	22	0.065	5	22	0.130
12:00 - 13:00	5	22	0.120	5	22	0.074	5	22	0.194
13:00 - 14:00	5	22	0.148	5	22	0.102	5	22	0.250
14:00 - 15:00	5	22	0.083	5	22	0.185	5	22	0.268
15:00 - 16:00	5	22	0.306	5	22	0.056	5	22	0.362
16:00 - 17:00	5	22	0.176	5	22	0.083	5	22	0.259
17:00 - 18:00	5	22	0.333	5	22	0.083	5	22	0.416
18:00 - 19:00	5	22	0.287	5	22	0.148	5	22	0.435
19:00 - 20:00	4	20	0.436	4	20	0.154	4	20	0.590
20:00 - 21:00	4	20	0.244	4	20	0.179	4	20	0.423
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		2.513			2.658			5.171	

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.