

Mapeley Estates Ltd

Eaton Court, Reading

Transport Statement

March 2019

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1 INTRODUCTION

1.1 Caneparo Associates has been appointed by Mapeley Estates Ltd ('the Applicant') to provide traffic and transport advice in relation to a Prior Approval Application at Eaton Court, Reading.

1.2 The existing site provides circa 3,550sqm (GIA) of B1 office floor space and is located on Oxford Road at the junction with Eaton Place, and is approximately 850m walk southwest of Reading Station.

Proposals

1.3 The proposal is for the change of use from Class B1 office to Class C3 residential, under Permitted Development Rights 'Class O'. The Architect's layout plans is provided at **Appendix A**, with a summary of the proposed changes below:

- Change of use of circa 3,296sqm (GIA) of the existing B1 office building to provide 58 C3 residential units (31 x studio units, 27 x 1-bed units);
- Provision of 30 cycle parking spaces within a secure, sheltered and well-lit store; and,
- Provision of 58 car parking spaces for residents and 6 spaces for visitors, within the existing 106 space car park.

1.4 Approximately 254sqm (GIA) of commercial floor space on-site is owned by the Department of Work and Pensions (DWP) and will be retained. This retained commercial floorspace will continue to be served by the on-site parking facilities (4 spaces marked for sole use by DWP), with the remaining car parking spaces being available to employees and visitors of DWP, as well as catering for any potential overspill visitor parking requirements for residential.

1.5 The change of use is proposed under the Town and Country Planning (General Permitted Development) (England) (Amendment) Order 2016 (as amended), which came into force 1st April 2016. Under the rights set out in the above Order, development under Class O "*consisting of a change of use of a building and any land within its curtilage from a use falling within Class B1(a) (offices) of the Schedule to the Use Classes Order, to a use falling within Class C3 (dwelling houses) of that Schedule*" is permitted subject to the following:

"...that before beginning the development, the developer must apply to the local planning authority for a determination as to whether the prior approval of the authority will be required as to (a) transport and highways impacts of the development; (b) contamination risks on the site; (c) flooding risks on the site, and (d) impacts of noise from commercial premises on the intended occupiers of the development..."

- 1.6 In respect of transport and highways impacts, paragraph W (Procedure for applications for prior approval under Part 3), item 5 states:

"Where the application relates to prior approval as to transport and highways impacts of the development, on receipt of the application, where in the opinion of the local planning authority the development is likely to result in a material increase or a material change in the character of traffic in the vicinity of the site, the local planning authority must consult...the local highway authority, where the increase or change relates to traffic entering or leaving a classified road or proposed highway, except where the local planning authority is the local highway authority."

- 1.7 Paragraph W (10) (b) states that the local planning authority must, when determining an application have regard to the National Planning Policy Framework (NPPF) (now revised NPPF, February 2019), so far as relevant to the subject matter of the prior approval, as if the application were a planning application.

- 1.8 Paragraph 109 of the NPPF 'Promoting Sustainable Transport' chapter states:

"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."

This Document

- 1.9 This Transport Statement (TS) supports a Prior Approval Application to the planning authority, Reading Borough Council, hereinafter referred to as 'the Council', for the proposed change of use described above.
- 1.10 This TS examines the transport and highways related effects of the proposed change of use, considering matters such as accessibility, trip generation, car parking provision, cycle parking provision, refuse and servicing.

1.11 This TS has been written with reference to best practice guidance from the Department for Transport (DfT), the NPPF, Planning Practice Guidance (PPG) and with previous experience of advising on a significant number of prior approval applications.

1.12 The remainder of the report is set out as follows:

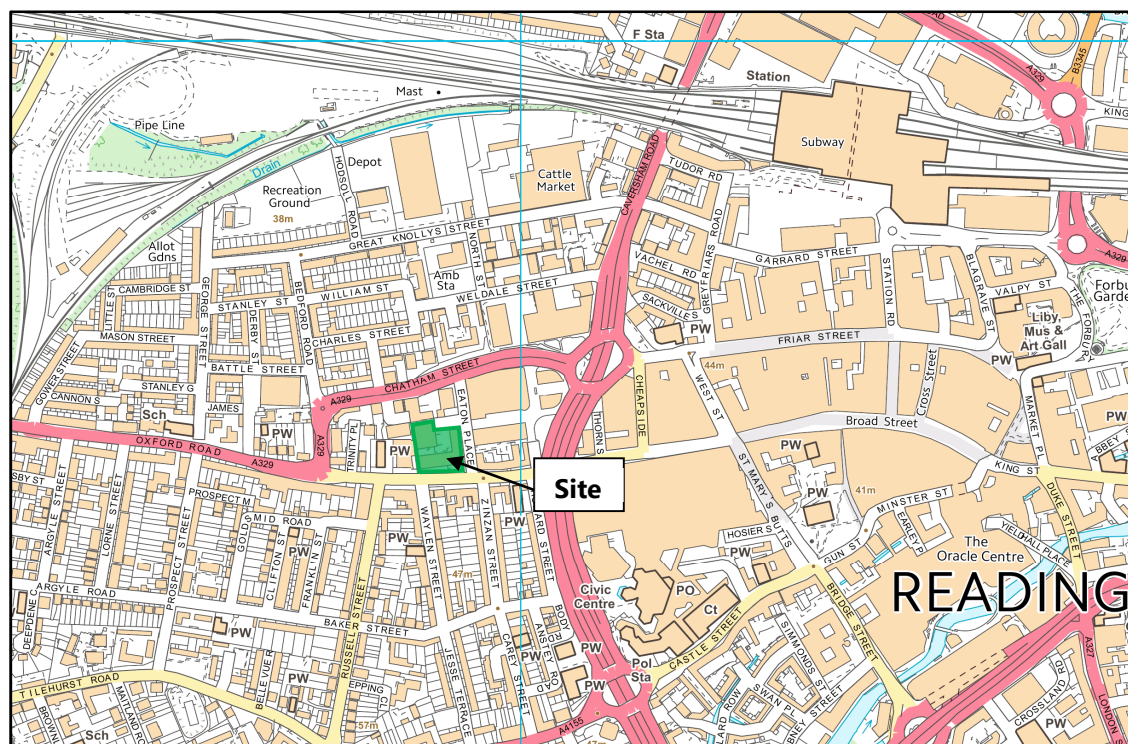
- Section 2 - describes the site and surrounding area;
- Section 3 - summarises the accessibility of the site;
- Section 4 - outlines the proposed change of use;
- Section 5 - transport and highways implications of the change of use; and
- Section 6 - provides a summary and conclusion.

2 THE SITE AND SURROUNDING AREA

The Site

- 2.1 The site is located within central Reading and is approximately 380m west of Reading's pedestrianised town centre. The site is bound to the east by Eaton Place, to the south by Oxford Road, to the west by a site currently undergoing redevelopment (to provide residential units), and is bound to the north by Eaton Place and neighbouring commercial properties.
- 2.2 The existing site comprises a part 2, part 3 storey office property (ground, 1st and 2nd floors), providing 3,550sqm (GIA) of office floorspace. The site also provides on-site car parking at the rear of the property, with 106 spaces provided within a multi-storey car park, accessible from Eaton Place to the north. The location of the site is shown at **Figure 2.1** below.

Figure 2.1 – Site Location Plan



- 2.3 The site is located approximately 850m to the southwest of Reading Station, which provides access to regular services operated by Cross Country Trains, South Western Railway and Great Western Railway. The site is located in an area which benefits from numerous residential amenities in close proximity, with retail and community amenities as well as a good public transport network.

Local Highway Network

- 2.4 Oxford Road is a two-way single carriageway road which operates along the southern boundary of the site in a broadly east to west orientation between the roundabout junction with West Street / Broad Street / St Mary's Butts to the east, and continues west for circa 6km, providing access to Tilehurst Station and Reading Retail Park. Oxford Road is designated as a red route, one of Reading's first red routes, which includes double red line kerbside restrictions of no stopping at any time.
- 2.5 Eaton Place is a two-way single carriageway road which operates along the eastern boundary of the site in a north to south orientation between the A329 Chatham Street to the north and Oxford Road to the south. Eaton Place provides access to the on-site rear car park. Double yellow line kerbside restrictions are present throughout, except for a circa 14m strip of single yellow line adjacent to the northern boundary of the site, with restrictions of no stopping between 08:00 – 18:30, Monday to Saturday.

3 ACCESSIBILITY

Pedestrians

- 3.1 A person's willingness to walk is dependent on many factors including; access to a car, safety, road congestion, weather, gradients, parking, health, direction of route, and purpose of journey. It is generally accepted that for journeys of up to 2km walking is an appropriate mode to replace car trips and this is set out in The Chartered Institution of Highways and Transportation (CIHT) Guidelines (*Guidelines for Providing for Journeys on Foot*, 2000) which suggests a maximum 'acceptable' walking distance for pedestrians without mobility impairment of 2km.
- 3.2 The site is accessible on foot, being well within an acceptable 2km walking distance of a wide range of amenities, owing to its central Reading location. Approximately 300m to the east of the site is a Tesco Express, as well as Broad Street Mall for a wide range of amenities. The pedestrianised element of Reading town centre is approximately 380m east of the site for further amenities.
- 3.3 All of the roads surrounding the site have pedestrian footways of sufficient width on both sides of the carriageway and street lighting columns provided at regular intervals. All pedestrian crossings in the vicinity of the site provide dropped kerbs with tactile paving and tonal contrasts.

Cycling

- 3.4 Accepted guidance suggests that for journeys up to 5km, cycling represents an important mode of transport. The majority of Reading, including Reading University, Thames Valley Business Park and Green Park Business Park, is within a 5km cycling distance of the site.
- 3.5 Reading has a good network of cycle routes, as can be seen in the Reading Cycle Routes Network Map included at **Appendix B**. Oxford Road forms part of cycle route R5, which operates between Reading town centre to the east and Tilehurst Station and Denefield School to the west.

Public Transport Accessibility

Bus Services

- 3.6 Bus stops are located adjacent to the site on Oxford Road, which provide access to a wide range of bus routes operating across Reading, primarily operated by Reading Buses. **Appendix C** includes a full network map of Reading bus routes, as well as a Reading town centre bus route map, highlighting the bus travel opportunities.

Rail Services

- 3.7 Reading Station is located approximately 850m to the northeast of the site and provides access to a wider range of rail services, operating through Cross Country Trains, South Western Railway and Great Western Railway. Regular rail service destinations from Reading Station include London Paddington, London Waterloo, Manchester Piccadilly, Oxford, Bristol Temple Meads, Didcot Parkway, Penzance, Gatwick Airport, Basingstoke, Newcastle, Frome and Carmarthen.
- 3.8 In addition to the wide range of rail services currently available, in late 2019, Transport for London Crossrail services will operate through central London and it is estimated that 2 trains per hour (4 trains per hour during peak hours) will serve Reading Station.

4 DEVELOPMENT PROPOSALS

- 4.1 The Applicant is seeking a change of use from office floor space 3,296sqm (GIA) to 58 residential units. The accommodation schedule is set out in **Table 4.1**, below.

Table 4.1 – Development Schedule	
Unit Type	No. of Units
Studio	31
1 bed	27
Total	58

Parking

Car Parking

- 4.2 The existing site includes an external multi-storey car park, split across ground and first floor levels, accessible from Eaton Place. The multi-storey car park provides parking for 106 cars, while an 11 space parking area is provided adjacent to Oxford Road. It is proposed that the residential element of the site is provided with 64 car parking spaces (6 visitor spaces), in line with Reading Borough Council (RBC) parking standards, with the remaining parking spaces to be for use by the retained DWP commercial space on-site (4 spaces marked for sole use by DWP), as well as for use as additional visitor parking. The 11 parking spaces adjacent to Oxford Road will be removed, to allow this space to be used for delivery vehicles to the Site and the multi-storey car park will be partially redesigned to provide 3 disabled spaces adjacent to the building, reducing the on-site parking levels to 103 spaces.

- 4.3 Parking is discussed further in Section 5.

Cycle Parking

- 4.4 The proposals will provide 30 cycle parking spaces for use by residents, in line with RBC cycle parking standards. These spaces will be provided within a secure and sheltered internal cycle store at ground floor level.

Servicing and Refuse Collection

- 4.5 The servicing and refuse collection regime for the proposed residential units will be undertaken on-site. It is anticipated that delivery vehicles will make use of the existing on-site parking area adjacent to Oxford Road, as this is adjacent to the main residential entrance. Refuse will be collected on-site within the rear car park, as per the existing situation. Servicing and refuse collection is considered further in Section 5.

5 EFFECTS OF THE PROPOSALS

5.1 This Section considers the potential effects of the proposed change of use in terms of trip generation, parking and servicing.

Trip Generation

Existing Site

5.2 The existing building comprises approximately 3,296sqm (GIA) of B1 office use. A trip generation exercise has therefore been undertaken for the existing office use to determine the number of trips that could be generated during the normal weekday peak periods (08:00 to 09:00 and 17:00 to 18:00).

5.3 TRICS was interrogated for B1 office sites under the land use 'Employment – Office' with sites selected in town centre and edge of town centre locations with similar levels of parking, so as to be most representative of the existing site.

5.4 A summary of the total person trip rates and trip generation is shown in **Table 5.1** below, while the trip rate outputs are included at **Appendix D**.

Table 5.1: TRICS Person Trip Rates and Trip Generation – Existing B1 Use (3,296sqm)						
Time Period	Total Person Trip Rates			Total Person Trips		
	In	Out	2-Way	In	Out	2-Way
AM Peak (08:00-09:00)	3.499	0.197	3.696	115	6	122
PM Peak (17:00-18:00)	0.395	3.534	3.929	13	116	129

5.5 As can be seen in the table above, the existing B1 office use at the site has the potential to generate 122 two-way person trips across the morning peak hour, and 129 two-way trips across the evening peak hour.

Modal Split

- 5.6 The modal split for the existing office has been based on the 2011 Census data for journeys to work (workplace) from the super output area middle layer: Reading 011. The modal split has been applied to the person trips above to produce the multi-modal trip generation, as shown in **Table 5.2** below.

Table 5.2: Existing Trip Generation by Mode							
Mode	Split	AM Peak			PM Peak		
		In	Out	2-Way	In	Out	2-Way
Train	17%	20	1	21	2	20	22
Bus	18%	21	1	22	2	21	23
Taxi	0%	0	0	0	0	0	0
Motorcycle	0%	0	0	0	0	0	0
Driving a car	39%	45	2	48	5	45	50
Passenger in car	4%	5	0	5	1	5	5
Bicycle	4%	5	0	5	1	5	5
On foot	18%	21	1	22	2	21	23
Total	100%	115	6	122	13	116	129

Proposed Residential Use

- 5.7 In a similar manner to the existing use, the TRICS database has been interrogated to provide trip rates for residential developments with similar levels of parking, number of units and edge of town / town centre location. **Table 5.3** below, provides the trip rates and total person trip generation for the proposed 58 residential units. A copy of the residential TRICS output data is included at **Appendix E**.

Table 5.3: TRICS Trip Rates and Trip Generation – Proposed Residential Use (58 Units)						
Time Period	Total Person Trip Rates			Total Person Trips		
	In	Out	2-Way	In	Out	2-Way
AM Peak (08:00-09:00)	0.094	0.328	0.422	5	19	24
PM Peak (17:00-18:00)	0.346	0.196	0.542	20	11	31

5.8 As can be seen in the table above, the proposed residential use at the site has the potential to generate 24 two-way person trips across the morning peak hour, and 31 two-way trips across the evening peak hour.

Modal Split

5.9 The modal split for the proposed residential use has been based on the 2011 Census data for journeys to work from the super output area middle layer: Reading 011. The modal split has been applied to the person trips above to produce the multi-modal trip generation, as shown in **Table 5.4** below.

Table 5.4: Proposed Trip Generation by Mode							
Mode	Split	AM Peak			PM Peak		
		In	Out	2-Way	In	Out	2-Way
Train	20%	1	4	5	4	2	6
Bus	12%	1	2	3	2	1	4
Taxi	0%	0	0	0	0	0	0
Motorcycle	0%	0	0	0	0	0	0
Driving a car	31%	2	6	7	6	3	10
Passenger in car	3%	0	1	1	1	0	1
Bicycle	4%	0	1	1	1	0	1
On foot	30%	2	6	7	6	3	9
Total	100%	5	19	24	20	11	31

Net Change in Trips

5.10 **Table 5.5** below shows the net change in trip generation between the existing office and proposed change of use to residential (i.e. proposed trips minus existing trips).

Table 5.5: Net Change in Trip Generation by Mode						
Mode	AM Peak			PM Peak		
	In	Out	2-Way	In	Out	2-Way
Train	-19	+3	-16	+2	-18	-16
Bus	-20	+1	-19	0	-20	-19
Taxi	0	0	0	0	0	0
Motorcycle	0	0	0	0	0	0
Driving a car	-43	+4	-41	+1	-42	-40
Passenger in car	-5	+1	-4	0	-5	-4
Bicycle	-5	+1	-4	0	-5	-4
On foot	-19	+5	-15	+4	-18	-14
Total	-110	+13	-98	+7	-105	-98

5.11 As can be seen from **Table 5.5** there will be a decrease in total person trips to / from the site as a result of the proposed change of use, during both the AM and PM peaks, of 98 two-way trips. Within this, it is estimated that the proposals will reduce the AM and PM peak car driver trips by 41 and 40 two-way trips during each respective peak hour. Therefore, it can be concluded that the proposals will be beneficial to the local highway and transport network.

Parking

Car Parking

5.12 The existing site provides 106 car parking spaces within an external multi-storey car park, accessed from the rear of the property via Eaton Place, as well as 11 parking spaces adjacent to Oxford Road.

5.13 The proposals will remove the parking spaces adjacent to Oxford Road and utilise this spaces as for delivery vehicles only. The rear multi-storey car park will also be partially redesigned to provide 3 disabled spaces adjacent to the building, reducing the total on-site car parking provision to 103 spaces.

- 5.14 It is proposed that residents will make use of 58 car parking spaces, a 1:1 parking space per residential unit provision, in line with RBC's car parking standards for 1-2 bed units in Reading's Zone 2 (as outlined in RBC's Revised Parking Standards and Design SPD, adopted October 2013). In addition to this, 6 spaces will be allocated for residential visitor parking. The remaining free spaces on site will be for use by the retained DWP commercial space (4 spaces will be marked for sole use by DWP) and will also allow for any potential visitor overspill parking which may occur.

Cycle Parking

- 5.15 A secure and sheltered cycle store will be provided internally at ground floor level, with space for 30 cycles.
- 5.16 The provision of cycle parking is in line with RBC's standards and will promote the use of active modes of travel to future residents.

Public Transport

- 5.17 As set out previously in Section 3, the site provides good accessibility to public transport as a result of a number of bus and rail services being within a short walk of the site.
- 5.18 As outlined in Table 5.5 above, it is anticipated that there would be a net decrease in the number of public transport trips during the peak hours (35 fewer two-way trips during both the AM and PM peaks) compared to the existing site. It can therefore be concluded that the proposals would result in a benefit in terms of its impact on local public transport services.

Deliveries and Refuse Collection

Deliveries

- 5.19 All deliveries to the site currently take place from within the rear car park area, accessed from Eaton Place, as well as from the front car park area adjacent to Oxford Road. It is proposed that the majority of deliveries to the residential units will take place from the front parking area adjacent to Oxford Road, with deliveries by HGV's able to make use of the rear car park in the unlikely event they are required.

- 5.20 It is expected that the majority of deliveries to the proposed residential use will be undertaken by small to medium sized vehicles e.g. transit vans, with the occasional requirement for larger vehicles such as a 7.5T box van.
- 5.21 Office floor space typically generates circa 0.25 deliveries per 100sqm of floorspace per day. Based on this, the existing 3,296sqm (GIA) B1 office space generates approximately 8 – 9 deliveries per day.
- 5.22 As a general rule of thumb, in-house surveys & the TRICS/TRAVL database flattened residential developments generate circa 12 – 15 deliveries per 100 units per day and, therefore, applying this ratio to the 58 proposed units indicates that the development will generate circa 7 - 9 deliveries per day.
- 5.23 It is therefore anticipated that the proposed change of use will receive a similar number of servicing trips to that of the existing site, if not a slight reduction in servicing trips.

Refuse Collections

- 5.24 Refuse at the existing site is collected from within the rear car park area. It is proposed that refuse collections will continue in a similar manner to the existing site.
- 5.25 A secure and sheltered refuse store will be provided within the building, adjacent to the car park, to ensure refuse can be collected in a timely manner by refuse collection operatives. The refuse store is accessible directly from the rear car park.

6 SUMMARY AND CONCLUSION

Summary

- 6.1 The site comprises a part two, part three storey, 3,550sqm (GIA) B1 office. The Applicant is seeking a change of use of circa 3,296sqm (GIA) of the existing office to provide residential use on all floors, under 'Class O' using Permitted Development rights, with a small element of commercial space retained at ground floor level for retained use by the Department for Work and Pensions.
- 6.2 The potential changes in traffic and transportation terms can be summarised as follows:
- The site is accessible by non-car modes being within walking and cycling distance of day to day amenities and close to bus services, with Reading Station located approximately 850m to the northeast of the building. There is anticipated to be a reduction in trips by sustainable modes generated by the change of use.
 - There is extensive off-street car parking available within the existing car park currently allocated to the office. 64 parking spaces will be transferred to the residential units in line with RBC standards.
 - 30 cycle parking spaces will be provided within a secure and sheltered cycle store for use by residents.
 - All vehicular deliveries and refuse collection will take place on-site, as existing.
 - Using the TRICS database it has been shown that there would be a decrease in the number of total person movements during the weekday peak periods and, as such, there would not be any unacceptable impact on local traffic conditions and public transport. Furthermore, it is considered that the reduction in vehicle movements associated with the change of use is a benefit.

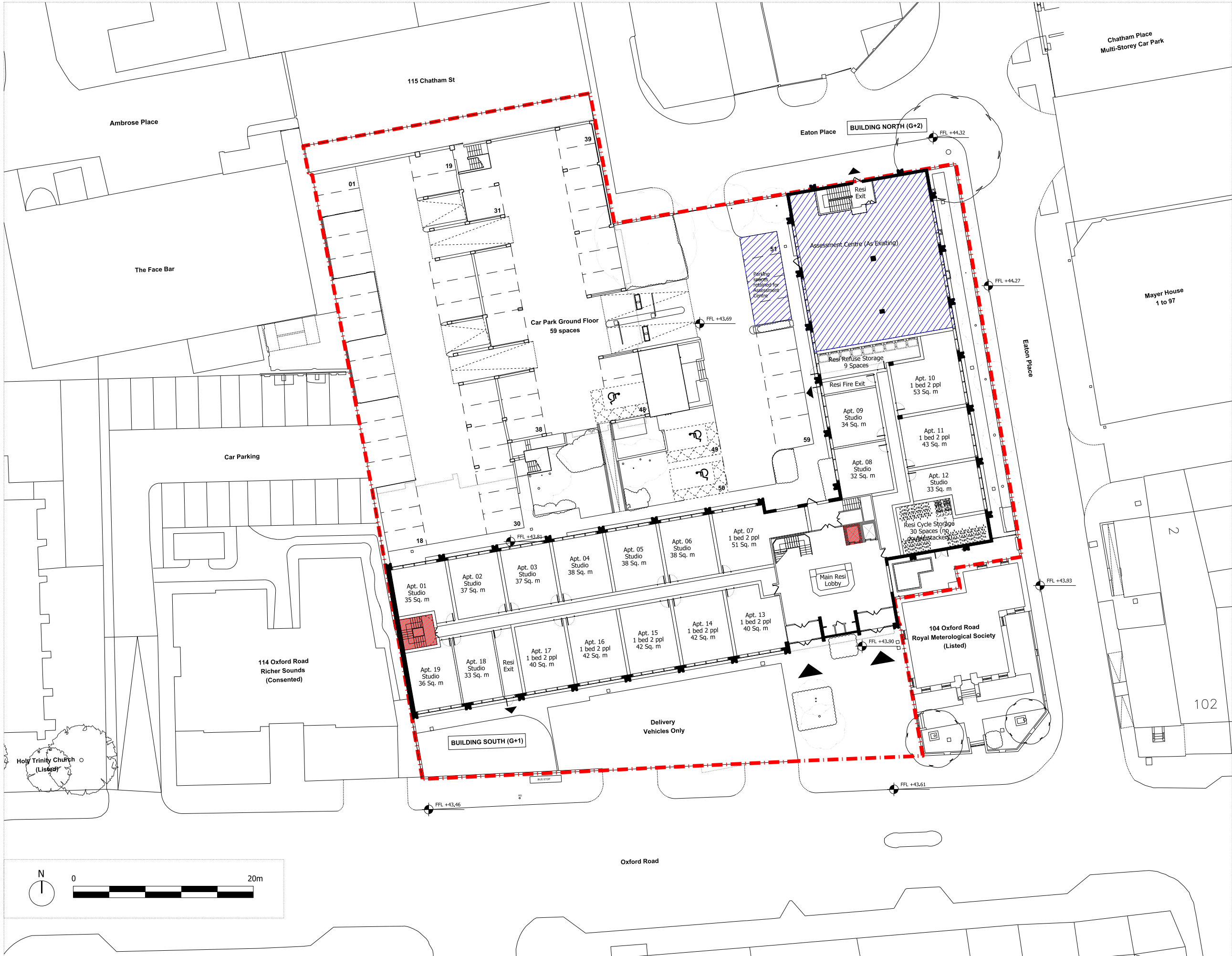
Conclusion

6.3 The proposed change of use is consistent with relevant transport policy guidance and is not anticipated to give rise to any material transport related impacts. We therefore conclude that the change of use is acceptable in traffic and transport terms, and there are no reasons why the development should be prevented or refused on transport grounds.

6.4 Taking into consideration the benefits of the development, it is consistent with relevant transport policy guidance and is considered to meet the key test of the NPPF and paragraph 109, which states that:

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

Appendix A



NOTES:

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PD Scheme Summary

Building south - 2 storeys
Building north - 3 storeys

Total units: 58

Parking provided: 103
(Including 4 for Assessment centre)

Cycle storage provided: 30

Refuse provided: 9 eurobins

ALTERATIONS

ASSESSMENT CENTRE AS EXISTING

Issued for Planning	24/01/19	RB	A
Issued for Planning	07/11/18	GH	-
Revision description	Date	Check	Rev

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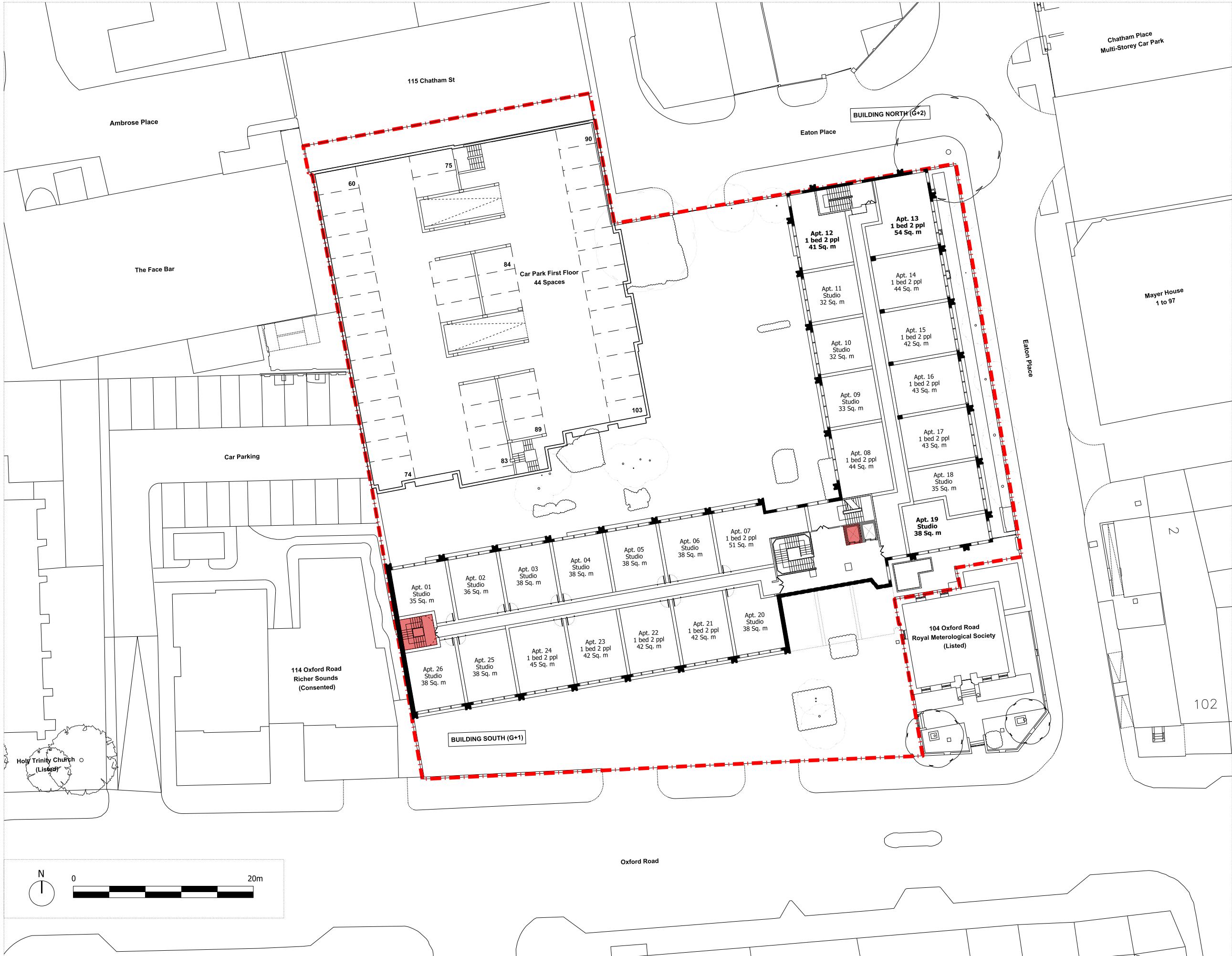
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Drawing
Proposed Ground Floor Plan
Permitted Development

Drawn	Date	Scale
JKL	02/02/2018	1: 200@A1 1: 400@A3
Job number	Drawing number	Revision
17110	C645_PD_P_00_001	A



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ALTERATIONS

Issued for Planning	07/11/18	GH	-
Revision description	Date	Check	Rev

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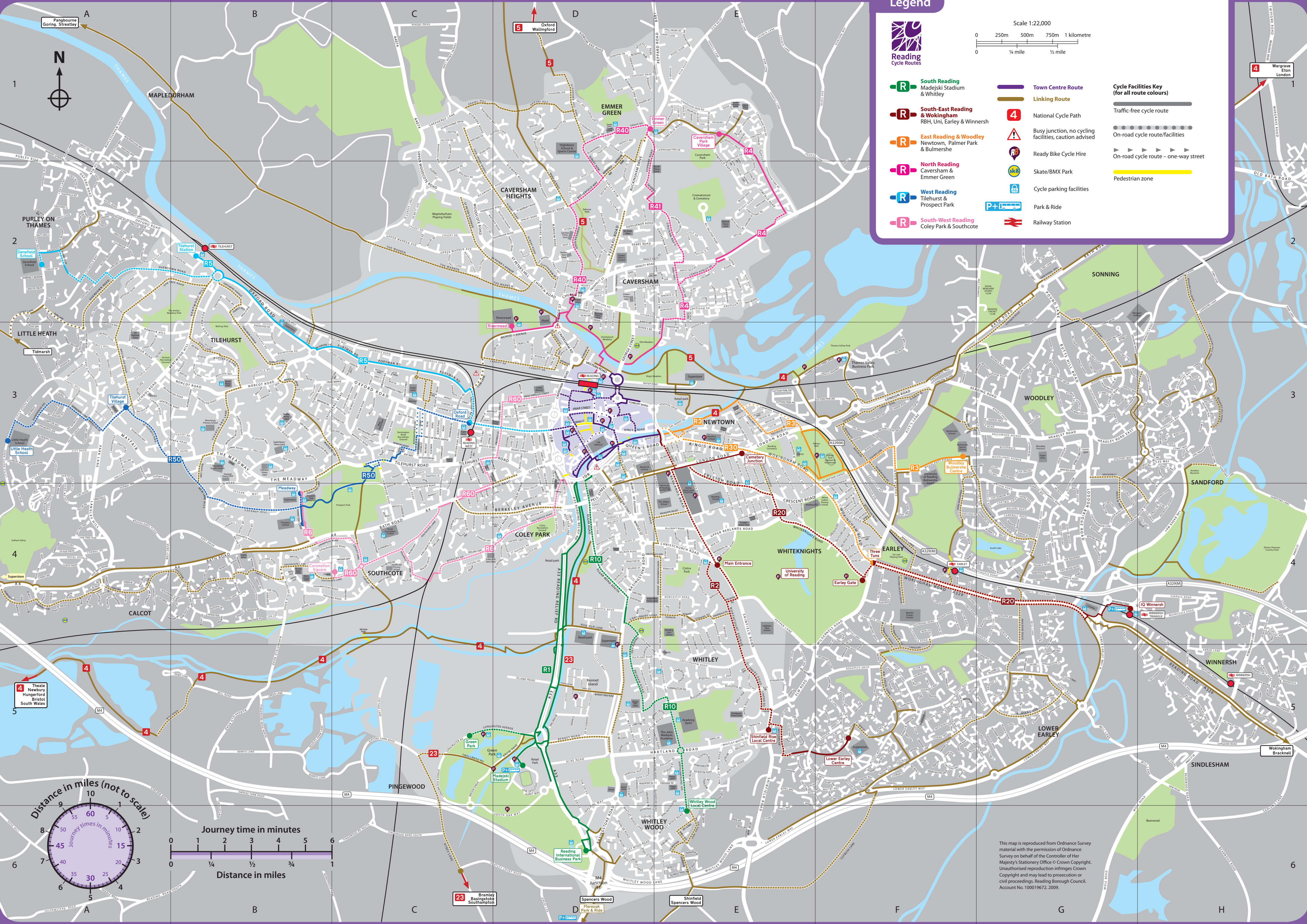
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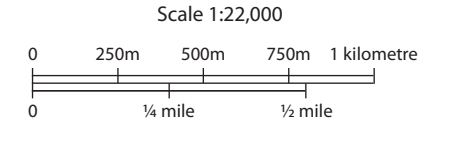
Drawing
Proposed 1st Floor Plan
Permitted Development

Drawn	Date	Scale
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Job number	Drawing number	Revision
17110	C645_PD_P_01_001	-

Appendix B



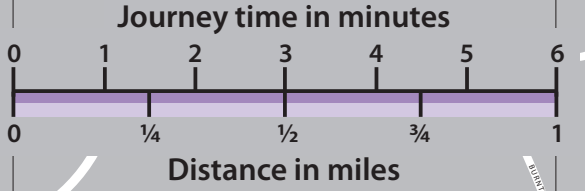
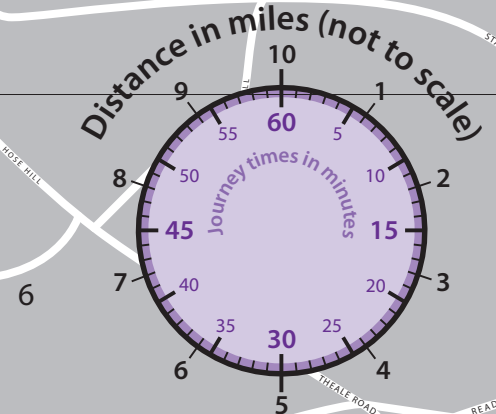
Legend



- South Reading**
Madejski Stadium & Whitley
- South-East Reading & Wokingham**
RBH, Uni, Earley & Winnersh
- East Reading & Woodley**
Newtown, Palmer Park & Bulmershe
- North Reading**
Caversham & Emmer Green
- West Reading**
Tilehurst & Prospect Park
- South-West Reading**
Coley Park & Southcote

- Town Centre Route**
- Linking Route**
- 4** National Cycle Path
- Busy junction, no cycling facilities, caution advised
- Ready Bike Cycle Hire
- Skate/BMX Park
- Cycle parking facilities
- Park & Ride
- Railway Station

- Cycle Facilities Key (for all route colours)**
- Traffic-free cycle route
 - On-road cycle route/facilities
 - On-road cycle route – one-way street
 - Pedestrian zone



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Appendix C

where to catch your bus in Central Reading



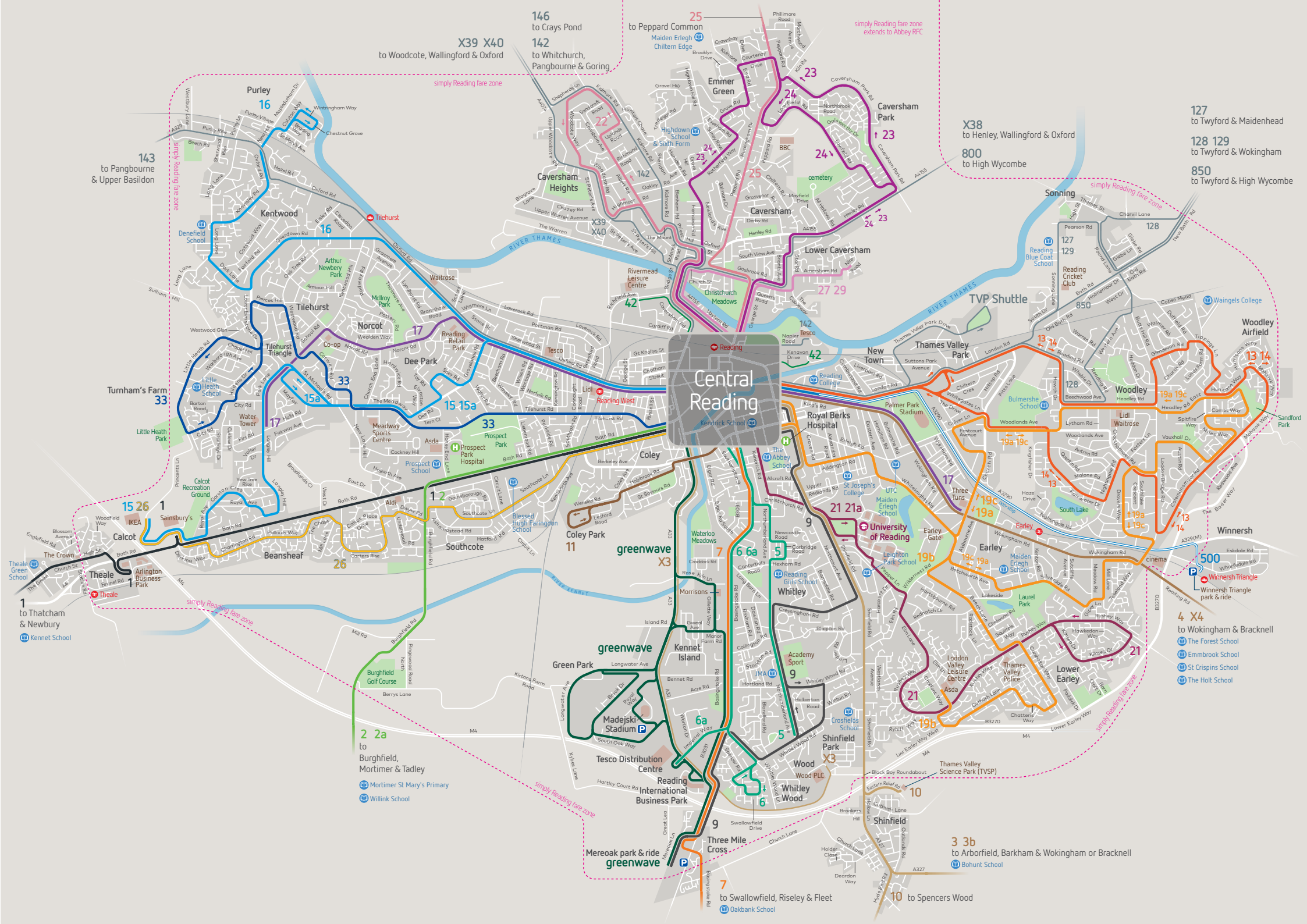
get the app



route

	towards	stops at
jet black 1	Theale/Thatcham/Newbury	EP FP CA CQ
lime 2 2a	Burghfield/Mortimer/Tadley	EP FP CA CQ
leopard 3	Royal Berkshire Hospital/Arborfield/Wokingham	CL FM SA MA MF
leopard 3b	Royal Berkshire Hospital/Arborfield/Bracknell	CL FM SA MA MF
leopard X3	Shinfield Park (direct)	EP FP
lion 4 X4	Reading College/Wokingham/Bracknell	CT FN EO ME
emerald 5	Northumberland Avenue	MI CL CU SC MC
emerald 6 6a	Whitley Wood/Tesco depot	MI CL CU SC MC
tiger 7	Riseley/Hartley Wintney/Fleet	SC MC LB
9	Royal Berkshire Hospital/ UoR/Whitley Wood/Mere oak	CR FM SA MA MF
leopard 10	Royal Berkshire Hospital/Thames Valley Science Park/Spencers Wood	CR FM SA MA MF
bronze 11	Coley Park	MI CR FM EO MC
little oranges 19a 19c	Royal Berkshire Hospital/ UoR/Earley (Silverdale Road)/Woodley	CR FM SA MA MF
little oranges 19b	Royal Berkshire Hospital/ UoR/Beech Lane/Lower Earley	CR FM SA MA MF
orange 13 14	Reading College/Woodley Centre/Woodley	EM MF
sky blue 15 15a	Tilehurst/Royal Avenue/Dee Park/Oxford Road/IKEA	FE CX
sky blue 16	Oxford Road/Purley	FE CX
purple 17	Reading College/Wokingham Road (Three Tuns)	CY FN EO ME
	Oxford Road/Tilehurst (Water Tower)	MG MM CN CW
claret 21 21a	University of Reading/Lower Earley	CR CU EK MA
pink 22	Caversham Centre/ Caversham Heights	FL EL NA
berry 23 24	Caversham Centre/Caversham Park/Emmer Green	FL EL NA
pink 25	Caversham Centre/Sonning Common/Peppard Common	FL EL NA
yellow 26	Southcote/Calcot (IKEA)	EK FP CA CQ
27	Caversham Centre via Lower Caversham	FJ EL
29	Lower Caversham via Caversham Centre	EO FP FG
royal blue 33	Turnhams Farm/Tilehurst	FE CB CQ
buzz 42	Kenavon Drive	FN EO MF
greenwave	Rivermead Leisure Centre	EN MP CS FG
park & ride 60	Kennet Island/Green Park/ Madejski Stadium/RIBP	CS SD MC
park&ride 500	Mere oak park & ride	CS SD MC
stadium buses F1 R1	Winnersh Triangle park & ride	MQ CS FM EO MC
	Madejski Stadium (football and rugby matchdays only)	WS
	Heathrow Airport	Reading Station

railair from First



143
to Pangbourne
& Upper Basildon

X39 X40
to Woodcote, Wallingford & Oxford

146
to Crays Pond
142
to Whitchurch,
Pangbourne & Goring

25
to Peppard Common
Maiden Erleigh
Chilren Edge

simply Reading fare zone
extends to Abbey RFC

X38
to Henley, Wallingford & Oxford
800
to High Wycombe

127
to Twyford & Maidenhead
128 129
to Twyford & Wokingham
850
to Twyford & High Wycombe

1
to Thatcham
& Newbury
Kennet School

2 2a
to Burghfield,
Mortimer & Tadley
Mortimer St Mary's Primary
Willink School

simply Reading fare zone

7
to Swallowfield, Riseley & Fleet
Oakbank School

3 3b
to Arborfield, Barkham & Wokingham or Bracknell
Bohnt School

10
to Spencers Wood

4 X4
to Wokingham & Bracknell
The Forest School
Emmbrook School
St Crispins School
The Holt School

500
Winnersh Triangle
park & ride

Appendix D

Calculation Reference: AUDIT-358901-181030-1015

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
BD	BEDFORDSHIRE	1 days
ES	EAST SUSSEX	1 days
KC	KENT	1 days
SO	SLOUGH	1 days

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

Secondary Filtering selection:

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

Parameter: Gross floor area
 Actual Range: 1469 to 5050 (units: sqm)
 Range Selected by User: 800 to 10000 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/10 to 12/09/18

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

Selected survey days:

Monday	1 days
Wednesday	1 days
Thursday	2 days

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

Selected survey types:

Manual count	4 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	4
---------------------	---

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

Selected Location Sub Categories:

Built-Up Zone	3
No Sub Category	1

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

Secondary Filtering selection:

Use Class:

A1	1 days
B1	3 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:

15,001 to 20,000	1 days
25,001 to 50,000	3 days

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

Population within 5 miles:

75,001 to 100,000	1 days
125,001 to 250,000	3 days

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

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	2 days
1.6 to 2.0	1 days

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

Travel Plan:

Yes	3 days
No	1 days

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

PTAL Rating:

No PTAL Present	4 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	BD-02-A-03 BROMHAM ROAD BEDFORD	OFFICES	BEDFORDSHIRE
	Edge of Town Centre No Sub Category Total Gross floor area:	1469 sqm	
	Survey date: MONDAY	14/10/13	Survey Type: MANUAL
2	ES-02-A-12 VICARAGE LANE HAILSHAM	COUNCIL OFFICES	EAST SUSSEX
	Edge of Town Centre Built-Up Zone Total Gross floor area:	3640 sqm	
	Survey date: THURSDAY	26/11/15	Survey Type: MANUAL
3	KC-02-A-09 SANDLING ROAD MAIDSTONE	COUNCIL OFFICES	KENT
	Edge of Town Centre Built-Up Zone Total Gross floor area:	1500 sqm	
	Survey date: WEDNESDAY	19/10/11	Survey Type: MANUAL
4	SO-02-A-02 BATH ROAD SLOUGH	COUNCIL OFFICES	SLOUGH
	Edge of Town Centre Built-Up Zone Total Gross floor area:	5050 sqm	
	Survey date: THURSDAY	27/02/14	Survey Type: MANUAL

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
BR-02-A-02	.
CA-02-A-05	.
KC-02-A-10	.
NF-02-A-01	.
SO-02-A-01	.
WK-02-A-01	.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	2915	1.029	4	2915	0.051	4	2915	1.080
08:00 - 09:00	4	2915	3.499	4	2915	0.197	4	2915	3.696
09:00 - 10:00	4	2915	3.697	4	2915	0.961	4	2915	4.658
10:00 - 11:00	4	2915	1.312	4	2915	1.064	4	2915	2.376
11:00 - 12:00	4	2915	0.952	4	2915	1.124	4	2915	2.076
12:00 - 13:00	4	2915	1.973	4	2915	2.890	4	2915	4.863
13:00 - 14:00	4	2915	2.788	4	2915	2.033	4	2915	4.821
14:00 - 15:00	4	2915	1.432	4	2915	1.038	4	2915	2.470
15:00 - 16:00	4	2915	0.781	4	2915	1.209	4	2915	1.990
16:00 - 17:00	4	2915	0.352	4	2915	2.976	4	2915	3.328
17:00 - 18:00	4	2915	0.395	4	2915	3.534	4	2915	3.929
18:00 - 19:00	4	2915	0.146	4	2915	0.875	4	2915	1.021
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		18.356			17.952			36.308	

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.

Appendix E

Calculation Reference: AUDIT-358901-181030-1047

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	EX ESSEX	1 days
	HC HAMPSHIRE	1 days
	SC SURREY	1 days
04	EAST ANGLIA	
	SF SUFFOLK	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:	72 to 94 (units:)
Range Selected by User:	20 to 200 (units:)

Public Transport Provision:

Selection by:	Include all surveys
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Date Range:	01/01/10 to 05/10/18
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This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Tuesday	2 days
Thursday	1 days
Saturday	1 days

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

Selected survey types:

Manual count	4 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	3
Edge of Town	1

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

Selected Location Sub Categories:

Residential Zone	2
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	4 days
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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:

5,001 to 10,000	1 days
15,001 to 20,000	1 days
25,001 to 50,000	2 days

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

Population within 5 miles:

50,001 to 75,000	1 days
125,001 to 250,000	2 days
250,001 to 500,000	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	3 days

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

Travel Plan:

Yes	1 days
No	3 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:

No PTAL Present	4 days
-----------------	--------

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

LIST OF SITES relevant to selection parameters

1	EX-03-C-02	BLOCK OF FLATS	ESSEX
	WESTCLIFF PARADE		
	SOUTHEND-ON-SEA		
	WESTCLIFF		
	Edge of Town Centre		
	Residential Zone		
	Total Number of dwellings:	94	
	Survey date: TUESDAY	22/10/13	Survey Type: MANUAL
2	HC-03-C-01	BLOCKS OF FLATS	HAMPSHIRE
	CROSS STREET		
	PORTSMOUTH		
	Edge of Town Centre		
	Built-Up Zone		
	Total Number of dwellings:	90	
	Survey date: TUESDAY	05/06/18	Survey Type: MANUAL
3	SC-03-C-04	BLOCK OF FLATS	SURREY
	LONDON ROAD		
	GUILDFORD		
	BURPHAM		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	72	
	Survey date: SATURDAY	23/10/10	Survey Type: MANUAL
4	SF-03-C-01	BLOCKS OF FLATS	SUFFOLK
	STATION HILL		
	BURY ST EDMUNDS		
	Edge of Town Centre		
	Built-Up Zone		
	Total Number of dwellings:	85	
	Survey date: THURSDAY	18/12/14	Survey Type: MANUAL

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
NF-03-C-01	.

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	4	85	0.073	4	85	0.238	4	85	0.311
08:00 - 09:00	4	85	0.094	4	85	0.328	4	85	0.422
09:00 - 10:00	4	85	0.100	4	85	0.191	4	85	0.291
10:00 - 11:00	4	85	0.173	4	85	0.214	4	85	0.387
11:00 - 12:00	4	85	0.141	4	85	0.161	4	85	0.302
12:00 - 13:00	4	85	0.255	4	85	0.287	4	85	0.542
13:00 - 14:00	4	85	0.223	4	85	0.267	4	85	0.490
14:00 - 15:00	4	85	0.191	4	85	0.214	4	85	0.405
15:00 - 16:00	4	85	0.164	4	85	0.123	4	85	0.287
16:00 - 17:00	4	85	0.352	4	85	0.155	4	85	0.507
17:00 - 18:00	4	85	0.346	4	85	0.196	4	85	0.542
18:00 - 19:00	4	85	0.273	4	85	0.158	4	85	0.431
19:00 - 20:00	1	72	0.222	1	72	0.194	1	72	0.416
20:00 - 21:00	1	72	0.208	1	72	0.153	1	72	0.361
21:00 - 22:00	1	72	0.250	1	72	0.111	1	72	0.361
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		3.065			2.990			6.055	

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.