



Technical Note

Northumberland Avenue, Reading

22-090-001 Rev -

Transport Technical Note

October 2022

Rev	Issue Purpose	Author	Checked	Reviewed	Approved	Date
-	Planning	CG	OM	SW	SW	28/10/22

1 Introduction

- 1.1.1 Charles & Associates (C&A) have been instructed by Bell Cornwell LLP to provide supporting information for a planning application (Reading Borough Council ref 221412). The application is for Prior Approval under the General Permitted Development Order to construct 12 dwellings above existing buildings at 79 Northumberland Avenue, Reading.
- 1.1.2 RBC have provided comments on the potential transport and highways implications of the application and this note provides further information in response to the matters raised.
- 1.1.3 The application should be considered in context of the National Planning Policy Framework (NPPF), which in relation to states:

110. 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;*
- c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code 46; and*

d) 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.

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

2 Site Location and Accessibility

2.1.1 The site is located at the junction of Northumberland Avenue and Newcastle Road to the south of Reading town centre. There are numerous amenities within an 800m walking distance of the site, representing approximately 10 minutes' walk. These include:

- Food and other convenience retailers
- Palmer Academy primary school
- Reading Girls School
- Long Barn Lane GP surgery
- Hexham Road community centre
- Cintra Park

2.1.2 Northumberland Avenue has traffic calming measures in the vicinity of the site and is a recommended cycling route¹ by RBC, connecting with the R21 signed route which runs between Reading town centre and the University campus.

2.1.3 There are bus stops on Newcastle Road immediately north of the site. These are served by route 5 “**Emerald**” which runs between the town centre and Whitley Wood, every 12 minutes on weekdays and Saturdays and every 20 minutes on Sundays. This service also calls at Reading railway station for onward connections to the Thames Valley and Central London.

2.1.4 The site therefore benefits from a highly sustainable location in accordance with the NPPF, in which residents have access to amenities and connections without using private cars. The 2011 Census data in **Appendix A** shows that in the local area², 44% of people travel to work by walking, cycling or public transport.

¹ Reading Cycle Map <https://images.reading.gov.uk/2022/04/RBC-Cycling-Leaflet-and-Map.pdf>

² Reading 016 Medium Level Super Output Area <https://mapit.mysociety.org/area/37283.html>

3 Development Proposals

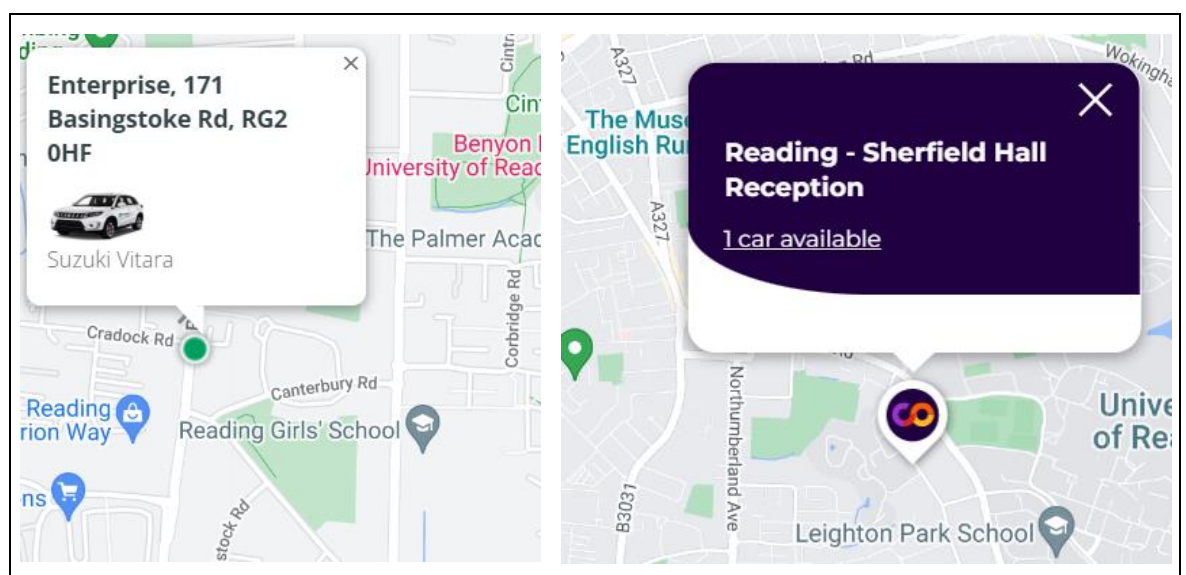
- 3.1.1 The site currently comprises a parade of shops at ground level and 6 flats with deck access at first-floor level. The public footway runs along the Northumberland Avenue frontage and provides access to all the shop entrances. There are short-stay car parking bays on Northumberland Avenue which are available to customers.
- 3.1.2 At the south end of the site is a private driveway which provides rear access to the shops and several off-street car parking spaces. These are understood to be used by shop staff and residents of the existing flats.
- 3.1.3 The development proposals comprise of internal alterations to the existing flats, and the construction of new 2nd and 3rd floor storeys to provide an additional 12 flats.

4 Parking and Servicing

4.1 Parking Requirements

- 4.1.1 Although RBC operate several Controlled Parking Zones (CPZs), these do not cover Northumberland Avenue or the adjoining streets, which indicates that there is not significant pressure on street parking here. Furthermore, as shown in **Appendix A**, Census data shows that in the local area 34% of households do not own a car or van, and a further 42% of households own only one car or van.
- 4.1.2 There are car club vehicles close to the site on Basingstoke Road (Enterprise) and Sherfield Hall (Co-Wheels) as shown in **Figure 4.1**. These services would allow residents of the site to make occasional car journeys without needing to own their own vehicle.

Figure 4.1: Local Car Club Opportunities



4.1.3 Using RBC's car parking standards the required provision is summarised in **Table 4.1** below.

Table 4.1: Parking Provision

	Units			Total
	1 bed	2 bed	3 bed	
Existing 1st floor flats	0	2	4	6
<i>Reading - Zone 2 Primary Core Area</i>				
<i>Car spaces per unit</i>	1	1	1.5	
Parking Requirement for Existing	0	2	6	8
Proposals				
Altered 1st floor flats	0	5	1	6
New 2nd/3rd floor flats	0	12	0	12
<i>Reading - Zone 2 Primary Core Area</i>				
<i>Car spaces per unit</i>	1	1	1.5	
Parking Requirement for Proposals		17	1.5	18.5

4.1.4 The above requirement is 18.5 spaces which rounds up to 19 spaces. With a further 10% uplift to allow for visitor parking, the total requirement for the flats is 21 spaces.

4.1.5 The site layout plan in **Appendix B** shows that there are 28 spaces within the site. This would allow the above 21 spaces and retain 7 spaces for shop staff, which is considered reasonable.

4.1.6 Furthermore, the proposed parking provision is considered suitable given the mix of land uses on the site that would give rise to different peak periods in terms of parking demand and accumulation. This is identified in RBC's own parking guidance SPD on page 12 which states:

"Where comprehensive and mixed-use development schemes are likely, developers are encouraged to provide shared parking for facilities which are likely to generate peak parking levels during different periods of the day."

4.1.7 For cycle parking the RBC standards require 0.5 spaces for 1-2 bedroom flats and 1 space for 3-bedroom flats, so the total requirement is 10 spaces. The layout includes a secure cycle store at ground level with space for 10 cycles.

4.1.8 Most of the shops accept deliveries from the Northumberland Street frontage rather than the from the private driveway to the rear. However, the layout allows space for servicing to the rear of the units to continue.

5 Trip Generation

5.1.1 The TRICS database has been used to estimate the vehicle trip generation of the proposals as shown in **Appendix C**.

- 5.1.2 For the proposed flats, the Privately Owned Flats category in TRICS has been used. The trip generation is summarised in **Table 5.1** and shows that the flats would generate less than 5 vehicle trips in each peak hour, and around 20 vehicle trips over the 12-hour daytime period.

Table 5.1: TRICS Assessment - Residential

Vehicle Trip Rates	AM Peak Hour (0700 – 0800)	PM Peak Hour (1600-1700)	Daily Total (0700 – 1900)
Inbound	0.05	0.15	0.78
Outbound	0.12	0.07	0.83
2-way Total	0.17	0.22	1.61
Vehicle Trips	AM Peak Hour (0700 – 0800)	PM Peak Hour (1600-1700)	Daily Total (0700 – 1900)
Inbound	1	2	9
Outbound	1	1	10
2-way Total	2	3	19

- 5.1.3 The shops predominantly serve local residential needs and would not be expected to generate significant levels of vehicle trips. In response to the RBC comments the servicing requirements for the shops have been estimated using the 'goods vehicle' rates for the Local Shops category in TRICS, as summarised in **Table 5.2**.

Table 5.2: TRICS Assessment – Retail Servicing Requirements (circa 600 sqm)

OGV Trip Rates	AM Peak Hour (0700 – 0800)	PM Peak Hour (1600-1700)	Daily Total (0700 – 1900)
Inbound	0.07	0.07	0.173
Outbound	0.04	0.07	0.174
2-way Total	0.10	0.14	0.347
OGV Trips	AM Peak Hour (0700 – 0800)	PM Peak Hour (1600-1700)	Daily Total (0700 – 1900)
Inbound	0.4	0.4	1.0
Outbound	0.2	0.4	1.0
2-way Total	0.6	0.8	2.1

- 5.1.4 The hourly data in **Appendix C** shows that deliveries to local shops are typically made between the peak periods on weekdays. The shops would not generate more than 1 vehicle movement in any daytime hour and such movements could easily be accommodated either using the short-stay parking bays on Northumberland Avenue or the driveway to the rear.
- 5.1.5 Therefore, the anticipated level of vehicular trip generation would not result in a significant impact on the local highway network, and could not be considered to be severe in accordance with the NPPF.

6 Summary

- 6.1.1 The site benefits from a sustainable location with good access to local amenities, non-car modes of transport and car club vehicles.
- 6.1.2 The existing access arrangements will continue to be safe and suitable for the additional residential development. The proposed site layout will also provide adequate parking provision in accordance with RBC's parking standards.
- 6.1.3 The analysis set out in Chapter 5 clearly demonstrates that the proposals would generate low levels of vehicle trips during peak periods and throughout the day.
- 6.1.4 Given the sustainable location, the low car ownership and the separate peak requirements of commercial and residential development, the proposed car and cycling parking arrangements are sufficient for both needs without generating demand for off-site parking.
- 6.1.5 It is therefore considered that there are no sound highways or transportation reasons for refusal with respect to the application proposals.

Appendix A Census Data

QS701EW - Method of travel to work

ONS Crown Copyright Reserved [from Nomis on 26 October 2022]

population	All usual residents aged 16 to 74
units	Persons
area type	2011 super output areas - middle layer
area name	E02003404 : Reading 016
rural urban	Total

Method of Travel to Work

2011

All categories: Method of travel to work	6,103	
Work mainly at or from home	150	
Underground, metro, light rail, tram	8	0.3%
Train	174	6.5%
Bus, minibus or coach	346	12.9%
Taxi	20	0.7%
Motorcycle, scooter or moped	15	0.6%
Driving a car or van	1,302	48.5%
Passenger in a car or van	154	5.7%
Bicycle	160	6.0%
On foot	489	18.2%
Other method of travel to work	15	0.6%
Not in employment	3,270	
Total travel to work	2,683	100.0%

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies.

QS416EW - Car or van availability

ONS Crown Copyright Reserved [from Nomis on 26 October 2022]

population	All households; All cars or vans
units	Households
area type	2011 super output areas - middle layer
area name	E02003404 : Reading 016
rural urban	Total

Cars	2011	%
All categories: Car or van availability	2,326	
No cars or vans in household	789	33.9%
1 car or van in household	970	41.7%
2 cars or vans in household	450	19.3%
3 cars or vans in household	93	4.0%
4 or more cars or vans in household	24	1.0%
Total Cars/Household	3,034	
Average Cars/Household	1.3	

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies.

Appendix B Site Layout

Appendix C TRICS Assessment

Calculation Reference: AUDIT-657801-221027-1033

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

05	EAST MIDLANDS	
	DY DERBY	1 days
11	SCOTLAND	
	EB CITY OF EDINBURGH	1 days
15	GREATER DUBLIN	
	DL DUBLIN	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: 20 to 32 (units:)
 Range Selected by User: 6 to 200 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 28/06/22

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

Selected survey days:

Tuesday	1 days
Wednesday	2 days

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

Selected survey types:

Manual count	3 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:

Suburban Area (PPS6 Out of Centre)	3
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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
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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 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®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

20,001 to 25,000 2 days

25,001 to 50,000 1 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 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

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

Travel Plan:

No 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 3 days

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

LIST OF SITES relevant to selection parameters

1	DL-03-C-15	BLOCKS OF FLATS	DUBLIN
	MONKSTOWN ROAD		
	DUBLIN		
	MONKSTOWN		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	20	
	Survey date: WEDNESDAY	01/10/14	Survey Type: MANUAL
2	DY-03-C-03	BLOCKS OF FLATS	DERBY
	CAESAR STREET		
	DERBY		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	30	
	Survey date: WEDNESDAY	25/09/19	Survey Type: MANUAL
3	EB-03-C-01	BLOCKS OF FLATS	CITY OF EDINBURGH
	MYRESIDE ROAD		
	EDINBURGH		
	CRAIGLOCKHART		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	32	
	Survey date: TUESDAY	26/05/15	Survey Type: MANUAL

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

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

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	3	27	0.049	3	27	0.122	3	27	0.171
08:00 - 09:00	3	27	0.012	3	27	0.110	3	27	0.122
09:00 - 10:00	3	27	0.049	3	27	0.024	3	27	0.073
10:00 - 11:00	3	27	0.024	3	27	0.061	3	27	0.085
11:00 - 12:00	3	27	0.037	3	27	0.037	3	27	0.074
12:00 - 13:00	3	27	0.049	3	27	0.061	3	27	0.110
13:00 - 14:00	3	27	0.061	3	27	0.073	3	27	0.134
14:00 - 15:00	3	27	0.085	3	27	0.037	3	27	0.122
15:00 - 16:00	3	27	0.073	3	27	0.061	3	27	0.134
16:00 - 17:00	3	27	0.146	3	27	0.073	3	27	0.219
17:00 - 18:00	3	27	0.122	3	27	0.110	3	27	0.232
18:00 - 19:00	3	27	0.073	3	27	0.061	3	27	0.134
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.780			0.830			1.610

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.

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Parameter summary

Trip rate parameter range selected:	20 - 32 (units:)
Survey date range:	01/01/14 - 28/06/22
Number of weekdays (Monday-Friday):	3
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.

Calculation Reference: AUDIT-657801-221027-1011

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
 Category : I - SHOPPING CENTRE - LOCAL SHOPS
TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	EN ENFIELD	1 days
02	SOUTH EAST	
	HF HERTFORDSHIRE	1 days
03	SOUTH WEST	
	PL PLYMOUTH	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
 Actual Range: 470 to 1305 (units: sqm)
 Range Selected by User: 210 to 2000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/11/10 to 15/10/21

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
Friday	1 days

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

Selected survey types:

Manual count	3 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:

Suburban Area (PPS6 Out of Centre)	3
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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
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:

n/a 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®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

20,001 to 25,000 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:

125,001 to 250,000 1 days
250,001 to 500,000 1 days
500,001 or More 1 days

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

Car ownership within 5 miles:

0.6 to 1.0 1 days
1.1 to 1.5 2 days

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

Petrol filling station:

Included in the survey count 0 days
Excluded from count or no filling station 3 days

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:

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 2 days
3 Moderate 1 days

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

LIST OF SITES relevant to selection parameters

1	EN-01-I-01 HIGH STREET ENFIELD PONDERS END Suburban Area (PPS6 Out of Centre) No Sub Category Total Gross floor area: Survey date: TUESDAY	LOCAL SHOPS 1305 sqm 20/11/18	ENFIELD Survey Type: MANUAL
2	HF-01-I-02 BROADWATER CRESCENT STEVENAGE Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: Survey date: FRIDAY	LOCAL SHOPS 1115 sqm 28/06/19	HERTFORDSHIRE Survey Type: MANUAL
3	PL-01-I-01 TORRIDGE WAY PLYMOUTH EFFORD Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: Survey date: TUESDAY	LOCAL SHOPS 470 sqm 17/07/12	PLYMOUTH 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 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
TOTAL VEHICLES
 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	3	963	3.391	3	963	3.183	3	963	6.574
08:00 - 09:00	3	963	3.322	3	963	2.837	3	963	6.159
09:00 - 10:00	3	963	3.979	3	963	3.772	3	963	7.751
10:00 - 11:00	3	963	4.152	3	963	3.875	3	963	8.027
11:00 - 12:00	3	963	4.118	3	963	4.048	3	963	8.166
12:00 - 13:00	3	963	5.052	3	963	5.017	3	963	10.069
13:00 - 14:00	3	963	4.221	3	963	4.083	3	963	8.304
14:00 - 15:00	3	963	4.948	3	963	4.983	3	963	9.931
15:00 - 16:00	3	963	4.498	3	963	4.118	3	963	8.616
16:00 - 17:00	3	963	5.294	3	963	5.294	3	963	10.588
17:00 - 18:00	3	963	5.294	3	963	5.813	3	963	11.107
18:00 - 19:00	3	963	4.602	3	963	5.329	3	963	9.931
19:00 - 20:00	3	963	4.221	3	963	4.429	3	963	8.650
20:00 - 21:00	3	963	2.734	3	963	2.803	3	963	5.537
21:00 - 22:00	3	963	2.353	3	963	2.561	3	963	4.914
22:00 - 23:00	1	1115	2.242	1	1115	2.242	1	1115	4.484
23:00 - 24:00									
Total Rates:			64.421			64.387			128.808

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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.

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Parameter summary

Trip rate parameter range selected:	470 - 1305 (units: sqm)
Survey date range:	01/11/10 - 15/10/21
Number of weekdays (Monday-Friday):	3
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 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

OGVS

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	3	963	0.035	3	963	0.035	3	963	0.070
08:00 - 09:00	3	963	0.000	3	963	0.000	3	963	0.000
09:00 - 10:00	3	963	0.000	3	963	0.000	3	963	0.000
10:00 - 11:00	3	963	0.000	3	963	0.000	3	963	0.000
11:00 - 12:00	3	963	0.069	3	963	0.035	3	963	0.104
12:00 - 13:00	3	963	0.000	3	963	0.035	3	963	0.035
13:00 - 14:00	3	963	0.000	3	963	0.000	3	963	0.000
14:00 - 15:00	3	963	0.069	3	963	0.069	3	963	0.138
15:00 - 16:00	3	963	0.000	3	963	0.000	3	963	0.000
16:00 - 17:00	3	963	0.000	3	963	0.000	3	963	0.000
17:00 - 18:00	3	963	0.000	3	963	0.000	3	963	0.000
18:00 - 19:00	3	963	0.000	3	963	0.000	3	963	0.000
19:00 - 20:00	3	963	0.000	3	963	0.000	3	963	0.000
20:00 - 21:00	3	963	0.000	3	963	0.000	3	963	0.000
21:00 - 22:00	3	963	0.000	3	963	0.000	3	963	0.000
22:00 - 23:00	1	1115	0.000	1	1115	0.000	1	1115	0.000
23:00 - 24:00									
Total Rates:			0.173				0.174	0.347	

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.