

TECHNICAL NOTE

Job Name: 313 Basingstoke Road, Reading
Job No: 46434
Note No: 002
Date: May 2019
Prepared By: Emily Imeson
Subject: Transport Impact Assessment

1. Introduction

- 1.1. Peter Brett Associates, now part of Stantec (PBA), has been commissioned to prepare a Technical Note assessing the transport implications of the proposed subdivision of an existing residential dwelling.
- 1.2. 313 Basingstoke Road is currently a privately-owned, 7-bedroom house located just over 2 kilometres to the south of Reading city centre. The redevelopment proposals comprise replacement of the single dwellings with three private flats.

2. Existing Transport Conditions

- 2.1. 313 Basingstoke Road is located on the eastern side of the B3031 Basingstoke Road which is one of a number of arterial routes leading out of the city to the south, forming a link with M4 Junction 11. Vehicular access to the existing property is gained via a private driveway and section of dropped kerb from which there is good visibility to both left and right, due to the straight alignment of the road.
- 2.2. Basingstoke Road has footways on both sides of the carriageway which are around two metres in width and provide connections with the wider footway network within Reading. While there are no off-road cycle facilities in the immediate vicinity of the site, the section of Basingstoke Road which runs past the dwelling is an on-road section of an identified linking route to the South Reading cycle route which links Madejski Stadium and Whitely with the city centre. The site therefore benefits from good cycle accessibility.
- 2.3. The closest bus stops to 313 Basingstoke Road are located around 150 metres to the north, in the vicinity of the junction with Buckland Road. These stops are served by a number of routes including the 6, 6a, 7 and 66 which provide access to a range of destinations including the city centre, Fleet, Royal Berkshire Hospital and Reading Station which would facilitate onward journeys by rail.
- 2.4. There are a range of local facilities within easy walking distance of the site including an Aldi and Morrison's supermarket around 250 metres to the north of the site as well as a number of additional retail facilities.

3. Parking and Servicing

- 3.1. Reference to the RBC's Revised Parking Standards and Design SPD (October 2011) indicates that the appropriate level of vehicle parking provision for 1-2 bedroom flats in Zone 3 (in which 313 Basingstoke Road is located) is 1.5 spaces per dwelling and 2 spaces per dwelling for flats with 3 or more bedrooms.

TECHNICAL NOTE

- 3.2. Two of the proposed flats will have 3 bedrooms and one will have one-bedroom, the required parking provision in Zone 3 following the subdivision of the dwelling will be a maximum of 6 spaces. The site however, is on Basingstoke Road which is a sustainable location with regular bus services between every 9-20 minutes.
- 3.3. With regards to cycle parking, the SPD advises that unless an individual secure facility (e.g. a garage) for each property is to be provided, then dedicated communal cycle parking will be required. For flats with 1-2 bedrooms, the SPD specifies the provision of 0.5 per dwelling and 1 space per dwelling for flats with 3 or more bedrooms, requiring a total of five spaces.
- 3.4. RBC's Residential Conversions SPD (November 2013) identifies that cycle storage for flats should be *'conveniently located in relation to the trip origin and destination, easy to use where the cycle can be secured easily and quickly and covered'*.
- 3.5. The refuse collection arrangements for the property will remain largely unchanged with collection from kerbside along with other properties along Basingstoke Road, although a designated bin storage point will be identified with sufficient capacity to accommodate the required bins and recycling boxes for each flat. Residents will be responsible for placing these in a suitable position for kerbside collection on the appointed day.

4. Trip Generation

- 4.1. In order to determine the potential impact the proposed subdivision of the existing dwelling could have on the surrounding transport network, analysis has been undertaken to determine the potential trip generation of the existing house as well as the three proposed flats. This will allow a comparison between the two scenarios to be drawn.
- 4.2. In order to inform this trip generation analysis, reference has been made to the TRICS database 03-A and 03-C privately owned houses and flats categories respectively to identify comparable sites to 313 Basingstoke Road. All weekday surveys were selected and, given the site's position in relation to the centre of Reading, location types were *restricted* to 'edge of town centre' and 'suburban area' in line with the TRICS Good Practice Guide (excluding sites in Ireland and Greater London). The TRICS data is included in **Appendix A**.
- 4.3. Based on the TRICS data, the person trip rates and associated trip generation potential of the existing house is shown in **Table 4.1**.

Table 4.1 Existing house – TRICS person trip rates and trip generation

	AM Peak			PM Peak			12 Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Trip Rate	0.380	0.880	1.260	0.663	0.359	1.022	4.933	5.043	9.976
Trip Generation	0	1	1	1	0	1	5	5	10

Source: TRICS

- 4.4. For the three proposed flats, the forecast person trip rates and associated trip generation of the dwellings are summarised in **Table 4.2**.

TECHNICAL NOTE

Table 4.2 Proposed flats – TRICS person trip rates and trip generation

	AM Peak			PM Peak			12 Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Trip Rate	0.190	0.673	0.863	0.588	0.255	0.843	4.125	4.452	8.577
Trip Generation	1	2	3	2	1	3	12	13	26

Source: TRICS

- 4.5. In order to translate the potential existing and forecast multi-modal trips into vehicle trips, reference has been made to the 'method of travel to work' 2011 Census data for the 'Reading 017' middle super output area (MSOA) in which 313 Basingstoke Road is located. This data indicates that 45% of all multi-modal trips from existing dwellings within this MSOA are split between car passengers and non-car modes including walking, cycling and public transport, with 55% of trips made are made by car drivers. The Census data is included in **Appendix B**.
- 4.6. The application of the non-car driver modal share (walk, cycle, public transport and car share) as taken from the 2011 Census is shown in the following **Table 4.3**.

Table 4.3 Non-Car Driver Trip Generation and Net Change

	AM Peak			PM Peak			12 Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Existing House	0	0	0	0	0	0	2	2	4
Proposed Flats	0	1	1	1	0	1	5	6	11
Net Change	0	+1	+1	+1	0	+1	+3	+4	+7

Source: Consultant calculations

- 4.7. Table 4.3 shows that the proposed subdivision of the existing house at 313 Basingstoke Road will result in the one additional non-vehicle trip in both the AM and PM peak hours, which results in a total of 7 additional trips occurring over the full 12-hour period. The existing pedestrian, cycle and public transport network in the area surrounding the site is considered to be suitable to accommodate these additional trips.
- 4.8. To determine the vehicle trip generation of the existing and proposed uses of the site, along with the net change in vehicle trip generation, the car driver modal share has been applied to the forecast multi-modal trip generation of the house and proposed flats as shown in **Table 4.4**.

Table 4.4 Vehicle Trip Generation and Net Change

	AM Peak			PM Peak			12 Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Existing House	0	1	1	1	0	1	3	3	6
Proposed Flats	1	1	2	1	1	2	7	7	14
Net Change	+1	0	+1	0	+1	+1	+4	+4	+8

Source: Consultant calculations

TECHNICAL NOTE

4.9. The Table 4.4 demonstrates that the proposed subdivision of the existing house at 313 Basingstoke Road will not have an impact on the vehicle trip generation potential of the site in the AM and PM peaks. Over the course of a 12-hour day, an additional 8 vehicle trips will be generated by the 3 flats compared to the single house. This level of additional trips will not have a significant impact on the surrounding highway network, particularly as these trips are not forecast to occur during the peak periods.

5. Summary

5.1. This TN has considered the potential impact of the subdivision of an existing dwelling at 313 Basingstoke Road to three flats and concluded the following:

- The site is well located in terms of existing transport opportunities providing good levels of accessibility by foot, cycle and public transport and well as private car.
- Vehicle and cycle parking will be provided at 313 Basingstoke Road in line with RBC standards.
- No changes to the existing kerbside refuse collection arrangements are proposed, although a dedicated area store will be provided for residents to store their bins and recycling boxes.
- Subdivision of the existing house is not forecast to have an impact on the number of vehicle trips generated by the site during the network peak hours, but will result in nine additional vehicle trips over the course of a 12 hour day.
- Subdivision of the existing house is forecast to result in 1 additional non-car driver trip during the AM and PM peak hour, resulting in 2 additional trips in total over the course of a 12-hour day.
- The net impact of the additional trips generated by the proposed flats when compared to the existing house is not considered to be significant and the surrounding transport network is considered suitable to accommodate these.

DOCUMENT ISSUE RECORD

Technical Note No	Rev	Date	Prepared	Checked	Reviewed (Discipline Lead)	Approved (Project Director)
46434/3313/TN001	-	10/5/19	Emily Imeson	Polly Hallchurch	Stuart Gardner	Phil Brady

Peter Brett Associates LLP disclaims any responsibility to the Client and others in respect of any matters outside the scope of this report. This report has been prepared with reasonable skill, care and diligence within the terms of the Contract with the Client and generally in accordance with the appropriate ACE Agreement and taking account of the manpower, resources, investigations and testing devoted to it by agreement with the Client. This report is confidential to the Client and Peter Brett Associates LLP accepts no responsibility of whatsoever nature to third parties to whom this report or any part thereof is made known. Any such party relies upon the report at their own risk.

© Peter Brett Associates LLP 2019

Peter Brett Associates LLP Lakeside House, Blackbrook Business Park, Blackbrook Park Avenue Taunton TA1 2PX

T: +44 (0)1823 218 940 E: taunton@peterbrett.com

TECHNICAL NOTE

Appendix A

Calculation Reference: AUDIT-706703-190513-0500

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
03	SOUTH WEST	
	DC DORSET	1 days
04	EAST ANGLIA	
	SF SUFFOLK	1 days
10	WALES	
	CO CONWY	1 days
11	SCOTLAND	
	EB CITY OF EDINBURGH	1 days
12	CONNAUGHT	
	GA GALWAY	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: 6 to 37 (units:)
 Range Selected by User: 6 to 40 (units:)

Parking Spaces Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/11 to 26/03/18

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
Tuesday	2 days
Wednesday	1 days
Thursday	1 days
Friday	1 days

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

Selected survey types:

Manual count	6 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	2
Suburban Area (PPS6 Out of 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:

Residential Zone	4
Built-Up Zone	1
No Sub Category	1

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

Secondary Filtering selection:

Use Class:

C3 6 days

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

Population within 1 mile:

10,001 to 15,000 3 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 4 days
125,001 to 250,000 1 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 2 days
1.1 to 1.5 4 days

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

Travel Plan:

No 6 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 6 days

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

LIST OF SITES relevant to selection parameters

1	CO-03-C-01	BLOCKS OF FLATS	CONWY
	MOSTYN BROADWAY LLANDUDNO		
	Edge of Town Centre Built-Up Zone		
	Total Number of dwellings:	37	
	Survey date: MONDAY	26/03/18	Survey Type: MANUAL
2	DC-03-C-02	FLATS IN BLOCKS	DORSET
	PALM COURT WEYMOUTH SPA ROAD		
	Suburban Area (PPS6 Out of Centre) Residential Zone		
	Total Number of dwellings:	14	
	Survey date: FRIDAY	28/03/14	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 Number of dwellings:	32	
	Survey date: TUESDAY	26/05/15	Survey Type: MANUAL
4	EX-03-C-01	FLATS	ESSEX
	WESTCLIFF PARADE SOUTHEND-ON-SEA WESTCLIFF		
	Edge of Town Centre Residential Zone		
	Total Number of dwellings:	6	
	Survey date: TUESDAY	22/10/13	Survey Type: MANUAL
5	GA-03-C-01	FLATS	GALWAY
	BALLYLOUGHANE ROAD GALWAY		
	Suburban Area (PPS6 Out of Centre) No Sub Category		
	Total Number of dwellings:	34	
	Survey date: THURSDAY	31/10/13	Survey Type: MANUAL
6	SF-03-C-03	BLOCKS OF FLATS	SUFFOLK
	TOLLGATE LANE BURY ST EDMUNDS		
	Suburban Area (PPS6 Out of Centre) Residential Zone		
	Total Number of dwellings:	30	
	Survey date: WEDNESDAY	03/12/14	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
CB-03-C-03	Includes bungalows

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	6	26	0.072	6	26	0.216	6	26	0.288
08:00 - 09:00	6	26	0.190	6	26	0.673	6	26	0.863
09:00 - 10:00	6	26	0.288	6	26	0.503	6	26	0.791
10:00 - 11:00	6	26	0.261	6	26	0.379	6	26	0.640
11:00 - 12:00	6	26	0.386	6	26	0.373	6	26	0.759
12:00 - 13:00	6	26	0.412	6	26	0.340	6	26	0.752
13:00 - 14:00	6	26	0.235	6	26	0.327	6	26	0.562
14:00 - 15:00	6	26	0.307	6	26	0.353	6	26	0.660
15:00 - 16:00	6	26	0.536	6	26	0.399	6	26	0.935
16:00 - 17:00	6	26	0.438	6	26	0.314	6	26	0.752
17:00 - 18:00	6	26	0.588	6	26	0.255	6	26	0.843
18:00 - 19:00	6	26	0.412	6	26	0.320	6	26	0.732
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.125			4.452			8.577

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

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

Calculation Reference: AUDIT-706703-190513-0550

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED

MULTI-MODAL PEDESTRIANS

Selected regions and areas:

02	SOUTH EAST	
	KC KENT	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
06	WEST MIDLANDS	
	ST STAFFORDSHIRE	1 days
	WK WARWICKSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	1 days
	MS MERSEYSIDE	1 days
09	NORTH	
	TW TYNE & WEAR	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: 6 to 17 (units:)
Range Selected by User: 6 to 20 (units:)

Parking Spaces Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/11 to 22/09/17

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

Selected survey days:

Monday	1 days
Tuesday	2 days
Wednesday	1 days
Friday	4 days

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

Selected survey types:

Manual count	8 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	6
Neighbourhood Centre (PPS6 Local Centre)	1

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

Selected Location Sub Categories:

Residential Zone	6
Village	1
No Sub Category	1

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

Secondary Filtering selection:

Use Class:

C3 8 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 1 mile:

1,001 to 5,000	2 days
5,001 to 10,000	1 days
15,001 to 20,000	2 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:

50,001 to 75,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	3 days
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	5 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:

No 8 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 8 days

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

LIST OF SITES relevant to selection parameters

1	CA-03-A-04	DETACHED		CAMBRIDGESHIRE
	PETERBOROUGH			
	THORPE PARK ROAD			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	9		
	Survey date: TUESDAY	18/10/11		Survey Type: MANUAL
2	CH-03-A-08	DETACHED		CHESHIRE
	WHITCHURCH ROAD			
	CHESTER			
	BOUGHTON HEATH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	11		
	Survey date: TUESDAY	22/05/12		Survey Type: MANUAL
3	KC-03-A-05	DETACHED & SEMI-DETACHED		KENT
	ROCHESTER ROAD			
	NEAR CHATHAM			
	BURHAM			
	Neighbourhood Centre (PPS6 Local Centre)			
	Village			
	Total Number of dwellings:	8		
	Survey date: FRIDAY	22/09/17		Survey Type: MANUAL
4	MS-03-A-03	DETACHED		MERSEYSIDE
	BEMPTON ROAD			
	LIVERPOOL			
	OTTERSPOOL			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	15		
	Survey date: FRIDAY	21/06/13		Survey Type: MANUAL
5	NY-03-A-13	TERRACED HOUSES		NORTH YORKSHIRE
	CATTERICK ROAD			
	CATTERICK GARRISON			
	OLD HOSPITAL COMPOUND			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	10		
	Survey date: WEDNESDAY	10/05/17		Survey Type: MANUAL
6	ST-03-A-06	SEMI-DET. & TERRACED		STAFFORDSHIRE
	STANFORD ROAD			
	WOLVERHAMPTON			
	BLAKENHALL			
	Edge of Town Centre			
	No Sub Category			
	Total Number of dwellings:	17		
	Survey date: FRIDAY	09/05/14		Survey Type: MANUAL
7	TW-03-A-02	SEMI-DETACHED		TYNE & WEAR
	WEST PARK ROAD			
	GATESHEAD			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	16		
	Survey date: MONDAY	07/10/13		Survey Type: MANUAL
8	WK-03-A-01	TERRACED/SEMI/DET.		WARWICKSHIRE
	ARLINGTON AVENUE			
	LEAMINGTON SPA			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	6		
	Survey date: FRIDAY	21/10/11		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
AG-03-A-01	Includes bunaglows
PS-03-A-01	Includes bunaglows
SF-03-A-04	Includes bunaglows

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES 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	8	12	0.054	8	12	0.109	8	12	0.163
08:00 - 09:00	8	12	0.087	8	12	0.239	8	12	0.326
09:00 - 10:00	8	12	0.043	8	12	0.076	8	12	0.119
10:00 - 11:00	8	12	0.054	8	12	0.098	8	12	0.152
11:00 - 12:00	8	12	0.098	8	12	0.098	8	12	0.196
12:00 - 13:00	8	12	0.098	8	12	0.098	8	12	0.196
13:00 - 14:00	8	12	0.130	8	12	0.196	8	12	0.326
14:00 - 15:00	8	12	0.109	8	12	0.098	8	12	0.207
15:00 - 16:00	8	12	0.228	8	12	0.109	8	12	0.337
16:00 - 17:00	8	12	0.174	8	12	0.098	8	12	0.272
17:00 - 18:00	8	12	0.228	8	12	0.109	8	12	0.337
18:00 - 19:00	8	12	0.130	8	12	0.087	8	12	0.217
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.433			1.415			2.848

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/A - HOUSES 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	8	12	0.033	8	12	0.000	8	12	0.033
08:00 - 09:00	8	12	0.000	8	12	0.000	8	12	0.000
09:00 - 10:00	8	12	0.000	8	12	0.000	8	12	0.000
10:00 - 11:00	8	12	0.000	8	12	0.000	8	12	0.000
11:00 - 12:00	8	12	0.000	8	12	0.000	8	12	0.000
12:00 - 13:00	8	12	0.022	8	12	0.000	8	12	0.022
13:00 - 14:00	8	12	0.000	8	12	0.000	8	12	0.000
14:00 - 15:00	8	12	0.000	8	12	0.000	8	12	0.000
15:00 - 16:00	8	12	0.000	8	12	0.011	8	12	0.011
16:00 - 17:00	8	12	0.000	8	12	0.000	8	12	0.000
17:00 - 18:00	8	12	0.000	8	12	0.022	8	12	0.022
18:00 - 19:00	8	12	0.000	8	12	0.000	8	12	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.055			0.033			0.088

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/A - HOUSES 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	8	12	0.239	8	12	0.630	8	12	0.869
08:00 - 09:00	8	12	0.380	8	12	0.880	8	12	1.260
09:00 - 10:00	8	12	0.163	8	12	0.228	8	12	0.391
10:00 - 11:00	8	12	0.250	8	12	0.250	8	12	0.500
11:00 - 12:00	8	12	0.304	8	12	0.402	8	12	0.706
12:00 - 13:00	8	12	0.522	8	12	0.446	8	12	0.968
13:00 - 14:00	8	12	0.391	8	12	0.424	8	12	0.815
14:00 - 15:00	8	12	0.315	8	12	0.304	8	12	0.619
15:00 - 16:00	8	12	0.641	8	12	0.359	8	12	1.000
16:00 - 17:00	8	12	0.543	8	12	0.348	8	12	0.891
17:00 - 18:00	8	12	0.663	8	12	0.359	8	12	1.022
18:00 - 19:00	8	12	0.522	8	12	0.413	8	12	0.935
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:	4.933			5.043			9.976		

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.

TECHNICAL NOTE

Appendix B

QS701EW - Method of travel to work

ONS Crown Copyright Reserved [from Nomis on 13 May 2019]

population	All usual residents aged 16 to 74
units	Persons
area type	2011 super output areas - middle layer
area name	E02003405 : Reading 017
rural urban	Total

Method of Travel to Work	2011
All categories: Method of travel to work	7,032
Work mainly at or from home	120
Underground, metro, light rail, tram	9
Train	234
Bus, minibus or coach	580
Taxi	14
Motorcycle, scooter or moped	37
Driving a car or van	2,353
Passenger in a car or van	265
Bicycle	183
On foot	713
Other method of travel to work	29
Not in employment	2,495

Assumed Modal Split	
Walk	16%
Cycle	4%
Car Driver	55%
Car Passenger	6%
Public Transport	19%
Total	100%

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.