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Consulting Development Engineers

PROPOSED DEVELOPMENT SITE, WEST ROAD, COMBERTON
OUR REF: 24939/03-19/TN 01
TRANSPORT FEASIBILITY NOTE – MARCH 2019

Introduction

Mewies Engineering Consultants Ltd (M-EC) has been commissioned by Davidsons Developments Ltd to produce a Transport Feasibility Note (TFN) in support of a proposed residential development at Land south of West Street and west of South Street Comberton, Cambridgeshire.

It is understood that the site is being promoted through the Greater Cambridge Local Plan for residential purposes. The wider site comprises an area of 29.537ha and has the potential to deliver around 600 dwellings (see Figure 1a below). A smaller site area, referred to as 'Land south of West Street' (as shown coloured red in Figure 1b) of 8.5 ha, is likely to yield a development quantum of 150 dwellings. A copy of illustrative masterplans for both site areas is included in Appendix A.

This TFN has been prepared to review all highways matters pertinent to the potential residential development. A summary of all findings has been provided within the following paragraphs of this report.

Site Location

The site, which is irregular in shape, is located along the western edge of Comberton, to the south of the B1046. The site is bound to the north and south by agricultural land, with Comberton Sports and Arts College along with residential dwellings forming the eastern boundary of the site. Cambridge Meridian Golf Club forms the immediate western boundary. Figure 1 below outlines the site location.

Figure 1a: Wider Site Location

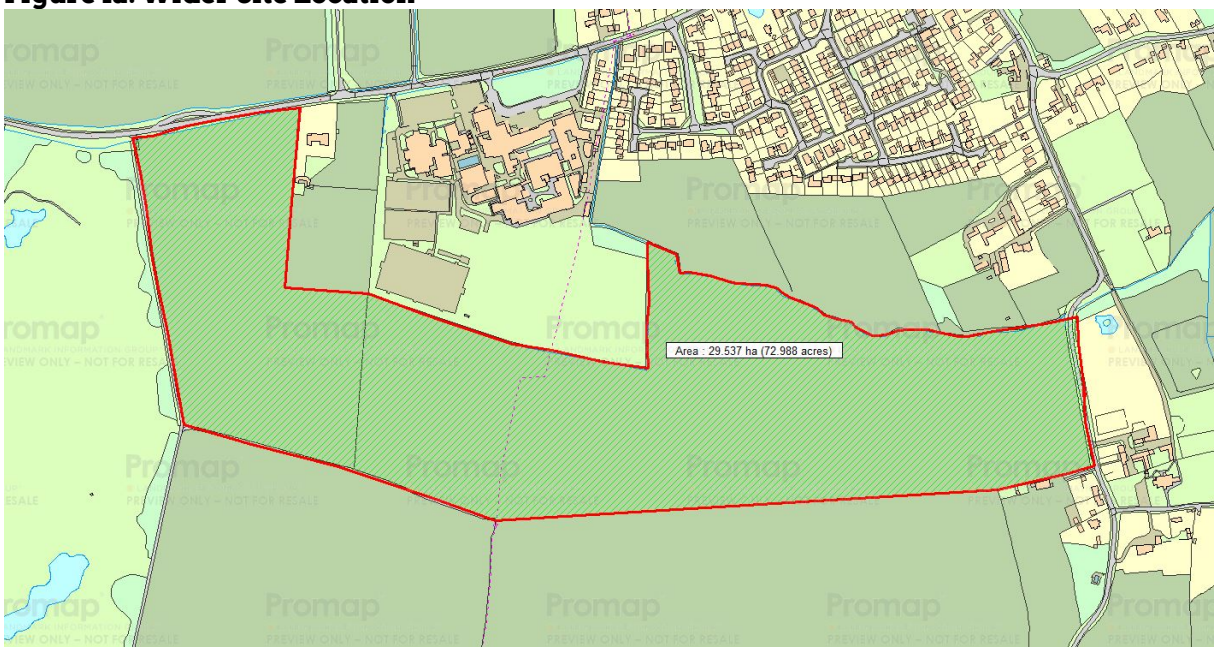


Figure 1b: Phase 1 site area

The B1046 is a 'B' class road, which links the residential area of Comberton to the wider highway network, most notably the M11 via Cambridge Road to the east. Access to a range of facilities and amenities can be undertaken along the B1046, which heads through the centre of Comberton as outlined within the following section of this TFN.

Sustainability

An accessibility assessment has been undertaken to determine the location of key local facilities and amenities in relation to walking, cycling and public transport, to prove that the site is located within a suitable travel time to these services, and that the routes taken to these are conducive to walking/cycling. Table 1 below, provides a summary of accessibility to key amenities and facilities from the proposed development by realistic sustainable transport modes, with distances taken from the site centre.

Table 1: Accessibility Assessment

Facility	Approx. Distance (m)	Approx. Journey Time (minutes)*		
		Walking	Cycling	Bus
Retail				
Budgens Supermarket	1280	15	5	-
Toft Shop Local Store	1530	18	6	-
Leisure				
Comberton Sports and Arts	620	7	3	-
Cambridge Meridian Golf Club	1020	12	4	-
Comberton Village Hall	1310	16	5	-
Comberton Recreation Ground	1480	18	6	-
Education				
Comberton Village College	690	8	3	-
Meridian Primary School	1780	21	7	-
Mulberry Montessori Pre-School and Bridge Farm Riding School	2450	29	10	-

Health				
Comberton Surgery and Pharmacy	1680	20	7	-
Transport				
Village College Stops	650	8	3	-

**Assumes a walking speed of 1.4m/s (3.2mph or 5.0kph) taken from the Guidance for Providing for Journeys on Foot (IHT, 2000) and cycling speed of 4m/s (9mph or 14.4kph), taken from Local Transport Note 1/86.*

Table 1 demonstrates that the majority of the facilities within Comberton are located within a 1.6km distance of the site with a greater number of facilities within local areas further away from the site. The Department for Transport (DfT) found that whilst walking constitutes 25% of all journeys made in a year, it found that approximately 80% of all walking trips were under one mile (1.6km). On average, people are willing to travel 16 minutes per walking trip.

Facilities located further afield are accessible on foot and via cycle in accordance with Manual for Streets which quotes PPS13 stating that PPS13 'walking offers the greatest potential to replace short car trips, particularly those under 2km' and previous PPG13 guidance which stated that cycling offers strong potential to substitute for car trips for those journeys under 5km.

Figure 2: 2km Walking Accessibility Map shown in 1km Isochrones

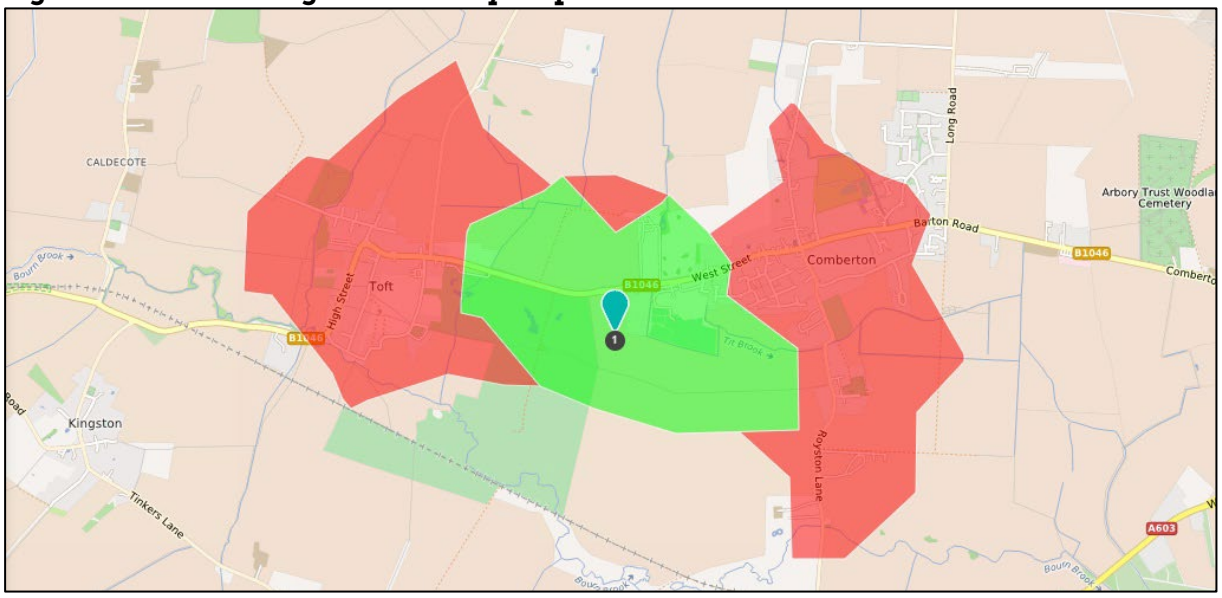


Image source: 'Openrouteservice.org'. Map layer: 'Openstreetmap.org'

Figure 3 shows that the areas of Comberton and Toton, where the majority of facilities mentioned within Table 1 are located, are encompassed within a 2km walking distance from the site, with all routes utilising the existing footway network. It is therefore considered that the majority of key facilities and amenities residents will require are accessible from the site.

Figure 3: 5km Cycling Accessibility Map shown in 1km Isochrones

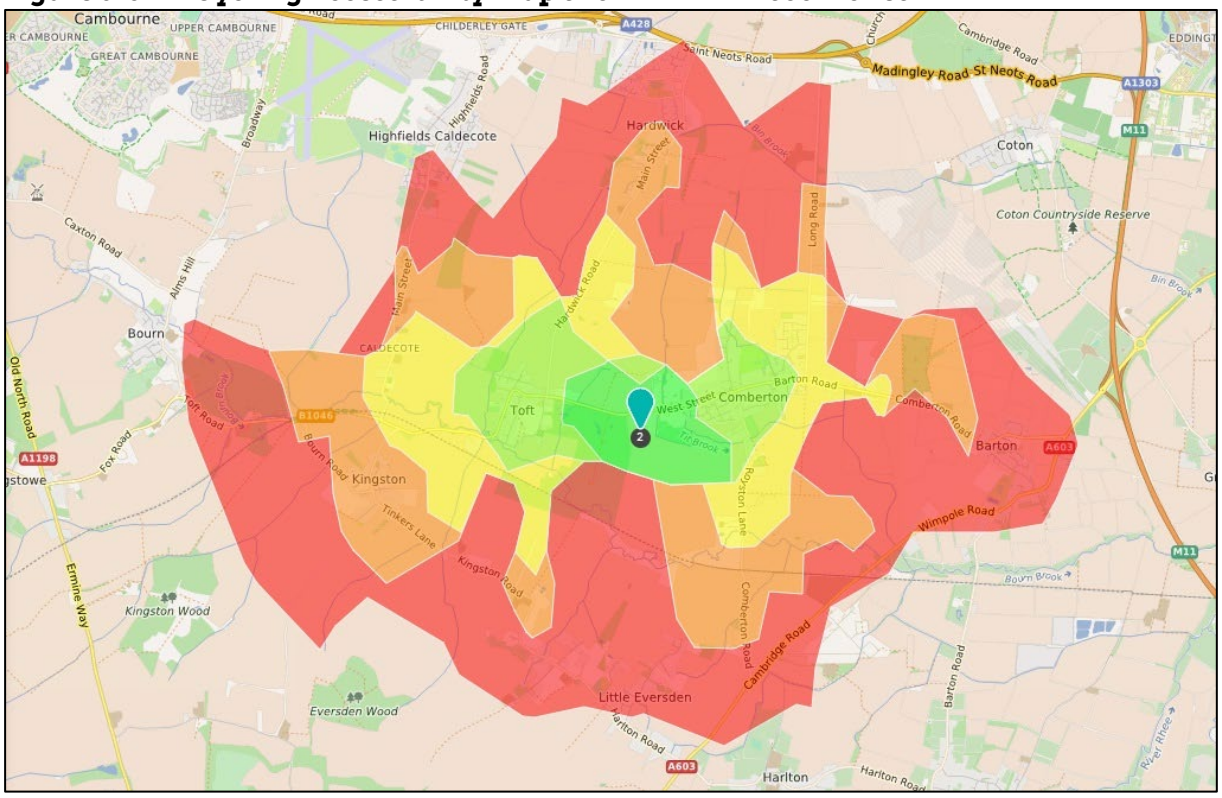


Image source: 'Openrouteservice.org'. Map layer: 'Openstreetmap.org'

Figure 3 shows that a number of local areas including Comberton, Toft, Barton, Caldecote, Kingston, Hardwick and Little Eversden can all be reached within a 5km cycling distance from the site, with all routes utilising the existing highway and cycle network. Previous PPG13 guidance stated that cycling offers strong potential to substitute for car trips for those journeys under 5km. As such it is considered that the majority residential areas nearby the site have the potential to travel to work via cycle.

<u>Pedestrian and Cycle Facilities</u>
The majority of facilities listed within Table 1 are located within Comberton and Toft, with the route to these facilities initially the same; along the B1046.

A review of Sustrans.org suggests that no national cycle routes (NCRs) are located within close proximity of the site (2.5km). It is also noted that there are no regional cycle routes or located within close proximity of the site either.

At present, no footway provision is provided on the southern side of the carriageway within the immediate vicinity of the site. A shared footway/cycleway of circa 2.0m exists along the northern side of the carriageway, from Toft to Comberton Village College.

It is noted that there are two Public Rights of Way (PRoW) routes located within the site boundary. Footpath '236/20' runs in a north to south direction along the western-most boundary of the site whilst Footpath '52/9' runs in an east to west direction, bisecting the site.

Improvements to the existing pedestrian infrastructure that could be made as part of the development site, are as follows:

- A new 'toucan' crossing is suggested to be implemented at the site access in order to encourage users to access/egress the site on foot or via cycle;

- It is also considered that there is a chance to promote cycling by providing a shared cycleway along the spine road of the development. It should be noted that this should now be 3.0m in width as a minimum in accordance with national guidance;

- An investigation as to whether north to south footway link in to the existing residential estate of Comberton could be established should be undertaken subject to land ownership;

- Footpath '236/20' should remain in situ, whilst it is considered that footpath '52/9' should be incorporated in to the spine road of the development throughout all three land parcels.

Mitigation measures are likely to be reviewed through the planning process therefore, alongside mitigation measures, the site can cater suitably for pedestrian movements.

Public Transport Facilities - Bus

The closest bus stops to the site are located along the B1046, adjacent to Comberton Village College, circa 650m east of the site, in excess of the 300m walking distance advised by the CIHT. The stops are served by the 18 and 28 services as summarised in Table 2.

Table 2: Summary of Public Transport Services

Stop	Service	Operating Days	Frequency (at peak)	Route	Provider
Village College *(B1046)*	18	Mon – Fri 07:04 – 18:36 Sat 07:39 – 18:36	Every 120 minutes	Longstowe to Cambridge	Stagecoach
	28	Mon – Fri 08:20 / 17:26	Once Each Way	Gamlingay to Comberton	HACT

Times passing nearest stops listed on timetable. Timetable data taken from 'traveline.info'.

As previously mentioned, the recommended walking distance to a bus stop served less frequently than every 12 minutes is 300m, in accordance with CIHT guidance provided within 'Buses in urban developments (January 2018)'. As the existing bus services fall outside these guidelines, the following mitigation measures could be applied:

- New bus stops could be implemented to the west of the proposed access (mentioned later in this TFN) in order to provide bus stops within walking distance of the site. The stops could include the implementation of seated shelters and Real-Time Information (RTI);

- The 18 Service could be improved to become a service that operates every 60 minutes in both directions. At present, the 18 Service operates every 60 minutes from Cambridge to Longstowe but not towards Cambridge;

- With the further development of the wider site it would then be possible to divert every other service through the development, heading north on South Street back in to Comberton. New stops would be provided throughout the site and discussions would have to be undertaken with Stagecoach as well as the local authority.

A review of potential public transport mitigation measures would be investigated within the Transport Assessment/Travel Plan, undertaken during any future planning application.

Sustainability Conclusion
It is apparent that a residential development, with mitigation measures as outlined, could be well accommodated by the existing infrastructure within the site's locale.

Paragraph 103 of the NPPF outlines that:

"Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes.

Opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making".

Given the location of the site, it is concluded that the proposed development site accords with the national guidance set out when promoting sustainable transport options.

Access Proposals
This section considerers access for the residential development of 150 dwellings, alongside access requirements for a development quantum of 600 dwellings.

Access for 'Land South of West Street' 150 Dwellings
As part of the development which will comprise 150 dwellings, a single point of access onto the B1046 will be required. Given the nature of the carriageway, it is likely that a priority right-turn lane junction will be implemented in order to enable a continuous two-way traffic flow along the carriageway from west to east. Visibility from the junction for emerging traffic appears suitable with forward visibility upon approach to the junction also considered good. An illustrative drawing of the access proposals can be found within Appendix B of this note.

Such proposals appear to be able to be delivered within land under ownership from the land owner, alongside land within the highway. Highway record plans will be obtained during and planning application in order to confirm the viability of the design.

Access for wider scheme 600 Dwellings
As part of the wider scheme for 600 dwellings, two points of access are being promoted, with an indicative access drawing for both found within Appendix B and a summary of both designs outlined below:

- A 3-arm normal roundabout inclusive of pedestrian facilities approximately centred along the site frontage on the B1046, and;
- A change of priority of South Street into the site, with a new T-junction created with the realigned South Street south of the access road.

In deciding upon these access options, the potential quantum of development and rural setting of the development site has been fully taken into account. The roundabout option will accommodate the majority of development traffic, whilst creating a focal gateway into Comberton from the west.

In both instances the proposals would be fully considered at planning/ detailed design stages and be informed by a Transport Assessment (including full junction capacity assessment) to ensure that a viable and a safe means of accessing the development site can be secured, meeting the needs of both motorised and non-motorised users.

In conclusion, the initial investigatory work outlines that suitable and safe means of accessing the development site can be achieved, whereby the cumulative impacts of such would not be severe.

Highway Impact/Vehicle Movements
This section considerers access for the residential development of both 150 dwellings and the wider scheme of 600 dwellings.

An assessment of the Trip Rate Information Computer System (TRICS®), a computer program which assists in estimating trip rates to and from sites, has been undertaken in order to determine the likely number of vehicle movements which will be generated during the generic AM and PM peak periods by the development. The assessment has assumed all of the properties at the site will be houses which are privately owned, with no shared ownership or affordable housing considered. Whilst the site is likely to accommodate non-private housing, only privately-owned houses have been considered within the TRICS® analysis as these generally generate higher vehicle trip rates. Using this methodology, the trip rates considered within Table 3 and 4 are robust, with detailed TRICS® results attached within Appendix C.

Table 3: Projected Vehicle Trip Rate Analysis for the Proposed Development (150 Units)

	Trip Rates (per dwelling)		Trip Generation (150 Dwellings)		
	Arrive	Depart	Arrive	Depart	Total
AM Peak (08:00-09:00)	0.143	0.382	21	57	78
PM Peak (17:00-18:00)	0.340	0.147	51	22	73
Daily (07:00-19:00)	2.350	2.347	353	352	705

Table 4: Projected Vehicle Trip Rate Analysis for the Proposed Development (600 Units)

	Trip Rates (per dwelling)		Trip Generation (600 Dwellings)		
	Arrive	Depart	Arrive	Depart	Total
AM Peak (08:00-09:00)	0.143	0.382	86	229	315
PM Peak (17:00-18:00)	0.340	0.147	204	88	292
Daily (07:00-19:00)	2.350	2.347	1,410	1,408	2,818

Whilst it is not considered the development proposals would generate these projected vehicle trips, the above table provides a worst-case projection of additional vehicles on the highway network during the peak periods.

Analysis of the likely distribution to the site, using Census 2011 data *'Location of usual residence and place of work by method of travel to work'*, has outlined that just under 80% of all likely development traffic by car would route into either the South Cambridgeshire District or Cambridge itself. Knowing this, alternative transportation modes could be promoted via a Framework Travel Plan given the available transport links into Cambridge. The table below provides a summary of likely locations residents could travel to, based on the 2011 census data, with results attached within Appendix D.

Table 5: Location of Employment for Residents within South Cambridgeshire (010) MSOA via Car Mode

Place of Employment	Percentage
Cambridge	41.0%
South Cambridgeshire	37.9%
Huntingdonshire	5.2%
North Hertfordshire	2.3%
East Cambridgeshire	1.8%
Uttlesford	1.0%
Peterborough	0.8%
*All Others**	*10.0%*

**Rounding has occurred*

Discussions will be undertaken with the Local Highway Authority during any future planning application, in order to determine the levels of assessment work required along the local highway network. At this time, it is not foreseen that any highways impact brought about by the proposed development cannot be suitably mitigated to cater for the increase in traffic flows on links at adjacent junctions.

Summary

This Transport Feasibility Note has been produced to provide information in support of a proposed residential development at Land off West Road, Comberton. A summary of the findings within this report is found below:

- In the absence of a footway link along the southern side of West Road, any development brought forward at the site is likely to need to implement a pedestrian crossing which will link to the existing footway infrastructure to on the northern side of the carriageway.

- The closest bus stop to the site is located along West Road, circa 650m east of the site. A series of potential mitigation measures have been outlined, which will be reviewed prior to any future planning application, which seeks to implement new bus stop provision close to or within the site as part of a wider bus route diversion.

- A single point of access onto the B1046 will be provided into the site for 150 dwellings. Given the nature of the carriageway, it is likely that a priority right-turn lane junction will be implemented in order to enable a continuous two-way traffic flow along the carriageway from west to east. The proposals appear able to be delivered within land under ownership from the land owner, alongside land within the highway.

- Analysis of worse case traffic flows projected from a residential development comprising in the region of 150 dwellings would yield a two-way vehicle flow of 78 vehicle movements during the AM peak period and 73 vehicle movements during the PM peak period. A wider development of 600 units would yield 315 vehicle movements during the AM peak period and 292 vehicle movements during the PM peak period. Analysis of the likely distribution to the site has outlined that 78.9% of all single car occupancy journeys from the South Cambridgeshire 010 MSOA are to either Cambridge or within South Cambridgeshire therefore; single car occupancy levels to the site can be reduced in accordance with suitable mitigation measures.

- At this time, it is not foreseen that any highways impact brought about by the proposed development cannot be suitably mitigated to cater for the increase in traffic flows.

This TFN has outlined that there are no known transportation or highways concerns to why the development proposals could not be supported.

A Transport Assessment and Framework Travel Plan will be required at a later date in order to support any future planning application at the site.

Report Prepared By:

Report Approved By:

APPENDIX A

0 50 100 m

Drain

30m

35m

View into feature plot

Liby

Hall

Comberton Village College

Leisur Centr

village green

buffer planting

Outward looking edges

main avenue

Tree/hedgerow corridor parrallel to the PROW which buffers development.

edge green

edge green

edge lane

visual links to countryside

suds

play area

"edge greens" permeate the built edge creating a greater sense of openess and softening the edge.

Outward looking edges creating attractive frontage.

DAVIDSONS HOMES

Key

- Application site boundary
- Other land under control of applicant
- Existing (retained) trees & hedgerow
- Indicative proposed planting
- Open space
- Indicative surface water attenuation basin
- Existing Public Right of Way
- Potential for equipped play/LEAP
- Key Views
- Visual links to the countryside
- Indicative development cell
- Potential locations of landmark buildings

Land Budget

Site Area 8.5ha

Net Residential Area 5.0ha

approx 150 dwellings

nineteen47

CHARTERED TOWN PLANNERS & URBAN DESIGNERS

Project

Land South of West Street, Comberton

Drawing Title

Masterplan

Project Code	Drawing Nr	Rev	Drawing Scale
n1260	005-01	-	1:2000 @ A3

Key

- Application site boundary
- Other land under control of applicant
- Existing (retained) trees & hedgerow
- Indicative proposed planting
- Open space
- Indicative surface water attenuation basin
- Existing Public Right of Way
- Potential for equipped play/LEAP
- Key Views
- Visual links to the countryside
- Indicative development cell
- Potential locations of landmark buildings

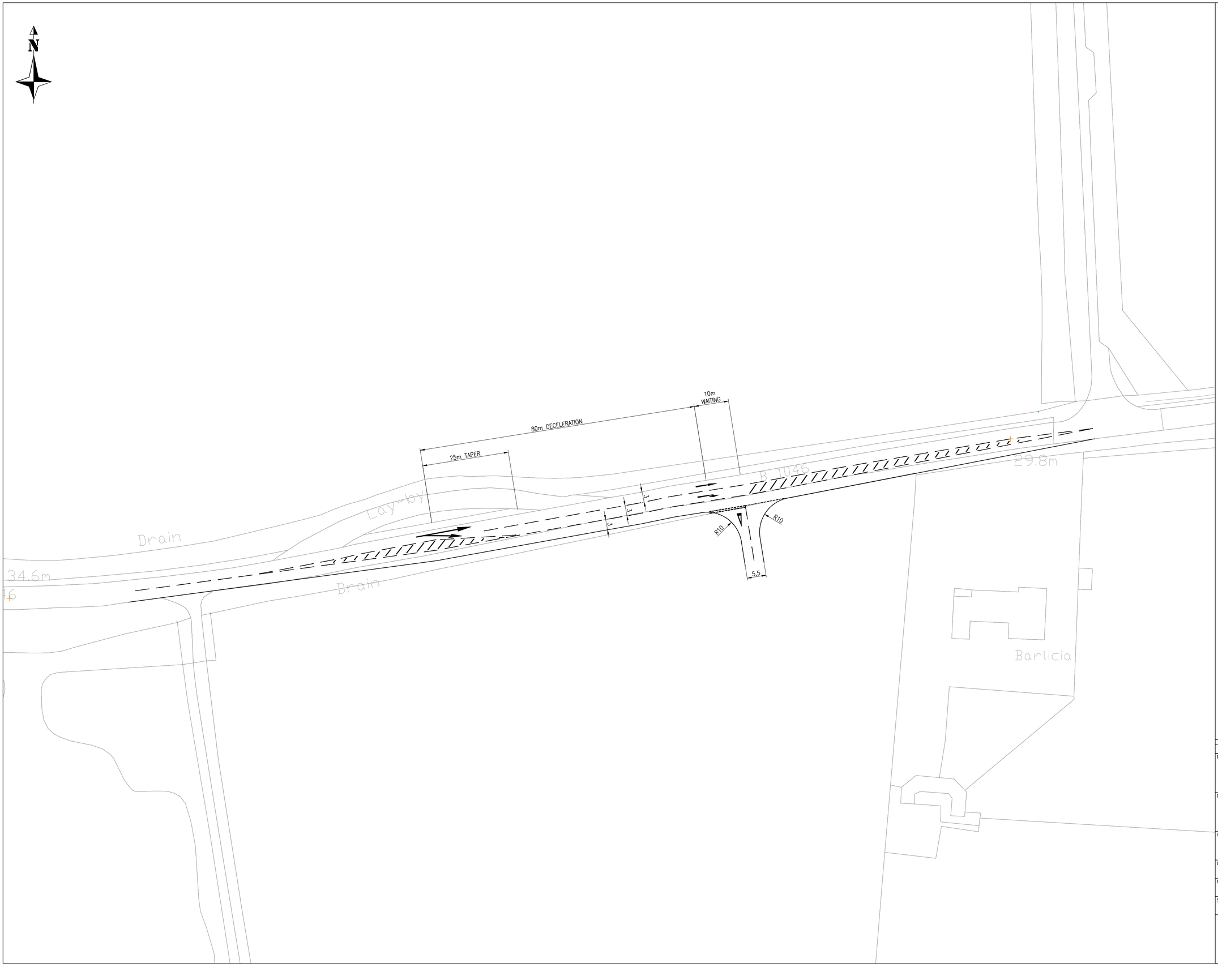
nineteen47
CHARTERED TOWN PLANNERS & URBAN DESIGNERS

Project
Land south of West Street and west of South Street, Comberton

Drawing Title
Masterplan

Project Code	Drawing Nr	Rev	Drawing Scale
n1260	005-03	A	1: 2,500 @ A2

APPENDIX B



NOTES:

1. DO NOT SCALE THIS DRAWING.

REV:	AMENDMENTS:	DRN	CHK	APP	DATE:
-					

PROJECT:
WEST ROAD
COMBERTON

DRAWING TITLE:
RIGHT TURN LANE
GENERAL ARRANGEMENT

CLIENT:
DAVIDSONS DEVELOPMENTS

DRAWING NUMBER:
24939_03_020_01

REVISION:	SHEET SIZE:	SCALE:
-	A1	1:500

STATUS:
PRELIMINARY

M-EC
Consulting Development Engineers

Telephone: 01530 264 753
Email: group@m-ec.co.uk
Website: www.m-ec.co.uk

File Location: T:\M-EC Job Book\24939\drawings\24939_03_020_01.rtl.dwg

Printed:21.03.2019

NOTES:

1. DO NOT SCALE THIS DRAWING.

REV:	AMENDMENTS:	DRN:	CHK:	APP:	DATE:
-					

PROJECT:
WEST ROAD
COMBERTON

DRAWING TITLE:
ROUNDABOUT ACCESS
GENERAL ARRANGEMENT

CLIENT:
DAVIDSONS DEVELOPMENTS

DRAWING NUMBER:
24939_03_020_02

REVISION:	SHEET SIZE:	SCALE:
-	A1	1:500

STATUS:
PRELIMINARY

M-EC
Consulting Development Engineers

Telephone: 01530 264 753
Email: group@m-ec.co.uk
Website: www.m-ec.co.uk

File Location: T:\M-EC Job Book\24939\drawings\24939_03_020_02 ra.dwg
Printed 21.03.2019

APPENDIX C

Calculation Reference: AUDIT-350901-190321-0359

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	ES	EAST SUSSEX	1 days
	KC	KENT	2 days
	WS	WEST SUSSEX	3 days
06	WEST MIDLANDS		
	ST	STAFFORDSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	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: 110 to 288 (units:)
Range Selected by User: 100 to 300 (units:)

Parking Spaces Range: Selected: 12 to 1726 Actual: 12 to 1726

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 05/07/18

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	2 days
Thursday	3 days
Friday	2 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 undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	1
Edge of Town	7

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	8

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	1 days
5,001 to 10,000	1 days
10,001 to 15,000	4 days
15,001 to 20,000	1 days
20,001 to 25,000	1 days

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

Population within 5 miles:

5,001 to 25,000	1 days
50,001 to 75,000	1 days
75,001 to 100,000	2 days
125,001 to 250,000	4 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	7 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	5 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 ES-03-A-03 MIXED HOUSES & FLATS EAST SUSSEX
SHEPHAM LANE
POLEGATE

Edge of Town
Residential Zone
Total Number of dwellings: 212
Survey date: MONDAY *11/07/16* *Survey Type: MANUAL*

2 KC-03-A-04 SEMI-DETACHED & TERRACED KENT
KILN BARN ROAD
AYLESFORD
DITTON
Edge of Town
Residential Zone
Total Number of dwellings: 110
Survey date: FRIDAY *22/09/17* *Survey Type: MANUAL*

3 KC-03-A-07 MIXED HOUSES KENT
RECULVER ROAD
HERNE BAY

Edge of Town
Residential Zone
Total Number of dwellings: 288
Survey date: WEDNESDAY *27/09/17* *Survey Type: MANUAL*

4 NY-03-A-06 BUNGALOWS & SEMI DET. NORTH YORKSHIRE
HORSEFAIR
BOROUGHBRIDGE

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 115
Survey date: FRIDAY *14/10/11* *Survey Type: MANUAL*

5 ST-03-A-07 DETACHED & SEMI-DETACHED STAFFORDSHIRE
BEACONSIDE
STAFFORD
MARSTON GATE
Edge of Town
Residential Zone
Total Number of dwellings: 248
Survey date: WEDNESDAY *22/11/17* *Survey Type: MANUAL*

6 WS-03-A-04 MIXED HOUSES WEST SUSSEX
HILLS FARM LANE
HORSHAM
BROADBRIDGE HEATH
Edge of Town
Residential Zone
Total Number of dwellings: 151
Survey date: THURSDAY *11/12/14* *Survey Type: MANUAL*

7 WS-03-A-08 MIXED HOUSES WEST SUSSEX
ROUNDSTONE LANE
ANGMERING

Edge of Town
Residential Zone
Total Number of dwellings: 180
Survey date: THURSDAY *19/04/18* *Survey Type: MANUAL*

8 WS-03-A-09 MIXED HOUSES & FLATS WEST SUSSEX
LITTLEHAMPTON ROAD
WORTHING
WEST DURRINGTON
Edge of Town
Residential Zone
Total Number of dwellings: 197
Survey date: THURSDAY *05/07/18* *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
DV-03-A-02	HOUSE TYPE
ES-03-A-04	HOUSE TYPE

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	188	0.091	8	188	0.282	8	188	0.373
08:00 - 09:00	8	188	0.143	8	188	0.382	8	188	0.525
09:00 - 10:00	8	188	0.155	8	188	0.173	8	188	0.328
10:00 - 11:00	8	188	0.136	8	188	0.161	8	188	0.297
11:00 - 12:00	8	188	0.139	8	188	0.158	8	188	0.297
12:00 - 13:00	8	188	0.167	8	188	0.149	8	188	0.316
13:00 - 14:00	8	188	0.184	8	188	0.154	8	188	0.338
14:00 - 15:00	8	188	0.183	8	188	0.207	8	188	0.390
15:00 - 16:00	8	188	0.268	8	188	0.179	8	188	0.447
16:00 - 17:00	8	188	0.268	8	188	0.170	8	188	0.438
17:00 - 18:00	8	188	0.340	8	188	0.147	8	188	0.487
18:00 - 19:00	8	188	0.276	8	188	0.185	8	188	0.461
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.350			2.347			4.697

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

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

Parameter summary

Trip rate parameter range selected:	110 - 288 (units:)
Survey date date range:	01/01/10 - 05/07/18
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	2

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 show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TAXIS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	188	0.002	8	188	0.002	8	188	0.004
08:00 - 09:00	8	188	0.003	8	188	0.003	8	188	0.006
09:00 - 10:00	8	188	0.001	8	188	0.001	8	188	0.002
10:00 - 11:00	8	188	0.001	8	188	0.001	8	188	0.002
11:00 - 12:00	8	188	0.001	8	188	0.001	8	188	0.002
12:00 - 13:00	8	188	0.001	8	188	0.001	8	188	0.002
13:00 - 14:00	8	188	0.003	8	188	0.002	8	188	0.005
14:00 - 15:00	8	188	0.003	8	188	0.003	8	188	0.006
15:00 - 16:00	8	188	0.008	8	188	0.008	8	188	0.016
16:00 - 17:00	8	188	0.005	8	188	0.006	8	188	0.011
17:00 - 18:00	8	188	0.003	8	188	0.002	8	188	0.005
18:00 - 19:00	8	188	0.003	8	188	0.003	8	188	0.006
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.034			0.033			0.067

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 OGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	188	0.001	8	188	0.000	8	188	0.001
08:00 - 09:00	8	188	0.000	8	188	0.001	8	188	0.001
09:00 - 10:00	8	188	0.003	8	188	0.000	8	188	0.003
10:00 - 11:00	8	188	0.004	8	188	0.002	8	188	0.006
11:00 - 12:00	8	188	0.001	8	188	0.002	8	188	0.003
12:00 - 13:00	8	188	0.002	8	188	0.003	8	188	0.005
13:00 - 14:00	8	188	0.003	8	188	0.001	8	188	0.004
14:00 - 15:00	8	188	0.001	8	188	0.005	8	188	0.006
15:00 - 16:00	8	188	0.001	8	188	0.001	8	188	0.002
16:00 - 17:00	8	188	0.001	8	188	0.002	8	188	0.003
17:00 - 18:00	8	188	0.001	8	188	0.000	8	188	0.001
18:00 - 19:00	8	188	0.000	8	188	0.000	8	188	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.018			0.017			0.035

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 CYCLISTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	188	0.006	8	188	0.008	8	188	0.014
08:00 - 09:00	8	188	0.011	8	188	0.013	8	188	0.024
09:00 - 10:00	8	188	0.000	8	188	0.002	8	188	0.002
10:00 - 11:00	8	188	0.003	8	188	0.005	8	188	0.008
11:00 - 12:00	8	188	0.003	8	188	0.003	8	188	0.006
12:00 - 13:00	8	188	0.005	8	188	0.005	8	188	0.010
13:00 - 14:00	8	188	0.001	8	188	0.001	8	188	0.002
14:00 - 15:00	8	188	0.003	8	188	0.003	8	188	0.006
15:00 - 16:00	8	188	0.007	8	188	0.005	8	188	0.012
16:00 - 17:00	8	188	0.005	8	188	0.010	8	188	0.015
17:00 - 18:00	8	188	0.018	8	188	0.009	8	188	0.027
18:00 - 19:00	8	188	0.014	8	188	0.011	8	188	0.025
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.076			0.075			0.151

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 VEHICLE OCCUPANTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	188	0.115	8	188	0.464	8	188	0.579
08:00 - 09:00	8	188	0.197	8	188	0.738	8	188	0.935
09:00 - 10:00	8	188	0.213	8	188	0.262	8	188	0.475
10:00 - 11:00	8	188	0.187	8	188	0.240	8	188	0.427
11:00 - 12:00	8	188	0.190	8	188	0.234	8	188	0.424
12:00 - 13:00	8	188	0.241	8	188	0.217	8	188	0.458
13:00 - 14:00	8	188	0.276	8	188	0.226	8	188	0.502
14:00 - 15:00	8	188	0.273	8	188	0.290	8	188	0.563
15:00 - 16:00	8	188	0.494	8	188	0.273	8	188	0.767
16:00 - 17:00	8	188	0.482	8	188	0.275	8	188	0.757
17:00 - 18:00	8	188	0.560	8	188	0.222	8	188	0.782
18:00 - 19:00	8	188	0.452	8	188	0.306	8	188	0.758
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.680			3.747			7.427

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 PEDESTRIANS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	188	0.019	8	188	0.024	8	188	0.043
08:00 - 09:00	8	188	0.035	8	188	0.086	8	188	0.121
09:00 - 10:00	8	188	0.039	8	188	0.035	8	188	0.074
10:00 - 11:00	8	188	0.036	8	188	0.029	8	188	0.065
11:00 - 12:00	8	188	0.019	8	188	0.023	8	188	0.042
12:00 - 13:00	8	188	0.028	8	188	0.024	8	188	0.052
13:00 - 14:00	8	188	0.018	8	188	0.025	8	188	0.043
14:00 - 15:00	8	188	0.033	8	188	0.038	8	188	0.071
15:00 - 16:00	8	188	0.085	8	188	0.042	8	188	0.127
16:00 - 17:00	8	188	0.063	8	188	0.029	8	188	0.092
17:00 - 18:00	8	188	0.047	8	188	0.023	8	188	0.070
18:00 - 19:00	8	188	0.037	8	188	0.057	8	188	0.094
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.459			0.435			0.894

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	188	0.000	8	188	0.013	8	188	0.013
08:00 - 09:00	8	188	0.000	8	188	0.027	8	188	0.027
09:00 - 10:00	8	188	0.002	8	188	0.007	8	188	0.009
10:00 - 11:00	8	188	0.003	8	188	0.001	8	188	0.004
11:00 - 12:00	8	188	0.000	8	188	0.003	8	188	0.003
12:00 - 13:00	8	188	0.002	8	188	0.003	8	188	0.005
13:00 - 14:00	8	188	0.001	8	188	0.004	8	188	0.005
14:00 - 15:00	8	188	0.005	8	188	0.003	8	188	0.008
15:00 - 16:00	8	188	0.018	8	188	0.008	8	188	0.026
16:00 - 17:00	8	188	0.015	8	188	0.005	8	188	0.020
17:00 - 18:00	8	188	0.008	8	188	0.002	8	188	0.010
18:00 - 19:00	8	188	0.023	8	188	0.008	8	188	0.031
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.077			0.084			0.161

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 RAIL PASSENGERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	188	0.003	8	188	0.007	8	188	0.010
08:00 - 09:00	8	188	0.000	8	188	0.015	8	188	0.015
09:00 - 10:00	8	188	0.001	8	188	0.007	8	188	0.008
10:00 - 11:00	8	188	0.000	8	188	0.003	8	188	0.003
11:00 - 12:00	8	188	0.000	8	188	0.002	8	188	0.002
12:00 - 13:00	8	188	0.000	8	188	0.003	8	188	0.003
13:00 - 14:00	8	188	0.001	8	188	0.001	8	188	0.002
14:00 - 15:00	8	188	0.001	8	188	0.000	8	188	0.001
15:00 - 16:00	8	188	0.007	8	188	0.002	8	188	0.009
16:00 - 17:00	8	188	0.005	8	188	0.001	8	188	0.006
17:00 - 18:00	8	188	0.006	8	188	0.002	8	188	0.008
18:00 - 19:00	8	188	0.009	8	188	0.001	8	188	0.010
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.033			0.044			0.077

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 PUBLIC TRANSPORT USERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	188	0.003	8	188	0.019	8	188	0.022
08:00 - 09:00	8	188	0.000	8	188	0.043	8	188	0.043
09:00 - 10:00	8	188	0.003	8	188	0.014	8	188	0.017
10:00 - 11:00	8	188	0.003	8	188	0.004	8	188	0.007
11:00 - 12:00	8	188	0.000	8	188	0.005	8	188	0.005
12:00 - 13:00	8	188	0.002	8	188	0.006	8	188	0.008
13:00 - 14:00	8	188	0.003	8	188	0.005	8	188	0.008
14:00 - 15:00	8	188	0.006	8	188	0.003	8	188	0.009
15:00 - 16:00	8	188	0.025	8	188	0.010	8	188	0.035
16:00 - 17:00	8	188	0.020	8	188	0.006	8	188	0.026
17:00 - 18:00	8	188	0.014	8	188	0.004	8	188	0.018
18:00 - 19:00	8	188	0.032	8	188	0.009	8	188	0.041
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.111			0.128			0.239

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	188	0.143	8	188	0.516	8	188	0.659
08:00 - 09:00	8	188	0.243	8	188	0.880	8	188	1.123
09:00 - 10:00	8	188	0.254	8	188	0.313	8	188	0.567
10:00 - 11:00	8	188	0.229	8	188	0.278	8	188	0.507
11:00 - 12:00	8	188	0.212	8	188	0.265	8	188	0.477
12:00 - 13:00	8	188	0.276	8	188	0.252	8	188	0.528
13:00 - 14:00	8	188	0.298	8	188	0.258	8	188	0.556
14:00 - 15:00	8	188	0.314	8	188	0.334	8	188	0.648
15:00 - 16:00	8	188	0.611	8	188	0.330	8	188	0.941
16:00 - 17:00	8	188	0.570	8	188	0.320	8	188	0.890
17:00 - 18:00	8	188	0.638	8	188	0.258	8	188	0.896
18:00 - 19:00	8	188	0.535	8	188	0.383	8	188	0.918
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.323			4.387			8.710

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 Servicing Vehicles
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	188	0.009	8	188	0.004	8	188	0.013
08:00 - 09:00	8	188	0.006	8	188	0.006	8	188	0.012
09:00 - 10:00	8	188	0.012	8	188	0.009	8	188	0.021
10:00 - 11:00	8	188	0.011	8	188	0.007	8	188	0.018
11:00 - 12:00	8	188	0.007	8	188	0.011	8	188	0.018
12:00 - 13:00	8	188	0.013	8	188	0.007	8	188	0.020
13:00 - 14:00	8	188	0.018	8	188	0.019	8	188	0.037
14:00 - 15:00	8	188	0.007	8	188	0.013	8	188	0.020
15:00 - 16:00	8	188	0.005	8	188	0.004	8	188	0.009
16:00 - 17:00	8	188	0.006	8	188	0.008	8	188	0.014
17:00 - 18:00	8	188	0.005	8	188	0.007	8	188	0.012
18:00 - 19:00	8	188	0.004	8	188	0.006	8	188	0.010
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.103			0.101			0.204

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 D

WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)

population	All usual residents aged 16 and over in employment the week before the census
units	Persons
date	2011
usual residence	E02003784 : South Cambridgeshire 010 (2011 super output area - middle layer)

Total 2,774

place of work : 2011 census merged local authority district	All categories: Method of travel to work (2001 specification)	Driving a car or van	%age
Cambridge	1,597	1,137	41.0
South Cambridgeshire	1,305	1,051	37.9
Huntingdonshire	155	145	5.2
North Hertfordshire	71	64	2.3
East Cambridgeshire	56	50	1.8
Uttlesford	32	28	1.0
Peterborough	26	22	0.8
Bedford	25	22	0.8
Forest Heath	23	22	0.8
Stevenage	18	18	0.6
St Edmundsbury	16	16	0.6
Central Bedfordshire	15	14	0.5
East Hertfordshire	13	13	0.5
Welwyn Hatfield	11	11	0.4
Fenland	10	9	0.3
Tower Hamlets	14	8	0.3
Harlow	7	7	0.3
Milton Keynes	8	7	0.3
East Northamptonshire	5	5	0.2
Northampton	5	5	0.2
Luton	6	4	0.1
St Albans	4	4	0.1
Norwich	5	4	0.1
Brentwood	3	3	0.1
Chelmsford	3	3	0.1
Hertsmere	4	3	0.1
King's Lynn and West N	3	3	0.1
Mid Suffolk	3	3	0.1
Newham	3	3	0.1
Vale of White Horse	3	3	0.1
North Lincolnshire	2	2	0.1
Leicester	2	2	0.1
Coventry	2	2	0.1
Solihull	2	2	0.1
Basildon	2	2	0.1
Colchester	3	2	0.1
Epping Forest	2	2	0.1
Broxbourne	2	2	0.1
Dacorum	3	2	0.1
Broadland	2	2	0.1
South Norfolk	2	2	0.1
Ipswich	2	2	0.1
Barnet	2	2	0.1
Brent	2	2	0.1
Enfield	3	2	0.1
Hammersmith and Fulh	7	2	0.1
Hillingdon	2	2	0.1
Redbridge	2	2	0.1
Westminster,City of Lo	62	2	0.1
Aylesbury Vale	2	2	0.1
Wealden	2	2	0.1
Swindon	2	2	0.1
County Durham	1	1	0.0
Stockport	1	1	0.0
Rotherham	1	1	0.0
Calderdale	2	1	0.0
Rutland	1	1	0.0
Nottingham	3	1	0.0
Harborough	1	1	0.0
North Kesteven	1	1	0.0
South Holland	1	1	0.0
South Kesteven	1	1	0.0
Corby	1	1	0.0
Daventry	2	1	0.0
Kettering	1	1	0.0
Herefordshire, County o	1	1	0.0
Stoke-on-Trent	1	1	0.0
Thurrock	1	1	0.0
Watford	1	1	0.0
Breckland	1	1	0.0
Camden	16	1	0.0
Ealing	1	1	0.0
Greenwich	2	1	0.0
Hackney	2	1	0.0
Haringey	1	1	0.0
Hounslow	1	1	0.0
Southwark	4	1	0.0
Sutton	1	1	0.0
Waltham Forest	2	1	0.0
Wandsworth	3	1	0.0
West Berkshire	1	1	0.0
Slough	1	1	0.0
Windsor and Maidenhe	1	1	0.0
New Forest	1	1	0.0
Rushmoor	1	1	0.0
Dartford	1	1	0.0
Thanet	1	1	0.0
Cherwell	1	1	0.0
West Oxfordshire	1	1	0.0
Surrey Heath	1	1	0.0
Woking	1	1	0.0
Bristol, City of	1	1	0.0
Gloucester	1	1	0.0
Stroud	2	1	0.0
Taunton Deane	1	1	0.0
Newcastle upon Tyne	1	0	0.0
Stafford	1	0	0.0
Croydon	1	0	0.0
Islington	10	0	0.0
Kensington and Chelse	2	0	0.0
Kingston upon Thames	1	0	0.0
Lambeth	3	0	0.0
Southampton	1	0	0.0
Wycombe	2	0	0.0
Fareham	2	0	0.0
Oxford	1	0	0.0
Guildford	1	0	0.0
South Hams	1	0	0.0
Forest of Dean	2	0	0.0

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.

- Civil Engineering
- Transport
- Road Safety
- Flood Risk & Drainage
- Structures
- Geo-environmental
- M-EC Acoustic Air
- Utilities
- M-EC Geomatics
- Street Lighting
- Expert Witness

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