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# LAND EAST OF WOODBASTWICK ROAD, BLOFIELD HEATH Highways Feasibility Assessment

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Reference:	AF/CC/P2	20-1976/01 Rev A				
Date:	March 20	March 2020				

# LAND EAST OF WOODBASTWICK ROAD, BLOFIELD HEATH Highways Feasibility Assessment Revision A

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# Plans

1976/03/001 Woodbastwick Road Access and Footway Improvement (Proposed)

1976/03/001 Mill Road Pedestrian Crossing (Proposed)

# **Registration of Amendments**

Revision and Date	Amendment Details	Revision Prepared By	Revision Approved By
Rev A	Updated following client comment.	AF	ΡZ
13.03.20	opuated following client comment.	AI	۲Z

# 1.0 INTRODUCTION

- 1.1 Create Consulting Engineers Ltd has been instructed by Savills Plc on behalf of Hugh Crane Ltd to produce this "Highways Feasibility Assessment" for Land to the east of Woodbastwick Road, Blofield Heath to be submitted alongside representations to support the draft allocation for residential development.
- 1.2 The area proposed for development is on the East side of Woodbastwick Road lying to the north of Blofield Business Centre and south of the existing residential properties south of Orchard Close, as shown on Figure 1 below.



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# **Figure 1: Site Location**

- 1.3 Highway improvements along Woodbastwick Road have been installed in connection with a recent residential development of 6 detached dwellings opposite the proposed Site. The scheme included footway provision along the western side of Woodbastwick Road and a dropped pedestrian crossing at the Blofield Corner Road/Woodbastwick Road junction.
- 1.4 The Greater Norwich Local Plan Draft Policy 1048 proposes to allocate the proposed Site for 15-20 dwellings and identifies that more homes may be accommodated, subject to an acceptable design and layout, as well as infrastructure constraints.
- 1.5 The access design presented in this Highways Feasibility Assessment is designed to allow for development over and above the initial 15-20 residential dwellings. The overall quantum of development could potentially increase to up to 60 residential dwellings.

- 1.6 In order to demonstrate the higher quantum of development will be acceptable to the local highway authority. Traffic modelling of the proposed access onto Woodbastwick Road would be undertaken in the form of a PICADY assessment. This would be part of the formal Transport Statement that would need to be submitted as part of the overall planning application.
- 1.7 This Highways Feasibility Assessment is written in connection with the potential development making reference to both 20 and 'up to 60 residential dwellings' and considers matters relating to direct vehicular and pedestrian access onto Woodbastwick Road, local road safety, potential trip generation and also the Site's accessibility to local services and facilities in and around the village of Blofield Heath.
- 1.8 Photo 1 below shows Woodbastwick Road looking northwards from approximate location of proposed Site access.



Photo 1.1: Woodbastwick Road looking North

### 2.0 ROAD NETWORK

#### **General Description**

- 2.1 The Site proposed for development is currently in agricultural/arable use and lies approximately 250m to the south of the village centre. There is no existing vehicular access into the Site from Woodbastwick Road.
- 2.2 Horsford is a small village approximately six miles to the east of Norwich with a population of 1,367 residents according to the 2011 Census.
- 2.3 A range of local services and facilities are within readily achievable walking and cycling distance of the Site for existing and future residents. These include the post office, Hemblington Primary School, Tamarind Indian restaurant, local shops, Blofield Heath Business Centre, Heathlands Community Social Club and recreational ground.



Photo 2.1: Blofield Heath post office, village shop and restaurant

2.4 Existing residents of Blofield Heath have access to local Konectbus service 5A operating regularly between Blofield Heath, Brundal and Norwich. The closest bus stop to the Site is

located approximately 30m north on the eastern side of Woodbastwick Road. A detailed bus timetable is included in Appendix A.

- 2.5 There is currently no footway provision along the Site frontage. However, north of the Site there is an existing footway along both sides of Woodbastwick Road extending all the way into Blofield Heath village centre and to the Hemblington Primary School located approximately 425m north of the Site.
- 2.6 In the vicinity of the Site, the Woodbastwick Road carriageway is approximately 5.5m in width to allow unhindered two-way traffic. A mandatory 30mph speed limit is in force along the local section of Woodbastwick Road extending southwards to the access into Blofield Business Centre.
- 2.7 Whilst the semi-rural setting is noted, there is now residential development opposite the Site and the presence of the proposed development would further enhance compliance with the 30mph speed limit.
- 2.8 A speed survey was undertaken by Create Consulting Engineers on the 12 March 2020 using a calibrated Bushnell Velocity Speed Radar Gun, recording the speeds of 200 (northbound and southbound) free flowing vehicles as they passed by the location of the proposed Site access on Woodbastwick Road. See full speed survey results in Appendix C.
- 2.9 The survey was conducted on a neutral weekday during the neutral hours of 11:52 13:51 in fine, dry, bright weather conditions.
- 2.10 The 85<sup>th</sup> percentile design speed has been calculated at 32mph northbound and 30mph southbound with average speeds of 28.75mph northbound and 26.71mph southbound.
- 2.11 Therefore, the recorded design speeds of up to 32mph and 30mph are within the thresholds for which the Manual for Streets (MfS) 1 & 2 are appropriate (i.e. up to 40mph), requiring visibility splays of 47m x 2.4m x 43m, as specified in Figure 2 below.



Figure 2.1: Manual for Streets 1 & 2 Visibility Requirements

### **Local Accident Data**

2.12 Five year recorded accident data has been obtained from Crashmap and this evidence shows there to be no prevailing road safety issues in the vicinity of the Site.



Figure 2.2: "Crashmap" Accident Data

2.13 Two accidents are recorded in close proximity to the Woodbastwick Road/Mill Road junction. The first accident was recorded on the 9<sup>th</sup> February 2015 involving one vehicle and resulting in one casualty, this incident was recorded as 'Serious' in severity. The second accident was recorded on the 17<sup>th</sup> December 2015 involving 2 vehicles and resulting in 2 casualties, this incident was recorded as 'Slight' in severity.

2.14 These two accidents were located approximately 300m north of the Site and therefore should not prevent the proposed development from coming forward.

### 3.0 PROPOSED DEVELOPMENT

#### **General Access Arrangements**

- 3.1 This potential residential development seek to provide direct access from Woodbastwick Road along the western boundary of the Site.
- 3.2 Create drawing 1976/03/001, as provided shows a potential access layout to serve future residential development on this Site by means of a new T-junction arrangement including new footway linkages between the Site and the existing footway on the eastern side of Woodbastwick Road.
- 3.3 The existing drainage ditch within the eastern verge of Woodbastwick Road will potentially require partial culverting to deliver the proposed access and footway. Further details of this will be provided at detailed design stage.



Photo 3.1: Woodbastwick Road looking to the South (Proposed access into Site on the left)

3.4 This access design presented on drawing 1976/03/001 is adequate to accommodate a development of up to 60 residential dwellings. A 2m wide verge strip will be maintained on the southern side of the proposed access carriageway which could be converted into a full footway construction in the event the higher level of resident dwellings are proposed.

3.5 Create drawing 1976/03/002 shows a proposed pedestrian dropped crossing with tactile paving on Mill Road to enhance the pedestrian route from the proposed development to Hemblington Primary School.



Photo 3.2: Mill Lane looking to the East towards proposed dropped pedestrian crossing

- 3.6 A turning head would be included within the masterplan layout to enable penetration of the Site by refuse/delivery vehicles without the requirement for such vehicles to reverse out onto the Woodbastwick Road when existing the development.
- 3.7 Access visibility splays are shown at 47m (South) x 2.4m x 43m (North) in respect of the recorded design speeds and requirements of MfS 1 & 2.
- 3.8 In the event a formal transport statement is submitted to support a planning application for the Site an ATC survey could be undertaken to provide traffic speed data over the course of a 7 day period.

# Potential Traffic Generation & Traffic Impact

3.9 At a semi-rural location such as this, the Norfolk County Council (as Highway Authority) typically cite that a residential dwelling could generate up to a maximum of 8 to 10 traffic

movements per day. It should be noted, however, that such levels of traffic could not reasonably be expected to be generated each and every day.

- 3.10 To provide further insight into the potential travel demands arising from the proposed development, the TRICS database has been utilised to obtain "best-fit" trip rates for "Residential Houses Privately Owned" situated in out of town locations. A copy of the TRICS data is included at Appendix B of this report.
- 3.11 Tables 3.1 and 3.2 below summarise an account of potential traffic generation associated with the proposed residential dwellings.

Private House	Al -0080)	M -0900)		M -1800)	12-Hour		
Trip Rates	Arr	Dep	Arr	Dep	Arr	Dep	
Vehicles	0.182	0.409	0.497	0.182	2.377	2.578	
Cyclists	0.019	0.057	0.038	0.069	0.202	0.208	
Vehicle Occupants	0.226	0.597	0.692	0.258	3.107	3.496	
Pedestrians	0.113	0.421	0.113	0.101	1.306	1.426	
Public Transport	0	0.019	0.025	0.025	0.081	0.087	
Total Person Trips	0.358	1.094	0.868	0.453	4.696	5.217	

Table 3.1: Private House Residential Trip Rates

Trip Generation	Al -0080)	M -0900)	P (1700-	M -1800)	12-Hour		
Generation	Arr	Dep	Arr	Dep	Arr	Dep	
Vehicles	4	8	10	4	48	52	
Cyclists	0	1	1	1	4	4	
Vehicle Occupants	5	12	14	5	62	70	
Pedestrians	2	8	2	2	26	29	
Public Transport	0	0	1	1	2	2	
Total Person Trips	7	21	18	9	94	105	

Table 3.2: Residential Trip Generation (20 new dwellings) rounded to nearest integer

- 3.12 The levels of additional traffic generation arising from the proposed residential development are modest and would amount to approximately 14 two-way vehicle trips during the morning and evening peak hours of activity.
- 3.13 Due to the location and nature of Woodbastwick Road it is not anticipated these levels of additional traffic would give rise to any significant impact on the free-flow of traffic on Woodbastwick Road and would be unlikely to give rise to any material impact on neighbouring junctions on the local highway road network.

Trip Generation	Al -0080)	M •0900)		M -1800)	12-Hour		
Generation	Arr	Dep	Arr	Dep	Arr	Dep	
Vehicles	11	25	30	11	143	155	
Cyclists	1	3	2	4	12	12	
Vehicle Occupants	14	34	42	15	186	210	
Pedestrians	7	25	7	6	78	86	
Public Transport	0	1	2	2	5	5	
Total Person Trips	22	63	53	27	271	313	

Table 3.3: Residential Trip Generation (60 new dwellings) rounded to nearest integer

- 3.14 The level of additional traffic generation arising from the potential residential development of up to 60 dwellings would amount to approximately 36 two-way vehicle trips during the morning peak hour and 41 two-way vehicle trips in the evening peak hours of activity.
- 3.15 This is still a relatively modest number of trips and should not p give rise to any significant impact on the free-flow of traffic on Woodbastwick Road. In order to demonstrate this point a PICADY assessment would be undertaken as part of the Transport Statement document submitted as part of the overall planning application.

### 4.0 CONCLUSIONS

- 4.1 Create Consulting Engineers Ltd has been instructed by Hugh Crane Ltd to produce this "Highways Feasibility Assessment" for Land to the east of Woodbastwick Road, Blofield Heath to be submitted alongside representations to support the draft allocation for residential development.
- 4.2 The area proposed for development is on the East side of Woodbastwick Road lying to the north of Blofield Business Centre and south of the existing residential properties south of Orchard Close.
- 4.3 Highway improvements along Woodbastwick Road have been installed in connection with a recent residential development of 6 detached dwellings opposite the proposed Site. The scheme included footway provision along the western side of Woodbastwick Road and a dropped pedestrian crossing at the Blofield Corner Road/Woodbastwick Road junction.
- 4.4 There are no prevailing road safety issues in the vicinity of the Site.
- 4.5 Create drawing 1976/03/001 shows a potential access layout to serve future residential development on this Site by means of a new T-junction arrangement including new footway linkages between the Site and the existing footway on the eastern side of Woodbastwick Road.
- 4.6 Create drawing 1976/03/002 shows a proposed pedestrian dropped crossing with tactile paving on Mill Road to enhance the pedestrian route from the proposed development to Hemblington Primary School.
- 4.7 A turning head would be included within the masterplan layout to enable penetration of the Site by refuse/delivery vehicles without the requirement for such vehicles to reverse out onto the main road when existing the development.
- 4.8 The levels of additional traffic arising from up to 60 resident dwellings at this location would generate a maximum of 41 two-way vehicle trips during the evening peak hours of activity and not give rise to any significant impact on the local highway network.
- 4.9 With respect to transport matters, the findings of this Highways Feasibility Assessment are that the local Highway Authority should have no significant concerns with respect to the proposed residential development at Woodbastwick Road, Blofield Heath, from coming forward.

### 5.0 DISCLAIMER

- 5.1 Create Consulting disclaims any responsibility to the Client and others in respect of any matters outside the scope of this report.
- 5.2 The copyright of this report is vested in Create Consulting Engineers Ltd and Hugh Crane Ltd. The Client, or his appointed representatives, may copy the report for purposes in connection with the development described herein. It shall not be copied by any other party or used for any other purposes without the written consent of Create Consulting Engineers Ltd or Hugh Crane Ltd.
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**APPENDICES** 

# **APPENDIX A**

# **konect**bus

- w: konectbus.co.uk
- e: feedback@konectbus.co.uk
- 🥑 @konectbuses

# Blofield Heath - Brundall - City Centre

Mondays to Saturdays											Sund	ays
	Codes	NS	NS	S							& banl	<pre>c holiday</pre>
Pilson Green, Bus Shelter			0730	0740								
South Walsham, Bus Shelter			0735	0745								
Panxworth, Salhouse Road			0738	0748								
Blofield Heath, Millfield Close		0712	0745	0755	0917	1047	1217	1347	1517	1653		
Blofield, Medical Centre		0718	0751	0800	0922	1052	1222	1352	1522	1658	1030	1423
Brundall, Co-op		0725	0758	0808	0929	1059	1229	1359	1529	1705	1035	1428
Broadland Business Park		0737	0808	0816	0937	1107	1237	1407	1537	1713	1042	1435
Yarmouth Road, St Andrews Avenue		0740	0814	0820	0942	1112	1242	1412	1542	1718	1045	1438
Thorpe Road, Rail Station		0747	0822	0827	0950	1120	1250	1420	1550	1726	1051	1444
Norwich, Castle Meadow		0751	0827	0831	0955	1125	1255	1425	1555	1731	1054	1447
Norwich, St Stephens Street		0754	0830	0834	0958	1128	1258	1428	1558	1735	1057	1450

Operates as route 5 between Postwick P&R and Norwich - no change of bus required

# City Centre - Brundall - Blofield Heath

Mondays to Saturdays Sunda								ays		
									& bank	holidays
Norwich, St Stephens Street dep [BC]	0835	1005	1135	1305	1435	1610	1730	1825	1007	1400
Norwich, Castle Meadow [CB]	0838	1008	1138	1308	1438	1615	1735	1828	1010	1403
Thorpe Road, Rail Station [DD]	0842	1012	1142	1312	1442	1620	1740	1832	1014	1407
Yarmouth Road, St Andrews Avenue	0849	1019	1149	1319	1449	1627	1747	1839	1020	1413
Broadland Business Park	0854	1024	1154	1324	1454	1632	1752	1842	1023	1416
Brundall, Co-op	0903	1033	1203	1333	1503	1641	1801	1852	1035	1428
Blofield, Medical Centre	0909	1039	1209	1339	1509	1647	1807	1858	1030	1423
Blofield Heath, Millfield Close	0914	1044	1214	1344	1514	1652	1812	1903		
Panxworth, Salhouse Road							1819			
South Walsham, Church							1822			
Pilson Green, Bus Shelter							1825			

Operates up to 4 minutes earlier on Saturdays					
Operates as route 5 between Postwick P&R and Norwich - no change of bus required					

Timetable commences 5 January 2020

Codes

NS Not Saturdays

S Saturdays only

5A

5A

# **APPENDIX B**

Calculation Reference: AUDIT-649801-200310-0319

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Solo	cted regions and areas:	
-	SOUTH EAST	
02	SUUTHEAST	
	KC KENT	1 days
03	SOUTH WEST	
	SM SOMERSET	2 days
04	EAST ANGLIA	2 4498
04		
	SF SUFFOLK	1 days
12	CONNAUGHT	
	CS SLIGO	1 days
	05 32100	i uays

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:	8 to 42 (units: )
Range Selected by User:	4 to 50 (units: )

Parking Spaces 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: 01/01/11 to 19/09/19

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.

<u>Selected survey days:</u>	
Tuesday	2 days
Thursday	1 days
Friday	2 days

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

Selected survey types:	
Manual count	5 days
Directional ATC Count	0 days

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

5

5

Selected Locations:

Neighbourhood Centre (PPS6 Local Centre)

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:

Village

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.

	7.6.4 141219 B19.28 Database right of TRICS bastwick Road	Consortium Limited, 2019. All rights reserved	Tuesday 10/03/20 Page 2
			<u> </u>
Create	Consulting Engineers Princes Street Norwich		Licence No: 649801
	Secondary Filtering selection:		
	<u>Use Class:</u>		
	C3	5 days	
	This data displays the number of surveys per Use has been used for this purpose, which can be fou	e Class classification within the selected set. The Use Cl and within the Library module of TRICS®.	lasses Order 2005
	Population within 1 mile:		
	1,000 or Less	2 days	
	1,001 to 5,000	3 days	
	This data displays the number of selected survey	rs within stated 1-mile radii of population.	
	Population within 5 miles:		
	5,000 or Less	1 days	
	25,001 to 50,000	1 days	
	75,001 to 100,000	2 days	
	125,001 to 250,000	1 days	
	This data displays the number of selected survey	rs within stated 5-mile radii of population.	
	Car ownership within 5 miles:		
	1.1 to 1.5	3 days	
	1.6 to 2.0	2 days	
	This data displays the number of selected survey within a radius of 5-miles of selected survey site.	rs within stated ranges of average cars owned per resid s.	lential dwelling,
	Travel Plan:		
	No	5 days	
	This data displays the number of surveys within and the number of surveys that were undertaked	the selected set that were undertaken at sites with Tra n at sites without Travel Plans.	evel Plans in place,
	<u>PTAL Rating:</u> No PTAL Present	5 days	

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

	ick Road					Page 3
Create Consu	Iting Engineers Prir	nces Street	Norwich			Licence No: 649801
<u>LIST</u>	OF SITES relevant to	selection par	ameters			
1	CS-03-A-03	MI XED HO	ISES		SLIGO	
	TOP ROAD		0020		02100	
	STRANDHILL					
	STRANDHILL	/·				
	Neighbourhood Cent	re (PPS6 Loca	al Centre)			
	Village	llipac		20		
	Total Number of dwe Survey date:			30 <i>27/10/16</i>	Survey Type: MANUAL	
2	KC-03-A-05		& SEMI-DE		KENT	
_	ROCHESTER ROAD	0217101120				
	NEAR CHATHAM					
	BURHAM					
	Neighbourhood Cent	re (PPS6 Loca	al Centre)			
	Village	llinge		0		
	Total Number of dwe Survey date:			8 <i>22/09/17</i>	Survey Type: MANUAL	
3	SF-03-A-06		& SEMI-DE		SUFFOLK	
-	BURY ROAD					
	KENTFORD					
	Neighbourhood Cent	re (PPS6 Loca	al Centre)			
	Village					
	Total Number of dwe			38		
4	Survey date:	<i>FRIDAY</i> MIXED HO		22/09/17	<i>Survey Type: MANUAL</i> SOMERSET	
4	SM-03-A-02 HYDE LANE	IVIT XED HO	JSES		SOWERSEI	
	NEAR TAUNTON					
	CREECH SAINT MICH	HAEL				
	Neighbourhood Cent	re (PPS6 Loca	al Centre)			
	Village					
	Total Number of dwe			42		
-	Survey date:		1050	25/09/18	Survey Type: MANUAL	
5	SM-03-A-03 HYDE LANE	MIXED HO	JSES		SOMERSET	
	NEAR TAUNTON					
	CREECH ST MICHAE	L				
	Neighbourhood Cent	re (PPS6 Loca	al Centre)			
	Village					
	Total Number of dwe			41	o T	
	Survey date:	TUESDAY		25/09/18	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.

Licence No: 649801

#### TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED MULTI - MODAL VEHICLES Calculation factor: 1 DWELLS Estimated TRIP rate value per 20 DWELLS shown in shaded columns BOLD print indicates peak (busiest) period

		AF	RIVALS			DEP	ARTURES			Т	OTALS	
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	5	32	0.101	2.013	5	32	0.340	6.792	5	32	0.441	8.805
08:00 - 09:00	5	32	0.182	3.648	5	32	0.409	8.176	5	32	0.591	11.824
09:00 - 10:00	5	32	0.157	3.145	5	32	0.245	4.906	5	32	0.402	8.051
10:00 - 11:00	5	32	0.132	2.642	5	32	0.119	2.390	5	32	0.251	5.032
11:00 - 12:00	5	32	0.119	2.390	5	32	0.176	3.522	5	32	0.295	5.912
12:00 - 13:00	5	32	0.157	3.145	5	32	0.157	3.145	5	32	0.314	6.290
13:00 - 14:00	5	32	0.170	3.396	5	32	0.170	3.396	5	32	0.340	6.792
14:00 - 15:00	5	32	0.164	3.270	5	32	0.189	3.774	5	32	0.353	7.044
15:00 - 16:00	5	32	0.176	3.522	5	32	0.164	3.270	5	32	0.340	6.792
16:00 - 17:00	5	32	0.233	4.654	5	32	0.226	4.528	5	32	0.459	9.182
17:00 - 18:00	5	32	0.497	9.937	5	32	0.182	3.648	5	32	0.679	13.585
18:00 - 19:00	5	32	0.289	5.786	5	32	0.201	4.025	5	32	0.490	9.811
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			2.377	47.548			2.578	51.572			4.955	99.120

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:	8 - 42 (units: )
Survey date date range:	01/01/11 - 19/09/19
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are 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 Estimated TRIP rate value per 20 DWELLS shown in shaded columns BOLD print indicates peak (busiest) period

		AR	RIVALS			DEP	ARTURES			Т	OTALS	
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	5	32	0.013	0.252	5	32	0.006	0.126	5	32	0.019	0.378
08:00 - 09:00	5	32	0.000	0.000	5	32	0.006	0.126	5	32	0.006	0.126
09:00 - 10:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
10:00 - 11:00	5	32	0.000	0.000	5	32	0.006	0.126	5	32	0.006	0.126
11:00 - 12:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
12:00 - 13:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
13:00 - 14:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
14:00 - 15:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
15:00 - 16:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
16:00 - 17:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
17:00 - 18:00	5	32	0.013	0.252	5	32	0.006	0.126	5	32	0.019	0.378
18:00 - 19:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.026	0.504			0.024	0.504			0.050	1.008

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 Estimated TRIP rate value per 20 DWELLS shown in shaded columns BOLD print indicates peak (busiest) period

		AR	RIVALS			DEP	ARTURES			Т	OTALS	
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	5	32	0.006	0.126	5	32	0.000	0.000	5	32	0.006	0.126
08:00 - 09:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
09:00 - 10:00	5	32	0.000	0.000	5	32	0.006	0.126	5	32	0.006	0.126
10:00 - 11:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
11:00 - 12:00	5	32	0.006	0.126	5	32	0.006	0.126	5	32	0.012	0.252
12:00 - 13:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
13:00 - 14:00	5	32	0.006	0.126	5	32	0.006	0.126	5	32	0.012	0.252
14:00 - 15:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
15:00 - 16:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
16:00 - 17:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
17:00 - 18:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
18:00 - 19:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	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	0.378			0.018	0.378			0.036	0.756

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.

#### TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED MULTI - MODAL PSVS Calculation factor: 1 DWELLS Estimated TRIP rate value per 20 DWELLS shown in shaded columns BOLD print indicates peak (busiest) period

		AF	RIVALS			DEP	ARTURES			Т	OTALS	
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	5	32	0.006	0.126	5	32	0.006	0.126	5	32	0.012	0.252
08:00 - 09:00	5	32	0.006	0.126	5	32	0.006	0.126	5	32	0.012	0.252
09:00 - 10:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
10:00 - 11:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
11:00 - 12:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
12:00 - 13:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
13:00 - 14:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
14:00 - 15:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
15:00 - 16:00	5	32	0.006	0.126	5	32	0.006	0.126	5	32	0.012	0.252
16:00 - 17:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
17:00 - 18:00	5	32	0.013	0.252	5	32	0.013	0.252	5	32	0.026	0.504
18:00 - 19:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.031	0.630			0.031	0.630			0.062	1.260

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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Licence No: 649801

#### TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED MULTI - MODAL CYCLISTS Calculation factor: 1 DWELLS Estimated TRIP rate value per 20 DWELLS shown in shaded columns BOLD print indicates peak (busiest) period

		AF	RIVALS			DEP	ARTURES			Т	OTALS	
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	5	32	0.000	0.000	5	32	0.013	0.252	5	32	0.013	0.252
08:00 - 09:00	5	32	0.019	0.377	5	32	0.057	1.132	5	32	0.076	1.509
09:00 - 10:00	5	32	0.000	0.000	5	32	0.025	0.503	5	32	0.025	0.503
10:00 - 11:00	5	32	0.013	0.252	5	32	0.000	0.000	5	32	0.013	0.252
11:00 - 12:00	5	32	0.000	0.000	5	32	0.013	0.252	5	32	0.013	0.252
12:00 - 13:00	5	32	0.019	0.377	5	32	0.000	0.000	5	32	0.019	0.377
13:00 - 14:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
14:00 - 15:00	5	32	0.019	0.377	5	32	0.000	0.000	5	32	0.019	0.377
15:00 - 16:00	5	32	0.031	0.629	5	32	0.019	0.377	5	32	0.050	1.006
16:00 - 17:00	5	32	0.038	0.755	5	32	0.006	0.126	5	32	0.044	0.881
17:00 - 18:00	5	32	0.038	0.755	5	32	0.069	1.384	5	32	0.107	2.139
18:00 - 19:00	5	32	0.025	0.503	5	32	0.006	0.126	5	32	0.031	0.629
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.202	4.025			0.208	4.152			0.410	8.177

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.

Licence No: 649801

#### TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED MULTI - MODAL VEHICLE OCCUPANTS Calculation factor: 1 DWELLS Estimated TRIP rate value per 20 DWELLS shown in shaded columns BOLD print indicates peak (busiest) period

		AF	RIVALS			DEP	ARTURES			Т	OTALS	
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	5	32	0.107	2.138	5	32	0.434	8.679	5	32	0.541	10.817
08:00 - 09:00	5	32	0.226	4.528	5	32	0.597	11.950	5	32	0.823	16.478
09:00 - 10:00	5	32	0.176	3.522	5	32	0.346	6.918	5	32	0.522	10.440
10:00 - 11:00	5	32	0.176	3.522	5	32	0.176	3.522	5	32	0.352	7.044
11:00 - 12:00	5	32	0.132	2.642	5	32	0.208	4.151	5	32	0.340	6.793
12:00 - 13:00	5	32	0.208	4.151	5	32	0.233	4.654	5	32	0.441	8.805
13:00 - 14:00	5	32	0.201	4.025	5	32	0.176	3.522	5	32	0.377	7.547
14:00 - 15:00	5	32	0.214	4.277	5	32	0.270	5.409	5	32	0.484	9.686
15:00 - 16:00	5	32	0.277	5.535	5	32	0.220	4.403	5	32	0.497	9.938
16:00 - 17:00	5	32	0.308	6.164	5	32	0.314	6.289	5	32	0.622	12.453
17:00 - 18:00	5	32	0.692	13.836	5	32	0.258	5.157	5	32	0.950	18.993
18:00 - 19:00	5	32	0.390	7.799	5	32	0.264	5.283	5	32	0.654	13.082
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			3.107	62.139			3.496	69.937			6.603	132.076

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.

#### TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED MULTI - MODAL PEDESTRIANS Calculation factor: 1 DWELLS Estimated TRIP rate value per 20 DWELLS shown in shaded columns BOLD print indicates peak (busiest) period

		AF	RIVALS			DEP	ARTURES			Т	OTALS	
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	5	32	0.019	0.377	5	32	0.050	1.006	5	32	0.069	1.383
08:00 - 09:00	5	32	0.113	2.264	5	32	0.421	8.428	5	32	0.534	10.692
09:00 - 10:00	5	32	0.182	3.648	5	32	0.075	1.509	5	32	0.257	5.157
10:00 - 11:00	5	32	0.025	0.503	5	32	0.069	1.384	5	32	0.094	1.887
11:00 - 12:00	5	32	0.044	0.881	5	32	0.075	1.509	5	32	0.119	2.390
12:00 - 13:00	5	32	0.113	2.264	5	32	0.113	2.264	5	32	0.226	4.528
13:00 - 14:00	5	32	0.094	1.887	5	32	0.044	0.881	5	32	0.138	2.768
14:00 - 15:00	5	32	0.050	1.006	5	32	0.050	1.006	5	32	0.100	2.012
15:00 - 16:00	5	32	0.308	6.164	5	32	0.220	4.403	5	32	0.528	10.567
16:00 - 17:00	5	32	0.132	2.642	5	32	0.126	2.516	5	32	0.258	5.158
17:00 - 18:00	5	32	0.113	2.264	5	32	0.101	2.013	5	32	0.214	4.277
18:00 - 19:00	5	32	0.113	2.264	5	32	0.082	1.635	5	32	0.195	3.899
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			1.306	26.164			1.426	28.554			2.732	54.718

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.

Licence No: 649801

#### TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED MULTI - MODAL TOTAL RAIL PASSENGERS Calculation factor: 1 DWELLS Estimated TRIP rate value per 20 DWELLS shown in shaded columns BOLD print indicates peak (busiest) period

		AF	RIVALS			DEP	ARTURES			Т	OTALS	
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
08:00 - 09:00	5	32	0.000	0.000	5	32	0.019	0.377	5	32	0.019	0.377
09:00 - 10:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
10:00 - 11:00	5	32	0.000	0.000	5	32	0.006	0.126	5	32	0.006	0.126
11:00 - 12:00	5	32	0.006	0.126	5	32	0.000	0.000	5	32	0.006	0.126
12:00 - 13:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
13:00 - 14:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
14:00 - 15:00	5	32	0.006	0.126	5	32	0.000	0.000	5	32	0.006	0.126
15:00 - 16:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
16:00 - 17:00	5	32	0.013	0.252	5	32	0.006	0.126	5	32	0.019	0.378
17:00 - 18:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
18:00 - 19:00	5	32	0.006	0.126	5	32	0.000	0.000	5	32	0.006	0.126
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.031	0.630			0.031	0.629			0.062	1.259

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.

Licence No: 649801

#### TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED MULTI - MODAL COACH PASSENGERS Calculation factor: 1 DWELLS Estimated TRIP rate value per 20 DWELLS shown in shaded columns BOLD print indicates peak (busiest) period

		AF	RIVALS			DEP	ARTURES			Т	OTALS	
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	5	32	0.000	0.000	5	32	0.006	0.126	5	32	0.006	0.126
08:00 - 09:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
09:00 - 10:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
10:00 - 11:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
11:00 - 12:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
12:00 - 13:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
13:00 - 14:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
14:00 - 15:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
15:00 - 16:00	5	32	0.025	0.503	5	32	0.025	0.503	5	32	0.050	1.006
16:00 - 17:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
17:00 - 18:00	5	32	0.025	0.503	5	32	0.025	0.503	5	32	0.050	1.006
18:00 - 19:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.050	1.006			0.056	1.132			0.106	2.138

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.

Licence No: 649801

#### TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED MULTI - MODAL PUBLIC TRANSPORT USERS Calculation factor: 1 DWELLS Estimated TRIP rate value per 20 DWELLS shown in shaded columns BOLD print indicates peak (busiest) period

		AF	RIVALS			DEP	ARTURES			Т	OTALS	
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	5	32	0.000	0.000	5	32	0.006	0.126	5	32	0.006	0.126
08:00 - 09:00	5	32	0.000	0.000	5	32	0.019	0.377	5	32	0.019	0.377
09:00 - 10:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
10:00 - 11:00	5	32	0.000	0.000	5	32	0.006	0.126	5	32	0.006	0.126
11:00 - 12:00	5	32	0.006	0.126	5	32	0.000	0.000	5	32	0.006	0.126
12:00 - 13:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
13:00 - 14:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
14:00 - 15:00	5	32	0.006	0.126	5	32	0.000	0.000	5	32	0.006	0.126
15:00 - 16:00	5	32	0.025	0.503	5	32	0.025	0.503	5	32	0.050	1.006
16:00 - 17:00	5	32	0.013	0.252	5	32	0.006	0.126	5	32	0.019	0.378
17:00 - 18:00	5	32	0.025	0.503	5	32	0.025	0.503	5	32	0.050	1.006
18:00 - 19:00	5	32	0.006	0.126	5	32	0.000	0.000	5	32	0.006	0.126
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.081	1.636			0.087	1.761			0.168	3.397

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.

#### TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED MULTI - MODAL TOTAL PEOPLE Calculation factor: 1 DWELLS Estimated TRIP rate value per 20 DWELLS shown in shaded columns BOLD print indicates peak (busiest) period

		AF	RIVALS			DEP	ARTURES			Т	OTALS	
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	5	32	0.126	2.516	5	32	0.503	10.063	5	32	0.629	12.579
08:00 - 09:00	5	32	0.358	7.170	5	32	1.094	21.887	5	32	1.452	29.057
09:00 - 10:00	5	32	0.358	7.170	5	32	0.447	8.931	5	32	0.805	16.101
10:00 - 11:00	5	32	0.214	4.277	5	32	0.252	5.031	5	32	0.466	9.308
11:00 - 12:00	5	32	0.182	3.648	5	32	0.296	5.912	5	32	0.478	9.560
12:00 - 13:00	5	32	0.340	6.792	5	32	0.346	6.918	5	32	0.686	13.710
13:00 - 14:00	5	32	0.296	5.912	5	32	0.220	4.403	5	32	0.516	10.315
14:00 - 15:00	5	32	0.289	5.786	5	32	0.321	6.415	5	32	0.610	12.201
15:00 - 16:00	5	32	0.642	12.830	5	32	0.484	9.686	5	32	1.126	22.516
16:00 - 17:00	5	32	0.491	9.811	5	32	0.453	9.057	5	32	0.944	18.868
17:00 - 18:00	5	32	0.868	17.358	5	32	0.453	9.057	5	32	1.321	26.415
18:00 - 19:00	5	32	0.535	10.692	5	32	0.352	7.044	5	32	0.887	17.736
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			4.699	93.962			5.221	104.404			9.920	198.366

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 CARS Calculation factor: 1 DWELLS Estimated TRIP rate value per 20 DWELLS shown in shaded columns BOLD print indicates peak (busiest) period

		AF	RIVALS			DEP	ARTURES			Т	OTALS	
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	5	32	0.063	1.258	5	32	0.296	5.912	5	32	0.359	7.170
08:00 - 09:00	5	32	0.138	2.767	5	32	0.365	7.296	5	32	0.503	10.063
09:00 - 10:00	5	32	0.126	2.516	5	32	0.214	4.277	5	32	0.340	6.793
10:00 - 11:00	5	32	0.119	2.390	5	32	0.101	2.013	5	32	0.220	4.403
11:00 - 12:00	5	32	0.088	1.761	5	32	0.132	2.642	5	32	0.220	4.403
12:00 - 13:00	5	32	0.126	2.516	5	32	0.113	2.264	5	32	0.239	4.780
13:00 - 14:00	5	32	0.145	2.893	5	32	0.145	2.893	5	32	0.290	5.786
14:00 - 15:00	5	32	0.119	2.390	5	32	0.164	3.270	5	32	0.283	5.660
15:00 - 16:00	5	32	0.164	3.270	5	32	0.138	2.767	5	32	0.302	6.037
16:00 - 17:00	5	32	0.214	4.277	5	32	0.195	3.899	5	32	0.409	8.176
17:00 - 18:00	5	32	0.421	8.428	5	32	0.132	2.642	5	32	0.553	11.070
18:00 - 19:00	5	32	0.277	5.535	5	32	0.182	3.648	5	32	0.459	9.183
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			2.000	40.001			2.177	43.523			4.177	83.524

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 LGVS Calculation factor: 1 DWELLS Estimated TRIP rate value per 20 DWELLS shown in shaded columns BOLD print indicates peak (busiest) period

		AF	RIVALS			DEP	ARTURES			Т	OTALS	
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	5	32	0.013	0.252	5	32	0.031	0.629	5	32	0.044	0.881
08:00 - 09:00	5	32	0.038	0.755	5	32	0.031	0.629	5	32	0.069	1.384
09:00 - 10:00	5	32	0.025	0.503	5	32	0.025	0.503	5	32	0.050	1.006
10:00 - 11:00	5	32	0.013	0.252	5	32	0.013	0.252	5	32	0.026	0.504
11:00 - 12:00	5	32	0.025	0.503	5	32	0.031	0.629	5	32	0.056	1.132
12:00 - 13:00	5	32	0.031	0.629	5	32	0.038	0.755	5	32	0.069	1.384
13:00 - 14:00	5	32	0.019	0.377	5	32	0.019	0.377	5	32	0.038	0.754
14:00 - 15:00	5	32	0.038	0.755	5	32	0.025	0.503	5	32	0.063	1.258
15:00 - 16:00	5	32	0.006	0.126	5	32	0.019	0.377	5	32	0.025	0.503
16:00 - 17:00	5	32	0.019	0.377	5	32	0.031	0.629	5	32	0.050	1.006
17:00 - 18:00	5	32	0.057	1.132	5	32	0.031	0.629	5	32	0.088	1.761
18:00 - 19:00	5	32	0.013	0.252	5	32	0.019	0.377	5	32	0.032	0.629
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.297	5.913			0.313	6.289			0.610	12.202

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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Licence No: 649801

#### TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED MULTI - MODAL MOTOR CYCLES Calculation factor: 1 DWELLS Estimated TRIP rate value per 20 DWELLS shown in shaded columns BOLD print indicates peak (busiest) period

		AF	RIVALS			DEP	ARTURES			Т	OTALS	
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
08:00 - 09:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
09:00 - 10:00	5	32	0.006	0.126	5	32	0.000	0.000	5	32	0.006	0.126
10:00 - 11:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
11:00 - 12:00	5	32	0.000	0.000	5	32	0.006	0.126	5	32	0.006	0.126
12:00 - 13:00	5	32	0.000	0.000	5	32	0.006	0.126	5	32	0.006	0.126
13:00 - 14:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
14:00 - 15:00	5	32	0.006	0.126	5	32	0.000	0.000	5	32	0.006	0.126
15:00 - 16:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
16:00 - 17:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
17:00 - 18:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
18:00 - 19:00	5	32	0.000	0.000	5	32	0.000	0.000	5	32	0.000	0.000
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.012	0.252			0.012	0.252			0.024	0.504

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.

# **APPENDIX C**



# **SPEED RADAR GUN SURVEY**

Date:	11.03.20
Start Time:	11:52
End Time:	13:51
Weather:	Fair, Sunny, Dry
Equipment used:	Bushnell Velocity Speed Radar Gun

Northbound	Speed (mph)	Time intervals	Southbound	Speed (mph)	Time intervals
1	27	11:52	1	28	11:55
2	28		2	23	
3	29		3	26	
4	30		4	25	
5	25		5	27	
6	24		6	19	
7	24		7	29	
8	27		8	30	
9	26		9	27	
10	31		10	28	
11	29		11	31	
12	24		12	27	
13	30		13	22	
14	29		14	23	
15	27		15	25	
16	33		16	36	
17	27		17	22	
18	22		18	28	
19	27		19	28	
20	25		20	22	
21	23		21	23	
22	28		22	27	
23	31		23	30	
24	35		24	28	
25	36		25	32	
26	35		26	25	
27	28		27	26	
28	29		28	25	
29	28		29	26	
30	22		30	27	
31	25		31	25	
32	25		32	25	
33	23		33	29	
34	34		34	24	
35	27		35	24	
36	24		36	25	
37	26		37	25	
38	27		38	26	



Northbound	Speed (mph)	Time intervals	Southbound	Speed (mph)	Time intervals
39	27		39	27	
40	27		40	29	
41	23		41	27	
42	27		42	27	
43	31		43	26	
44	31		44	32	
45	28		45	33	
46	28		46	35	
47	25		47	26	
48	28		48	28	
49	25		49	30	
50	31		50	28	
51	37		51	24	
52	28		52	20	
53	25		53	28	
54	24		54	25	
55	25		55	30	
56	31		56	26	
57	33		57	29	
58	35		58	30	
59	32		59	27	
60	30		60	25	
61	30		61	21	
62	29		62	30	
63	28	12:20	63	24	12:26
64	30		64	24	
65	30		65	27	
66	31		66	30	
67	28		67	23	
68	28		68	30	
69	24		69	26	
70	26		70	31	
71	27		71	26	
72	30		72	29	
73	30		73	34	
74	33		74	29	
75	29		75	29	
76	32		76	26	
77	37		77	25	
78	24		78	29	
79	25		79	28	
80	22		80	25	
81	22		81	25	
82	32		82	31	
83	30		83	26	
84	28		84	22	
85	27		85	27	
86	29		86	29	



Northbound	Speed (mph)	Time intervals	Southbound	Speed (mph)	Time intervals
87	22		87	24	
88	26		88	24	
89	30		89	26	
90	26		90	33	
91	27		91	31	
92	30		92	25	
93	30		93	28	
94	33		94	28	
95	33		95	26	
96	27		96	29	
97	27		97	26	
98	30		98	34	
99	32		99	31	
100	27		100	28	
101	29		101	24	
102	28		102	24	
103	26		103	26	
104	27		104	26	
105	27		105	28	
106	31		106	23	
107	31		107	25	
108	35		108	30	
109	29		109	30	
110	28		110	30	
111	28		111	26	
112	28	12:39	112	23	12:53
113	25		113	25	
114	31		114	27	
115	32		115	26	
116	31		116	22	
117	30		117	22	
118	31		118	26	
119	36		119	28	
120	30		120	25	
121	32		121	25	
122	32		122	29	
123	30		123	29	
124	25		124	28	
125	31		125	30	
126	37		126	32	
127	26		127	29	
128	30		128	30	
129	27		129	22	
130	39		130	22	
131	27		131	28	
132	28		132	27	
133	28		133	21	
134	25		134	23	



Northbound	Speed (mph)	Time intervals	Southbound	Speed (mph)	Time intervals
135	23		135	27	
136	25		136	24	
137	35		137	28	
138	33		138	30	
139	31		139	29	
140	24		140	27	
141	30		141	23	
142	28		142	25	
143	35		143	24	
144	28		144	25	
145	33		145	31	
146	34		146	25	
147	30		147	26	
148	26		148	27	
149	29		149	28	
150	28		150	28	
151	30		151	28	
152	28		152	26	
153	29		153	29	
154	29		154	30	
155	29		155	28	
156	27		156	26	
157	25		157	22	
158	25		158	28	
159	32		159	24	
160	25		160	28	
161	32		161	28	
162	26		162	28	
163	29	13:00	163	21	
164	25		164	26	
165	26		165	21	
166	28		166	22	
167	29		167	20	
168	29		168	28	
169	34		169	25	
170	27		170	28	
171	30		171	29	
172	30		172	27	
173	28		173	30	
174	28		174	24	
175	28		175	27	
176	37		176	26	
177	28		177	28	
178	27		178	28	
179	30		179	27	
180	29		180	27	
181	32		181	23	
182	33		182	24	



Northbound	Speed (mph)	Time intervals	Southbound	Speed (mph)	Time intervals
183	29		183	26	
184	34		184	29	
185	34		185	29	
186	29		186	25	
187	29		187	25	
188	29		188	24	
189	27		189	29	
190	26		190	30	
191	29		191	28	
192	28		192	28	
193	31		193	29	
194	30		194	26	
195	29		195	25	
196	25		196	28	
197	28		197	27	
198	25		198	22	
199	24		199	24	
200	36	13:19	200	25	13:51
Average	28.75			26.71	
85th percentile	32			30	

# **PLANS**



SITE BOUNDARY

## VISIBILITY SPLAY 47M (SOUTH) X 2.4M X 43M (NORTH)



### <u>NOTES:</u>

- 1. DRAWING BASED ON OS MAPPING SO MEASUREMENTS ARE APPROXIMATE.
- 2. ALL MEASUREMENTS SHOWN IN METRES UNLESS OTHERWISE STATED.
- 3. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH NJUG GUIDELINES.

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А	13.03.20	RED LINE AMENDED	AF	PZ
REV	DATE	AMENDMENT DETAILS	DRAWN	APPROVED

PROJECT	DATE	DRAWING STATUS				
LAND EAST OF WOODBASTWICK ROAD,	11.03.20					
BLOFIELD HEATH	SCALE(S)	DESIGNED	DRAWN			
		AF	AF			
DRAWING TITLE	1:1000	CHECKED	APPROVED	SA SA		
WOODBASTWICK ROAD ACCESS		PZ	PZ	TXX.		
AND FOOTWAY IMPROVEMENT	JOB No			71		
	1976			create		
CLIENT	DRAWING No		REVISION	CONSULTING		
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www.createconsultingengineers.co.uk						

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- 1. DRAWING BASED ON OS MAPPING SO MEASUREMENTS ARE APPROXIMATE.
- 2. ALL MEASUREMENTS SHOWN IN METRES UNLESS OTHERWISE STATED.

 ving. Only figured dimensions are to be worked to.		-
		<u> </u>

APPROVE

AMENDMENT DETAILS

DATE

PROJECT LAND EAST OF WOODBASTWICK ROAD,	DATE 11.03.20	DRAWING STATUS		
BLOFIELD HEATH	SCALE(S)	DESIGNED	DRAWN	
		AF	AF	
DRAWING TITLE	1:500	CHECKED	APPROVED	
MILL ROAD		PZ	PZ	JYX
PROPOSED PEDESTRIAN CROSSING	JOB No			H
	1976			create
CLIENT	DRAWING No		REVISION	CONSULTING
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