

Title: Transport Scoping Note

Date: August 2022

# 1.0 Introduction

- 1.1.1 Jubb has been commissioned by Hallam Land Management Ltd (HLM) to provide highways and transportation advice in relation to proposals for a residential-led mixed use development on Land northeast of the railway line in North West Bicester 'Hawkwell Village'.
- 1.1.2 The detailed description of the development proposals is set out below:

"Mixed Use Development of up to 3,100 dwellings (including extra care); residential care homes(C2); mixed use local centre (comprising Commercial, Business and Service Uses, residential uses, Local Community Uses (F2(a) and F2(b)), hot food takeaways, public house, wine bar); employment area (B2, B8, E(g)); Learning and Non-residential institutions (Class F1) including primary, land to allow extension of existing primary school; Green Infrastructure including formal (including playing fields) and informal open space, allotments, landscape, biodiversity and amenity space; burial ground; play space (including Neaps/Leaps/MUGA); changing facilities; large scale photovoltaic system (solar farm); sustainable drainage systems; movement network comprising new highway, cycle and pedestrian routes and access from highway network; car parking; infrastructure (including utilities); engineering works (including ground modelling); demolition".

1.1.3 This Technical Note (TN) has been produced to establish the details relating to the calculation of forecast peak hour vehicle trip generation for the development proposals. This vehicle trip generation, which has been calculated based on principles agreed with the Local Highway Authority (LHA), will be used to assess the development traffic impact using the Bicester Transport Model (BTM), along with an additional scenario using the trip generation predicted by the BTM model.

# 2.0 Development Traffic Impact

## Methodology and Approach

- 2.1.1 The principles set out in this TN are in keeping with the Decide and Provide (D&P) approach, as set out within the TRICS Guidance Note on the Practical Implementation of the Decide & Provide Approach (February 2021). This approach is vision-led and seeks to provide a preferred future of reduced car dependence through providing a development path best suited to achieving it.
- 2.1.2 In contrast to the previous Predict & Provide (P&P) approach, which often delivered schemes based on unrealistic worst case traffic assumptions, the D&P approach develops schemes based on more realistic traffic assumptions, taking into account changes in general travel patterns through technological advances and changes in the perception relating to the esteem associated with car ownership and use.
- 2.1.3 The TRICS D&P Guidance Note emphasises that:

"The D&P approach provides the opportunity for more positive and integrated transport and land use planning. It also provides the opportunity to meaningfully implement the modal hierarchy, giving greater centrality to the up-front consideration of walking and cycling, rather than a more cursory treatment as residual or less considered modes that has sometimes, historically, been the case.

It is important that, as transport professionals, we engage fully with this paradigm shift. We need to take decisions and make provisions that respond to the following key drivers including the following:

• The drive towards Net Zero climate change or greenhouse gas (GHG) emissions.

- Strategies to decarbonise the transport sector, being progressed in the UK's Transport Decarbonisation Plan.
- In terms of health and wellbeing, respond to the UK's obesity crisis (also further compounded by Covid-19) and further promote active travel provision."
- 2.1.4 In light of this, a full review of the assumptions and principles that were previously adopted in forecasting the development traffic impact of the 2014 submission has been undertaken and adjustments on the methodology and approach have been made to reflect the prevailing travel tendency and the impact of the current pandemic.
- 2.1.5 In order to provide an initial forecast of peak hour (i.e. 08:00-09:00 and 17:00-18:00) traffic generation associated with the employment and residential elements of the development proposals; vehicle trip rates have first been calculated based on surveys of comparative sites within the TRICS database.

# **Initial Traffic Generation**

- 2.1.6 The Cherwell District Council (CDC) Housing Strategy identifies a 30% affordable housing requirement in this area. On this basis the peak hour vehicle trip rates for the proposed residential element have been calculated separately for Private Housing and Affordable Housing.
- 2.1.7 Vehicle trip rates for the land categories of "Employment Industrial Units", "Residential Privately Owned Houses", "Residential Affordable/Local Authority Houses", "Retail Convenience Store" and "Education Primary School" have been established based on comparative survey sites collated from the TRICS database.
- 2.1.8 The obtained full TRICS reports are included within **Appendix A**. The correlated vehicle trip rates for the traditional highway AM and PM peaks of 08:00-0900 and 17:00-18:00 are summarised in **Table 4.1** below.

	Wee	kday AM P	eak	Weekday PM Peak			
Vehicle Trip Rates	IN	OUT	TOTAL	IN	OUT	TOTAL	
B2 Industrial Estate (per 100sq.m GFA)	0.186	0.078	0.264	0.057	0.171	0.228	
Private Housing (per unit)	0.110	0.365	0.475	0.347	0.155	0.502	
Affordable Housing (per unit)	0.162	0.277	0.439	0.275	0.203	0.478	
Convenience Store	9.277	9.482	18.759	8.663	8.731	17.394	
Primary School	0.322	0.250	0.572	0.020	0.034	0.054	

Table 4.1 – Vehicle Trip Rates

2.1.9 The initial traffic generation for 3,750sq.m B2/B8 Industrial Use, Convenience Store (1,000sq.m, Primary School (two form entry), 2170 (i.e. 70%) Privately Owned Houses and 930 (i.e. 30%) Affordable Houses are summarised in **Table 4.2** below:

Use Type Use	se Sub Class	Weekday AM Peak	Weekday PM Peak
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		IN	OUT	TOTAL	IN	OUT	TOTAL
Employment	B2 Industrial Unit 3750sq.m	7	3	10	2	6	9
Residential	Private Units (2170 dwellings)	239	792	1031	753	336	1089
	Affordable Units (930 dwellings)	151	258	408	256	189	445
	TOTAL	389	1050	1439	1009	525	1534
Education	Primary School (420 Pupils)	135	105	240	8	14	23

Table 4.2 – Initial Traffic Generation

# **Journey Composition**

- 2.1.10 It should be noted that the derived vehicle trip rates for residential development contain journeys with various purposes associated with not only employment but also leisure, shopping and education activities. As discussed earlier in this report, a host of complimentary land-uses are proposed to support the core residential element and thus it is likely that a high proportion of these movements would be retained on site as residents will not need to travel offsite to access these facilities.
- 2.1.11 In light of this, an exercise has been undertaken to calculate the proportion of traffic that would be associated with typical journeys associated with the proposed mix of uses within the site. In order to disaggregate the forecast vehicle movements by journey purposes, information on journey purposes by trip starting time for England was obtained from the National Travel Survey.
- 2.1.12 The 2019 NTS is the latest available series of household data that has been released to provide a data source at a national level that sets out personal travel in England. NTS Table 502 provides details of "Trip start time by trip purpose (Monday to Friday only)", with specific sub tables available that split these trips down into specific modes. The data provided for car/van driver is included as **Appendix B** of this report with a peak hour summary also provided as **Table 4.3** below.

Journey Purpose	AM Peak (08:00-09:00)	PM Peak (17:00-18:00)
Commuting/Business	37%	43%
Education	1%	0%
Escort Education	28%	3%
Shopping	5%	13%
Personal business	23%	23%
Visiting Friends / Sport / Entertainment	5%	15%
Holiday / Day Trip	2%	3%

Table 4.3 – Summary of Peak Hour Journey Purpose – As Extracted from NTS Table 0502

2.1.13 The forecast residential traffic generation by different journey purposes is summarised as follows:

	Wee	ekday AM F	Peak	Weekday PM Peak			
Journey Purpose	IN	OUT	Total	IN	OUT	Total	
Commuting / Business	143	387	530	435	227	662	
Education	4	10	13	3	1	4	
Escort Education	109	294	403	31	16	48	
Shopping	21	56	77	131	68	199	
Personal business	88	236	324	228	119	346	
Visiting Friends / Sport / Entertainment	18	48	66	154	80	235	
Holiday / Day Trip	7	19	26	26	14	40	
Total 3100 dwellings	389	1050	1439	1009	525	1534	

Table 4.4 – Traffic Generation by Journey Purposes

# **Calculation of Internalisation**

- 2.1.14 Given the self-sufficient nature of the proposed development mix, there is potential for a significant number of the forecast residential vehicle movements that are related to employment, primary education, retail and personal business to take place internally between the proposed residential communities and the onsite ancillary land-uses.
- 2.1.15 And hence, the impact in terms of traffic flow on the external network would be less than the total vehicle trip generation figures shown in **Table 4.2**. On this basis, further calculations have been carried out as appropriate to take account of this internalisation. Further detail relating to these calculations are provided below.

# Commuting/Business Trips

- 2.1.16 Inevitably, there will be a proportion of future residents who will live and work onsite giving rise to internal journeys that are retained within the site rather than dispersing onto the wider highway network. To quantify these journeys, 2011 census data on the location of usual residence and place of work for the MSOA areas in Bicester were assessed.
- 2.1.17 The analysis demonstrates that approximately 34% of the workplace population in Bicester who drive to work also live locally in the same area. Applying this to the forecast employment traffic as shown in **Table 4.2**, the reduction for internal work-related trips between the onsite employment elements and residential communities is set out in **Table 4.5**. The subsequent reciprocal and opposing reduction is applied to the residential trips to take account of this internalisation.

Reduction –	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)			
Commuting/Business	IN	OUT	Total	IN	OUT	Total	
Employment	-2	-1	-3	-1	-2	-3	
Residential	-1	-2	-3	-2	-1	-3	

Table 4.5 – Vehicle reductions to take into account internal Employment journeys

# Education Trips

2.1.18 It is evident that "Escort Education" makes up 28% of all main journeys in the AM Peak and 3% of all journeys in the PM.

- 2.1.19 The proposal will see the deliver a 2FE primary school onsite as well as a nursery school to serve the primary educational demand arising from the proposed core residential element. This will reduce the requirement to travel outside of the site by private car for escorted education journeys with these journeys being contained onsite.
- 2.1.20 The new primary school is anticipated to absorb the vast majority of primary education-related trips forecast onsite. Whilst the primary school would also have some staff journeys to and from the site it is considered that these are more likely to be outside of the typical peak hours.
- 2.1.21 However, as a robust case, it is assumed that 90% of the forecast primary school trips will be internal journeys associated with residents of the new development, with the remaining 10% being external to allow some incoming trips made by pupils and staff who live offsite.
- 2.1.22 The resultant deduction in vehicle trips for the primary school is set out below. The equivalent amount of residential trips has also been deducted from the forecast escorted education trips in the opposing direction as shown in **Table 4.6** below.

Internal Education Journeys	AM Pe	ak (08:00-	09:00)	PM Peak (17:00-18:00)			
	IN	OUT	Total	IN	OUT	Total	
Primary School	-122	-95	-216	-8	-13	-21	
Residential - Escort Education	-95	-122	-216	-13	-8	-21	

# Local Centre Adjustment

2.1.23 It can be seen from **Table 4.3** that Personal Business provides a high proportion of the main journey purpose during the reviewed peak hours, equating to 22% in both the AM Peak and PM peak. Personal Business is defined within the "Notes and Definitions" July 2018 release note relating to the NTS as:

"Visits to services, e.g. hairdressers, launderettes, dry cleaners, betting shops, solicitors, banks, estate agents, libraries, churches or for medical consultation or treatment; or for eating and drinking, unless the main purpose was entertainment or social."

2.1.24 It is evident that the local centre would provide a number of these types of services and whilst not all personal business uses may be covered by this centre it is considered reasonable to apply a 25% reduction in the forecast Personal Business-related journeys as shown in Table 4.4 to account for potential internalisation in relation to this proposed use. This reduction is summarised in **Table 4.7** below.

Personal Business	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)			
	IN	OUT	Total	IN	OUT	Total	
Residential	-22	-59	-81	-57	-30	-87	

Table 4.7– Vehicle Traffic Adjustments for Internal Personal Business Trips

- 2.1.25 In addition, it also noted that the Local Centre would also include a convenience shopping element catering to the day-to-day local requirements of the proposed new community. On this basis further adjustments have also been undertaken to take account of this specific use.
- 2.1.26 It can be seen from **Table 4.3** that shopping comprises a proportion of the main journey purpose during the reviewed peak hours, equating to 5% in the AM peak and 13% within the PM.

- 2.1.27 Retail trips in the morning peak are likely to consist of more convenience-based journeys (e.g. to pick up day to day food products) and therefore it is likely that the nearby local centre would account for the most part all of the shopping journeys (i.e. the full 5% as outlined within the NTS). However, evening journeys would most likely encompass a broader range of shopping journeys which means that lower proportion of all shopping journeys would be convenience based in this peak (i.e. lower than the 13% as identified with the NTS).
- 2.1.28 On this basis it is considered reasonable and robust to assume a 5% reduction be applied to vehicle journeys in both peaks to take account of the fact that journeys for convenience shopping can be undertaken within the site. This reduction is summarised in **Table 4.8** below.

Shopping	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)			
	IN	OUT	Total	IN	OUT	Total	
Reduction	-19	-52	-72	-50	-26	-77	

Table 4.8 – Vehicle Traffic Adjustments for Internal	. Shopping T	rips
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### Convenience Store

- 2.1.29 The 1,000sq.m convenience store is primarily proposed to serve the needs of the future residents of the proposed development. However, it has been agreed that 15% of the store's trips should be considered as pass-by trips.
- 2.1.30 The TRICS database has been interrogated using category 01 O (Convenience Store) with the TRICS output report attached at **Appendix A. Table 4.9** sets out the number of pass-by vehicle trips associated with 15% of the total trip generation of the convenience store.

Convenience Store	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)			
	IN	OUT	Total	IN	OUT	Total	
15% Pass-by trips	+14	+14	+28	+13	+13	+26	

Table 4.9 – Convenience Store Pass-by Trips

### Innovation and Home Working

2.1.31 It is noted that recent control measures introduced nationally as a result of the Covid 19 pandemic appear to have resulted in major behavioural change that has resulted in more home working that is likely to result in subsequent permanent long-term changes even after these measures are lifted. These changes in travel pattern are discussed in the Royal Town Planning Institute document titled "Plan the World We Need", which was released in June 2020. Section 3.1 states the following:

"...In the UK during April, 39% of those in employment reported working only from home, while 6% both worked from home and travelled to work. This contrasts with 5% of the workforce who reported working mainly from home during 2019..."

2.1.32 The Department for Transport (DfT), in conjunction with Ipsos MORI, published 'All change? Travel tracker – Wave 1 summary for the Department for Transport' in June 2020. This summary document presents analysis and headline figures from a UK-wide survey commissioned by the DfT and undertaken during May-June 2020. The survey explored whether participants would use more sustainable travel or return to pre-lockdown travel and made the following statement in this regard:

"Thinking about the future more generally, the survey suggests that there could be some positive behavioural impacts from a sustainability perspective. There is a high degree of self-reported willingness to change behaviour in response to the long-term threat. Many say they are willing to do a range of things to reduce their contribution to climate change, reflecting a recognition that the long-term posed by climate change is as serious as coronavirus in the long-term (63% agree, 15% disagree)".

- 2.1.33 It is also evident that there would likely be more changes in future years as technology, society and business continues to evolve. This is particularly evident for the Oxfordshire economy which is home to a significant number of research & development and technology companies that present more opportunity for home working than traditional industries.
- 2.1.34 Properties within the community would be designed to capitalise on these changes so that home working is possible through the use of enhanced telecommunications and the establishment of appropriate work areas within each property and areas to support recreation. In addition, co working space can also be provided within the Local Community Centre for residents of the development to use.
- 2.1.35 In addition, the 2020 Home Working Database by Local Authority indicates that when asking people where their main place of work in 'normal times' is, approximately 15% of the population who live in the District stated that they mainly work from home.
- 2.1.36 To account for the impact of these innovations and the subsequent introduction of properties designed to cater for these future changes it is proposed that a reduction factor of 10% be applied to the employment traffic generation as set out in **Table 4.2** as well as the forecast Commuting and Business trips for residential development as set out in **Table 4.4**.
- 2.1.37 This level of adjustment is in accordance with the "Innovation and Homeworking" trip adjustment agreed with Oxfordshire County Council (OCC) for the Oxfordshire Garden Village to the north of Eynsham (i.e. as set out in paragraph 6.9.8 of the TA produced by Stantec in relation to these proposals). The subsequent reduction in terms of trip numbers is summarised in **Table 4.10** below.

Innovation and Home	AM Pe	ak (08:00-	09:00)	PM Peak (17:00-18:00)		
Working	IN	OUT	Total	IN	OUT	Total
Employment Reduction	-1	0	-1	0	-1	-1
Residential Reduction	-14	-39	-53	-44	-23	-66

Table 4.10 -	Calculated	"Innovation	and Home	vorking"	vehicle adjustment.
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## **Behavioural Change**

- 2.1.38 A robust site overarching Travel Plan will also be introduced at the development to reduce the reliance on solo-car journeys and thus to accomplish a positive mode shift from car travel to other sustainable modes. This travel plan will include measures to encourage sustainable travel behaviour from the point of occupation.
- 2.1.39 Sustainable travel connections linking with the existing pedestrian and cycling network in the local area will be provided across the site. The spine road will also include appropriate walking and cycling links along its length that will feed into the various residential streets that will also include appropriate connections for these modes. The walking and cycle routes will enhance travel via active modes thereby contributing to the wellbeing of the future occupants.
- 2.1.40 High quality public transport connections will also be facilitated (to connect the proposals with the centre of Bicester). The provision of this bus connection within the proposals would ensure that the majority of properties are located within 400m access of a frequent bus service. Details of these proposals will be provided following further discussion with OCC.
- 2.1.41 A mobility hub will be incorporated into the proposed Local Centre. It could include infrastructure such as electric bike/scooter hire facilities, car club vehicle(s), electric vehicle charging points, storage lockers for home deliveries and sustainable travel information
- 2.1.42 Various tangible measures will enable significant behavioural change. This is emphasised within the "Essential Guide to Travel Planning" document published by the Department for Transport in March 2008, which states that:

"Good travel plans have typically succeeded in cutting the number of people driving to work by 15%"

- 2.1.43 Notwithstanding, these measures are also likely to have a similar impact on other journey purposes.
- 2.1.44 In light of the above, it is reasonable to assume that by delivering appropriately sustainable travel infrastructure as well as targeted travel plan measures, a mode shift of 15% away from car usage can be achieved.
- 2.1.45 Applying the proposed mode shift to the forecast generation as set out in **Table 4.2**, the reduction in vehicle movements is summarised in **Table 4.11** below.

Behaviour Change	AM F	Peak (08:00	0-09:00)	PM Peak (17:00-18:00)			
benaviour enange	IN	OUT	Total	IN	OUT	Total	
Employment Reduction	-1	0	-1	0	-1	-1	
Residential Reduction	-58	-157	-216	-151	-79	-230	

Table 4.11 – Adjustment due to behavioural change as a result of travel plan measures

# External Traffic Generation

2.1.46 The calculated adjustments shown in **Table 4.5**, **Table 4.6**, **Table 4.7**, **Table 4.8**, **Table 4.9**, **Table 4.10** and **Table 4.11** have been subtracted from the trip generation forecast in **Table 4.2**. The resultant figures which are shown in **Table 4.12** represent the total development traffic volume on the external network. These traffic figures would therefore be used as the basis of future traffic models for the proposals.

		AM Peak		PM Peak		
External Traffic	IN	OUT	Total	IN	OUT	Total
Residential	180	618	798	692	360	1051
Employment	3	1	4	1	3	4
Primary School	14	11	24	1	1	2
Convenience Store	14	14	28	13	13	26
Total	210	644	854	706	377	1083

Table 4.12 – Residual External Traffic Generation

## **Comparison Study**

- 2.1.47 The derived external development traffic generation is subsequently compared with the traffic forecast previously considered in the NW Bicester Traffic Model for the site. The assessed traffic volume that would impact on the external highway network is abstracted from the original TA submitted in support for the 2014 scheme.
- 2.1.48 It is noted that the proposed residential dwellings (3,100 units) on HLM's site only account for 85% of the total housing provision (3,650 units) that is envisaged at land to the north of the railway line. And hence an adjustment of 85% is applied to the previously assessed external traffic impact and the consequent comparison study is shown in **Table 4.12** below.

Forecast External Traffic for the	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Site	IN	OUT	Total	IN	OUT	Total
NW Bicester Model 2014 TA	303	618	921	596	430	1026

New Predicted External Development Traffic	210	644	854	706	377	1083
Difference	-93	26	-67	110	-53	57

Table 4.12 – Comparison Study on Forecast External Traffic

2.1.49 It is proposed that the trip generation as shown in Table 4.12 is used in the BTM to produce a 'Vision' scenario assessment of the proposed development.

Appendix A TRICS Report

Calculation Reference: AUDIT-829401-210720-0727

Land Use	:	02 - EMPLOYMENT		
Category	:	D - INDUSTRIAL ESTATE		
TOTAĽ VEHICLES				

Seled	cted red	nions and areas:	
02		HEAST	
	ES	EAST SUSSEX	2 days
	ΕX	ESSEX	3 days
03	SOUT	H WEST	5
	BR	BRISTOL CITY	2 days
	DV	DEVON	1 days
	WL	WILTSHIRE	1 days
04	EAST	ANGLIA	
	CA	CAMBRIDGESHIRE	1 days
05		MIDLANDS	
	DS	DERBYSHIRE	1 days
	LN	LINCOLNSHIRE	1 days
	NR	NORTHAMPTONSHIRE	1 days
06		MIDLANDS	
	HE	HEREFORDSHIRE	1 days
	WK		4 days
	WM		1 days
07	WO	WORCESTERSHIRE	3 days
07		SHIRE & NORTH LINCOLNSHIRE	1
	NY WY	NORTH YORKSHIRE WEST YORKSHIRE	1 days
08		TH WEST	6 days
08	GM	GREATER MANCHESTER	1 days
	LC	LANCASHIRE	3 days
09	NORT		5 00 33
07	TW	TYNE & WEAR	2 days
10	WALE		2 days
	SW	SWANSEA	2 days
	VG	VALE OF GLAMORGAN	1 days
11	SCOT	LAND	5
	AG	ANGUS	1 days
	FA	FALKIRK	1 days
	FI	FIFE	1 days
			-

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

Primary Filtering selection:

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

Parameter: Actual Range: Range Selected by I	lsor	Gross floor area 1138 to 974258 (units: sqm) 552 to 974258 (units: sqm)	
Parking Spaces Ran		All Surveys Included	
Public Transport Pro	vision:		Include all surveys
Date Range:	01/01	/13 to 01/01/20	
This data displavs t	he rand	ne of survey dates selected. On	lv survevs that were

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	6 days
Tuesday	10 days
Wednesday	5 days
Thursday	10 days
Friday	10 days

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

<u>Selected survey types:</u>	
Manual count	41 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.

<u>Selected Locations:</u>	
Suburban Area (PPS6 Out of Centre)	13
Edge of Town	28

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:	
Industrial Zone	21
Commercial Zone	1
Development Zone	2
Residential Zone	8
Out of Town	2
No Sub Category	7

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:

<u>Use Class:</u> Not Known

41 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®.

<u>Filter by Site Operations Breakdown:</u> All Surveys Included

<u>Population within 500m Range:</u> All Surveys Included Page 2

Population within 1 mile:	
1,001 to 5,000	1 days
5,001 to 10,000	8 days
10,001 to 15,000	9 days
15,001 to 20,000	6 days
20,001 to 25,000	5 days
25,001 to 50,000	11 days
50,001 to 100,000	1 days

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

Population within 5 miles:	
25,001 to 50,000	4 days
50,001 to 75,000	2 days
75,001 to 100,000	5 days
100,001 to 125,000	3 days
125,001 to 250,000	18 days
250,001 to 500,000	7 days
500,001 or More	2 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	17 days
1.1 to 1.5	22 days
1.6 to 2.0	2 days

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

# Travel Plan:

No

41 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.

<u>PTAL Rating:</u> No PTAL Present

41 days

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

Tuesday 20/07/21 Page 3

Licence No: 829401

Tuesday 20/07/21

Licence No: 829401

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## JUBB Consulting Engineers Excelsior Road, Western Avenue Cardiff

LIST OF SITES relevant to selection parameters

1	AG-02-D-02 INDUSTRIAL ESTATE A933 WESTWAY ARBROATH HOSPITALFIELD	Ξ	ANGUS
2	Edge of Town No Sub Category Total Gross floor area: <i>Survey date: TUESDAY</i> BR-02-D-04 INDUSTRIAL ESTATE CROFTS END ROAD BRISTOL	78500 sqm <i>25/04/17</i> E	<i>Survey Type: MANUAL</i> BRISTOL CITY
3	SPEEDWELL Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: Survey date: FRIDAY BR-02-D-05 INDUSTRIAL ESTATE NOVERS HILL	18018 sqm <i>29/11/13</i> E	<i>Survey Type: MANUAL</i> BRISTOL CITY
4	BRISTOL BEDMINSTER Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: Survey date: FRIDAY CA-02-D-04 INDUSTRIAL ESTATE LINCOLN ROAD	18128 sqm <i>29/11/13</i> E	<i>Survey Type: MANUAL</i> CAMBRI DGESHI RE
5	PETERBOROUGH Suburban Area (PPS6 Out of Centre) No Sub Category Total Gross floor area: <i>Survey date: TUESDAY</i> DS-02-D-02 INDUSTRIAL ESTATE SHAFTESBURY STREET	4133 sqm <i>02/12/14</i> E	<i>Survey Type: MANUAL</i> DERBYSHI RE
6	DERBY ROSE HILL Suburban Area (PPS6 Out of Centre) No Sub Category Total Gross floor area: Survey date: WEDNESDAY DV-02-D-07 INDUSTRIAL ESTATE BITTERN ROAD EXETER	5686 sqm <i>25/09/19</i> E	<i>Survey Type: MANUAL</i> DEVON
7	SOWTON IND. ESTATE Edge of Town Industrial Zone Total Gross floor area: <i>Survey date: MONDAY</i> ES-02-D-06 INDUSTRIAL ESTATE COURTLANDS ROAD	3600 sqm <i>03/07/17</i>	<i>Survey Type: MANUAL</i> EAST SUSSEX
8	EASTBOURNE Edge of Town Residential Zone Total Gross floor area: <i>Survey date: MONDAY</i> ES-02-D-07 HUGHES ROAD BRIGHTON	7525 sqm <i>21/10/13</i> E	<i>Survey Type: MANUAL</i> EAST SUSSEX
	Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: Survey date: THURSDAY	6625 sqm <i>16/10/14</i>	Survey Type: MANUAL

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JUBB Consulting Engineers Excelsior Road, Western Avenue Cardiff

LIST OF SITES relevant to selection parameters (Cont.)

<u>LIST</u>	OF SITES relevant to selection parameters (Cont.)	
9	EX-02-D-03 INDUSTRIAL ESTATE WYNCOLLS ROAD COLCHESTER SEVERALLS INDUSTRIAL PK Edge of Town Industrial Zone Total Gross floor area: 4876 sqm	ESSEX
10	<i>Survey date: FRIDAY 18/05/18</i> EX-02-D-04 INDUSTRIAL ESTATE PASTURE ROAD WITHAM	<i>Survey Type: MANUAL</i> ESSEX
11	Edge of Town Industrial Zone Total Gross floor area: 37130 sqm <i>Survey date: THURSDAY</i> 10/05/18 EX-02-D-05 INDUSTRIAL ESTATE HECKWORTH CLOSE COLCHESTER SEVERALLS INDUSTRIAL PK	<i>Survey Type: MANUAL</i> ESSEX
12	Edge of Town Industrial Zone Total Gross floor area: 7280 sqm <i>Survey date: FRIDAY</i> 18/05/18 FA-02-D-02 INDUSTRIAL ESTATE MAIN STREET FALKIRK GRAHAMSTON Suburban Area (PPS6 Out of Centre)	<i>Survey Type: MANUAL</i> FALKIRK
13	Residential Zone Total Gross floor area: 21250 sqm <i>Survey date: THURSDAY 30/05/13</i> FI-02-D-01 INDUSTRIAL ESTATE DICKSON STREET DUNFERMLINE	<i>Survey Type: MANUAL</i> FIFE
14	Edge of Town Residential Zone Total Gross floor area: 7850 sqm <i>Survey date: THURSDAY 21/05/15</i> GM-02-D-07 BUSI NESS PARK VULCAN STREET OLDHAM	<i>Survey Type: MANUAL</i> GREATER MANCHESTER
15	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: 4400 sqm <i>Survey date: THURSDAY 22/10/15</i> HE-02-D-02 BUSI NESS PARK BURCOTT ROAD HEREFORD	<i>Survey Type: MANUAL</i> HEREFORDSHIRE
16	Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: 5214 sqm <i>Survey date: TUESDAY 22/10/13</i> LC-02-D-06 INDUSTRIAL ESTATE SMALLSHAW LANE BURNLEY	<i>Survey Type: MANUAL</i> LANCASHI RE
17	Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: 7383 sqm <i>Survey date: THURSDAY 29/09/16</i> LC-02-D-07 INDUSTRIAL ESTATE CHAIN CAUL WAY PRESTON ASHTON-ON-RIBBLE	<i>Survey Type: MANUAL</i> LANCASHI RE
	Edge of Town Industrial Zone Total Gross floor area: 4700 sqm <i>Survey date: FRIDAY</i> 17/11/17	Survey Type: MANUAL

# LIST OF SITES relevant to selection parameters (Cont.)

18	LC-02-D-08 NOOK LANE BAMBER BRIDGE	INDUSTRIAL ESTATE	5	LANCASHI RE
19		ea: - <i>TUESDAY</i> - INDUSTRIAL ESTATE	4000 sqm <i>06/11/18</i>	<i>Survey Type: MANUAL</i> LINCOLNSHIRE
20	Edge of Town Industrial Zone Total Gross floor are <i>Survey date:</i> NR-02-D-01 ROBINSON WAY KETTERING		11265 sqm <i>28/06/19</i>	<i>Survey Type: MANUAL</i> NORTHAMPTONSHI RE
21	Edge of Town Industrial Zone Total Gross floor are <i>Survey date:</i> NY-02-D-02 RACECOURSE ROAD RICHMOND	<i>THURSDAY</i> INDUSTRIAL ESTATE	12900 sqm <i>23/10/14</i>	<i>Survey Type: MANUAL</i> NORTH YORKSHI RE
22	SW-02-D-01 UPPER FOREST WAY SWANSEA SWANSEA ENTERPR	<i>TUESDAY</i> INDUSTRIAL ESTATE	35183 sqm <i>12/03/19</i>	<i>Survey Type: MANUAL</i> SWANSEA
23	SW-02-D-02 CLARION COURT SWANSEA SWANSEA ENTERPR	<i>WEDNESDAY</i> INDUSTRIAL ESTATE	6822 sqm <i>09/10/19</i>	<i>Survey Type: MANUAL</i> SWANSEA
24	Edge of Town Industrial Zone Total Gross floor are <i>Survey date:</i> TW-02-D-07 SWALWELL BANK GATESHEAD WHICKHAM		5280 sqm <i>10/10/19</i>	<i>Survey Type: MANUAL</i> TYNE & WEAR
25	Edge of Town Residential Zone Total Gross floor are <i>Survey date:</i> TW-02-D-08 NORTH HYLTON RO/ SUNDERLAND SOUTHWICK	<i>FRIDAY</i> INDUSTRIAL ESTATE	6800 sqm <i>04/10/13</i>	<i>Survey Type: MANUAL</i> TYNE & WEAR
	Suburban Area (PPS Development Zone Total Gross floor are <i>Survey date:</i>	ea:	8310 sqm <i>04/04/17</i>	Survey Type: MANUAL

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# LIST OF SITES relevant to selection parameters (Cont.)

<u>26</u>	VG-02-D-01 INDUSTRIAL ESTATE ARTHUR STREET BARRY	VALE OF GLAMORGAN
27	Edge of Town No Sub Category Total Gross floor area: 13091 sqm <i>Survey date: MONDAY 08/05/17</i> WK-02-D-01 INDUSTRIAL ESTATE CASTLE MOUND WAY RUGBY	<i>Survey Type: MANUAL</i> WARWICKSHIRE
28	Edge of Town Industrial Zone Total Gross floor area: 150564 sqm <i>Survey date: WEDNESDAY 27/06/18</i> WK-02-D-02 INDUSTRIAL ESTATE OVERVIEW WAY RUGBY	<i>Survey Type: MANUAL</i> WARWICKSHIRE
29	Edge of Town Industrial Zone Total Gross floor area: 974258 sqm <i>Survey date: WEDNESDAY 27/06/18</i> WK-02-D-03 INDUSTRIAL ESTATE EASTBORO WAY NUNEATON	<i>Survey Type: MANUAL</i> WARWICKSHIRE
30	Edge of Town Industrial Zone Total Gross floor area: 20860 sqm <i>Survey date: THURSDAY 26/09/19</i> WK-02-D-04 INDUSTRIAL ESTATE ABELES WAY ATHERSTONE	<i>Survey Type: MANUAL</i> WARWICKSHIRE
31	Edge of Town No Sub Category Total Gross floor area: 17500 sqm <i>Survey date: FRIDAY 27/09/19</i> WL-02-D-02 INDUSTRIAL ESTATE HEADLANDS GROVE SWINDON	<i>Survey Type: MANUAL</i> WILTSHIRE
32	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: 10000 sqm <i>Survey date: TUESDAY 20/09/16</i> WM-02-D-03 INDUSTRIAL ESTATE JUNCTION ROAD STOURBRIDGE AUDNAM	<i>Survey Type: MANUAL</i> WEST MIDLANDS
33	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: 1138 sqm <i>Survey date: TUESDAY 28/11/17</i> WO-02-D-01 INDUSTRIAL ESTATE SANDY LANE STOURPORT-ON-SEVERN	<i>Survey Type: MANUAL</i> WORCESTERSHIRE
34	Edge of Town Commercial Zone Total Gross floor area: 2758 sqm <i>Survey date: FRIDAY 23/05/14</i> WO-02-D-02 INDUSTRIAL ESTATE WEIR LANE WORCESTER	<i>Survey Type: MANUAL</i> WORCESTERSHI RE
	Edge of Town Residential Zone Total Gross floor area: 9500 sqm <i>Survey date: MONDAY</i> 14/11/16	Survey Type: MANUAL

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LIST OF SITES relevant to selection parameters (Cont.)

35	WO-02-D-03 INDUSTRIAL ESTATE MILLENNIUM WAY EVESHAM	WORCESTERSHI RE
36	Edge of Town Out of Town Total Gross floor area: 84575 sqm <i>Survey date: TUESDAY 26/06/18</i> WY-02-D-03 INDUSTRIAL ESTATE	<i>Survey Type: MANUAL</i> WEST YORKSHI RE
50	ARMLEY ROAD LEEDS	WEST FORGERINE
	Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: 24980 sqm	
37	Survey date: FRIDAY 20/09/13 WY-02-D-04 INDUSTRIAL ESTATE LAW STREET CLECKHEATON	<i>Survey Type: MANUAL</i> WEST YORKSHIRE
	Edge of Town Industrial Zone Total Gross floor area: 23226 sqm	
38	Survey date: THURSDAY 15/09/16 WY-02-D-05 INDUSTRIAL ESTATE CARR WOOD ROAD CASTLEFORD	<i>Survey Type: MANUAL</i> WEST YORKSHIRE
	Edge of Town Development Zone Total Gross floor area: 1776 sqm Survey date: MONDAY 22/05/17	Survey Type: MANUAL
39	WY-02-D-06 INDUSTRIAL ESTATE (PART) PIONEER WAY CASTLEFORD	WEST YORKSHIRE
	Edge of Town Industrial Zone Total Gross floor area: 4328 sqm	
40	Survey date: TUESDAY 23/05/17 WY-02-D-07 INDUSTRIAL ESTATE THUNDERHEAD RIDGE RD CASTLEFORD GLASSHOUGHTON	<i>Survey Type: MANUAL</i> WEST YORKSHIRE
	Edge of Town No Sub Category Total Gross floor area: 3191 sqm	
41	Survey date: MONDAY 15/05/17 WY-02-D-08 INDUSTRIAL ESTATE MILL LANE HALIFAX	<i>Survey Type: MANUAL</i> WEST YORKSHIRE
	Edge of Town No Sub Category	
	Total Gross floor area:11305 sqmSurvey date:WEDNESDAY17/10/18	Survey Type: MANUAL
This	section provides a list of all survey sites and days in the selected s	set. For each individual survey site, it

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.

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### TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE TOTAL VEHICLES Calculation factor: 100 sqm BOLD print indicates peak (busiest) period

		ARRIVALS		[	DEPARTURES	•		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	5	9792	0.063	5	9792	0.010	5	9792	0.073
06:00 - 07:00	6	10037	0.141	6	10037	0.033	6	10037	0.174
07:00 - 08:00	41	39621	0.149	41	39621	0.042	41	39621	0.191
08:00 - 09:00	41	39621	0.186	41	39621	0.078	41	39621	0.264
09:00 - 10:00	41	39621	0.139	41	39621	0.093	41	39621	0.232
10:00 - 11:00	41	39621	0.114	41	39621	0.099	41	39621	0.213
11:00 - 12:00	41	39621	0.111	41	39621	0.106	41	39621	0.217
12:00 - 13:00	41	39621	0.114	41	39621	0.129	41	39621	0.243
13:00 - 14:00	41	39621	0.131	41	39621	0.116	41	39621	0.247
14:00 - 15:00	41	39621	0.104	41	39621	0.128	41	39621	0.232
15:00 - 16:00	41	39621	0.091	41	39621	0.129	41	39621	0.220
16:00 - 17:00	41	39621	0.086	41	39621	0.164	41	39621	0.250
17:00 - 18:00	41	39621	0.057	41	39621	0.171	41	39621	0.228
18:00 - 19:00	41	39621	0.038	41	39621	0.069	41	39621	0.107
19:00 - 20:00	6	10037	0.098	6	10037	0.148	6	10037	0.246
20:00 - 21:00	6	10037	0.017	6	10037	0.070	6	10037	0.087
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.639			1.585			3.224

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:1138 - 974258 (units: sqm)Survey date date range:01/01/13 - 01/01/20Number of weekdays (Monday-Friday):41Number of Saturdays:0Number of Sundays:0Surveys automatically removed from selection:0Surveys 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.

Calculation Reference: AUDIT-829401-210308-0328

### TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use	:	03 - RESIDENTIAL
Category	:	B - AFFORDABLE/LOCAL AUTHORITY HOUSES
TOTAL V		

Selea	cted red	gions and areas:	
03	SOUT	TH WEST	
	WL	WILTSHIRE	1 days
07	YORK	(SHI RE & NORTH LI NCOLNSHI RE	
	WY	WEST YORKSHIRE	3 days
80	NOR	TH WEST	
	СН	CHESHIRE	1 days
	GM	GREATER MANCHESTER	1 days
	MS	MERSEYSIDE	1 days
09	NOR	ГН	
	NB	NORTHUMBERLAND	1 days
11	SCOT	LAND	
	DU	DUNDEE CITY	1 days

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

#### Primary Filtering selection:

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

Parameter:	No of Dwellings
Actual Range:	16 to 97 (units: )
Range Selected by User:	11 to 516 (units: )

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision: Selection by:

Include all surveys

Date Range: 01/01/12 to 19/10/18

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.

<u>Selected survey days:</u>	
Monday	2 days
Tuesday	3 days
Wednesday	1 days
Thursday	1 days
Friday	2 days

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

<u>Selected survey types:</u>	
Manual count	9 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.

> 4 5

7

1

1

<u>Selected Locations:</u>	
Suburban Area (PPS6 Out of Centre)	
Edge of Town	

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.

<u>Selected Location Sub Categories:</u> Residential Zone Built-Up Zone No Sub Category

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

9 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®.

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Population within 500m Range:	
All Surveys Included	
Population within 1 mile:	
1,001 to 5,000	1 days
5,001 to 10,000	3 days
10,001 to 15,000	1 days
15,001 to 20,000	2 days
25,001 to 50,000	2 days

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

Population within 5 miles:	
5,001 to 25,000	1 days
25,001 to 50,000	1 days
75,001 to 100,000	2 days
125,001 to 250,000	4 days
250,001 to 500,000	1 days

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

Car ownership within 5 miles:	
0.6 to 1.0	6 days
1.1 to 1.5	3 days

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

Travel Plan:

No

9 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

9 days

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

LIST OF SITES relevant to selection parameters

LIST	OF SITES relevant to selection parameters		
1	CH-03-B-01 HOUSES & FLATS WORDSWORTH CRES.		CHESHIRE
	CHESTER BLACON Edge of Town Residential Zone Total No of Dwellings:	80	
2	Survey date: MONDAY DU-03-B-01 TERRACED BUNGALOV 307-441 BALUNIE DRIVE DUNDEE DOUGLAS & ANGUS Suburban Area (PPS6 Out of Centre)	<i>17/11/14</i> VS	<i>Survey Type: MANUAL</i> DUNDEE CITY
3	Residential Zone Total No of Dwellings: <i>Survey date: FRIDAY</i> GM-03-B-01 TERRACED HOUSES NEWBOLD	68 <i>21/04/17</i>	<i>Survey Type: MANUAL</i> GREATER MANCHESTER
4	ROCHDALE Suburban Area (PPS6 Out of Centre) No Sub Category Total No of Dwellings: <i>Survey date: WEDNESDAY</i> MS-03-B-01 TARBOCK ROAD LIVERPOOL	43 <i>21/10/15</i>	<i>Survey Type: MANUAL</i> MERSEYSI DE
5	SPEKE Edge of Town Residential Zone Total No of Dwellings: <i>Survey date: TUESDAY</i> NB-03-B-01 SEMI DET. & TERRACE WESTLEA BEDLINGTON	16 <i>18/06/13</i> D	<i>Survey Type: MANUAL</i> NORTHUMBERLAND
6	Edge of Town Residential Zone Total No of Dwellings: <i>Survey date: MONDAY</i> WL-03-B-01 TERRACED HOUSES BUTTERFIELD DRIVE AMESBURY	97 <i>19/11/12</i>	<i>Survey Type: MANUAL</i> WILTSHIRE
7	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: <i>Survey date: TUESDAY</i> WY-03-B-02 MI XED HOUSES WHITEACRE STREET HUDDERSFIELD DEIGHTON	54 <i>18/09/18</i>	<i>Survey Type: MANUAL</i> WEST YORKSHIRE
8	Edge of Town Residential Zone Total No of Dwellings: <i>Survey date: TUESDAY</i> WY-03-B-03 TERRACED HOUSES LINCOLN GREEN ROAD LEEDS	54 1 <i>7/09/13</i>	<i>Survey Type: MANUAL</i> WEST YORKSHIRE
9	Suburban Area (PPS6 Out of Centre) Built-Up Zone Total No of Dwellings: <i>Survey date: THURSDAY</i> WY-03-B-04 SYKES CLOSE BATLEY	29 1 <i>9/09/13</i>	<i>Survey Type: MANUAL</i> WEST YORKSHIRE
	Edge of Town Residential Zone Total No of Dwellings: <i>Survey date: FRIDAY</i>	17 <i>19/10/18</i>	Survey Type: MANUAL

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

### TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES TOTAL VEHICLES Calculation factor: 1 DWELLS BOLD print indicates peak (busiest) period

	ARRIVALS		DEPARTURES			TOTALS			
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	DWELLS	Rate	Days	DWELLS	Rate	Days	DWELLS	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	9	51	0.076	9	51	0.159	9	51	0.235
08:00 - 09:00	9	51	0.162	9	51	0.277	9	51	0.439
09:00 - 10:00	9	51	0.162	9	51	0.227	9	51	0.389
10:00 - 11:00	9	51	0.155	9	51	0.164	9	51	0.319
11:00 - 12:00	9	51	0.138	9	51	0.140	9	51	0.278
12:00 - 13:00	9	51	0.177	9	51	0.138	9	51	0.315
13:00 - 14:00	9	51	0.162	9	51	0.148	9	51	0.310
14:00 - 15:00	9	51	0.177	9	51	0.188	9	51	0.365
15:00 - 16:00	9	51	0.240	9	51	0.181	9	51	0.421
16:00 - 17:00	9	51	0.266	9	51	0.166	9	51	0.432
17:00 - 18:00	9	51	0.275	9	51	0.203	9	51	0.478
18:00 - 19:00	9	51	0.170	9	51	0.142	9	51	0.312
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.160			2.133			4.293

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:	16 - 97 (units: )
Survey date date range:	01/01/12 - 19/10/18
Number of weekdays (Monday-Friday):	9
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.

CS 7.8.4	4 211221 B20.35 Database right of TRICS Cons	sortium Limited, 2022.	All rights reserved	Wednesday 16/02/2 Page
B Consul	ting Engineers Excelsior Road, Western Avenue	e Cardiff		Licence No: 82940
		(	Calculation Reference: A	AUDIT-829401-220216-020
TRI	P RATE CALCULATION SELECTION PARAMETI	ERS:		
Land	Use : 04 - EDUCATION			
Cate	egory : A - PRIMARY			
TO	TĂĽ VEHICLES			
Sele	ected regions and areas:			
02	SOUTH EAST			
	HC HAMPSHIRE	1 days		
03	SOUTH WEST	·		
	BR BRISTOL CITY	1 days		
	CW CORNWALL	1 days		
05	EAST MIDLANDS			
	DS DERBYSHIRE	1 days		
	LE LEICESTERSHIRE	1 days		
	NR NORTHAMPTONSHIRE	1 days		
06	WEST MIDLANDS			
	WM WEST MIDLANDS	1 days		
07	YORKSHIRE & NORTH LINCOLNSHIRE	3		
	WY WEST YORKSHIRE	2 days		
08	NORTH WEST	3		
	CH CHESHIRE	1 days		
	GM GREATER MANCHESTER	1 days		
09	NORTH	3		
	TW TYNE & WEAR	1 days		
10	WALES	3		
	CF CARDIFF	1 days		
	MT MERTHYR TYDFIL	1 days		
11	SCOTLAND	5		
	EB CITY OF EDINBURGH	1 days		

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

### Primary Filtering selection:

FALKIRK

FA

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.

1 days

Parameter:	Number of pupils
Actual Range:	184 to 621 (units: )
Range Selected by User:	79 to 621 (units: )

Parking Spaces Range: All Surveys Included

Public Transport Provision: Selection by:

Include all surveys

Date Range: 01/01/13 to 25/11/19

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>	
Monday	6 days
Tuesday	3 days
Thursday	5 days
Friday	2 days

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

Selected survey types:	
Manual count	16 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.

> 7 9

<u>Selected Locations:</u>	
Suburban Area (PPS6 Out of Centre)	
Edge of Town	

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

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:

<u>Use Class:</u>

F1(a)

16 days

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

Population within 500m Range:	
All Surveys Included	
Population within 1 mile:	
1,001 to 5,000	1 days
5,001 to 10,000	3 days
10,001 to 15,000	1 days
15,001 to 20,000	6 days
20,001 to 25,000	2 days
25,001 to 50,000	3 days

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

Population within 5 miles:	
50,001 to 75,000	2 days
75,001 to 100,000	1 days
125,001 to 250,000	3 days
250,001 to 500,000	8 days
500,001 or More	2 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	7 days
1.1 to 1.5	9 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.

<u>Travel Plan:</u>	
Yes	2 days
No	14 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.

<u>PTAL Rating:</u> No PTAL Present

16 days

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

3 Consul	ting Engineers Excelsior Road, Western Av	enue Cardiff	Licence No: 829
LIS	T OF SITES relevant to selection parameters		
1	BR-04-A-01 PRIMARY SCHOOL SCHOOL CLOSE BRISTOL WHITCHURCH Edge of Town Residential Zone	200	BRI STOL CI TY
	Total Number of pupils: Survey date: TUESDAY	208 <i>22/09/15</i>	Survey Type: MANUAL
2	CF-04-A-01 PRIMARY SCHOOL AEL-Y-BRYN CARDIFF LLANEDEYRN Suburban Area (PPS6 Out of Centre) Residential Zone		CARDIFF
	Total Number of pupils: Survey date: FRIDAY	194 <i>05/05/17</i>	Survey Type: MANUAL
3	CH-04-A-01 PRIMARY SCHOOL WESTON GROVE CHESTER UPTON Edge of Town Residential Zone		CHESHIRE
	Total Number of pupils:	219	
4	Survey date: MONDAY CW-04-A-03 PRIMARY ACADEMY TREVERBYN RISE PENRYN	, 17/11/14	<i>Survey Type: MANUAL</i> CORNWALL
5	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of pupils: <i>Survey date: THURSDAY</i> DS-04-A-01 PRIMARY SCHOOL VICARAGE ROAD DERBY MICKLEOVER	440 <i>28/03/19</i>	<i>Survey Type: MANUAL</i> DERBYSHIRE
6	Edge of Town Residential Zone Total Number of pupils: <i>Survey date: THURSDAY</i> EB-04-A-01 PRIMARY SCHOOL MAGDALENE DRIVE EDINBURGH	387 <i>25/06/15</i>	<i>Survey Type: MANUAL</i> CITY OF EDINBURGH
7	Edge of Town Residential Zone Total Number of pupils: <i>Survey date: MONDAY</i> FA-04-A-03 PRIMARY SCHOOL	214 <i>23/04/18</i>	<i>Survey Type: MANUAL</i> FALKI RK
8	GLENDEVON DRIVE FALKIRK MADDISTON Edge of Town Residential Zone Total Number of pupils: <i>Survey date: MONDAY</i> GM-04-A-01 PRIMARY SCHOOL ROCH MILLS CRESCENT ROCHDALE	452 <i>03/06/13</i>	<i>Survey Type: MANUAL</i> GREATER MANCHESTER
	Edge of Town Residential Zone Total Number of pupils: <i>Survey date: TUESDAY</i>	457 <i>20/10/15</i>	Survey Type: MANUAL

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JUBB Consult	ting Engineers Excel	lsior Road, Western Aver	nue Cardiff		Licence No: 829401
<u></u>	OF SITES relevant to	selection parameters (Co	<u>ont.)</u>		
9	HC-04-A-05 HAVANT ROAD HAYLING ISLAND	PRIMARY SCHOOL		HAMPSHI RE	
10	Edge of Town Residential Zone Total Number of pup <i>Survey date:</i> LE-04-A-02 BEAUFORT WAY		550 <i>30/11/15</i>	<i>Survey Type: MANUA</i> LEICESTERSHIRE	Z
	LEICESTER OADBY Edge of Town Residential Zone Total Number of pup <i>Survey date:</i>		380 <i>30/10/14</i>	Survey Type: MANUA.	/
11	MT-04-A-01 BRECON ROAD MERTHYR TYDFIL	PRIMARY SCHOOL		MERTHYR TYDFIL	
12	Suburban Area (PPSe Residential Zone Total Number of pup <i>Survey date:</i> NR-04-A-03 BOOTH LANE NORTH NORTHAMPTON	ils: <i>FRIDAY</i> PRIMARY SCHOOL	184 <i>18/10/13</i>	<i>Survey Type: MANUA</i> . NORTHAMPTONSHI RE	Z
13	Suburban Area (PPSe Residential Zone Total Number of pup <i>Survey date:</i> TW-04-A-01 GLYNWOOD GARDEN GATESHEAD	ils: <i>THURSDAY</i> PRIMARY SCHOOL	400 <i>24/03/16</i>	<i>Survey Type: MANUA.</i> TYNE & WEAR	Z
14	Suburban Area (PPSe Residential Zone Total Number of pup <i>Survey date:</i> WM-04-A-02 HAZEL ROAD BIRMINGHAM RUBERY	ils: <i>MONDAY</i>	260 <i>07/10/13</i>	<i>Survey Type: MANUA</i> WEST MIDLANDS	2
15	Edge of Town Residential Zone Total Number of pup <i>Survey date:</i> WY-04-A-01 SHAKESPEARE AVEN LEEDS	<i>TUESDAY</i> PRIMARY SCHOOL	234 <i>10/11/15</i>	<i>Survey Type: MANUA</i> WEST YORKSHIRE	2
16	Suburban Area (PPSe Residential Zone Total Number of pup <i>Survey date:</i> WY-04-A-02 TOWN STREET LEEDS	ils:	370 <i>19/09/13</i>	<i>Survey Type: MANUA.</i> WEST YORKSHIRE	Z
	Suburban Area (PPSe Residential Zone Total Number of pup <i>Survey date:</i>	ils:	621 <i>19/10/15</i>	Survey Type: MANUA.	2

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

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY TOTAL VEHICLES Calculation factor: 1 PUPILS BOLD print indicates peak (busiest) period

	ARRIVALS		DEPARTURES			TOTALS			
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	PUPILS	Rate	Days	PUPILS	Rate	Days	PUPILS	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	16	348	0.054	16	348	0.021	16	348	0.075
08:00 - 09:00	16	348	0.322	16	348	0.250	16	348	0.572
09:00 - 10:00	16	348	0.039	16	348	0.066	16	348	0.105
10:00 - 11:00	16	348	0.014	16	348	0.012	16	348	0.026
11:00 - 12:00	16	348	0.025	16	348	0.020	16	348	0.045
12:00 - 13:00	16	348	0.028	16	348	0.033	16	348	0.061
13:00 - 14:00	16	348	0.017	16	348	0.021	16	348	0.038
14:00 - 15:00	16	348	0.088	16	348	0.027	16	348	0.115
15:00 - 16:00	16	348	0.186	16	348	0.257	16	348	0.443
16:00 - 17:00	16	348	0.045	16	348	0.079	16	348	0.124
17:00 - 18:00	16	348	0.020	16	348	0.034	16	348	0.054
18:00 - 19:00	15	359	0.009	15	359	0.019	15	359	0.028
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.847			0.839			1.686

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:	184 - 621 (units: )
Survey date date range:	01/01/13 - 25/11/19
Number of weekdays (Monday-Friday):	16
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.

02		
	ES EAST SUSSEX	2 days
	KC KENT	3 days
03	SOUTH WEST	
	DV DEVON	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
06	WEST MIDLANDS	
	ST STAFFORDSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NE NORTH EAST LINCOLNSHIRE	1 days
11	SCOTLAND	
	FA FALKIRK	1 days

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

#### Primary Filtering selection:

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

Parameter: Actual Range: Range Selected by User:	No of Dwellings 110 to 432 (units: ) 100 to 4334 (units: )	)
Parking Spaces Range:	All Surveys Included	
Parking Spaces per Dwelling	g Range: All Surveys	Included
Bedrooms per Dwelling Ran	nge: All Surveys	Included
Percentage of dwellings priv	vately owned:	All Surveys Included
Public Transport Provision: Selection by:		Include all surveys

#### Date Range: 01/01/13 to 31/12/19

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>	
Monday	2 days
Tuesday	1 days
Wednesday	4 days
Friday	3 days

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

<u>Selected survey types:</u>	
Manual count	10 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.

<u>Selected Locations:</u>	
Suburban Area (PPS6 Out of Centre)	
Edge of Town	

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.

3 7

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:

<u>Use Class:</u>

C3

10 days

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

Population within 500m Range:	
All Surveys Included	
Population within 1 mile:	
1,000 or Less	1 days
5,001 to 10,000	1 days
10,001 to 15,000	5 days
15,001 to 20,000	1 days
20,001 to 25,000	2 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	2 days
50,001 to 75,000	3 days
75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	3 days

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

*Car ownership within 5 miles:* 0.6 to 1.0 1.1 to 1.5

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.

<u>Travel Plan:</u> No

10 days

4 days

6 days

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

PTAL Rating: No PTAL Present

10 days

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

	New England and Mashim Association 20, 197	Page
BB Consul	ting Engineers Excelsior Road, Western Avenue Cardiff	Licence No: 82940
<u>LIST</u>	OF SITES relevant to selection parameters	
1	DS-03-A-02 MI XED HOUSES DERBYSHI RE RADBOURNE LANE DERBY DERBY	
2	Edge of Town   Residential Zone   Total No of Dwellings: 371   Survey date: TUESDAY   DV-03-A-02 HOUSES & BUNGALOWS   MILLHEAD ROAD   HONITON	42
3	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 116 <i>Survey date: FRIDAY 25/09/15 Survey Type: MANU</i> ES-03-A-03 MI XED HOUSES & FLATS EAST SUSSEX SHEPHAM LANE POLEGATE	42
4	Edge of Town Residential Zone Total No of Dwellings: 212 <i>Survey date: MONDAY</i> 11/07/16 ES-03-A-04 MI XED HOUSES & FLATS EAST SUSSEX NEW LYDD ROAD CAMBER	42
5	Edge of Town Residential Zone Total No of Dwellings: 134 <i>Survey date: FRIDAY</i> 15/07/16 Survey Type: MANUL FA-03-A-02 MI XED HOUSES FALKI RK ROSEBANK AVENUE & SPRINGFIELD DRIVE FALKIRK	42
6	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 161 <i>Survey date: WEDNESDAY 29/05/13 Survey Type: MANU</i> , KC-03-A-04 SEMI-DETACHED & TERRACED KENT KILN BARN ROAD AYLESFORD DITTON	42
7	Edge of Town Residential Zone Total No of Dwellings: 110 <i>Survey date: FRIDAY 22/09/17 Survey Type: MANU</i> KC-03-A-06 MI XED HOUSES & FLATS KENT MARGATE ROAD HERNE BAY	42
	Suburban Area (PPS6 Out of Centre)Residential ZoneTotal No of Dwellings:363Survey date: WEDNESDAY27/09/17Survey Type: MANU.	42

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3 Consul	ting Engineers Excel	sior Road, Western A	venue Cardiff		Licence No: 82940
LIST	OF SITES relevant to .	selection parameters	(Cont.)		
8	KC-03-A-07 RECULVER ROAD HERNE BAY	MI XED HOUSES		KENT	
	Edge of Town Residential Zone Total No of Dwellings		288 <i>27/09/17</i>	C	
9	NE-03-A-02 HANOVER WALK SCUNTHORPE	WEDNESDAY SEMI DETACHED &		<i>Survey Type: MAN</i> NORTH EAST LINCOL	
	Edge of Town No Sub Category Total No of Dwellings		432	Survey Trace MAN	
10	Survey date: ST-03-A-07 BEACONSIDE STAFFORD MARSTON GATE Edge of Town Residential Zone	MONDAY DETACHED & SEM	<i>12/05/14</i> I -DETACHED	<i>Survey Type: MAN</i> STAFFORDSHIRE	JAL
	Total No of Dwellings	: WEDNESDAY	248 <i>22/11/17</i>	Survey Type: MAND	UAL.

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
WS-03-A-11	Other Land Uses

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

		ARRIVALS		[	DEPARTURES			TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	DWELLS	Rate	Days	DWELLS	Rate	Days	DWELLS	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	10	244	0.072	10	244	0.294	10	244	0.366
08:00 - 09:00	10	244	0.110	10	244	0.365	10	244	0.475
09:00 - 10:00	10	244	0.125	10	244	0.145	10	244	0.270
10:00 - 11:00	10	244	0.117	10	244	0.147	10	244	0.264
11:00 - 12:00	10	244	0.118	10	244	0.138	10	244	0.256
12:00 - 13:00	10	244	0.153	10	244	0.141	10	244	0.294
13:00 - 14:00	10	244	0.151	10	244	0.145	10	244	0.296
14:00 - 15:00	10	244	0.168	10	244	0.161	10	244	0.329
15:00 - 16:00	10	244	0.246	10	244	0.170	10	244	0.416
16:00 - 17:00	10	244	0.280	10	244	0.175	10	244	0.455
17:00 - 18:00	10	244	0.347	10	244	0.155	10	244	0.502
18:00 - 19:00	10	244	0.293	10	244	0.179	10	244	0.472
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.180			2.215			4.395

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:	110 - 432 (units: )
Survey date date range:	01/01/13 - 31/12/19
Number of weekdays (Monday-Friday):	10
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	-1
Surveys manually removed from selection:	1

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.

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	ting Engineers Excelsior Road, Western Avenu	e Cardiff		Licence No: 829401
TRI	P RATE CALCULATION SELECTION PARAMET	ERS:	Calculation Reference:	AUDIT-829401-220525-0546
Lond				
ТОТ	gory : O - CONVENIENCE STORE AL VEHICLES			
Cate TOT <u>Sele</u>	gory : O - CONVENIENCE STORE AL VEHICLES <u>cted regions and areas:</u>			
Cate TOT	gory : O - CONVENIENCE STORE AL VEHICLES <u>cted regions and areas:</u> SOUTH WEST	1 days		
Cate TOT <u>Sele</u> 03	gory : O - CONVENIENCE STORE AL VEHICLES <u>cted regions and areas:</u> SOUTH WEST WL WILTSHIRE	1 days		
Cate TOT <u>Sele</u>	gory : O - CONVENIENCE STORE AL VEHICLES <u>cted regions and areas:</u> SOUTH WEST	5		
Cate TOT <u>Sele</u> 03	gory : O - CONVENIENCE STORE AL VEHICLES <u>cted regions and areas:</u> SOUTH WEST WL WILTSHIRE YORKSHIRE & NORTH LINCOLNSHIRE	1 days 1 days 1 days		
Cate TOT <u>Sele</u> 03	gory : O - CONVENIENCE STORE AL VEHICLES <u>cted regions and areas:</u> SOUTH WEST WL WILTSHIRE YORKSHIRE & NORTH LINCOLNSHIRE NY NORTH YORKSHIRE	1 days		

### Primary Filtering selection:

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

Parameter: Actual Range: Range Selected by l	Jser:	Gross floor area 292 to 539 (units: sqm) 70 to 1200 (units: sqm)			
Parking Spaces Rang	ge:	All Surveys Included			
Public Transport Provision: Selection by:					
Date Range:	01/01,	/14 to 25/09/19			

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.

Include all surveys

<u>Selected survey days:</u>	
Monday	2 days
Friday	2 days

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

<u>Selected survey types:</u>	
Manual count	4 days
Directional ATC Count	0 days

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

<u>Selected Locations:</u>	
Suburban Area (PPS6 Out of Centre)	3
Neighbourhood Centre (PPS6 Local Centre)	1

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

<u>Selected Location Sub Categories:</u> Residential Zone

4

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.

RICS 7.9.1 300322 B20.41 Database right of TRI 20300 Hawkwell Village	CS Consortium Limited, 2022. All rights reserved	Wednesday 25/05/22 Page 2
UBB Consulting Engineers Excelsior Road, Westerr	Avenue Cardiff	Licence No: 829401
Secondary Filtering selection:		
<u>Use Class:</u>		
E(a)	4 days	
This data displays the number of surveys per has been used for this purpose, which can be	Use Class classification within the selected set. The found within the Library module of TRICS®.	he Use Classes Order 2005
Population within 500m Range:		
All Surveys Included		
<u>Population within 1 mile:</u> 5.001 to 10.000	1 days	
10,001 to 15,000	2 days	
25,001 to 50,000	1 days	
This data displays the number of selected sur	veys within stated 1-mile radii of population.	
Population within 5 miles:		
5,001 to 25,000	1 days	
25,001 to 50,000	1 days	
125,001 to 250,000	2 days	
This data displays the number of selected sur	veys within stated 5-mile radii of population.	
Car ownership within 5 miles:		
0.6 to 1.0	3 days	
1.1 to 1.5	1 days	
This data displays the number of selected sur within a radius of 5-miles of selected survey s	veys within stated ranges of average cars owned vites.	per residential dwelling,
Petrol filling station:		
Included in the survey count	0 days	
Excluded from count or no filling station	4 days	
This data displays the number of surveys with	nin the selected set that include petrol filling static	on activity, and the
number of surveys that do not.		-

<u>*Travel Plan:*</u> No

4 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.

<u>PTAL Rating:</u> No PTAL Present

4 days

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

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JUBB Consulting Engineers Excelsior Road, Western Ave	nue Cardiff		Licence No: 829401
LIST OF SITES relevant to selection parameters			
LIST OF SITES TELEVALL to Selection parameters			
1 NY-01-O-03 CO-OPERATIVE FOREST ROAD NORTHALLERTON		NORTH YORKSHIRE	
Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: Survey date: MONDAY	305 sqm <i>19/09/16</i>	Survey Type: MANUA	/
2 TW-01-0-02 CO-OPERATIVE ETHEL TERRACE SUNDERLAND CASTLETOWN	17/07/10	TYNE & WEAR	L
Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: Survey date: FRIDAY	330 sqm <i>07/04/17</i>	Survey Type: MANUA	Z
3 WL-01-O-01 ONE STOP THE CIRCLE SWINDON		WILTSHIRE	
Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: Survey date: FRIDAY	292 sqm <i>23/09/16</i>	Survey Type: MANUA	Z
4 WY-01-O-02 CO-OPERATIVE AINSTY ROAD WETHERBY		WEST YORKSHI RE	
Neighbourhood Centre (PPS6 Local Centre) Residential Zone	500		
Total Gross floor area: Survey date: MONDAY	539 sqm <i>26/09/16</i>	Survey Type: MANUA	1/
This section provides a list of all survey sites and a		5 57	

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

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE TOTAL VEHICLES Calculation factor: 100 sqm BOLD print indicates peak (busiest) period

	ARRIVALS				DEPARTURES	5	TOTALS		
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	2	422	4.265	2	422	4.265	2	422	8.530
07:00 - 08:00	4	367	7.299	4	367	7.094	4	367	14.393
08:00 - 09:00	4	367	9.277	4	367	9.482	4	367	18.759
09:00 - 10:00	4	367	6.276	4	367	5.866	4	367	12.142
10:00 - 11:00	4	367	5.798	4	367	5.525	4	367	11.323
11:00 - 12:00	4	367	4.911	4	367	5.389	4	367	10.300
12:00 - 13:00	4	367	7.162	4	367	6.958	4	367	14.120
13:00 - 14:00	4	367	5.457	4	367	5.321	4	367	10.778
14:00 - 15:00	4	367	5.662	4	367	5.866	4	367	11.528
15:00 - 16:00	4	367	6.548	4	367	6.276	4	367	12.824
16:00 - 17:00	4	367	6.685	4	367	6.617	4	367	13.302
17:00 - 18:00	4	367	8.663	4	367	8.731	4	367	17.394
18:00 - 19:00	4	367	9.891	4	367	9.618	4	367	19.509
19:00 - 20:00	4	367	8.458	4	367	8.254	4	367	16.712
20:00 - 21:00	3	391	3.237	3	391	3.578	3	391	6.815
21:00 - 22:00	3	391	2.215	3	391	2.385	3	391	4.600
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			101.804			101.225			203.029

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:	292 - 539 (units: sqm)
Survey date date range:	01/01/14 - 25/09/19
Number of weekdays (Monday-Friday):	4
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. Appendix B NTS Travel Survey

## **Department for Transport statistics**

National Travel Survey

### Table NTS0502 (edit)

Trip start time by trip purpose (Monday to Friday only): car/van driver only, England, 2015/19

					Percentage					
Start time	Commuting	Business	Education	Escort education	Shopping		Visiting friends / entertainment / sport	Holiday / Day trip / Other	All purposes	Unweighted sample size (trips '000s)
0000 - 0059	50	6	0	1	3	18	22	. 1	100	-
0100 - 0159	69	4	0	1	1	11	13	1	100	-
0200 - 0259	78	4	0	-	3	7	5	3	100	-
0300 - 0359	71	6	0	1	3	11	2	5	100	-
0400 - 0459	75	8	-	-	1	10	2	3	100	1
0500 - 0559	79	7	-	-	1	8	4	1	100	4
0600 - 0659	70	8	-	1	2	12	5	2	100	11
0700 - 0759	58	7	1	8	2	18	4	1	100	28
0800 - 0859	31	6	1	28	5	23	5	2	100	40
0900 - 0959	13	8	1	6	22	29	16	5	100	25
1000 - 1059	5	7	-	1	36	26	18	6	100	25
1100 - 1159	6	7	-	2	37	24	18	5	100	25
1200 - 1259	9	8	-	2	33	23	20	4	100	24
1300 - 1359	14	8	-	1	30	23	20	4	100	23
1400 - 1459	13	6	-	12	27	21	16	5	100	26
1500 - 1559	13	5	1	28	18	19	13	4	100	34
1600 - 1659	30	6	1	6	16	23	14	4	100	34
1700 - 1759	38	5	-	3	13	23	15	3	100	36
1800 - 1859	24	4	-	1	17	23	28	3	100	24
1900 - 1959	13	3	-	-	18	24	38	3	100	16
2000 - 2059	14	4	-	1	16	23	39	3	100	10
2100 - 2159	16	4	-	-	9	22	46	2	100	7
2200 - 2259	25	4	-	-	4	19	46	2	100	5
2300 - 2359	27	4	-	-	4	20	44	1	100	2
All day	24	6	-	8	18	22	17	4	100	402

Five years combined to increase sample size. However some hour/purpose combinations will be based on a small number of trips in the survey and so should be treated with caution.

Telephone: 020 7944 4163 Email: national.travelsurvey@dft.gsi.gov.uk Notes & definitions

The figures in this table are National Statistics

The results presented in this table are weighted. The base (unweighted sample size) is shown in the table for information. Weights are applied to adjust for non-response to ensure the characteristics of the achieved sample match the population of Great Britain (1995-2012) or England (2013 onwards) and for the drop off in trip recording in diary data. The survey results are subject to sampling error.

Source: National Travel Survey