

Belle Homes

Tanworth Lane

Transport Appraisal

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| | Rev |
| 15 February 2017 | Date |



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1.0 INTRODUCTION

1.1 Background

- **1.1.1** PTB Transport Planning Ltd has been commissioned by Belle Homes Ltd to provide transport advice for a potential residential development Tanworth Lane, Shirley.
- **1.1.2** It is intended that the site would provide 54 dwellings; the site location is shown on Figure 1.1.

1.2 Structure and Purpose of the Report

- **1.2.1** This report is intended to provide an initial transport appraisal of the site in potential residential use, including the site access to the proposal. The purpose of the report is to support Local Plan representations for the development in residential use.
- **1.2.2** Following this introduction, the report is set out as follows:
 - Chapter 2 Development Proposals;
 - Chapter 3 Traffic Generation, Distribution and Assignment;
 - Chapter 4 Sustainable Travel;
 - Chapter 5 Summary and Conclusion.

1.3 Limitations of this Report

- **1.3.1** This report has been undertaken at the request of Belle Homes Ltd, thus should not be entrusted to any third party without written permission from PTB Transport Planning Ltd. However, should any information contained within this report be used by any unauthorised third party, it is done so entirely at their own risk and shall not be the responsibility of PTB Transport Planning Ltd.
- **1.3.2** This report has been compiled using data from a number of external sources (such as TRICS and traffic count data); whilst these sources are considered to be trustworthy, PTB Transport Planning Ltd is not responsible for the accuracy of the data provided.



2.0 DEVELOPMENT PROPOSALS

2.1 Planned Developments Nearby

- **2.1.1** Outline planning permission was granted for the Bloor Homes development for up to 220 dwellings (2014/1163/S) with access from Tanworth Lane to the north of the access to the proposal site; the access to the site is in place and a certain number of properties have now been constructed on the site.
- **2.1.2** Subsequently an additional application has been made that would result in 274 dwellings across that site as a whole (BWB Transport Assessment accompanying application PL/2016/02759/PPFL).
- **2.1.3** Although details of the 2014 application are not available on the SMBC website it is clear that SMBC Highways had no objection to the 2014 application, subject to conditions, and neither do they have any objections to the planned additional 54 dwellings.
- **2.1.4** On that basis, it is clear that SMBC are content that the Bloor site could provide safe and suitable access for up to 274 dwellings and that the site is sustainably located.

2.2 The Proposal Site

- **2.2.1** The site is formed of land fronting Tanworth Lane between 587 and 601 Tanworth Lane and also land to the rear of and between 575a and 601 Tanworth Lane. The development site outline is indicated on the plan included as Appendix A. The site would support construction of 54 dwellings.
- **2.2.2** The proposal site would abut the Bloor Homes residential development currently being built out with access from Tanworth Lane to the north of the proposal site.

2.3 Site Access

- **2.3.1** Access is proposed by means of a simple priority junction with Tanworth Lane. The access proposal is indicated on Drawing T17527.001 on an Ordnance Survey base. The drawing has been included to demonstrate the access can be provided, but should not be relied upon for visibility splay measurements.
- **2.3.2** The access would be provided through 587 Tanworth Lane with that dwelling being demolished. Tanworth Lane has a wide footway/verge on the site frontage (5.5m to 6.5m) and this allows for the need for only one property to be demolished to achieve access. The carriageway in this location is about 7.0m and to the north narrows to about 6.4m.



- **2.3.3** The access road has been indicated as a 5.0m carriageway plus two x 2.0m footways. This is more than sufficient to accommodate the proposed development but a 5.5m carriageway could be provided if necessary.
- **2.3.4** On-site observations indicate that forward visibility from the south and visibility to the south from the access is well in excess of that normally associated with a 40mph speed limit.
- **2.3.5** Drivers approaching the access from the north would be able to view the front of a vehicle leaving the access from about 140m from the access. Looking from the site access to the north visibility from a 2.4m setback from the edge of carriageway to the edge of carriageway approaches 120m.

2.4 Accident Data

- **2.4.1** We have investigated the Crashmap database in order to assess whether there are any existing accident issues in the vicinity of the proposed site access.
- **2.4.2** The data for the five-year period 2012 to 2016 indicates that there have been no personal injury accidents (PIAs) reported on the B4102 Tanworth Road on the link between Watery Lane and Lady Lane.
- **2.4.3** The data indicates no PIAs at the junction of the B4102 with Watery Lane in this period and two accidents classified as slight in severity at the junction of the B4102 with Lady Lane.
- **2.4.4** Although all PIAs are regrettable there is no pattern to the accidents observed on the B4102 in the vicinity of the proposed site access and the volume of accidents observed is low.



3.0 TRAFFIC GENERATION, DISTRIBUTION AND ASSIGNMENT

3.1 TRICS Assessment

3.1.1 The traffic generation for the proposed development has been assessed using the TRICS 7.3.3 database and has been carried out in accordance with the TRICS Good Practice Guide (2016).

3.2 TRICS Parameters

- **3.2.1** Within the TRICS assessment work, the following parameters have been used:
 - Sites from Greater London and all Republic of Ireland and Northern Ireland sites removed.
 - Proposed Private Housing use:
 - Range 10 to 50 dwellings;
 - o 34 surveys available in database;
 - o Edge of town centre sites excluded leaving 29 surveys;
 - Seven further surveys removed:
 - DC-03-A-08 as includes bungalows;
 - HC-03-A-17 as includes flats;
 - NF-03-A-01 as includes bungalows;
 - PK-03-A-01 as includes bungalows;
 - SH-03-A-06 as includes bungalows;
 - WK-03-A-02 as includes bungalows; and
 - WS-03-A-05 as includes flats.
 - o 22 surveys used for calculation of trip rates.
- **3.2.2** The 'cross test' function in TRICS indicates that the peak hour variation (between the mean and the median values) is 2.6% in the AM peak hour and 6.1% in the PM peak hour. The dataset has only a modest variance in trip rates between sites used to calculate the overall trip rate.

Table 1 - TRICS Assessment – Residential, 54 Dwellings

| Peak Period | Trip Rate (per dwelling) | | Trips | | Total | |
|-------------|--------------------------|-------|-------|-----|-------|--|
| reak renou | In | Out | In | Out | Total | |
| AM | 0.160 | 0.445 | 9 | 24 | 33 | |
| PM | 0.389 | 0.169 | 21 | 9 | 30 | |

NB: AM peak is 08:00-09:00 and PM peak is 17:00-18:00; trips have been rounded.



3.2.3 The TRICS output is provided in Appendix B.

3.3 Traffic Impact

- **3.3.1** The forecast traffic generation detailed in Table 1 indicates that the predicted peak hour traffic generation from 54 dwellings on the development site is no more than 33 two-way vehicle movements; that is about one vehicle every two minutes in any peak hour.
- **3.3.2** The forecast level of traffic associated with the residential development is considered to be negligible in terms of impact on the highway network.

3.4 Traffic Distribution and Assignment

- **3.4.1** Any subsequent planning application would be accompanied by a detailed Transport Statement that would include more detail on likely traffic routeing utilising journey to work data from the latest available census.
- **3.4.2** For the purposes of this assessment it is clear from site observations that the proposed junction arrangement can easily deal with the predicted level of traffic from the development proposal; especially as the Bloor Homes site to north is a much larger development and access to that site is from a simple priority junction with Tanworth Lane.



4.0 LOCAL FACILITIES AND SUSTAINABLE TRAVEL

4.1 Local Facilities

- **4.1.1** Just to the south of the proposal site is a vehicle repair garage. However, the closest facilities most likely to be used by residents of the proposal site on a day-to-day or weekly basis are located in Cheswick Green.
- **4.1.2** Facilities such as the local public house (The Saxon), the post office, pharmacy, doctors' surgery, convenience store, beauty salon and other local shops are within a 700m-750m walk of the centre of the development site; this distance is within the distance that manual for Streets (MfS) refers to as a walkable neighbourhood (800m).
- **4.1.3** Cheswick Green Primary School is located off Cheswick Way and, at 1.3km from the centre of the proposal site, is within the 2km preferred maximum walking distance recommended in the IHT Guidance (Table 3.2 Guidelines for Providing for Journeys on Foot).

4.2 Sustainable Travel

Walk

- **4.2.1** Footways with wide verges front the development site on Tanworth Lane and provide a comfortable and safe walking environment.
- **4.2.2** Footways continue southwards from the site to Watery Lane and on towards Cheswick Green via Coppice Walk and Cheswick Way.
- **4.2.3** The site access will include a 2.0m footway either side of the access to connect to the existing footway network.

Cycle

- **4.2.4** We have investigated SUSTRANS mapping to determine the national and local cycle network available in the vicinity of the proposal site.
- **4.2.5** There are no NCN or local routes in the immediate vicinity of the site. However, the road network within Cheswick Green is considered safe and suitable for use by even inexperienced cyclists although perhaps only more experienced cyclists would travel along Tanworth Lane.
- **4.2.6** Further afield local traffic-free cycle routes can be reached via Creynolds Lane along sections of the Stratford Road and in Dickens Heath accessed northwards on Tanworth Lane.



Bus

- **4.2.7** Bus services can be accessed in Cheswick Green. The nearest bus stops from the proposal site are located on Watery Lane at about 290 from the centre of the site. These stops serve the number 823 school service.
- **4.2.8** In Cheswick Green itself services 894A and S2 can be accessed. Service 894A is also a school service but service S2 provides a meaningful link for employment, retail and other purposes.

Table 2 - S2 Bus Service

| Service Number | Route | Frequency/Hr | | | |
|----------------|--|--------------|-----|-----|--|
| Service Number | Koule | Peak | Day | Sat | |
| S2 | Dorridge Rail Station – Bentley Heath – Widney Manor Rd – Solihull TC – Solihull Rail Stn – Marshall Lake Rd – Cheswick Grn | 2 | 2 | 2 | |

- **4.2.9** The S2 bus service starts from Dorridge railway station at 06:31 on weekdays. The first bus from Cheswick Green in the opposite direction is at 07:13. Evening services from Dorridge run until 18:41 and from Solihull until 23:10. The last service from Cheswick Green to Dorridge is at 17:53 and the last service to Solihull is at 22:30.
- **4.2.10** There is also a Saturday service running at a 30-minute frequency and a Sunday service which runs hourly.
- **4.2.11** The service provides an very good link from Cheswick Green to nearby employment, retail, education and other facilities.

Rail

- **4.2.12** The closest railway stations to the proposal site lie on either The Lakes, Earlswood, and Wythall on the Stourbridge Junction-Birmingham-Stratford line.
- **4.2.13** Widney Manor provides direct links to Birmingham, the Black Country, and Worcester and provides vehicle parking.
- **4.2.14** All of the stations offer the opportunity to cycle to the station and ride ontrain completing journeys by cycle at the destination end.

4.3 Overall Transport Sustainability

4.3.1 In terms of the local facilities provided in Cheswick Green and the sustainable transport links available it would have to be described as a sustainable location for development, particularly for a settlement of this size.



5.0 SUMMARY AND CONCLUSIONS

5.1 Summary

- **5.1.1** Safe and suitable access can be provided to the development land with precise details of visibility to be provided on the basis of topographical and speed surveys at any subsequent planning application stage.
- **5.1.2** The trip generation predicted for the site would be minimal and no capacity issues would arise as a result of the development proposal.
- **5.1.3** The site is very well located to take advantage of local facilities typically used on a day-to-day and weekly basis by residential dwellings. The proposal site is also well located to a very good local bus service providing links to Solihull and Dorridge.

5.2 Conclusion

- **5.2.1** The proposal site is clearly sustainably located and provides the opportunity to assist in delivering Solihull MBC's housing needs.
- **5.2.2** The National Planning Policy Framework (NPPF) states that opportunities for sustainable access should be taken up and that safe and suitable access is provided for all people.
- **5.2.3** The development is located to make use of existing infrastructure and services and is sustainable in transport terms. The development will promote the use of sustainable means of transport and the site provides safe and suitable access for all users.
- **5.2.4** Bearing the above in mind NPPF states that:

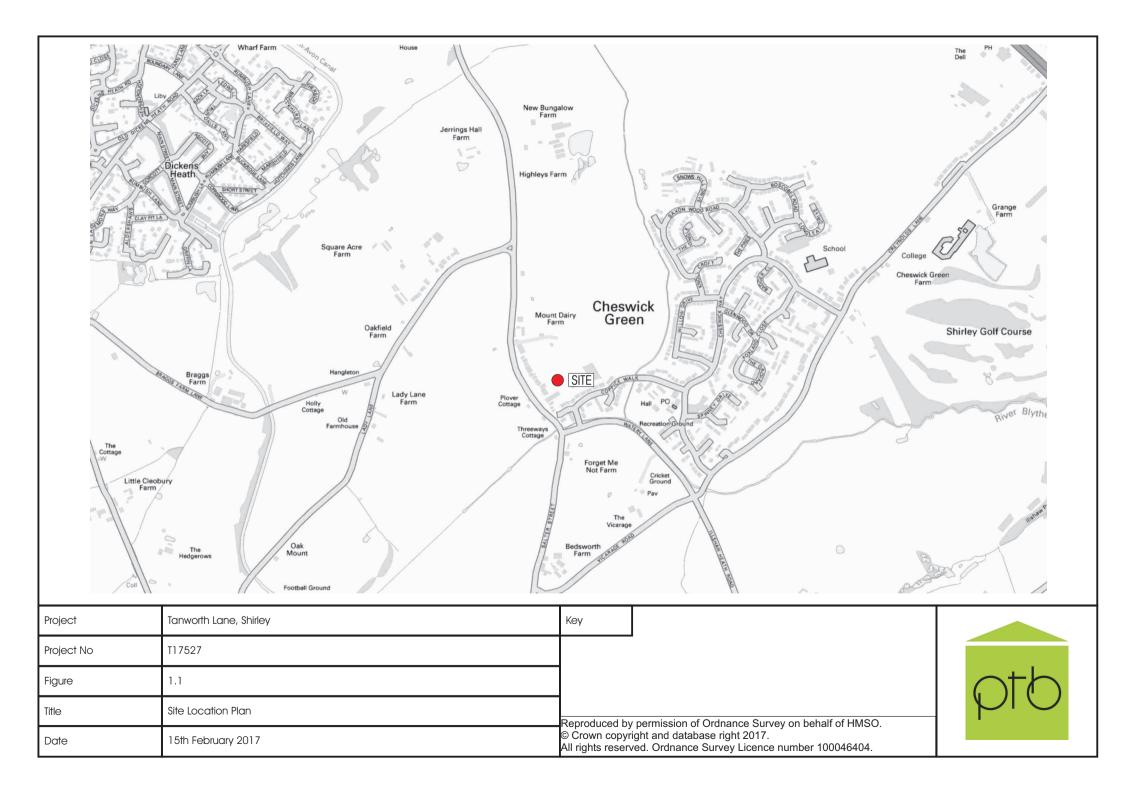
"Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe."

- **5.2.5** The assessment work undertaken and detailed in this report demonstrates that, in NPPF terms, the residual cumulative impact of the proposal is minimal.
- **5.2.6** Therefore, it is considered that, in transport terms, this proposal is suitable for inclusion within the emerging Local Plan.



T17527 Belle Homes, Tanworth Lane

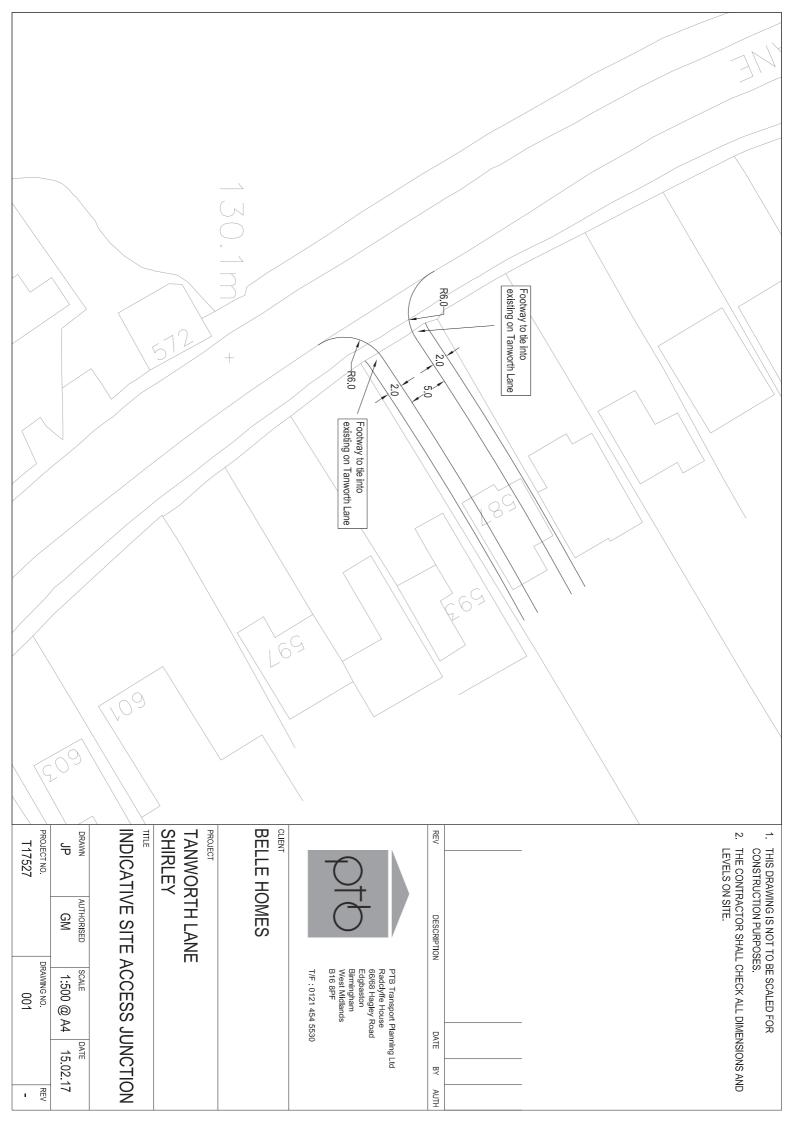
FIGURES





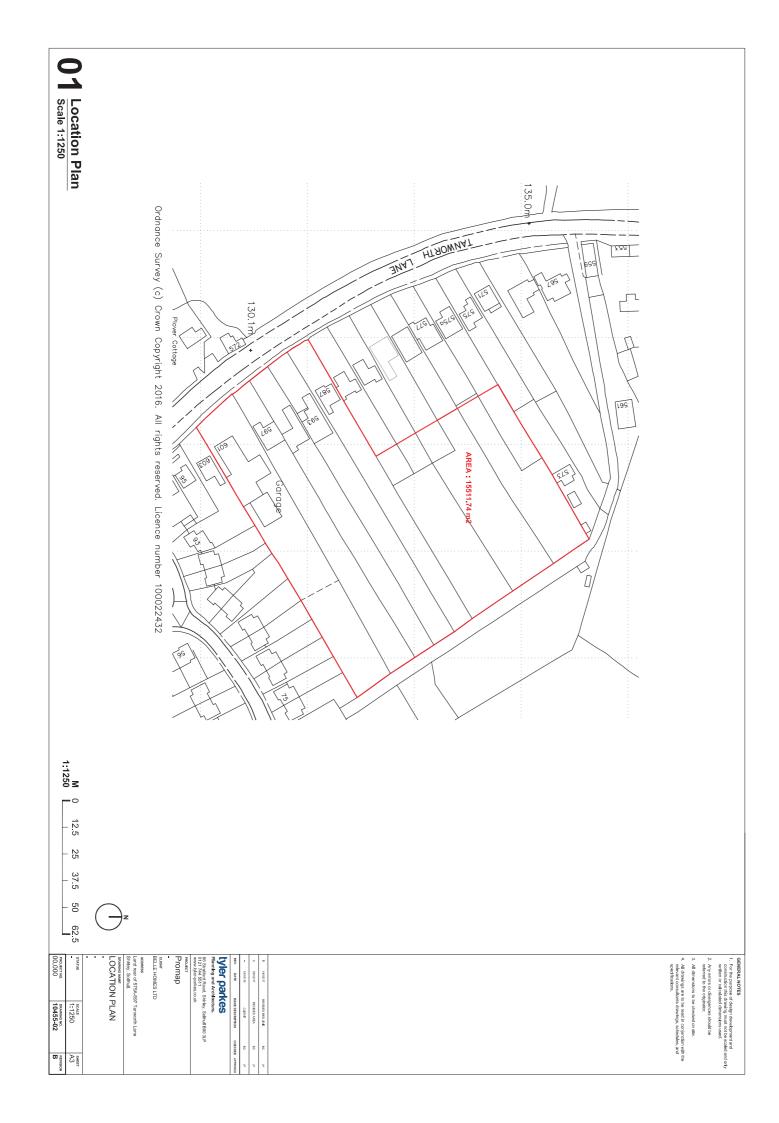
T17527 Belle Homes, Tanworth Lane

DRAWINGS





APPENDIX A - THE PROPOSAL SITE





APPENDIX B - TRICS DATA - RESIDENTIAL

| TRICS 7.3.3 240916 E | 317.41 (C) 2016 TRICS Cons | ortium Ltd | | Tuesday 14/02/17 |
|------------------------------|----------------------------|-------------|------------|--------------------|
| Residential Trip Rate | S | | | Page 1 |
| OFF-LINE VERSION | PTB Transport Planning Ltd | Hagley Road | Birmingham | Licence No: 141301 |

Calculation Reference: AUDIT-141301-170214-0205

TRIP RATE CALCULATION SELECTION PARAMETERS:

| Land Use | : | 03 - RESIDENTIAL |
|----------|---|----------------------------|
| | | A - HOUSES PRIVATELY OWNED |
| VEHICLES | S | |

| Selec | cted red | gions and areas: | |
|-------|--------------|----------------------------|------------|
| 02 | SOUT | TH EAST | |
| | ES | EAST SUSSEX | 1 days |
| 03 | SOUT | TH WEST | |
| | DV | DEVON | 1 days |
| | SM | SOMERSET | 1 days |
| 04 | EAST | ANGLIA | |
| | NF | NORFOLK | 1 days |
| | SF | SUFFOLK | 1 days |
| 05 | | MIDLANDS | |
| | LN | LINCOLNSHIRE | 1 days |
| 06 | | T MIDLANDS | |
| | SH | SHROPSHIRE | 1 days |
| | ST | STAFFORDSHIRE | 1 days |
| 07 | | SHIRE & NORTH LINCOLNSHIRE | |
| | NY | NORTH YORKSHIRE | 3 days |
| 08 | | THWEST | . . |
| | CH | CHESHIRE | 3 days |
| | GM | GREATER MANCHESTER | 1 days |
| ~~ | MS | MERSEYSIDE | 1 days |
| 09 | NOR | | 1 |
| | CB | CUMBRIA | 1 days |
| 10 | TW | TYNE & WEAR | 2 days |
| 10 | WAL PS | ES POWYS | 1 days |
| | | | 1 days |
| 11 | FA | | 1 days |
| | _ / (| EAST AYRSHIRE | 1 days |
| | FA | FALKIRK | 1 days |
| | | | |

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

| TRICS 7.3.3 240916 B | 317.41 (C) 2016 TRICS Cons | ortium Ltd | | Tuesday 14/02/17 |
|-------------------------------|----------------------------|-------------|------------|--------------------|
| Residential Trip Rates | S | | | Page 2 |
| OFF-LINE VERSION | PTB Transport Planning Ltd | Hagley Road | Birmingham | Licence No: 141301 |

Filtering Stage 2 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: | 10 to 40 (units:) |
| Range Selected by User: | 10 to 50 (units:) |

Public Transport Provision: Selection by:

Include all surveys

01/01/08 to 13/11/15 Date Range:

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 | 4 days |
| Tuesday | 4 days |
| Wednesday | 6 days |
| Thursday | 4 days |
| Friday | 4 days |

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

| Selected survey types: | |
|------------------------|---------|
| Manual count | 22 days |
| Directional ATC Count | 0 days |

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

| Selected Locations: | |
|--|----|
| Suburban Area (PPS6 Out of Centre) | 9 |
| Edge of Town | 12 |
| Neighbourhood Centre (PPS6 Local Centre) | 1 |

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

| Selected Location Sub Categories: | |
|-----------------------------------|----|
| Residential Zone | 19 |
| Village | 1 |
| No Sub Category | 2 |

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.

Filtering Stage 3 selection:

Use Class: C3

22 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®.

| ential Trip Rates | 7.41 (C) 2016 TRICS Cons | ortium Ltd | | Tuesday 14/02/17 Page 3 |
|--------------------------|-----------------------------|-------------------|-------------------------------|----------------------------|
| | PTB Transport Planning Ltd | Hagley Road | Birmingham | Licence No: 14130 |
| Filtering Stage | 3 selection (Cont.): | | | |
| Population within | <u>1 mile:</u> | | | |
| 1,001 to 5,000 | | 3 days | | |
| 5,001 to 10,000 | | 5 days | | |
| 10,001 to 15,000 | | 6 days | | |
| 15,001 to 20,000 | | 4 days | | |
| 20,001 to 25,000 | | 2 days | | |
| 25,001 to 50,000 | | 2 days | | |
| This data displays | the number of selected surv | eys within stated | d 1-mile radii of population. | |
| Population within | 5 miles: | | | |
| 5,001 to 25,000 | | 3 days | | |
| 25,001 to 50,000 | | 1 days | | |
| 50,001 to 75,000 | 1 | 2 days | | |
| 75,001 to 100,00 | | 7 days | | |
| 100,001 to 125,00 | | 2 days | | |
| 125,001 to 250,00 | | 2 days | | |
| 250,001 to 500,00 | | 4 days | | |
| 500,001 or More | | 1 days | | |
| This data displays | the number of selected surv | eys within stated | d 5-mile radii of population. | |
| , , | | | | |
| <u>Car ownership wit</u> | hin 5 miles: | | | |
| | hin 5 miles: | 9 days | | |

| <u>Travel Plan:</u> | |
|---------------------|---------|
| Yes | 1 days |
| No | 21 days |

Ŀ

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.

LIST OF SITES relevant to selection parameters

| <u>L131</u> | or sires recount to selection parameters | | |
|-------------|---|-----------------------|--------------------------------------|
| 1 | CB-03-A-03 SEMI DETACHED HAWKSHEAD AVENUE | | CUMBRIA |
| 2 | WORKINGTON Edge of Town Residential Zone Total Number of dwellings: <i>Survey date: THURSDAY</i> CH-03-A-05 DETACHED SYDNEY ROAD SYDNEY CREWE Edge of Town | 40 <i>20/11/08</i> | Survey Type: MANUAL CHESHIRE |
| 3 | Residential Zone Total Number of dwellings: Survey date: TUESDAY CH-03-A-08 DETACHED WHITCHURCH ROAD BOUGHTON HEATH | 17 <i>14/10/08</i> | Survey Type: MANUAL CHESHIRE |
| 4 | CHESTER Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: <i>Survey date: TUESDAY</i> CH-03-A-09 TERRACED HOUSES GREYSTOKE ROAD | 11 <i>22/05/12</i> | Survey Type: MANUAL CHESHIRE |
| 5 | HURDSFIELD MACCLESFIELD Edge of Town Residential Zone Total Number of dwellings: <i>Survey date: MONDAY</i> DV-03-A-01 TERRACED HOUSES BRONSHILL ROAD | 24 24/11/14 | Survey Type: MANUAL DEVON |
| 6 | TORQUAY Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: <i>Survey date: WEDNESDAY</i> EA-03-A-01 DETATCHED TALISKER AVENUE | 37 <i>30/09/15</i> | Survey Type: MANUAL EAST AYRSHIRE |
| 7 | KILMARNOCK Edge of Town Residential Zone Total Number of dwellings: <i>Survey date: THURSDAY</i> ES-03-A-02 PRIVATE HOUSING SOUTH COAST ROAD | 39 <i>05/06/08</i> | Survey Type: MANUAL EAST SUSSEX |
| | PEACEHAVEN Edge of Town Residential Zone Total Number of dwellings: <i>Survey date: FRIDAY</i> | 37 <i>18/11/11</i> | Survey Type: MANUAL |

| ential | Trip Rates | C) 2016 TRICS Consor | | | Tuesday 14/02/1 Page |
|---------|---|-----------------------------|-------------|---|-------------------------|
| | | sport Planning Ltd | Hagley Road | Birmingham | Licence No: 14130 |
| LIST | OF SITES relevant to | selection narameters | (Cont.) | | |
| <u></u> | | selection parameters | (00111) | | |
| 8 | FA-03-A-01 Mandela avenue | SEMI-DETACHED/ | TERRACED | FALKIRK | |
| | FALKIRK | | | | |
| | Suburban Area (PPS | 6 Out of Centre) | | | |
| | Residential Zone | | | | |
| | Total Number of dwe | | 37 | Company Transa MANULAL | |
| 9 | Survey date: GM-03-A-10 | DETACHED/SEMI | 30/05/13 | Survey Type: MANUAL GREATER MANCHESTER | |
| 9 | BUTT HILL DRIVE | DETACHED/SEMI | | GREATER MANCHESTER | |
| | PRESTWICH | | | | |
| | MANCHESTER | | | | |
| | Edge of Town | | | | |
| | Residential Zone | | | | |
| | Total Number of dwe | ellings: | 29 | | |
| | | WEDNESDAY | 12/10/11 | Survey Type: MANUAL | |
| 10 | LN-03-A-03 | SEMI DETACHED | | LINCOLNSHIRE | |
| | ROOKERY LANE | | | | |
| | BOULTHAM | | | | |
| | LINCOLN | Court of Control | | | |
| | Suburban Area (PPS) Residential Zone | b Out of Centre) | | | |
| | Total Number of dwe | llinas | 22 | | |
| | Survey date: | | 18/09/12 | Survey Type: MANUAL | |
| 11 | MS-03-A-03 | DETACHED | 10/00/12 | MERSEYSIDE | |
| | BEMPTON ROAD | | | | |
| | OTTERSPOOL | | | | |
| | LIVERPOOL | | | | |
| | Suburban Area (PPS | 6 Out of Centre) | | | |
| | Residential Zone | | | | |
| | Total Number of dwe | | 15 | Curries Turner MANULAL | |
| 12 | Survey date: NF-03-A-03 | DETACHED HOUSE | 21/06/13 | Survey Type: MANUAL NORFOLK | |
| 12 | HALING WAY | DETACHED HOUSE | -5 | NORFOLK | |
| | | | | | |
| | THETFORD | | | | |
| | Edge of Town | | | | |
| | Residential Zone | | | | |
| | Total Number of dwe | | 10 | | |
| 13 | Survey date: NY-03-A-07 | WEDNESDAY DETACHED & SEM | 16/09/15 | Survey Type: MANUAL NORTH YORKSHIRE | |
| 13 | CRAVEN WAY | DETACHED & SEM | | NORTH TORKSHIRE | |
| | BOROUGHBRIDGE | | | | |
| | Edge of Town | | | | |
| | No Sub Category | | | | |
| | Total Number of dwe | | 23 | ~ ~ | |
| 14 | Survey date: | | 18/10/11 | Survey Type: MANUAL | |
| 14 | NY-03-A-08 NICHOLAS STREET | TERRACED HOUSE | 3 | NORTH YORKSHIRE | |
| | YORK | | | | |
| | Suburban Area (PPS | 6 Out of Centre) | | | |
| | Residential Zone | | | | |
| | Total Number of dwe | ellings: | 21 | | |
| | Survey date: | | 16/09/13 | Survey Type: MANUAL | |

LIST OF SITES relevant to selection parameters (Cont.)

| 15 | NY-03-A-11 Horsefair | PRIVATE HOUSING | | NORTH YORKSHIRE |
|----|--|---|---------------------------------|------------------------------------|
| 16 | BOROUGHBRIDGE Edge of Town Residential Zone Total Number of dwe <i>Survey date:</i> PS-03-A-02 GUNROG ROAD | ellings: WEDNESDAY DETACHED/SEMI-DE | 23 <i>18/09/13</i> FACHED | Survey Type: MANUAL POWYS |
| 17 | WELSHPOOL Suburban Area (PPSe Residential Zone Total Number of dwe <i>Survey date:</i> SF-03-A-05 | ellings: | 28 <i>11/05/15</i> | Survey Type: MANUAL SUFFOLK |
| | | | | |
| 18 | SH-03-A-03 SOMERBY DRIVE BICTON HEATH SHREWSBURY | ellings: WEDNESDAY DETATCHED | 18 <i>09/09/15</i> | Survey Type: MANUAL SHROPSHIRE |
| | Edge of Town No Sub Category Total Number of dwe Survey date: | FRIDAY | 10 <i>26/06/09</i> | Survey Type: MANUAL |
| 19 | SM-03-A-01 WEMBDON ROAD NORTHFIELD BRIDGWATER Edge of Town Residential Zone Total Number of dwe Survey date: | | 33 <i>24/09/15</i> | SOMERSET Survey Type: MANUAL |
| 20 | ST-03-A-05 | TERRACED & DETACH | | STAFFORDSHIRE |
| 21 | WATERMEET GROVE ETRURIA STOKE-ON-TRENT Suburban Area (PPSe Residential Zone Total Number of dwe <i>Survey date:</i> TW-03-A-02 WEST PARK ROAD | 5 Out of Centre) | 14 <i>26/11/08</i> | Survey Type: MANUAL TYNE & WEAR |
| | GATESHEAD Suburban Area (PPS6 | 5 Out of Centre) | | |
| | Residential Zone Total Number of dwe <i>Survey date:</i> | ellings: | 16 <i>07/10/13</i> | Survey Type: MANUAL |

LIST OF SITES relevant to selection parameters (Cont.)

| 22 | TW-03-A-03 STATION ROAD BACKWORTH NEAR NEWCASTLE | MIXED HOUSES | | TYNE & WEAR |
|----|--|------------------------|----------|---------------------|
| | Neighbourhood Cent Village Total Number of dwo | re (PPS6 Local Centre) | 33 | |
| | Survey date: | - | 13/11/15 | Survey Type: MANUAL |

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

MANUALLY DESELECTED SITES

| Site Ref | | Reason for Deselection |
|------------|--------------------|------------------------|
| DC-03-A-08 | Bungalows | |
| HC-03-A-17 | Includes Flats | |
| NF-03-A-01 | Includes Bungalows | |
| PK-03-A-01 | Includes Bungalows | |
| SH-03-A-06 | Bungalows | |
| WK-03-A-02 | Bungalows | |
| WS-03-A-05 | Includes flats | |

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

| | | ARRIVALS | | [| DEPARTURES | 5 | | 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 | 22 | 24 | 0.078 | 22 | 24 | 0.285 | 22 | 24 | 0.363 |
| 08:00 - 09:00 | 22 | 24 | 0.160 | 22 | 24 | 0.445 | 22 | 24 | 0.605 |
| 09:00 - 10:00 | 22 | 24 | 0.153 | 22 | 24 | 0.190 | 22 | 24 | 0.343 |
| 10:00 - 11:00 | 22 | 24 | 0.156 | 22 | 24 | 0.142 | 22 | 24 | 0.298 |
| 11:00 - 12:00 | 22 | 24 | 0.158 | 22 | 24 | 0.186 | 22 | 24 | 0.344 |
| 12:00 - 13:00 | 22 | 24 | 0.173 | 22 | 24 | 0.162 | 22 | 24 | 0.335 |
| 13:00 - 14:00 | 22 | 24 | 0.156 | 22 | 24 | 0.158 | 22 | 24 | 0.314 |
| 14:00 - 15:00 | 22 | 24 | 0.153 | 22 | 24 | 0.175 | 22 | 24 | 0.328 |
| 15:00 - 16:00 | 22 | 24 | 0.263 | 22 | 24 | 0.205 | 22 | 24 | 0.468 |
| 16:00 - 17:00 | 22 | 24 | 0.331 | 22 | 24 | 0.158 | 22 | 24 | 0.489 |
| 17:00 - 18:00 | 22 | 24 | 0.389 | 22 | 24 | 0.169 | 22 | 24 | 0.558 |
| 18:00 - 19:00 | 22 | 24 | 0.218 | 22 | 24 | 0.130 | 22 | 24 | 0.348 |
| 19:00 - 20:00 | | | | | | | | | |
| 20:00 - 21:00 | | | | | | | | | |
| 21:00 - 22:00 | | | | | | | | | |
| 22:00 - 23:00 | | | | | | | | | |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 2.388 | | | 2.405 | | | 4.793 |

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

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

Parameter summary

| Trip rate parameter range selected: | 10 - 40 (units:) |
|---|---------------------|
| Survey date date range: | 01/01/08 - 13/11/15 |
| Number of weekdays (Monday-Friday): | 22 |
| Number of Saturdays: | 0 |
| Number of Sundays: | 0 |
| Surveys automatically removed from selection: | 0 |
| Surveys manually removed from selection: | 7 |

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.