



Appendix 2:

TRICS Vehicle Trip Generation Assessments

**In Support of Transport Statement:
Repurposing of
The Central Swimming Pool,
Battle Street,
Reading.**

1. Trip generation

1.1. Trip Generation Methodology

1.1.1. Trip generation methodology was agreed between the Highway Authority (Reading Borough Council) and Hampshire County Council officers at a meeting held on 18th of May 2021 meeting. At this meeting, it was agreed that an analysis of existing and/or previous trips rates, would be produced, versus predicted trip rates for the sites new use.

1.1.2. This analysis was to be based on Trip Rate Information Computer System (TRICS) assessments for the relevant site use for its previous use as a public swimming pool facility, and its new use as residential, sheltered/assisted living accommodation and an older persons day-care facility.

1.1.3. TRICS is the system of trip generation analysis comprising of a comprehensive database of traffic and multi-modal transport surveys, covering a wide range of development types for the UK and Ireland. TRICS can help establish potential levels of trip generation for different types of development scenarios using a series of database filtering processes and is widely used by both transport planning consultants and local authorities.

1.1.4. For the purposes of the TRICs assessment the site's land use classes were split into three different categories, as follows:

For the new use:

- **Class C3:**
 - **Assisted Living** - *Housing developments for older people that offer more support than sheltered housing, but still allow residents to live independently. Residents usually live in a self-contained flat with their own front door, but meals may be provided. Personal care and support services are generally available on-site 24 hours per day. Trip rates are calculated by Site Area, Dwellings, Housing Density or Bedrooms.*
 - **Sheltered accommodation for elderly people** – *not to be confused with nursing homes. Trip rates are calculated by Site Area, Dwellings, or Housing Density.*
- **Class C2:**
 - **Care Home (Specific Condition)** - *A care home that is registered to meet a specific care need (for example, mental illness, dementia, long term physical injuries, etc). Not specifically catering for older people, with possibly an element of day care included. Not to be confused with the "Care Home (elderly residential)" land use sub-category. Trip rates are calculated by Residents or Parking Spaces.*
- **Class D1:**
 - **Nursery Pre-school centres.** Trip rates are calculated by Gross Floor Area, Pupils, or Employees. For the purposes of the day care facility to illustrate a trip rate akin to a Day Centre. Day Centre land use category not available on TRICs.

For previous use as a swimming pool:

- Class 07/C:
Leisure Centre - *Local leisure centre or swimming pool with gym, classes, etc. Usually owned by the local authority. Swimming pools can be both traditional pools and modern sites with flumes and other activities. Sites may be leisure (gym/classes etc) only, pool only, or a combination of both. Trip rates are calculated by Site Area, Gross Floor Area, or Employees.*

- 1.1.5. There was no category in TRICS for 'general needs' accommodation so this has been combined with the C3 'sheltered accommodation' category, as it is not dissimilar. The three bed homes, being of such a minimal amount (two in total), will be added as category C3 as well.
- 1.1.6. For the 13 supported living flats these were placed under category C2 as 'care home (specific condition)' as these are meeting a specific need under mental health care.
- 1.1.7. As there was no specific 'day care centre' land use category within the TRICS database, it was agreed that the best comparison would be a nursery, as the day centre would run specific time slots for attendees throughout the day, and they would be dropped off and collected from the day centre. The nursery calculations are based on staff (eight) as the capacity to generate a trip generation based on attendees (35 capacity) was too low.
- 1.1.8. The TRICS assessment will aim to provide a peak hour trip rate (AM & PM) against the sites previous use as a swimming pool leisure facility and the sites new use in terms of its capacity of residential accommodation and day care facility spaces.
- 1.1.9. The demand for on-site staff and visitor parking, for the new site, has been calculated using RBC's *Parking Standards and Design SPD (2011)*, in relation to the number of care staff expected to be employed by the facilities. A total of 13 staff has been established based on the number of staff at the current facilities (Focus House having five and The Maples having eight).

1.2. TRICS Assessments

- 1.2.1. All survey sites selected were located within either a 'residential/suburban area/residential zone' and 'edge of town centre' location, similar to that of the current area surrounding the new site off Battle Street. The trip rate parameters and calculations, for all land use types are outlined below, together with the trip rate summaries for all accommodation types.
- 1.2.2. Four comparable TRICS survey sites were available to use in the assessment for the sheltered accommodation/ general needs housing (use class C3), as well as the supported living mental health flats (use class C2). Associated trips have been calculated against the number of units being provided.
- 1.2.3. For the day care centre, nursery comparison (use class D1), a total of five comparable sites were available to use within the trip generation TRICS assessment.
- 1.2.4. The TRICS calculation of the site's previous use as a swimming pool was based on three comparable leisure centre sites and one swimming and fitness centre site and calculated against the size of the previous site in hectares (0.55 ha).
- 1.2.5. The outputs of the calculations above were used in order to produce an average estimated trip rate against the maximum capacity of units for residents and spaces for the day care facility on the new site.

2.1. Sheltered accommodation/general needs:

- 2.1.1. The TRICS assessment showed that the peak levels of arrivals and departures for the AM peak were between 10:00-11:00 for the sheltered accommodation/general needs housing. For the PM peak it demonstrated 14:00-15:00 for both these accommodation types. This was measured within a 12 hour period from 07:00 – 19:00.
- 2.1.2. From TRICS the sheltered accommodation/general needs accommodation produced a combined vehicle arrival and departure trip rate peak of 0.273 at the peak hour of 10:00-11:00. When calculated against the number of dwellings (49) this amounts to a maximum of **14 vehicle arrival and departures** during the peak hours associated with these accommodation types, within the 12 hour assessment period.
- 2.1.3. Below details the TRICS output calculations for the sheltered accommodation trip rate assessment.

Calculation Reference: AUDIT-146301-220711-0700

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : F - SHELTERED ACCOMMODATION
 TOTAL VEHICLES

Selected regions and areas:

06	WEST MIDLANDS	
	ST STAFFORDSHIRE	1 days
08	NORTH WEST	
	GM GREATER MANCHESTER	1 days
10	WALES	
	DB DENBIGHSHIRE	1 days
11	SCOTLAND	
	EL EAST LOTHIAN	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: 32 to 73 (units:)
 Range Selected by User: 14 to 80 (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: 01/01/14 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.

Selected survey days:

Monday	1 days
Tuesday	1 days
Wednesday	1 days
Friday	1 days

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

Selected survey types:

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 undertaken using machines.

Selected Locations:

Edge of Town Centre	3
Suburban Area (PPS6 Out of 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	3
No Sub Category	1

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

Hampshire County Council STREET NAME TOWN/CITY

Licence No: 146301

Secondary Filtering selection:

Use Class:

C3 4 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:

5,001 to 10,000	1 days
20,001 to 25,000	2 days
25,001 to 50,000	1 days

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

Population within 5 miles:

50,001 to 75,000	1 days
125,001 to 250,000	1 days
250,001 to 500,000	1 days
500,001 or More	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	3 days
1.1 to 1.5	1 days

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

Travel Plan:

No 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.

PTAL Rating:

No PTAL Present 4 days

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

Hampshire County Council STREET NAME TOWN/CITY

Licence No: 146301

LIST OF SITES relevant to selection parameters

1	DB-03-F-02 HIGHFIELD PARK RHYL	SHELTERED HOUSING	DENBIGHSHIRE
	Edge of Town Centre Residential Zone Total No of Dwellings: 59 Survey date: TUESDAY 11/11/14		Survey Type: MANUAL
2	EL-03-F-01 INVERESK ROAD MUSSELBURGH	SHELTERED HOUSING	EAST LoTHIAN
	Edge of Town Centre Residential Zone Total No of Dwellings: 56 Survey date: MONDAY 23/04/18		Survey Type: MANUAL
3	GM-03-F-07 LANCASTER ROAD SALFORD SWINTON PARK Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 32 Survey date: FRIDAY 21/06/19	SHELTERED HOUSING	GREATER MANCHESTER
4	ST-03-F-01 EARLSWOOD WAY CANNOCK BRIDGTOWN Edge of Town Centre No Sub Category Total No of Dwellings: 73 Survey date: WEDNESDAY 25/09/19	SHELTERED HOUSING	STAFFORDSHIRE
			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.

Hampshire County Council STREET NAME TOWN/CITY

Licence No: 146301

TRIP RATE for Land Use 03 - RESIDENTIAL/F - SHELTERED ACCOMMODATION

TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	55	0.045	4	55	0.050	4	55	0.095
08:00 - 09:00	4	55	0.064	4	55	0.073	4	55	0.137
09:00 - 10:00	4	55	0.100	4	55	0.086	4	55	0.186
10:00 - 11:00	4	55	0.150	4	55	0.123	4	55	0.273
11:00 - 12:00	4	55	0.118	4	55	0.141	4	55	0.259
12:00 - 13:00	4	55	0.100	4	55	0.105	4	55	0.205
13:00 - 14:00	4	55	0.109	4	55	0.118	4	55	0.227
14:00 - 15:00	4	55	0.114	4	55	0.123	4	55	0.237
15:00 - 16:00	4	55	0.100	4	55	0.091	4	55	0.191
16:00 - 17:00	4	55	0.100	4	55	0.073	4	55	0.173
17:00 - 18:00	4	55	0.059	4	55	0.077	4	55	0.136
18:00 - 19:00	4	55	0.064	4	55	0.036	4	55	0.100
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.123			1.096			2.219

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: 32 - 73 (units:)
 Survey 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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

3.1. Supported Living:

- 3.1.1. The TRICS assessment showed that the peak levels of arrivals and departures for the AM peak were between 10:00-11:00 for the supported living housing, and for the PM peak 12:00-13:00. This was measured within a 12-hour period from 07:00 – 19:00.
- 3.1.2. The supported living accommodation produced a combined vehicle arrival and departure trip rate of 0.272, at the peak hour of 10:00-11:00. When calculated against the total number of supported living dwellings (13 units) this equated to **four vehicle arrival and departures**, during the peak hours associated with this accommodation type, within the 12-hour assessment period.
- 3.1.3. Below details the TRICS output calculations for the supported living trip rate assessment.

Hampshire County Council STREET NAME TOWN/CITY

Licence No: 146301

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : P - ASSISTED LIVING
 TOTAL VEHICLES

Selected regions and areas:

03	SOUTH WEST	
	DV DEVON	1 days
04	EAST ANGLIA	
	NF NORFOLK	1 days
05	EAST MIDLANDS	
	LE LEICESTERSHIRE	1 days
09	NORTH	
	TW TYNE & WEAR	1 days

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

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: 11 to 47 (units:)
 Range Selected by User: 06 to 50 (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: 01/01/14 to 20/10/21

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:

Wednesday	1 days
Thursday	1 days
Friday	2 days

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

Selected survey types:

Manual count	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 undertaken using machines.

Selected Locations:

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

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	3
No Sub Category	1

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

Hampshire County Council STREET NAME TOWN/CITY

Licence No: 146301

Secondary Filtering selection:

Use Class:

C3 4 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:

20,001 to 25,000 3 days

25,001 to 50,000 1 days

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

Population within 5 miles:

100,001 to 125,000 1 days

125,001 to 250,000 2 days

500,001 or More 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 1 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 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.

PTAL Rating:

No PTAL Present 4 days

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

Hampshire County Council STREET NAME TOWN/CITY

Licence No: 146301

LIST OF SITES relevant to selection parameters

1	DV-03-P-01 GARFIELD ROAD PAIGNTON	ASSISTED LIVING		DEVON
	Edge of Town Centre Residential Zone Total No of Dwellings:		11	
	Survey date: FRIDAY		29/03/19	Survey Type: MANUAL
2	LE-03-P-01 NOTTINGHAM ROAD LOUGHBOROUGH	ASSISTED LIVING		LEICESTERSHIRE
	Edge of Town Centre No Sub Category Total No of Dwellings:		47	
	Survey date: WEDNESDAY		20/10/21	Survey Type: MANUAL
3	NF-03-P-02 LAKENFIELDS NORWICH LAKENHAM	ASSISTED LIVING		NORFOLK
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:		40	
	Survey date: FRIDAY		22/11/19	Survey Type: MANUAL
4	TW-03-P-01 KENTON ROAD NEWCASTLE UPON TYNE	ASSISTED LIVING		TYNE & WEAR
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:		42	
	Survey date: THURSDAY		07/10/21	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.

Hampshire County Council STREET NAME TOWN/CITY

Licence No: 146301

TRIP RATE for Land Use 03 - RESIDENTIAL/P - ASSISTED LIVING

TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	35	0.121	4	35	0.079	4	35	0.200
08:00 - 09:00	4	35	0.050	4	35	0.029	4	35	0.079
09:00 - 10:00	4	35	0.136	4	35	0.100	4	35	0.236
10:00 - 11:00	4	35	0.143	4	35	0.129	4	35	0.272
11:00 - 12:00	4	35	0.121	4	35	0.107	4	35	0.228
12:00 - 13:00	4	35	0.107	4	35	0.121	4	35	0.228
13:00 - 14:00	4	35	0.107	4	35	0.114	4	35	0.221
14:00 - 15:00	4	35	0.093	4	35	0.107	4	35	0.200
15:00 - 16:00	4	35	0.071	4	35	0.057	4	35	0.128
16:00 - 17:00	4	35	0.107	4	35	0.114	4	35	0.221
17:00 - 18:00	4	35	0.036	4	35	0.029	4	35	0.065
18:00 - 19:00	4	35	0.036	4	35	0.064	4	35	0.100
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.128			1.050			2.178

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:	11 - 47 (units:)
Survey date range:	01/01/14 - 20/10/21
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

4.1. Day Care Facility:

- 4.1.1. For the purpose of the older persons day care facility, the trip rate for a nursery was used as a comparison. A nursery would represent similar trips to that of a day care centre, where attendees would be dropped off and picked up at different times throughout the operational hours of the centre. The trip rate used was based on staff numbers - eight at the day care centre.
- 4.1.2. The TRICS assessment showed that the peak levels of arrivals and departures for the AM peak were between 08:00-09:00 for the day care facility, and for the PM peak 17:00-18:00. This was measured within a 12 hour period from 07:00 – 19:00.
- 4.1.3. From TRICS the day care facility produced a combined vehicle arrival and departure trip rate of 1.529, at the peak hour of 08:00-09:00. When calculated against the total number of staff associated with the day care facility (eight) this equated to **13 vehicle arrival and departures**, during the peak hours associated with this accommodation type, within the 12 hours assessment period.
- 4.1.4. Below details the TRICS output calculations for the nursery comparison trip rate assessment.

Hampshire County Council STREET NAME TOWN/CITY

Licence No: 146301

Calculation Reference: AUDIT-146301-220711-0750

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION

Category : D - NURSERY

TOTAL VEHICLES

Selected regions and areas:

04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	1 days
11	SCOTLAND	
	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 Employees
 Actual Range: 9 to 19 (units:)
 Range Selected by User: 4 to 20 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 19/11/21

*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	2 days
Tuesday	2 days
Wednesday	1 days

*This data displays the number of selected surveys by day of the week.*Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

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

Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	3

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

Residential Zone	4
No Sub Category	1

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

Hampshire County Council STREET NAME TOWN/CITY

Licence No: 146301

Secondary Filtering selection:

Use Class:

E(f) 5 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
15,001 to 20,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	2 days

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

Population within 5 miles:

75,001 to 100,000	2 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:

0.5 or Less	1 days
0.6 to 1.0	1 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 5 days

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

PTAL Rating:

No PTAL Present 5 days

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

Hampshire County Council STREET NAME TOWN/CITY

Licence No: 146301

LIST OF SITES relevant to selection parameters

1	CA-04-D-02 EASTFIELD ROAD PETERBOROUGH	NURSERY		CAMBRIDGESHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Employees: 17 Survey date: TUESDAY 18/10/16 Survey Type: MANUAL			
2	CH-04-D-01 CHESTER ROAD MACCLESFIELD	NURSERY		CHESHIRE
	Edge of Town Centre No Sub Category Total No of Employees: 19 Survey date: MONDAY 24/11/14 Survey Type: MANUAL			
3	DU-04-D-01 LONGTOWN TERRACE DUNDEE	NURSERY		DUNDEE CITY
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Employees: 9 Survey date: MONDAY 24/04/17 Survey Type: MANUAL			
4	LN-04-D-01 NEWARK ROAD LINCOLN SWALLOW BECK	NURSERY		LINCOLNSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Employees: 12 Survey date: TUESDAY 31/10/17 Survey Type: MANUAL			
5	SH-04-D-01 OLD COLEHAM SHREWSBURY	NURSERY		SHROPSHIRE
	Edge of Town Centre Residential Zone Total No of Employees: 11 Survey date: WEDNESDAY 28/05/14 Survey Type: MANUAL			

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

Hampshire County Council STREET NAME TOWN/CITY

Licence No: 146301

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY

TOTAL VEHICLES

Calculation factor: 1 EMPLOY

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	17	0.000	1	17	0.000	1	17	0.000
07:00 - 08:00	5	14	0.338	5	14	0.235	5	14	0.573
08:00 - 09:00	5	14	0.897	5	14	0.632	5	14	1.529
09:00 - 10:00	5	14	0.235	5	14	0.235	5	14	0.470
10:00 - 11:00	5	14	0.088	5	14	0.118	5	14	0.206
11:00 - 12:00	5	14	0.162	5	14	0.147	5	14	0.309
12:00 - 13:00	5	14	0.132	5	14	0.221	5	14	0.353
13:00 - 14:00	5	14	0.221	5	14	0.221	5	14	0.442
14:00 - 15:00	5	14	0.132	5	14	0.162	5	14	0.294
15:00 - 16:00	5	14	0.191	5	14	0.191	5	14	0.382
16:00 - 17:00	5	14	0.500	5	14	0.500	5	14	1.000
17:00 - 18:00	5	14	0.706	5	14	0.765	5	14	1.471
18:00 - 19:00	5	14	0.074	5	14	0.191	5	14	0.265
19:00 - 20:00	1	17	0.000	1	17	0.000	1	17	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.676			3.618			7.294

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: 9 - 19 (units:)
 Survey date range: 01/01/14 - 19/11/21
 Number of weekdays (Monday-Friday): 5
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

5.1. Former swimming pool:

- 5.1.1. For the purposes of the former swimming pool facility, the trip rate for a leisure centre was used for the TRICS vehicle trip rate assessment. The swimming pool facilities trip rate user average was based on site size (with the previous site being 0.55 ha).
- 5.1.2. The TRICS assessment showed that the peak levels of arrivals and departures for the AM peak were between 09:00-10:00, and for the PM peak 17:00-18:00. This was measured within a 17-hour period from 06:00 – 23:00.
- 5.1.3. From TRICS the leisure centre facilities produced a combined vehicle arrival and departure trip rate of 176.624, at the peak hour of 17:00-18:00. When calculated against the size of the site (0.55ha) this equated to **100 vehicle arrival and departures**, during the peak hours associated with this facility type, within the 17-hour assessment period.
- 5.1.4. Below details the TRICS output calculations for the leisure centre facility trip rate assessment.

Calculation Reference: AUDIT-146301-220711-0727

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE
 Category : C - LEISURE CENTRE
 TOTAL VEHICLES

Selected regions and areas:

04	EAST ANGLIA	
	NF NORFOLK	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	1 days
09	NORTH	
	CB CUMBRIA	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: Site area
 Actual Range: 0.29 to 0.79 (units: hect)
 Range Selected by User: 0.2 to 0.8 (units: hect)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 28/11/19

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.

Selected survey days:

Tuesday	1 days
Wednesday	2 days
Thursday	1 days

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

Selected survey types:

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 undertaken using machines.

Selected Locations:

Town Centre	1
Edge of Town Centre	3

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:

Built-Up Zone	3
No Sub Category	1

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

Hampshire County Council STREET NAME TOWN/CITY

Licence No: 146301

Secondary Filtering selection:

Use Class:

n/a 4 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

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:

5,001 to 25,000 1 days

75,001 to 100,000 1 days

125,001 to 250,000 1 days

250,001 to 500,000 1 days

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

Car ownership within 5 miles:

0.6 to 1.0 2 days

1.1 to 1.5 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 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.

PTAL Rating:

No PTAL Present 4 days

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

Hampshire County Council STREET NAME TOWN/CITY

Licence No: 146301

LIST OF SITES relevant to selection parameters

1	CB-07-C-03 JAMES STREET CARLISLE	SWIMMING & FITNESS CENTRE	CUMBRIA
	Edge of Town Centre Built-Up Zone Total Site area:	0.58 hect	
	Survey date: WEDNESDAY	22/06/16	Survey Type: MANUAL
2	DS-07-C-01 CATHEDRAL ROAD DERBY	LEISURE CENTRE	DERBYSHIRE
	Town Centre Built-Up Zone Total Site area:	0.29 hect	
	Survey date: WEDNESDAY	25/09/19	Survey Type: MANUAL
3	NF-07-C-04 WHERRY ROAD NORWICH	LEISURE CENTRE	NORFOLK
	Edge of Town Centre Built-Up Zone Total Site area:	0.79 hect	
	Survey date: THURSDAY	28/11/19	Survey Type: MANUAL
4	WY-07-C-02 LODGE LANE WETHERBY	LEISURE CENTRE	WEST YORKSHIRE
	Edge of Town Centre No Sub Category Total Site area:	0.65 hect	
	Survey date: TUESDAY	20/09/16	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.

Hampshire County Council STREET NAME TOWN/CITY

Licence No: 146301

TRIP RATE for Land Use 07 - LEISURE/C - LEISURE CENTRE

TOTAL VEHICLES

Calculation factor: 1 hect

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	0.54	32.407	2	0.54	3.704	2	0.54	36.111
07:00 - 08:00	4	0.58	31.602	4	0.58	16.017	4	0.58	47.619
08:00 - 09:00	4	0.58	43.723	4	0.58	28.139	4	0.58	71.862
09:00 - 10:00	4	0.58	68.398	4	0.58	45.887	4	0.58	114.285
10:00 - 11:00	4	0.58	66.234	4	0.58	64.502	4	0.58	130.736
11:00 - 12:00	4	0.58	45.022	4	0.58	51.515	4	0.58	96.537
12:00 - 13:00	4	0.58	36.797	4	0.58	61.905	4	0.58	98.702
13:00 - 14:00	4	0.58	40.693	4	0.58	38.528	4	0.58	79.221
14:00 - 15:00	4	0.58	34.199	4	0.58	36.797	4	0.58	70.996
15:00 - 16:00	4	0.58	65.368	4	0.58	36.364	4	0.58	101.732
16:00 - 17:00	4	0.58	89.610	4	0.58	70.996	4	0.58	160.606
17:00 - 18:00	4	0.58	83.983	4	0.58	92.641	4	0.58	176.624
18:00 - 19:00	4	0.58	70.563	4	0.58	74.892	4	0.58	145.455
19:00 - 20:00	4	0.58	53.247	4	0.58	73.593	4	0.58	126.840
20:00 - 21:00	4	0.58	35.065	4	0.58	53.247	4	0.58	88.312
21:00 - 22:00	4	0.58	10.390	4	0.58	33.766	4	0.58	44.156
22:00 - 23:00	2	0.54	0.000	2	0.54	22.222	2	0.54	22.222
23:00 - 24:00									
Total Rates:			807.301			804.715			1612.016

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:	0.29 to 0.79 (units: hect)
Survey date range:	01/01/14 - 28/11/19
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

6.1. Output Summary

6.1.1. All anticipated peak hour vehicle (cars) arrival and departure outputs are detailed in *Table 1* below:

Table 1 Anticipated Combined Arrival/Departure Trip Rate for Peak AM and PM Times

Accommodation Type/Facility Type	Measurement for comparison	TRICS Estimated Trip Rate - AM Peak	TRICS Estimated Trip Rate - PM Peak	Total no. of vehicles (car)
New use				
Sheltered accommodation/general needs housing (C3)	49 dwellings	7	7*	14
Supported living (mental health flats) (C3)	13 dwellings	2*	2*	4
Older persons day care (C2)	8 staff	7	6	13
Cumulative total	All listed above	16	15	31
Previous use				
Swimming pool facility (leisure) (use class?)	0.55 ha	49	51	100

***rounded up**

6.1.2. Table 1 outlines that there would have been approximately **100** arrival and departure vehicle trips occurring at peak hour periods, associated with the site's previous use as a swimming pool.

6.1.3. With regards to the use of the site the cumulative trips are estimated to be **31 arrival and departure vehicle trips**, occurring at peak periods during the day. This represents a net decrease of **-69 vehicle trips** against the site's previous trip generation estimation.

6.1.4. The difference in trip generation from the new site's previous use to its anticipated use demonstrates that the differences are significant, with, if any, a positive impact on the local highway.

6.1.5. It is also worth noting that this trip generation represents a 'worst case scenario' based on peak hour assumptions. It does not take into account shared

transportation, which for example it likely to used by attendees at the day care facility. Use of shared taxis and minibuses could further reduce the trip generation.

- 6.1.6. It is worth noting however that sufficient staff parking will be accommodated on-site in line with RBC guidelines.