

1 Green Dragon – Transport Statement Addendum

Introduction

- 1.1 Further to the consultation memorandum provided by Wrexham Council and JMP's subsequent discussions with Wrexham Council's highway department, this note provides further clarity on the proposal for a C2 residential care development, at the Green Dragon Public House site, located off Bennion's Road, Wrexham.
- 1.2 The application is to convert the Public House to provide 6 residential care home units.

Trip Generation

Extant Planning Use

- 1.3 Trip generation figures for the site of the proposed development have been derived from the TRICS database (Version 2013a). The TRICS database was interrogated to determine the trip rates for the weekday morning and evening peaks. In order to obtain appropriate trip rates, sites within London, Northern Ireland and the Republic of Ireland have not been included within this assessment.
- 1.4 The results of this TRICS interrogation are shown within Table 1.1, whilst the TRICS outputs for the extant planning permission are provided within **Appendix A**.

Table 1.1 Extant Development Trip Rates

Land Use	GFA M2	Weekday Morning Peak		Weekday Evening Peak	
		Arr	Dep	Arr	Dep
Public House	303	-	-	5.733	3.933

- 1.5 The above trip rates have been applied to the current development Gross Floor Area [GFA] to determine the traffic generation associated with extant use. The resultant trip generations are shown in Table 1.2.

Table 1.2 Extant Traffic Generation

Land Use	GFA M2	Weekday Morning Peak		Weekday Evening Peak	
		Arr	Dep	Arr	Dep
Public House	303	-	-	17	12
Total		-	-	17	12

- 1.6 It can be seen from the above table that the extant planning use is predicted to generate 0 trips in the morning peak hour and 29 two-way trips in the evening peak hour.

Proposed Development

- 1.7 As detailed in the introduction section, the planning applications seek to provide 6 residential care units at the Green Dragon site.
- 1.8 JMP have again interrogated the TRICS database (version 2013a) to derive the proposed development trips for the residential care development.
- 1.9 The results of this TRICS assessment are shown within Table 1.3, whilst the TRICS outputs are also included in **Appendix B**.

Table 1.3 Proposed Development Trip Rates

Land Use	GFA (Per unit)	Weekday Morning Peak		Weekday Evening Peak	
		Arr	Dep	Arr	Dep
Residential care units	6	0.143	0.131	0.06	0.083

- 1.10
- 1.11 The above trip rates have been applied to the proposed application to determine the potential traffic generation. The resultant trip generations are shown in Table 1.4 below.

Table 1.4 Proposed Traffic Generation

Land Use	GFA (Per unit)	Weekday Morning Peak		Weekday Evening Peak	
		Arr	Dep	Arr	Dep
Residential care units	6	1	1	0	1
Total		1	1	0	1

- 1.12 It can be seen from the above table that the proposed application would generate a total of 2 trips in both weekday morning and 1 trip in the weekday evening peak. Based on the above assessments it can be concluded that the proposed development will not be a large trip generator.
- 1.13 Notwithstanding the above commentary a comparison of the extant and proposed development trips generation is further illustrated in Table 1.5 below.

Table 1.5 New Trips on the Network (Proposed Development minus Extant Traffic)

New Trips	Weekday Morning Peak		Weekday Evening Peak	
	Arr	Dep	Arr	Dep
Proposed Application (Table 1.4)	1	1	0	1
Minus Extant Traffic (Table 1.2)	0	0	17	12
Total	1	1	-17	-11

- 1.14 It can therefore be seen from the above table that the traffic associated with the planning application would generate 26 fewer weekday peak trips.

- 1.15 Over the course of a typical week, this difference in traffic movements is likely to be considerable. Given the reduction in traffic movements, there would be a number of wider benefits for the local area including:
- reduction in CO² emissions;
 - reduction in noise pollution for local residents; and
 - reduction in traffic using local junctions.

Access

- 1.16 The client has confirmed that they will not be pursuing the residential scheme of 7 dwellings (ref: P/2010/006) and that our client advises that the recycling bins will not be retained on site and they are currently not accessible.
- 1.17 On this basis the access proposals are as per the enclosed JMP figures.

Car Parking

- 1.18 Further to JMP's discussions with the Council it was agreed that the provision of 10 parking spaces would be sufficient to accommodate the likely demands of staff, residents and visitors. As can be identified from **Figure 3** these parking bays have been accommodated within the site and can be accessed by a large family vehicle.

Conclusions

- 1.19 Further to the consultation memorandum provided by Wrexham Council and JMP's subsequent discussions with Wrexham Council's highway department, this note provides further clarity on the proposal for a C2 residential care development, at the Green Dragon Public House site, located off Bennion's Road, Wrexham.
- 1.20 In summary, the main findings of this addendum are as follows:
- The proposed development would not generate any material highways impacts in terms of vehicular movements and manoeuvrability; and
 - The proposed car parking arrangements are suitable for the proposed use.
- 1.21 On this basis, JMP considers that there are no traffic or highways grounds that would preclude against positive determination of the respective application to enable the viable development of the existing public house into a C2 residential care development.



Figures

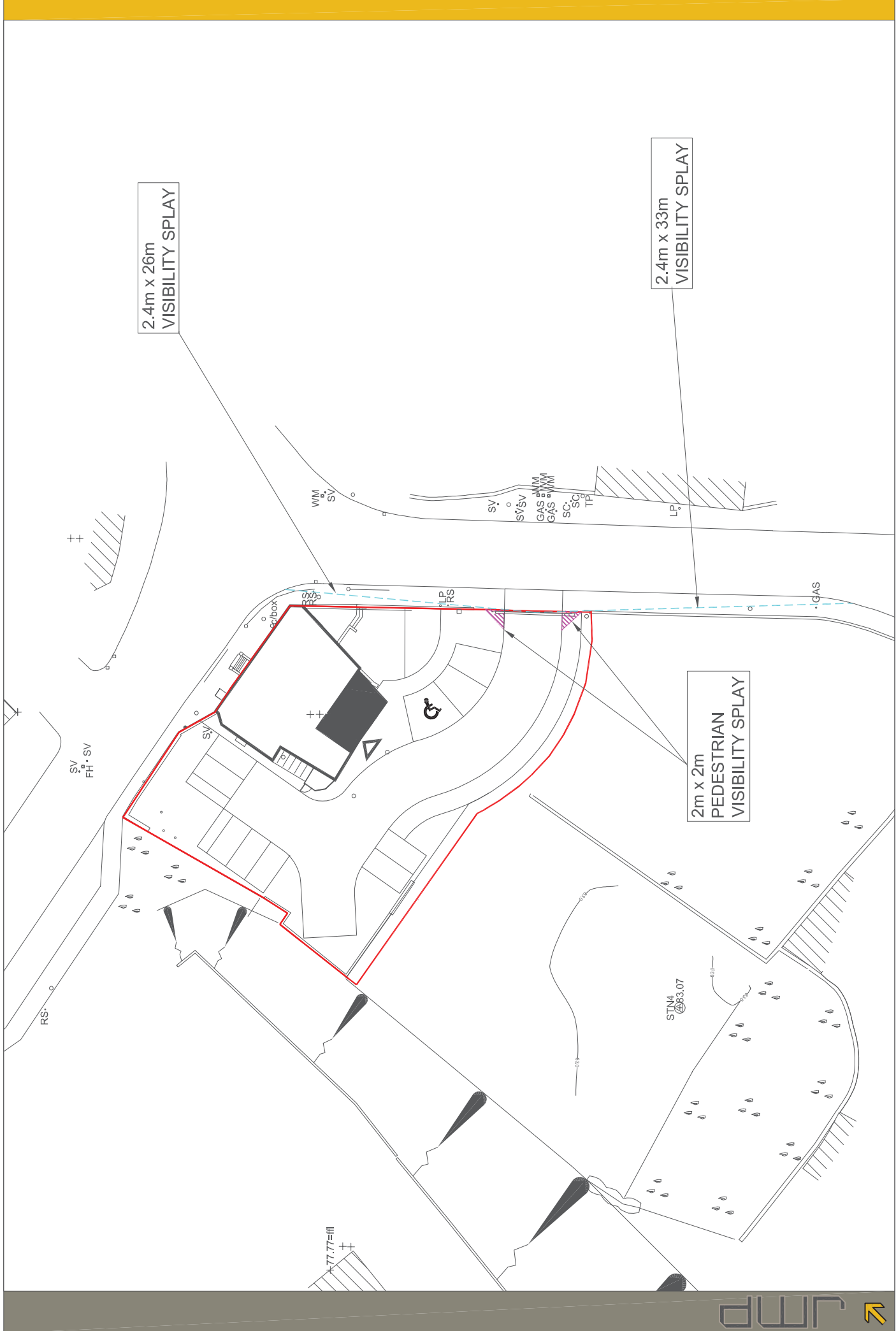




Figure Title: Swept Path Analysis of a Large Refuse Vehicle





Appendix A

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK
Category : C - PUB/RESTAURANT

VEHICLES

Selected regions and areas:

02 SOUTH EAST	
EX ESSEX	1 days
HC HAMPSHIRE	1 days
03 SOUTH WEST	
CW CORNWALL	1 days
11 SCOTLAND	
AD ABERDEEN CITY	1 days

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

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: Gross floor area
Actual Range: 285 to 450 (units: sqm)
Range Selected by User: 112 to 500 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/04 to 17/10/09

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:

Friday 4 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 1
Suburban Area (PPS6 Out of Centre) 2
Edge of Town 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:

No Sub Category 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.

Filtering Stage 3 selection:

Use Class:

A3	1 days
A4	3 days

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

Population within 1 mile:

10,001 to 15,000	2 days
15,001 to 20,000	1 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
100,001 to 125,000	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:

1.1 to 1.5	4 days
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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
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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

1	AD-06-C-01	PUB/RESTAURANT, ABERDEEN	ABERDEEN CITY
	WESTBURN ROAD		
	ABERDEEN		
	Edge of Town Centre		
	No Sub Category		
	Total Gross floor area:	315 sqm	
	Survey date: FRIDAY	13/05/05	Survey Type: MANUAL
2	CW-06-C-01	PUB/RESTAURANT, CAMBORNE	CORNWALL
	FORE STREET		
	POOL		
	CAMBORNE		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total Gross floor area:	285 sqm	
	Survey date: FRIDAY	21/09/07	Survey Type: MANUAL
3	EX-06-C-01	HARVESTER, COLCHESTER	ESSEX
	LONDON ROAD		
	STANWAY		
	COLCHESTER		
	Edge of Town		
	No Sub Category		
	Total Gross floor area:	450 sqm	
	Survey date: FRIDAY	11/07/08	Survey Type: MANUAL
4	HC-06-C-02	BEEFEATER, EASTLEIGH	HAMPSHIRE
	BOURNEMOUTH ROAD		
	AMPFIELD		
	EASTLEIGH		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total Gross floor area:	450 sqm	
	Survey date: FRIDAY	16/11/07	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 06 - HOTEL, FOOD & DRINK/C - PUB/RESTAURANT

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00	4	375	0.267	4	375	0.200	4	375	0.467
11:00 - 12:00	4	375	2.800	4	375	0.800	4	375	3.600
12:00 - 13:00	4	375	4.867	4	375	2.200	4	375	7.067
13:00 - 14:00	4	375	4.667	4	375	5.000	4	375	9.667
14:00 - 15:00	4	375	2.733	4	375	3.867	4	375	6.600
15:00 - 16:00	4	375	1.867	4	375	2.133	4	375	4.000
16:00 - 17:00	4	375	3.333	4	375	3.333	4	375	6.666
17:00 - 18:00	4	375	5.733	4	375	3.933	4	375	9.666
18:00 - 19:00	4	375	4.000	4	375	4.133	4	375	8.133
19:00 - 20:00	4	375	5.600	4	375	3.600	4	375	9.200
20:00 - 21:00	4	375	2.000	4	375	3.733	4	375	5.733
21:00 - 22:00	4	375	1.000	4	375	3.333	4	375	4.333
22:00 - 23:00	3	395	0.253	3	395	1.857	3	395	2.110
23:00 - 24:00	3	395	0.422	3	395	3.038	3	395	3.460
Total Rates:			39.542			41.160			80.702

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: 285 - 450 (units: sqm)
 Survey date date range: 01/01/04 - 17/10/09
 Number of weekdays (Monday-Friday): 4
 Number of Saturdays: 0
 Number of Sundays: 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.



Appendix B

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 05 - HEALTH
Category : L - CARE HOME

VEHICLES

Selected regions and areas:

02 SOUTH EAST	
BU BUCKINGHAMSHIRE	1 days
07 YORKSHIRE & NORTH LINCOLNSHIRE	
WY WEST YORKSHIRE	1 days
09 NORTH	
DH DURHAM	1 days

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

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 residents
Actual Range: 9 to 40 (units:)
Range Selected by User: 9 to 40 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/05 to 13/12/12

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	1 days

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

Selected survey types:

Manual count	3 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:

Suburban Area (PPS6 Out of Centre)	3
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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
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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:

C23 days

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

Population within 1 mile:

1,001 to 5,0001 days

20,001 to 25,0001 days

25,001 to 50,0001 days

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

Population within 5 miles:

75,001 to 100,0001 days

125,001 to 250,0001 days

250,001 to 500,0001 days

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

Car ownership within 5 miles:

0.6 to 1.03 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:

No3 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.

LIST OF SITES relevant to selection parameters

1	BU-05-L-01	CARE HOME		BUCKINGHAMSHIRE
	BELVOIR AVENUE			
	BLETCHLEY			
	MILTON KEYNES			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of residents:	9		
	Survey date: FRIDAY	11/11/11		Survey Type: MANUAL
2	DH-05-L-01	CARE CENTRE		DURHAM
	TRINITY MEWS			
	PIERREMONT			
	DARLINGTON			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of residents:	35		
	Survey date: WEDNESDAY	10/11/10		Survey Type: MANUAL
3	WY-05-L-01	CARE HOME		WEST YORKSHIRE
	NORTH PARK ROAD			
	BRADFORD			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of residents:	40		
	Survey date: THURSDAY	13/12/12		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 05 - HEALTH/L - CARE HOME

VEHICLES**Calculation factor: 1 RESIDE****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	3	28	0.190	3	28	0.107	3	28	0.297
08:00 - 09:00	3	28	0.143	3	28	0.131	3	28	0.274
09:00 - 10:00	3	28	0.107	3	28	0.036	3	28	0.143
10:00 - 11:00	3	28	0.131	3	28	0.071	3	28	0.202
11:00 - 12:00	3	28	0.095	3	28	0.155	3	28	0.250
12:00 - 13:00	3	28	0.107	3	28	0.107	3	28	0.214
13:00 - 14:00	3	28	0.179	3	28	0.143	3	28	0.322
14:00 - 15:00	3	28	0.119	3	28	0.143	3	28	0.262
15:00 - 16:00	3	28	0.131	3	28	0.155	3	28	0.286
16:00 - 17:00	3	28	0.060	3	28	0.238	3	28	0.298
17:00 - 18:00	3	28	0.060	3	28	0.083	3	28	0.143
18:00 - 19:00	3	28	0.060	3	28	0.012	3	28	0.072
19:00 - 20:00	3	28	0.143	3	28	0.083	3	28	0.226
20:00 - 21:00	3	28	0.012	3	28	0.119	3	28	0.131
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.537			1.583			3.120

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

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

Parameter summary

Trip rate parameter range selected: 9 - 40 (units:)
 Survey date date range: 01/01/05 - 13/12/12
 Number of weekdays (Monday-Friday): 3
 Number of Saturdays: 0
 Number of Sundays: 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.