



Outline Planning Application

Penley Hall

Transport Statement

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Outline Planning Application

Penley Hall Site

Transport Statement

Status	Prepared By	Purpose	Date
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Contents

	Page No.
1. Introduction	1
2. Existing conditions	1
3. Development Proposals	2
4. Development estate road dedication/adoption	3
5. Traffic Generation and Distribution	3
6. Accessibility /Sustainable Transport considerations	5
7. Highway Safety	5
8. Conclusion	5

Appendices

- 1 Indicative Site Layout
- 2 Photographs
- 3 TRICs Data
- 4 Public Transport Information
- 5 Road safety

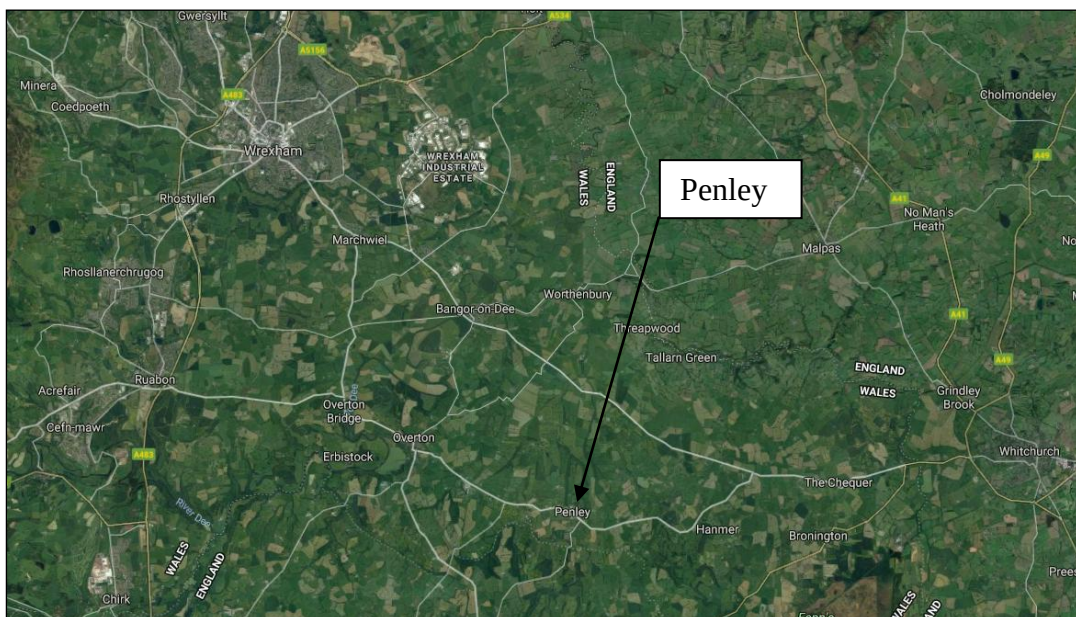
1 Introduction

Highway Planning Services was commissioned by Mr. K Barker to undertake a study and to prepare a transport statement in support of an outline planning application for Land at Penley Hall, Penley Hall Drive. The scope of the study was to include consideration of the highway implications and transport requirements resulting from development.

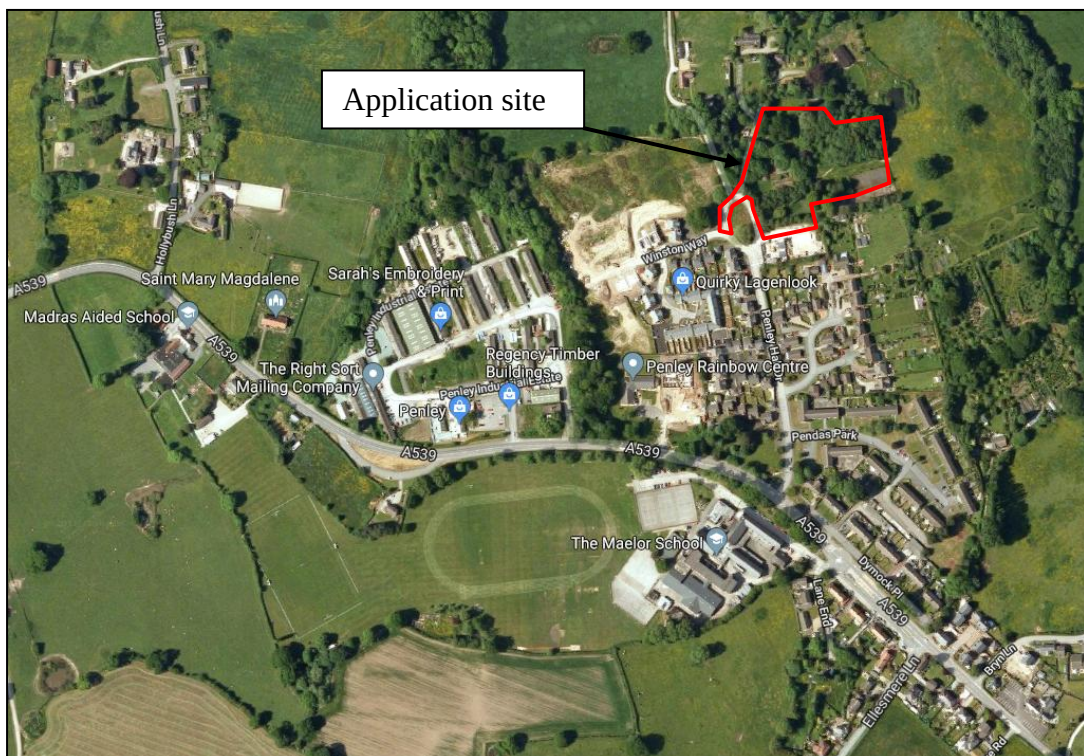
The study was undertaken following initial site visits followed by a desk based exercise.

2 Existing Conditions

The application site adjoins the Pendas Park Estate, a residential estate developed approximately 10 years ago by Morris Homes. The estate is located to the north of the A539 close to the centre of Penley village. Penley is located approximately 8 miles south east of Wrexham and mid way between Ruabon and Whitchurch. A detailed plan indicating the location and extents of the site is included within the appendices.



The site is accessed via a private drive off Penley Hall Lane, a residential access road leading off the A539; photographs are included within the appendices. A Traffic Regulation Order on the A539 through the village and on the residential access roads leading off it, restricts traffic speeds to 20mph. Traffic speeds are physically restricted by the presence of a mini roundabout, by the introduction of speed cushions and speed ramps and further enforced by “20” roundels marked on the road surface and permanently mounted, speed monitoring display equipment.



3. Development Proposals

The site layout sketch included within the appendices indicates a potential provision of 9 dwellings. With an area of over 0.9 Ha, the site could theoretically cater for something in excess of 27 dwellings however protection of existing trees growing on the site and the requirements of the Landscape Strategy plan, significantly reduces the potential. Properties will be served from a cul-de-sac

road leading off Winston Way; a stub road was constructed by previous developers specifically for this purpose. The stub is kerbed, 5.5m wide and provided with a single footway. The existing private drive leading away from the stub will be re-constructed to meet adoptable standards.

The Pendas Park Development constructed by Morris Homes was designed to adoptable standard however construction has not been completed to the satisfaction of the highway authority. There is no adoption agreement in place and it would appear unlikely that roads within the development will be adopted in the near future. Roads on Pendas Park were constructed as public highway but maintenance responsibility currently lies with the developer and Management Company; the Applicant has documented rights of access over these roads.

4. Development estate road dedication/adoption

The access road required to serve the application site will be designed and constructed to adoptable standard but until such time as it can be connected to the publicly maintainable highway network, it will be managed and maintained by a management company to be set up for the specific purpose. Establishment and control by such management companies is discussed in sections 11.6 and 11.9 of Manual For Streets. The Applicant has the ability to dedicate roads as publically maintainable highway as and when the opportunity arises.

5. Traffic Generation/Distribution

Penley lies within the Maelor South Community Council area; census information available for the community indicates that 57% of the working population lives less than 10km from their place of employment. However, linked to this 76% of the working population either drive or travel as a passenger in a car or van and 24% either work from home or travel by a more sustainable mode of transport. If

the employment characteristics of residents on the proposed allocation were to follow the pattern of the existing ward, it is anticipated that by introduction and careful management of a residential travel plan, the percentage of journeys made by sustainable travel modes could be further increased.

An enquiry was submitted to the TRICs Bureau Service with a request for survey data of small residential sites, restricted to those located in rural areas or edge of settlement. The available data is limited but results are contained in the appendices. The survey data indicates the busiest weekday a.m. and p.m. peak periods for residential developments are 08:00–09:00 and 16:00–17:00 respectively however high levels of vehicular trips are also recorded in the afternoon period between 13.00 – 15.00.

	TRICS			Development 9no. dwellings		
	Arrivals	Departures	Total	Arrivals	Departures	Total
a.m. peak	0.13	0.57	0.70	1	5	6
p.m. peak	0.66	0.50	1.16	6	4	10

Vehicular trip rates for small rural residential developments are found to be 0.70 during the a.m. peak and 1.16 during the p.m. peak. This would equate to a two way generation by the proposed development of 6 and 10 movements respectively during the morning and evening periods (less than 1 every 5 minutes).

Apart from Wrexham (10 miles) and Whitchurch (9 miles), other common destinations for traffic during peak periods are likely to be Wrexham Industrial Estate (9 miles), Oswestry (12 miles), Chester (20 miles) or Shrewsbury (22 miles). With this range of destinations, trips are likely to be evenly distributed between east and west directions on the A539 with a portion of those to/from the east using Ellesemere Lane.

The DfT Traffic Counts website records the A539 west of Penley to be a relatively lightly trafficked road with an estimated AADF 2 way flow of 2840 vehicles. The TRICs calculated traffic generation rates, will have no noticeable impact on highway operations.

6. Accessibility/ Sustainable Transport Considerations

Penley contains local facilities including primary and secondary schools, a general store and public house. The village is located approximately 3.5 miles from Overton and 4 miles from Ellesmere where all other local facilities are available.

The 146 bus service (timetable within the appendices) provides a daily service linking between Wrexham and Whitchurch. The nearest rail stations are in Wrexham approximately 10 miles away. The area has a network of lightly trafficked unclassified roads that are suitable for use by cyclists.

7. Highway Safety

During recent years a number of incidents, some serious, have occurred on the A539 in the vicinity of Penley. These have largely been attributed to driver error and inappropriate speed. Only two incidents have been recorded within the confines of the village as shown in the extract from Crash Map included within the appendices. Since these incidents a 20mph speed restriction has been imposed throughout the village.

To facilitate right turners, the junction of Pendas Park onto the A539 is provided with ghost islands and turning lane. Visibility splays in excess of 2.4x400m to the left and 150m to the right are available.

8. Conclusion

The site is considered to be a suitable location for residential development, the provision of a residential travel plan would provide an opportunity to enhance the use of sustainable travel options.

Appendices

Appendix 1

Indicative Site Layout

Appendix 2

Photographs



A539/Pendas Park Junction



Junction visibility to the left



Junction visibility to the right



Access to the site via Penley Hall Lane through Pendas Park

Appendix 3

TRICs Data

Filtering Summary

Land Use	03/A	RESIDENTIAL/HOUSES PRIVATELY OWNED
Selected Trip Rate Calculation Parameter Range	4-50 DWELLS	
Actual Trip Rate Calculation Parameter Range	7-37 DWELLS	
Date Range	Minimum: 01/01/09	Maximum: 28/03/17
Days of the week selected	Tuesday Wednesday Thursday	2 1 2
Main Location Types selected	Edge of Town	5
Population <1 Mile ranges selected	1,001 to 5,000	5
Population <5 Mile ranges selected	5,000 or Less 5,001 to 25,000	2 3
Car Ownership <5 Mile ranges selected	1.1 to 1.5	5
PTAL Rating	No PTAL Present	5

Calculation Reference: AUDIT-700101-171011-1026

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : A - HOUSES PRIVATELY OWNED

VEHICLES

Selected regions and areas:

07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	2 days
12	CONNAUGHT	
	RO ROSCOMMON	1 days
16	ULSTER (REPUBLIC OF IRELAND)	
	CV CAVAN	1 days
	DN DONEGAL	1 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
 Actual Range: 7 to 37 (units:)
 Range Selected by User: 4 to 50 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/09 to 28/03/17

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	2 days
Wednesday	1 days
Thursday	2 days

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

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town	5
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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	2
No Sub Category	3

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

Secondary Filtering selection:

Use Class:

C3 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 1 mile:

1,001 to 5,000 5 days

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

Population within 5 miles:

5,000 or Less 2 days
5,001 to 25,000 3 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 5 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.

LIST OF SITES relevant to selection parameters

Site(1):	CV-03-A-01	Site area:	1.25 hect
Development Name:	DETACHED	Number of dwellings:	37
Location:	CAVAN	Housing density:	35
Postcode:		Total Bedrooms:	148
Main Location Type:	Edge of Town	Survey Date:	18/12/12
Sub-Location Type:	No Sub Category	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	114
Site(2):	DN-03-A-02	Site area:	1.02 hect
Development Name:	DETACHED	Number of dwellings:	7
Location:	BALLYBOFEY	Housing density:	8
Postcode:		Total Bedrooms:	35
Main Location Type:	Edge of Town	Survey Date:	05/09/13
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	21
Site(3):	NY-03-A-07	Site area:	0.77 hect
Development Name:	DETACHED & SEMI DET.	Number of dwellings:	23
Location:	BOROUGHBRIDGE	Housing density:	35
Postcode:	Y051 9US	Total Bedrooms:	67
Main Location Type:	Edge of Town	Survey Date:	18/10/11
Sub-Location Type:	No Sub Category	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	45
Site(4):	NY-03-A-11	Site area:	1.79 hect
Development Name:	PRIVATE HOUSING	Number of dwellings:	23
Location:	BOROUGHBRIDGE	Housing density:	15
Postcode:	Y051 9LQ	Total Bedrooms:	101
Main Location Type:	Edge of Town	Survey Date:	18/09/13
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	144
Site(5):	RO-03-A-03	Site area:	4.08 hect
Development Name:	DETACHED HOUSES	Number of dwellings:	23
Location:	BOYLE	Housing density:	8
Postcode:		Total Bedrooms:	96
Main Location Type:	Edge of Town	Survey Date:	25/09/14
Sub-Location Type:	No Sub Category	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	84

Trip Rates for Key Periods		Trips per 100m2 GFA	
Period	Inbound	Outbound	Total
0800-0900	99.999	99.999	99.999
1700-1800	99.999	99.999	99.999

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

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	5	23	0.071	5	23	0.204	5	23	0.275
08:00 - 09:00	5	23	0.133	5	23	0.566	5	23	0.699
09:00 - 10:00	5	23	0.274	5	23	0.345	5	23	0.619
10:00 - 11:00	5	23	0.186	5	23	0.212	5	23	0.398
11:00 - 12:00	5	23	0.257	5	23	0.212	5	23	0.469
12:00 - 13:00	5	23	0.434	5	23	0.354	5	23	0.788
13:00 - 14:00	5	23	0.575	5	23	0.522	5	23	1.097
14:00 - 15:00	5	23	0.513	5	23	0.584	5	23	1.097
15:00 - 16:00	5	23	0.407	5	23	0.389	5	23	0.796
16:00 - 17:00	5	23	0.664	5	23	0.496	5	23	1.160
17:00 - 18:00	5	23	0.602	5	23	0.407	5	23	1.009
18:00 - 19:00	5	23	0.566	5	23	0.398	5	23	0.964
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.682			4.689			9.371

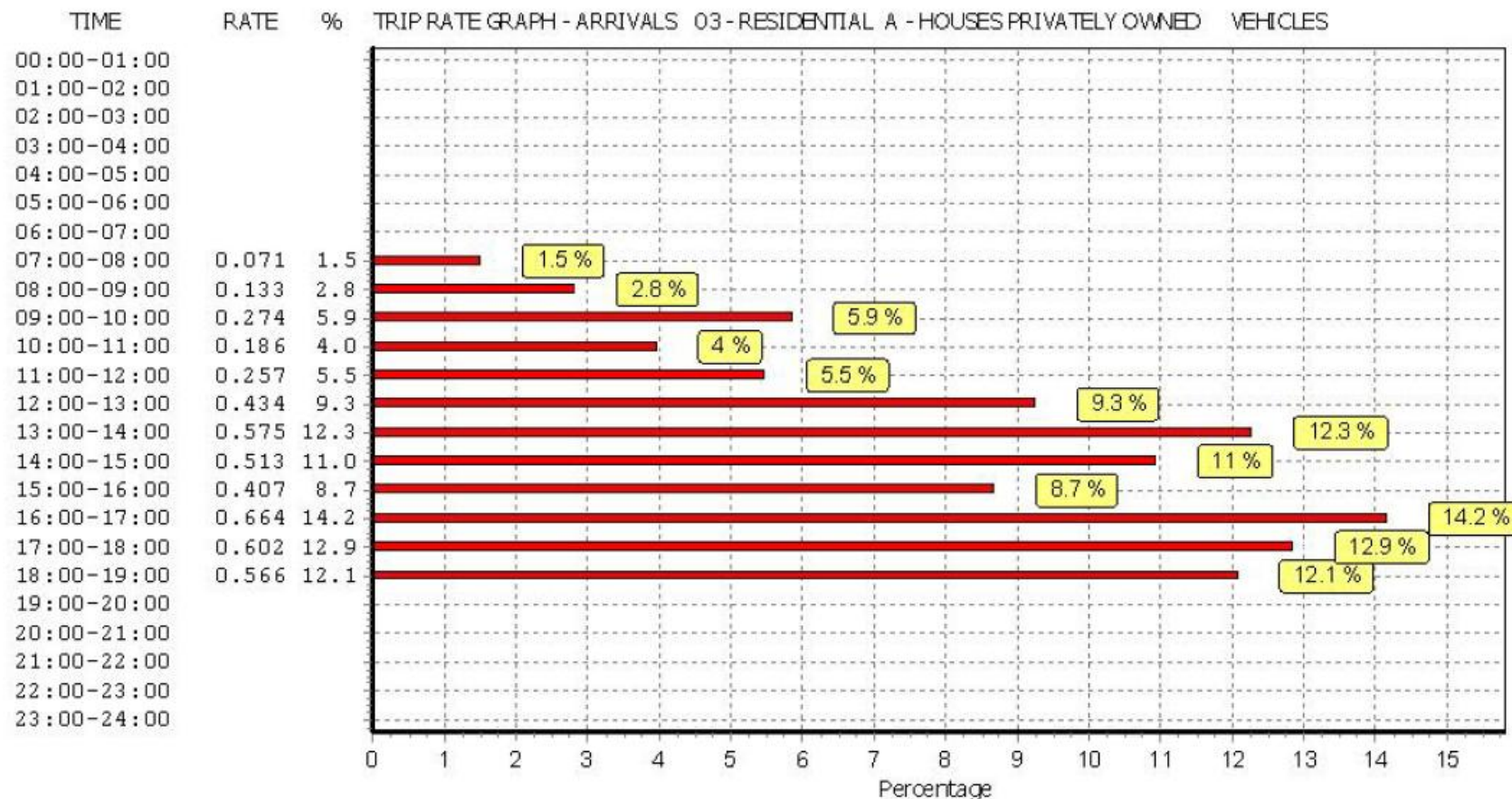
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are 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.

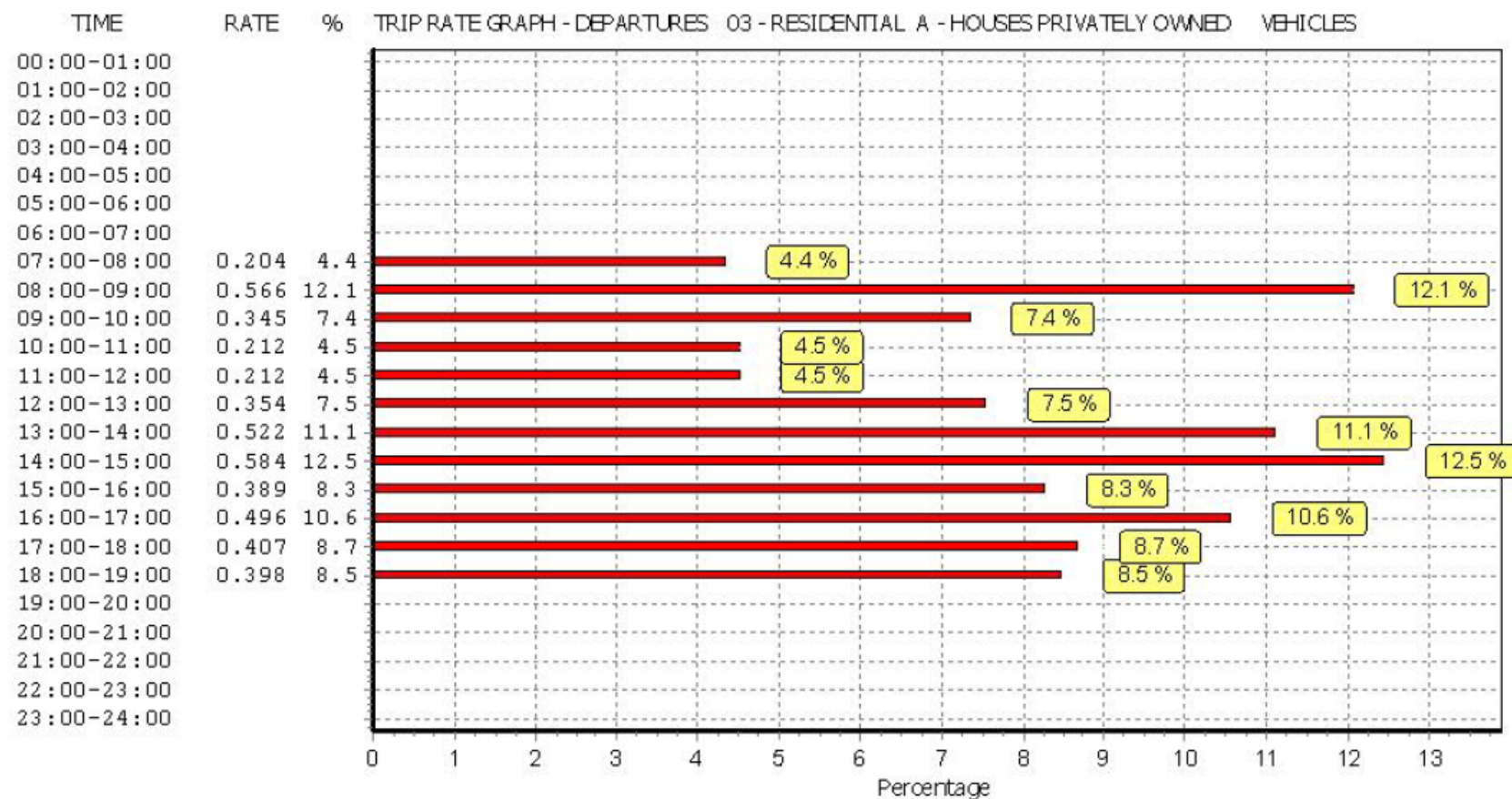
Parameter summary

Trip rate parameter range selected: 7 - 37 (units:)
 Survey date range: 01/01/09 - 28/03/17
 Number of weekdays (Monday-Friday): 5
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 1
 Surveys manually removed from selection: 0

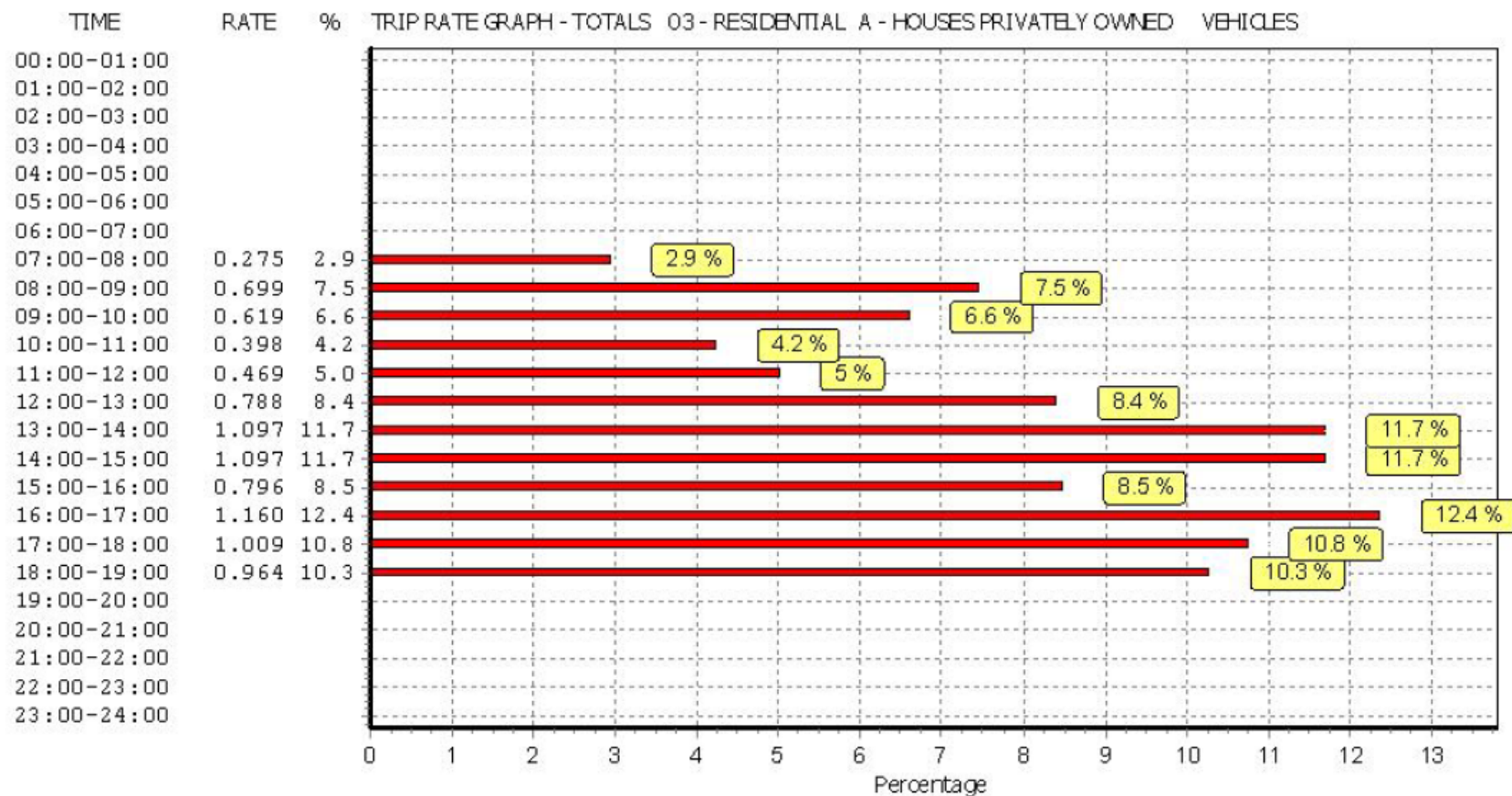
This section displays a quick summary of some of the data filtering selections made by the TRICS@ user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected 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.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



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Appendix 4

Public Transport Information

146 Wrexham/Wreccsam - Marchwieli - Penley - Whitchurch**X46 Wrexham/Wreccsam - Marchwieli - Whitchurch**

Monday to Saturday except Bank Holidays : Llun i Sadwrn henblaw Gwyliau Cyhoeddus

PATS COACHES

Service No. / Rhif Gwasanaeth:	X46	146	146	146
Wrexham, Bus Station [2]	0700	0940	1310	1700
Market Street	0704	0944	1314	1704
Eagles Meadow	0706	0946	1316	1706
Hightown, Farmfoods	0710	0950	1320	1710
Marchwieli, Piercy Avenue	0714	0954	1324	1714
Cross Lanes	0716	0956	1326	1716
Bangor-on-Dee		0959	1329	1719
Overton		1008	1338	1728
Penley		1015	1345	1735
Hanmer		1022	1352	1742
Bronington		1030	1400	1750
Whitchurch	0740	1040	1410	1758

146 Whitchurch - Penley - Marchwieli - Wrexham/Wreccsam**PC6 Penley-Wrexham/Wreccsam, Diwrnod Ysgol yn Unig/School Days Only**

Monday to Saturday except Bank Holidays : Llun i Sadwrn henblaw Gwyliau Cyhoeddus

	146	PC6	146	146	146
Whitchurch	0745	----	1045	1415	1800
Bronington	0755	----	1055	1425	1810
Hanmer	0803	----	1103	1433	1818
Penley	0810	0855	1110	1440	1825
Overton	0817	0902	1117	1447	1830
Bangor-on-Dee	0827	0912	1127	1457	1838
Cross Lanes	0829	0914	1131	1501	1840
Marchwieli, Piercy Avenue	0831	0916	1133	1503	1842
Hightown, Farmfoods	0835	0920	1137	1507	1844
Eagles Meadow	0839	0924	1142	1512	1848
Market Street	0841	0926	1145	1515	1850
Wrexham, Bus Station	0845	0930	1148	1518	1852

Appendix 5

Road Safety

