

**Specialist Care Facility
Pendine Park,
Summerhill Road, Wrexham**

Technical Note



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Proposed Specialist Care Facility Pendine Park, Summerhill Road, Wrexham

Technical Note

Status	Prepared By	Purpose	Date
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Contents	Page
1. Introduction	1
2. Site Location	1
3. The Proposed Development	2
4. Traffic Generation	3
5. Traffic Survey/Junction Capacity	3
6. Junction Layout	5
7. Traffic Impact On Summerhill Road-Accident History	5
8. Sustainable Travel	6
9. Conclusions	6

Appendices

1. Photographs
2. LPGN16 Parking Standards
3. Public Transport
4. Indicative Site Layout
5. Traffic Survey
6. Picady Capacity Analysis
7. Personal Injury Accident Data
8. Sustainable Transport

1. Introduction

Highway Planning Services has been commissioned to prepare a Technical Note in support of an outline planning application that is to be submitted to Wrexham County Borough Council for the development of a specialist care facility, to be sited on land at Pendine Park, Summerhill Road Wrexham.

This preliminary note will consider the transport requirements of the proposed development and will also comment upon the potential highway impact of the development. This note will be replaced by a Transport Statement to be submitted with a future detailed planning application following grant of outline consent.

2. Site Location



The application site at Pendine Park is located off Summerhill Road approximately 2.5 km to the north west of Wrexham Town Centre. Pendine Park is a long established medical/care centre specialising in the care of mental illness. The park is set in a rural location and the site is surrounded by agricultural land.

Summerhill Road is used as a local distributor road providing access from Wrexham, via Mold Road and the A483 interchange, to the residential areas of Summerhill on the western edge of Gwersyllt. The road is two lane and generally between 5 and 6 metres wide. Footway provision is intermittent however there is a continuous footway from Wrexham as far as the entrance to Pendine Park. The section of road past the Pendine Park entrance is subject to the national speed limit although traffic generally travels at slower speeds than this; the road is generally unlit. Photographs are included in Appendix 1.

Public bus services nos. 21, 21A, 26 and 27 run along Summerhill Road, with stops directly outside of the Pendine Park entrance. Copies of the timetables are included within Appendix 2. Nos. 21 and 21A are the Wrexham to Summerhill Service via the Maelor Hospital and run on a half hourly schedule from early morning to late evening Monday to Saturday. An hourly service runs throughout the day on Sunday. Nos. 26 and 27 are the Wrexham to Mold service via Maelor Hospital, Caergwrle and Leeswood. Services run on an hourly basis throughout the day Monday – Saturday

3. Illustrative plan showing the general location of the development footprint for outline planning purposes only



The application seeks the construction of a specialist care facility to be located within the confines of the existing development site. The proposed development will accommodate 40-50 residential patients. Parking facilities will be provided for visitors and staff in line with the WCBC parking standards; one car per two bed spaces. An indicative layout plan is included within at Appendix 4. This indicative layout shows that over 50 parking spaces could be provided if considered necessary; actual detail will be addressed at the next stage of discharge of reserved matters.

4. Traffic Generation

Traffic generation will be limited to staff, visitors and servicing. The proposed facility will employ approximately 15-20 additional care staff; these staff will work a shift rota system with shift changes avoiding the usual highway peak periods. Visiting is likely to be restricted to limited hours during the morning and afternoon periods and weekends; existing visitor peak hours are between 11.00 – 15:00 and avoid the highway peak periods. Servicing will run throughout the daytime period but delivery/collections will be shared with the existing on-site facility; there will be no significant increase in servicing movements.

It can be seen that the proposed development is not anticipated to generate a significant change in traffic volumes. It should be noted that approximately 20no. administrative staff were recently relocated from the Pendine Park site to offices within the Technology Park; this reduction in admin staff, travelling during the highway critical peak periods, will outweigh the impact of any traffic generation associated with the proposed development.

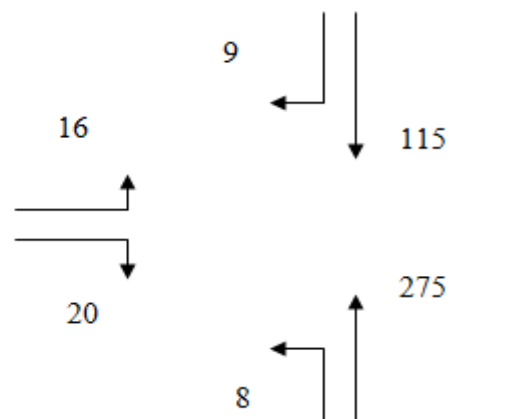
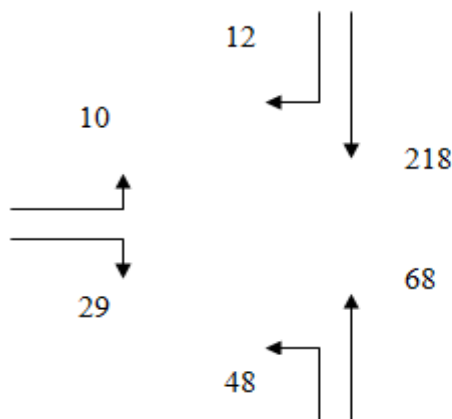
5. Traffic Survey/Junction Capacity

A previous unrealised development opportunity necessitated the undertaking of a seven day traffic survey. This was undertaken between 27 June and 3 July 2016 with a peak hour junction turning movement count undertaken on 30 June. The traffic survey indicated the peak period traffic flows on Summerhill Road occurred between 08:00 and 09:00 and between 17:00 and 18:00. Peak traffic movements related to the development site matched the care staff shift changes and occurred between 07:15-08:15 and 16:45 and 17:45. Full results from this survey are included in Appendix 5 but are summarised below:

	08.00-09.00 Average weekday flows	17.00-18.00 Average weekday flows	7 day 85 th percentile speed
Northbound (toward Summerhill)	91 24%	279 70%	41.3 mph
Southbound (toward Wrexham)	198 76%	123 30%	40.4 mph

Weekday average flows on Summerhill road

The junction turning count, 30 June 2016, recorded the following movements:



Committed Development and additional traffic

The only significant committed development in the area is a recently granted consent for residential development on Boozy Fields however the traffic assessment included with that submission indicates a negligible traffic generation on Summerhill Road. No additional movements have been added as a result of this proposed development.

Junction Capacity

A Picady junction capacity analysis was carried out; this included an additional traffic generation attributable to the previous development proposal. Full results from the junction capacity analysis are included within Appendix 6 but are summarised in the following table.

It can be seen that the junction (including additional traffic) will operate well within capacity with a maximum RFC of 0.12 occurring during the morning period. The results also indicate that there will be significant residual capacity on stream B-AC, the exit from Pendine Park. The low RFC is significant; even if traffic generation rates vary from those assumed, the junction flows are far from critical.

Summary of junction performance

	AM						PM					
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity
	With Development											
Stream B-AC	0.1	7.79	0.12	A	A	280 %	0.1	7.89	0.10	A	A	227 %
Stream C-AB	0.1	5.19	0.04	A		[Stream B-AC]	0.0	5.83	0.03	A		[Stream B-AC]

6. Junction Layout

Guidance on the visibility requirements at junctions is provided in Annex B of Technical Advice Note 18: Transport (TAN18) published by Welsh Government. Table A of Annex B, Tan 18 indicates that a traffic speed of 44 mph equates to a safe stopping distance (SSD) of 120 metres. This SSD should be available to drivers of vehicles emerging from a junction measured from a distance of 2.4 metres behind the give way line to intersection points on the nearside kerb line. Within these visibility splays there should be no significant obstruction to visibility. The traffic survey referenced in section 5 recorded 85th percentile traffic speeds of 41.3mph northbound and 40.4mph southbound; visibility splays of 120m in both directions would therefore appear appropriate.

Clear visibility of 2.4x185 to the left (north) and 142m to the right (south) have been measured from the Pendine Park access. Clear visibility to the right is restricted by the vertical curvature of the road; approaching vehicles can be seen at a distance of 240m but become partially obscured as they approach up to the distance of 142m. Available visibility clearly exceeds that stipulated by TAN18.

The access road is 7.5m wide as it passes through the gateway but narrows to a width of 6.0m internally; this width is sufficient to permit vehicles to simultaneously enter and exit the site without interference.

7. Traffic Impact On Summerhill Road - Accident History

Concern has previously been expressed regarding the impact of development traffic on the already congested Mold Road/A483 interchange roundabout. The recent relocation of approximately 20 administrative staff from the Pendine Park site to premises on The Technology Park has removed peak hour traffic movements from this junction. The proposed development is likely to generate fewer movements than previous operations and these movements will be outside of the highway peak period.

A search of traffic accident data for the past 5 years has been undertaken; investigations indicate 3 incidents on Summerhill Road in the vicinity of the development, the results are recorded in Appendix 7. Two of the incidents involved a collision between two cars; one at the junction with Griffiths Road the other on a bend. The third involved the loss of control of a single vehicle. The three incidents were spread over a distance of more than 1km and

there was no common linkage. This number and type of instances is not unusual for a section of road of this nature.

8. Sustainable Travel

Public bus services nos. 21, 21A, 26 and 27 run along Summerhill Road, with a bus every 20 minutes between early morning and late evening. The closest stops are directly outside of the Pendine Park entrance. The northbound stop is provided with a shelter and raised boarding kerbs but there are no southbound facilities. The lack of verge in the southbound direction makes provision of facilities difficult. Copies of the bus timetables are included within Appendix 2. Nos. 21 and 21A are the Wrexham to Summerhill Service via the Maelor Hospital and run on a half hourly schedule from early morning to late evening Monday to Saturday. An hourly service runs throughout the day on Sunday. Nos. 26 and 27 are the Wrexham to Mold service via Maelor Hospital, Caergwrle and Leeswood. Services run on an hourly basis throughout the day Monday – Saturday.

9. Conclusions

It can be seen from the above that:

- the proposed development will not generate a significant amount of additional traffic
- there will be no significant impact on the operation of the Mold Road interchange roundabout
- the capacity of the existing junction onto Summerhill Road is adequate
- the layout and available visibility of the existing junction is appropriate
- there is no significant traffic accident history in the vicinity of the development site

It is therefore considered that there is no justifiable highway related reason for refusal of a planning application for the development of a specialist care facility on this site.

This is an outline planning application with all matters reserved and therefore detailed matters of highways, parking, vehicular/pedestrian movements can be verified at the discharge of reserved matters stage.

Appendix 1

Photographs



Site Entrance



Approach from the North



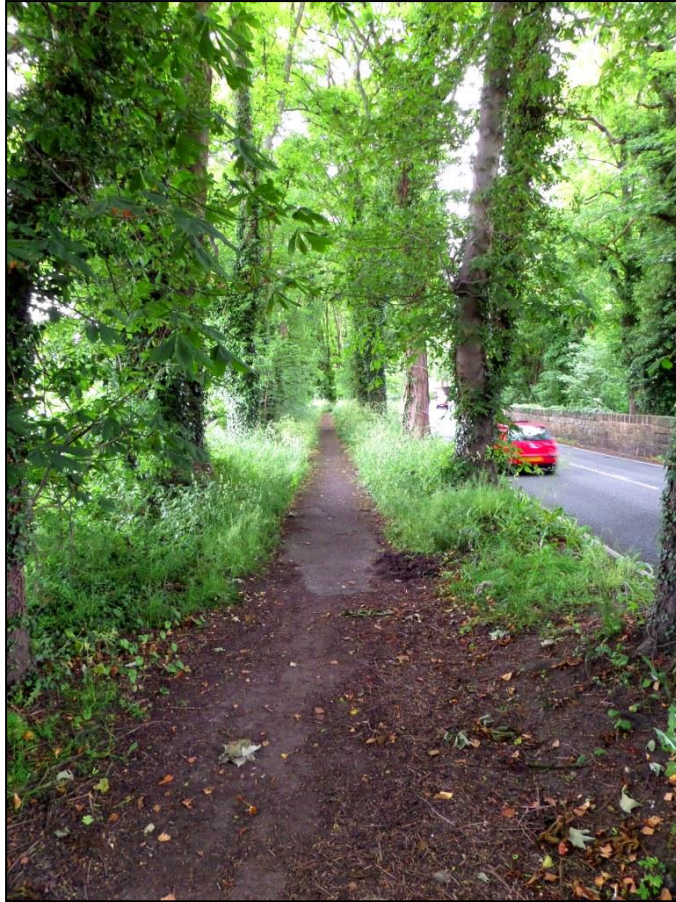
Approach from the South



2.4x240m visibility to the right from the site exit



2.4x185m visibility to the left from the site exit



Pedestrian route toward Wrexham

Appendix 2

LPGN16 Parking Standards

Figure C

Type of Development		Parking Standard	Cycle Parking Standard
C1 Hotels, boarding houses and guest houses.		1 car space per bedroom. For hotels that have function suites, please refer to the parking standard for A3 uses.	1 cycle space per 10 bed spaces. <i>and</i> 1 cycle space per 10 employees
C2 Residential Institutions Care/nursing homes, hospitals.		1 car space per 2 bed spaces	1 cycle space per 10 bed spaces. <i>and</i> 1 cycle space per 10 employees
C3 Dwellings	1 bedroom	1.5 car space per unit	Sufficient space to provide at least 2 secure cycle parking spaces per dwelling. In the case of flats, this should be provided via safe and secure communal cycle parking areas.
	2 bedrooms	2 car spaces per unit	
	3/4 bedrooms	3 car spaces per unit	
	5 or more bedrooms	4 car spaces per unit	
Notes: 1 An area suitable for ambulance / service vehicles to load/unload and turn within the site will normally be required for C1 and C2 uses, particularly for sites accessed from a classified road. Any extensions should not result in the loss of this loading/unloading/turning spaces unless an adequate alternative can be provided within the site. 2 Driveways should be wide enough to allow pedestrian access alongside parked cars (including wheelchair access). 3 Garages will not be counted as contributing towards on-site parking provision. 4 The parking provision for housing developments does not always need to be located within the curtilage of individual dwellings. Communal parking areas/courtyards may be an appropriate way to provide some/all of the parking spaces for dwellings, particularly smaller properties.			
Houses in Multiple Occupation	1 to 6 bedrooms	1 car space per bedroom up to a maximum of 4 spaces	Provision for 1 secure cycle parking space per 2 bedrooms HMO via a safe, secure and preferably covered cycle parking area located within the curtilage of the building
	7 bedrooms or more	4 car spaces for the first 6 bedrooms and 1 car space per 2 bedrooms thereafter	
Sheltered Housing		1 car space per 4 units, 1 car space per resident staff and access for an ambulance.	1 cycle space per 10 bed spaces <i>and</i> 1 cycle space per 10 employees
Student Accommodation		1 car space per two bed spaces, and an area suitable for drop off/pick up either on site or close to the development.	1 cycle space per 5 bed spaces via a safe and secure cycle parking area.
P A R K I N G S T A N D A R D S			

Extract from Local planning Guidance note 16: Parking Standards

Appendix 3

Public Transport

21 WREXHAM/WRECSAM - SUMMERHILL/BRYNHYFRYD via Plas Coch**21A WREXHAM/WRECSAM - SUMMERHILL/BRYNHYFRYD via Maelor Hospital/Ysbyty Maelor**

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

ARRIVA BUSES WALES

Service No. / Rhif Gwasanaeth:	21	21A	21	21A	21	21A	21	21A	21	21A	21	21A	21	21A	21	21A	21	21A	21
Wrexham, Bus Station [4]	0641	0711	0741	0811	0841	0911	0941	1011	1041	1111	1141	1211	1241	1311	1341	1411	1441	1511	1541
Maelor Hospital	....	0714	....	0814	....	0914	....	1014	....	1114	....	1214	....	1314	....	1414	....	1514	....
Plas Coch Retail Park	0647	....	0747	....	0847	....	0947	....	1047	....	1147	....	1247	....	1347	....	1447	....	1547
Pendine Estate	0653	0723	0753	0823	0853	0923	0953	1023	1053	1123	1153	1223	1253	1323	1353	1423	1453	1523	1553
Summerhill, New Rd	0659	0729	0759	0829	0859	0929	0959	1029	1059	1129	1159	1229	1259	1329	1359	1429	1459	1529	1559

Service No. / Rhif Gwasanaeth:	21A	21	21A	21	21	21	21	21	21
Wrexham, Bus Station [4]	1611	1641	1711	1741	1815	1915	2015	2115	2215
Maelor Hospital	1614	....	1714	....	....	....	....	....	....
Plas Coch Retail Park	....	1647	....	1747	1820	1920	2020	2120	2220
Pendine Estate	1623	1653	1723	1753	1825	1925	2025	2125	2225
Summerhill, New Rd	1629	1659	1729	1759	1830	1930	2030	2130	2230

21 SUMMERHILL/BRYNHYFRYD - WREXHAM/WRECSAM via Plas Coch**21A SUMMERHILL/BRYNHYFRYD - WREXHAM/WRECSAM via Maelor Hospital/Ysbyty Maelor**

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

ARRIVA BUSES WALES

Service No. / Rhif Gwasanaeth:	21	21A	21	21A	21	21A	21	21A	21	21A	21	21A	21	21A	21	21A	21	21A	21
Summerhill, New Rd	0659	0729	0759	0829	0859	0929	0959	1029	1059	1129	1159	1229	1259	1329	1359	1429	1459	1529	1559
Pendine Estate	0707	0737	0807	0837	0907	0937	1007	1037	1107	1137	1207	1237	1307	1337	1407	1437	1507	1537	1607
Plas Coch Retail Park	0714	....	0814	....	0914	....	1014	....	1114	....	1214	....	1314	....	1414	....	1514	....	1614
Maelor Hospital	....	0745	....	0845	....	0945	....	1045	....	1145	....	1245	....	1345	....	1445	....	1545	....
Wrexham, Bus Station	0719	0749	0819	0849	0919	0949	1019	1049	1119	1149	1219	1249	1319	1349	1419	1449	1519	1549	1619

Service No. / Rhif Gwasanaeth:	21A	21	21A	21	21	21	21	21	21
Summerhill, New Rd	1629	1659	1729	1759	1830	1930	2030	2130	2230
Pendine Estate	1637	1707	1737	1807	1837	1937	2037	2137	2237
Plas Coch Retail Park	....	1714	....	1814	1842	1942	2042	2142	2242
Maelor Hospital	1645	....	1745	....	....	....	....	....	....
Wrexham, Bus Station	1649	1719	1749	1819	1847	1947	2047	2147	2247

21 WREXHAM/WRECSAM - SUMMERHILL/BRYNHYFRYD via Plas Coch**21A WREXHAM/WRECSAM - SUMMERHILL/BRYNHYFRYD via Maelor Hospital/Ysbyty Maelor**

Sunday & Bank Holidays Only - Suliau a Gwyliau Cyhoeddus

Service No. / Rhif Gwasanaeth:	21A	21	21A	21	21A	21	21A	21	21A
Wrexham, Bus Station [4]	1035	1135	1235	1335	1435	1535	1635	1735	1835
Maelor Hospital	1039	....	1239	....	1439	....	1639	....	1839
Plas Coch, Sainsburys	....	1141	....	1341	....	1541	....	1741	....
Pendine Estate	1045	1147	1245	1347	1445	1547	1645	1747	1845
Summerhill, New Rd	1051	1153	1251	1353	1451	1553	1651	1753	1851

ARRIVA BUSES WALES

21 SUMMERHILL/BRYNHYFRYD - WREXHAM/WRECSAM via Plas Coch**21A SUMMERHILL/BRYNHYFRYD - WREXHAM/WRECSAM via Maelor Hospital/Ysbyty Maelor**

Sunday & Bank Holidays Only - Suliau a Gwyliau Cyhoeddus

Service No. / Rhif Gwasanaeth:	21A	21	21A	21	21A	21	21A	21	21A
Summerhill, New Rd	1051	1153	1251	1353	1451	1553	1651	1753	1851
Pendine Estate	1059	1201	1259	1401	1459	1601	1659	1801	1859
Plas Coch, Sainsburys	....	1208	....	1408	....	1608	....	1808	....
Maelor Hospital	1105	....	1305	....	1505	....	1705	....	1905
Wrexham, Bus Station	1109	1213	1309	1413	1509	1613	1709	1813	1909

ARRIVA BUSES WALES

26 WREXHAM/WRECSAM - MOLD/YR WYDDGRUG via Maelor Hospital, Caergwrle & Leeswood**27 WREXHAM/WRECSAM - MOLD/YR WYDDGRUG via Maelor Hospital, Caergwrle & Leeswood**

Monday to Friday except Bank Holidays : Llun i Gwener heblaw Gwyliau Cyhoeddus

Service No. / Rhif Gwasanaeth:	27	27	27	26	26	26	26	26	26	26	26	27	27
Wrexham, Bus Station [4]	0600	0645	0745	0845	0945	1045	1145	1245	1345	1445	1545	1645	1745
Pendine Estate	0611	0656	0756	0856	0956	1056	1156	1256	1356	1456	1556	1656	1756
Tan yr Allt	0617	0702	0802	0902	1002	1102	1202	1302	1402	1502	1602	1702	1802
Caergwrle, Tegfan Court	0621	0706	0806	0906	1006	1106	1206	1306	1406	1506	1606	1706	1806
Pontblyddyn, Bridge Inn (NW)	0628	0713	0813	0913	1013	1113	1213	1313	1413	1513	1613	1713	1813
Leeswood, Bethel Chapel	0636	0721	0821	0921	1021	1121	1221	1321	1421	1521	1621	1721	1821
Mold Bus Station	0649	0734	0834	0934	1034	1134	1234	1334	1434	1534	1634	1734	1834

ARRIVA BUSES WALES

26 WREXHAM/WRECSAM - MOLD/YR WYDDGRUG via Maelor Hospital, Caergwrle & Leeswood**27 WREXHAM/WRECSAM - MOLD/YR WYDDGRUG via Maelor Hospital, Caergwrle & Leeswood**

Saturday only - Sadwrn yn unig

Service No. / Rhif Gwasanaeth:	27	27	27	26	26	26	26	26	26	26	26	27	27
Wrexham, Bus Station [4]	0615	0700	0745	0845	0945	1045	1145	1245	1345	1445	1545	1645	1745
Pendine Estate	0625	0710	0755	0855	0955	1055	1155	1255	1355	1455	1555	1655	1755
Tan yr Allt	0632	0717	0802	0902	1002	1102	1202	1302	1402	1502	1602	1702	1802
Caergwrle, Tegfan Court	0636	0721	0806	0906	1006	1106	1206	1306	1406	1506	1606	1706	1806
Pontblyddyn, Bridge Inn (NW)	0643	0728	0813	0913	1013	1113	1213	1313	1413	1513	1613	1713	1813
Leeswood, Bethel Chapel	0648	0733	0818	0918	1018	1118	1218	1318	1418	1518	1618	1718	1818
Mold Bus Station	0701	0746	0831	0931	1031	1131	1231	1331	1431	1531	1631	1731	1831

ARRIVA BUSES WALES

26 MOLD/YR WYDDGRUG - WREXHAM/WRECSAM via Leeswood, Caergwrle & Maelor Hospital**27 MOLD/YR WYDDGRUG - WREXHAM/WRECSAM via Leeswood, Caergwrle & Maelor Hospital**

Monday to Friday except Bank Holidays : Llun i Gwener heblaw Gwyliau Cyhoeddus

Service No. / Rhif Gwasanaeth:	27	27	27	26	26	26	26	26	26	26	26	27	27
Mold Bus Station	0655	0740	0840	0940	1040	1140	1240	1340	1440	1540	1640	1740	1840
Leeswood, Drury Lane	0708	0753	0853	0953	1053	1153	1253	1353	1453	1553	1653	1753	1853
Caergwrle, Pentre Lane Turn (SE)	0719	0804	0904	1004	1104	1204	1304	1404	1504	1604	1704	1802	1902
Caergwrle Railway Station	0723	0808	0908	1008	1108	1208	1308	1408	1508	1608	1708	1806	1906
Tan yr Allt	0729	0814	0914	1014	1114	1214	1314	1414	1514	1614	1714	1811	1911
Pendine Estate	0734	0819	0919	1019	1119	1219	1319	1419	1519	1619	1719	1817	1917
Wrexham, Bus Station	0745	0836	0930	1030	1130	1230	1330	1430	1530	1630	1730	1826	1926

ARRIVA BUSES WALES

26 MOLD/YR WYDDGRUG - WREXHAM/WRECSAM via Leeswood, Caergwrle & Maelor Hospital**27 MOLD/YR WYDDGRUG - WREXHAM/WRECSAM via Leeswood, Caergwrle & Maelor Hospital**

Saturday only - Sadwrn yn unig

Service No. / Rhif Gwasanaeth:	27	27	27	26	26	26	26	26	26	26	26	27	27
Mold Bus Station	0705	0750	0835	0935	1035	1135	1235	1335	1435	1535	1635	1735	1835
Leeswood, Drury Lane	0718	0803	0848	0948	1048	1148	1248	1348	1448	1548	1648	1748	1848
Caergwrle, Pentre Lane Turn (SE)	0725	0810	0855	0955	1055	1155	1255	1355	1455	1555	1655	1755	1855
Caergwrle Railway Station	0729	0814	0859	0959	1059	1159	1259	1359	1459	1559	1659	1759	1859
Tan yr Allt	0734	0819	0904	1004	1104	1204	1304	1404	1504	1604	1704	1804	1904
Pendine Estate	0741	0826	0911	1011	1111	1211	1311	1411	1511	1611	1711	1811	1911
Wrexham, Bus Station	0751	0836	0921	1021	1121	1221	1321	1421	1521	1621	1721	1821	1921

ARRIVA BUSES WALES

Appendix 4

Indicative Site Layout

Appendix 5

Traffic Survey

Automatic Classified Counts, Summerhill Road

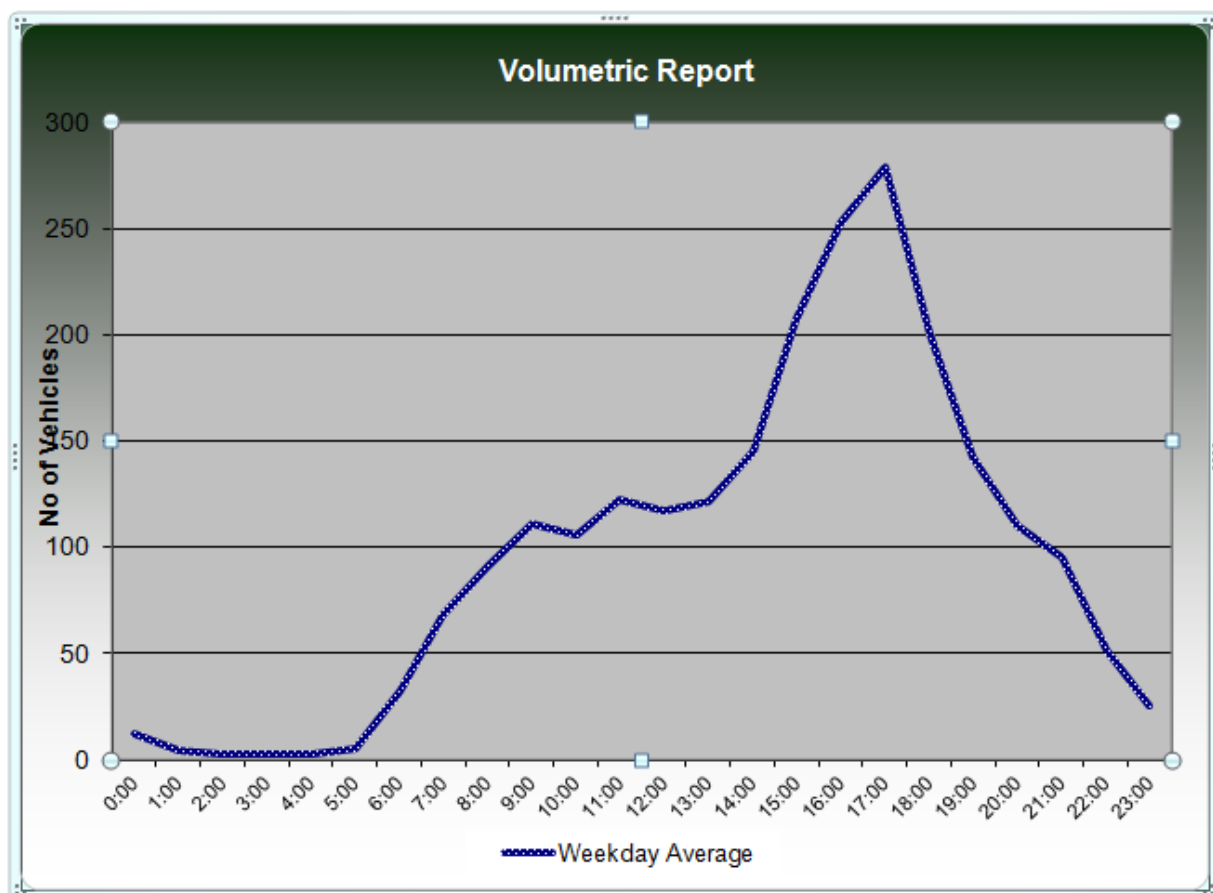
DATE: 27/06/2015 TO 03/07/2015

LOCATION: SUMMERHILL ROAD

Direction : NORTHBOUND



TIME PERIOD		VEHICLE VOLUMES								
		Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Weekday	Week
		27/06/2015	28/06/2015	29/06/2015	30/06/2015	01/07/2015	02/07/2015	03/07/2015	Average	Average
0:00	- 1:00	30	29	11	14	10	10	16	13	17
1:00	- 2:00	16	19	4	1	6	4	6	4	8
2:00	- 3:00	12	16	2	4	3	1	3	2	6
3:00	- 4:00	8	13	2	3	2	1	4	3	5
4:00	- 5:00	4	8	1	3	2	4	3	2	4
5:00	- 6:00	6	4	2	5	6	6	9	6	5
6:00	- 7:00	26	14	28	25	43	36	37	32	30
7:00	- 8:00	49	22	71	65	75	62	72	69	59
8:00	- 9:00	57	26	64	100	95	94	105	91	77
9:00	- 10:00	87	49	95	110	131	115	106	112	99
10:00	- 11:00	119	74	105	111	105	104	103	106	103
11:00	- 12:00	141	117	120	118	138	113	122	123	124
12:00	- 13:00	160	111	125	113	97	132	120	118	123
13:00	- 14:00	159	121	131	123	122	114	117	122	127
14:00	- 15:00	153	154	136	142	140	152	149	145	147
15:00	- 16:00	146	176	189	203	199	222	214	208	193
16:00	- 17:00	186	166	242	257	235	271	258	253	231
17:00	- 18:00	149	120	266	281	311	264	280	279	239
18:00	- 19:00	158	127	201	209	199	194	195	200	183
19:00	- 20:00	116	88	138	157	127	151	142	143	131
20:00	- 21:00	85	71	97	118	120	111	114	111	102
21:00	- 22:00	101	65	74	107	95	108	103	96	93
22:00	- 23:00	48	31	47	49	41	61	54	51	47
23:00	- 0:00	45	18	21	23	25	29	27	25	27
7-19		1564	1263	1745	1832	1847	1837	1841	1825	1704
6-22		1892	1501	2082	2239	2232	2243	2237	2206	2061
6-24		1985	1550	2150	2311	2298	2333	2318	2283	2135
0-24		2061	1639	2172	2341	2327	2359	2359	2313	2180



Automatic Classified Counts, Summerhill Road

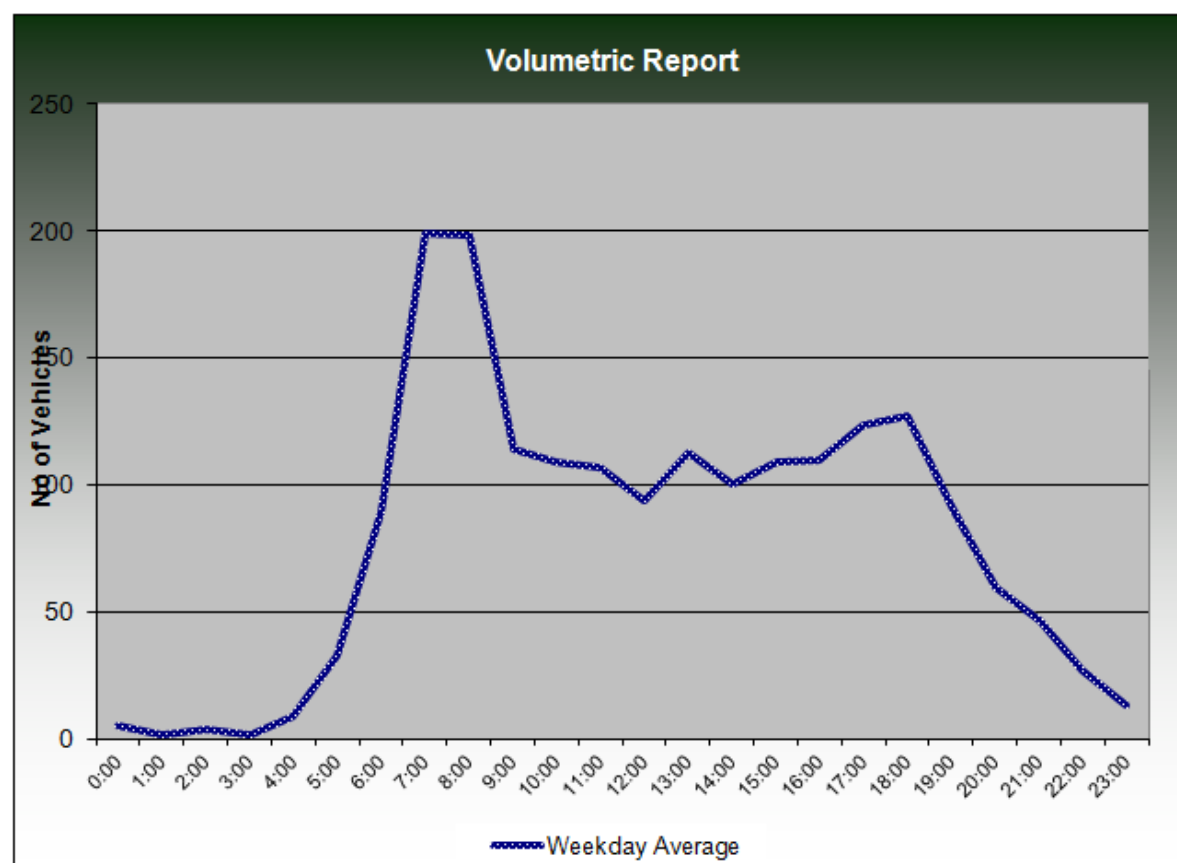
DATE: 27/06/2015 TO 03/07/2015

LOCATION: SUMMERHILL ROAD

Direction : SOUTHBOUND



TIME PERIOD		VEHICLE VOLUMES								
		Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Weekday	Week
		27/06/2015	28/06/2015	29/06/2015	30/06/2015	01/07/2015	02/07/2015	03/07/2015	Average	Average
0:00 - 1:00	16	14	2	6	4	3	9	5	8	
1:00 - 2:00	11	16	2	1	0	0	4	2	5	
2:00 - 3:00	6	8	1	4	3	2	5	3	4	
3:00 - 4:00	8	9	2	3	1	3	2	2	4	
4:00 - 5:00	3	5	9	8	7	13	10	8	8	
5:00 - 6:00	17	15	31	33	33	33	36	33	28	
6:00 - 7:00	32	15	87	97	89	92	82	89	71	
7:00 - 8:00	74	41	189	215	210	194	192	199	159	
8:00 - 9:00	93	41	189	201	198	200	212	198	162	
9:00 - 10:00	132	77	116	115	102	110	127	114	111	
10:00 - 11:00	135	117	104	102	114	112	113	109	114	
11:00 - 12:00	157	110	104	96	96	123	113	106	114	
12:00 - 13:00	118	138	103	102	80	93	89	93	103	
13:00 - 14:00	128	120	111	123	110	108	110	112	116	
14:00 - 15:00	118	107	84	109	106	103	105	100	105	
15:00 - 16:00	84	105	96	96	108	124	119	109	105	
16:00 - 17:00	104	78	112	117	101	111	107	109	104	
17:00 - 18:00	106	116	120	129	112	133	126	123	120	
18:00 - 19:00	109	74	89	125	134	148	143	127	117	
19:00 - 20:00	86	74	96	95	71	105	93	91	89	
20:00 - 21:00	59	50	56	65	58	64	62	59	59	
21:00 - 22:00	44	29	36	46	51	53	53	47	45	
22:00 - 23:00	54	26	19	37	23	29	27	27	31	
23:00 - 0:00	33	8	12	8	13	16	15	13	15	
7-19	1358	1124	1417	1530	1471	1559	1556	1502	1431	
6-22	1579	1292	1692	1833	1740	1873	1846	1788	1694	
6-24	1666	1326	1723	1878	1776	1918	1888	1828	1739	
0-24	1727	1393	1770	1933	1824	1972	1954	1881	1796	



Automatic Classified Counts, Summerhill Road

DATE: 27/06/2015 TO 03/07/2015

LOCATION: SUMMERHILL ROAD

Direction : NORTHBOUND



TIME PERIOD	AVERAGE SPEEDS						
	Saturday 27/06/2015	Sunday 28/06/2015	Monday 29/06/2015	Tuesday 30/06/2015	Wednesday 01/07/2015	Thursday 02/07/2015	Friday 03/07/2015
0:00 - 1:00	35.5	35.1	35.7	39.6	37.5	33.3	37.1
1:00 - 2:00	33.9	33.1	37.5	29.0	34.2	30.8	34.7
2:00 - 3:00	37.2	32.6	45.0	32.3	36.0	50.0	40.5
3:00 - 4:00	33.5	30.8	37.5	38.0	41.0	34.0	39.5
4:00 - 5:00	42.3	39.1	50.0	37.5	36.0	28.8	28.3
5:00 - 6:00	37.7	39.5	40.7	36.4	35.2	36.5	37.4
6:00 - 7:00	32.7	34.2	35.3	36.1	34.9	36.1	37.6
7:00 - 8:00	29.5	23.4	30.9	31.7	30.5	30.1	30.1
8:00 - 9:00	33.5	32.2	32.9	32.6	30.5	33.5	30.9
9:00 - 10:00	33.0	34.5	33.0	32.4	31.0	31.9	31.2
10:00 - 11:00	33.1	34.9	32.1	31.5	31.9	32.8	32.5
11:00 - 12:00	33.5	34.8	30.5	32.5	32.2	33.1	32.8
12:00 - 13:00	31.8	34.1	31.7	32.9	32.2	33.3	33.4
13:00 - 14:00	32.8	34.3	31.5	33.0	32.8	30.8	31.5
14:00 - 15:00	32.2	32.8	30.2	33.2	31.6	31.8	31.8
15:00 - 16:00	33.5	34.3	32.9	31.9	32.8	31.9	32.0
16:00 - 17:00	31.8	33.1	31.6	31.2	31.7	31.1	31.3
17:00 - 18:00	35.1	35.3	34.7	33.9	33.9	32.6	33.1
18:00 - 19:00	34.7	34.5	34.2	35.1	35.2	34.7	34.6
19:00 - 20:00	35.4	35.6	35.2	34.5	32.8	34.8	34.3
20:00 - 21:00	33.0	36.5	34.8	34.2	33.5	36.5	35.8
21:00 - 22:00	31.2	32.2	34.0	32.3	32.8	33.6	33.4
22:00 - 23:00	34.2	37.6	35.9	38.0	35.3	36.3	36.8
23:00 - 0:00	34.2	34.2	34.2	35.3	34.8	35.5	35.5
10-12	33.4	34.9	31.2	32.0	32.0	32.9	32.6
14-16	32.8	33.6	31.8	32.4	32.3	31.9	32.0
0-24	33.2	34.2	33.0	33.2	32.8	33.0	32.9

TIME PERIOD	85TH PERCENTILE						
	Saturday 27/06/2015	Sunday 28/06/2015	Monday 29/06/2015	Tuesday 30/06/2015	Wednesday 01/07/2015	Thursday 02/07/2015	Friday 03/07/2015
0:00 - 1:00	42.4	43.1	40.9	46.5	47.6	45.0	48.1
1:00 - 2:00	39.9	38.6	41.3	29.0	46.4	44.0	40.9
2:00 - 3:00	43.0	40.1	51.1	45.0	44.2	50.0	42.6
3:00 - 4:00	39.7	39.5	38.2	46.2	60.0	34.0	41.4
4:00 - 5:00	47.4	46.1	50.0	41.0	38.8	38.6	39.6
5:00 - 6:00	45.3	43.9	50.3	41.1	41.4	45.6	43.1
6:00 - 7:00	41.2	42.2	44.4	44.9	44.6	42.9	44.5
7:00 - 8:00	40.1	35.3	40.6	41.1	40.0	39.2	39.3
8:00 - 9:00	41.4	38.6	40.8	40.8	39.8	40.7	39.1
9:00 - 10:00	40.5	41.5	40.9	40.4	39.7	39.0	40.0
10:00 - 11:00	40.6	42.0	39.9	40.1	38.9	40.4	40.1
11:00 - 12:00	40.2	40.9	39.7	40.9	38.5	41.4	40.3
12:00 - 13:00	39.2	41.4	38.8	40.9	40.6	42.0	42.2
13:00 - 14:00	41.1	41.5	40.8	40.6	40.9	40.6	40.8
14:00 - 15:00	41.6	41.2	39.5	42.4	40.9	38.9	39.1
15:00 - 16:00	40.8	42.5	40.7	40.7	40.1	39.5	39.7
16:00 - 17:00	40.7	40.9	40.1	39.4	40.5	39.1	39.7
17:00 - 18:00	41.8	43.0	42.6	41.8	41.2	41.1	41.2
18:00 - 19:00	42.0	42.1	41.6	42.7	42.7	42.9	42.7
19:00 - 20:00	42.8	44.6	41.6	41.3	41.0	41.7	41.7
20:00 - 21:00	40.4	44.0	42.5	42.3	41.8	43.0	42.7
21:00 - 22:00	40.9	41.9	43.5	41.4	42.1	42.9	42.6
22:00 - 23:00	40.8	44.4	42.8	44.7	40.3	45.1	45.3
23:00 - 0:00	41.6	41.8	39.9	44.0	42.1	44.8	44.3
10-12	40.4	41.3	39.8	40.5	38.7	40.9	40.2
14-16	41.2	42.7	41.2	42.7	41.6	40.6	40.7
0-24	41.2	42.1	41.3	41.5	41.0	41.2	41.2

7 DAY AVERAGE SPEED	33.1
7 DAY AVERAGE 85th PERCENTILE	41.3

Automatic Classified Counts, Summerhill Road

DATE: 27/06/2015 TO 03/07/2015

LOCATION: SUMMERHILL ROAD

Direction : SOUTHBOUND



TIME PERIOD	AVERAGE SPEEDS						
	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
	27/06/2015	28/06/2015	29/06/2015	30/06/2015	01/07/2015	02/07/2015	03/07/2015
0:00 - 1:00	33.7	32.1	41.0	36.8	38.4	33.7	32.4
1:00 - 2:00	35.4	32.8	33.5	48.0	-	-	36.0
2:00 - 3:00	39.8	31.6	36.0	40.8	33.0	45.0	36.0
3:00 - 4:00	32.1	34.0	31.5	33.3	22.0	32.7	32.0
4:00 - 5:00	41.3	37.4	40.8	38.0	41.0	33.8	36.1
5:00 - 6:00	36.5	38.3	39.2	36.1	37.8	36.4	37.3
6:00 - 7:00	35.0	33.6	36.3	36.4	34.8	36.3	37.0
7:00 - 8:00	28.9	26.2	32.8	31.6	31.5	33.2	32.2
8:00 - 9:00	35.6	34.7	33.3	33.5	32.5	33.9	32.6
9:00 - 10:00	33.8	35.1	32.6	31.5	31.5	32.3	32.2
10:00 - 11:00	33.1	34.8	31.4	33.1	32.0	32.7	32.3
11:00 - 12:00	32.4	33.3	31.0	30.9	31.6	30.2	30.5
12:00 - 13:00	32.0	32.7	32.0	32.4	32.1	31.2	31.7
13:00 - 14:00	31.2	32.9	32.6	31.7	30.8	29.3	29.6
14:00 - 15:00	31.2	32.8	30.9	32.7	30.3	31.2	31.0
15:00 - 16:00	32.0	32.8	32.3	31.2	31.4	30.8	31.5
16:00 - 17:00	32.0	32.7	30.1	29.9	31.2	31.4	31.1
17:00 - 18:00	32.6	34.0	33.8	34.4	33.4	33.4	33.4
18:00 - 19:00	33.8	32.9	32.6	34.5	32.7	33.0	32.7
19:00 - 20:00	35.3	35.3	34.3	33.5	34.4	33.8	33.9
20:00 - 21:00	32.2	33.5	34.0	31.5	33.5	31.9	32.1
21:00 - 22:00	35.5	34.1	34.9	35.1	30.9	36.7	35.2
22:00 - 23:00	32.0	34.7	33.5	35.9	34.7	32.4	32.0
23:00 - 0:00	32.0	34.8	32.8	34.1	36.3	34.6	34.9

10-12	32.7	34.1	31.2	32.1	31.8	31.4	31.4
14-16	31.5	32.8	31.6	32.0	30.9	31.0	31.3
0-24	32.8	33.4	32.9	32.9	32.3	32.6	32.5

TIME PERIOD	85TH PERCENTILE						
	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
	27/06/2015	28/06/2015	29/06/2015	30/06/2015	01/07/2015	02/07/2015	03/07/2015
0:00 - 1:00	39.0	39.2	41.0	42.4	53.1	42.9	42.5
1:00 - 2:00	40.9	38.6	39.9	57.9	-	-	45.2
2:00 - 3:00	46.0	38.4	36.0	42.5	37.4	57.7	46.2
3:00 - 4:00	37.0	40.0	40.7	40.8	22.0	40.7	37.7
4:00 - 5:00	47.0	47.6	43.3	45.7	44.3	44.6	44.3
5:00 - 6:00	45.9	47.2	48.1	44.1	45.6	46.1	46.6
6:00 - 7:00	43.8	44.7	43.6	43.4	42.7	43.0	44.2
7:00 - 8:00	38.0	36.3	41.6	40.8	40.7	41.8	40.2
8:00 - 9:00	41.6	43.2	40.5	41.1	40.1	41.1	40.2
9:00 - 10:00	40.9	42.8	39.9	37.6	39.2	39.8	39.6
10:00 - 11:00	40.4	40.7	38.5	39.7	39.0	39.5	39.2
11:00 - 12:00	39.2	39.5	38.6	38.0	38.1	37.7	37.7
12:00 - 13:00	39.1	39.6	40.0	39.3	39.5	39.0	39.3
13:00 - 14:00	39.7	40.2	41.5	39.1	38.2	37.0	37.2
14:00 - 15:00	38.4	39.7	38.6	40.8	38.3	37.7	37.8
15:00 - 16:00	39.3	40.7	39.1	39.2	38.8	39.1	39.7
16:00 - 17:00	40.1	40.1	38.3	37.8	39.0	37.8	38.2
17:00 - 18:00	40.2	40.5	40.6	41.3	40.9	40.7	40.8
18:00 - 19:00	40.4	41.9	40.3	42.6	40.5	39.4	39.6
19:00 - 20:00	42.3	41.5	41.6	40.5	41.3	40.0	40.3
20:00 - 21:00	41.4	42.6	42.7	40.7	42.9	40.3	40.7
21:00 - 22:00	43.1	44.1	40.6	43.6	37.9	44.2	43.1
22:00 - 23:00	37.6	41.9	42.0	41.3	42.3	38.5	38.3
23:00 - 0:00	39.6	41.7	43.5	38.1	43.0	41.7	42.1

10-12	39.7	40.2	38.5	39.0	38.6	38.6	38.5
14-16	38.1	39.9	38.6	39.5	38.5	38.8	39.1
0-24	40.3	41.0	40.7	40.6	40.2	40.2	40.1

7 DAY AVERAGE SPEED	32.7
7 DAY AVERAGE 85th PERCENTILE	40.4

TIME / CLASS	LEFT TO SUMMERHILL ROAD (NORTH)								RIGHT TO SUMMERHILL ROAD (SOUTH)								U-TURN TO PENDINE PARK								TOTAL MOVEMENT FROM APPROACH
	PEDAL CYCLE	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	PEDAL CYCLE	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	PEDAL CYCLE	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	
7:00 - 7:15	0	0	1	0	0	0	0	1	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	3
7:15 - 7:30	0	0	2	0	0	0	0	2	0	0	4	1	1	0	0	6	0	0	0	0	0	0	0	0	8
7:30 - 7:45	0	0	3	0	1	0	0	4	0	0	18	0	0	0	0	18	0	0	0	0	0	0	0	0	22
7:45 - 8:00	0	0	3	0	0	0	0	3	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	7
HOURLY TOTAL	0	0	9	0	1	0	0	10	0	0	28	1	1	0	0	30	0	0	0	0	0	0	0	0	40
8:00 - 8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 - 8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 - 8:45	0	0	2	0	0	0	0	2	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	5
8:45 - 9:00	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	2
HOURLY TOTAL	0	0	2	0	0	0	0	2	0	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0	7
9:00 - 9:15	0	0	0	1	0	0	0	1	0	0	2	2	0	0	0	4	0	0	0	0	0	0	0	0	5
9:15 - 9:30	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9:30 - 9:45	0	0	1	1	1	0	0	3	0	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	5
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	2
HOURLY TOTAL	0	0	2	2	1	0	0	5	0	0	5	2	0	0	1	8	0	0	0	0	0	0	0	0	13
PERIOD TOTAL	0	0	13	2	2	0	0	17	0	0	38	3	1	0	1	43	0	0	0	0	0	0	0	0	60
16:00 - 16:15	1	0	8	0	0	0	0	8	0	0	11	1	0	0	0	12	0	0	0	0	0	0	0	0	20
16:15 - 16:30	0	0	2	0	1	0	0	3	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	6
16:30 - 16:45	0	0	1	0	0	0	0	1	0	0	8	0	0	0	0	8	0	0	0	0	0	0	0	0	9
16:45 - 17:00	0	0	4	1	0	0	0	5	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	9
HOURLY TOTAL	1	0	15	1	1	0	0	17	0	0	26	1	0	0	0	27	0	0	0	0	0	0	0	0	44
17:00 - 17:15	0	0	8	0	0	0	0	8	0	0	7	0	0	0	0	7	0	0	0	0	0	0	0	0	15
17:15 - 17:30	0	0	0	1	0	0	0	1	0	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	3
17:30 - 17:45	0	0	2	0	0	0	0	2	0	0	7	0	0	0	0	7	0	0	0	0	0	0	0	0	9
17:45 - 18:00	0	0	1	0	0	0	0	1	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	3
HOURLY TOTAL	0	0	11	1	0	0	0	12	0	0	17	1	0	0	0	18	0	0	0	0	0	0	0	0	30
18:00 - 18:15	0	0	2	0	0	0	0	2	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	4
18:15 - 18:30	0	0	2	0	0	0	0	2	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	5
18:30 - 18:45	0	0	1	0	0	0	0	1	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	5
18:45 - 19:00	0	0	0	1	0	0	0	1	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	3
HOURLY TOTAL	0	0	5	1	0	0	0	6	0	0	11	0	0	0	0	11	0	0	0	0	0	0	0	0	17
PERIOD TOTAL	1	0	31	3	1	0	0	35	0	0	54	2	0	0	0	56	0	0	0	0	0	0	0	0	91

DATE: TUESDAY 30th JUNE 2015

TURNING COUNT LOCATION: PENDINE PARK / SUMMERHILL ROAD

APPROACHING FROM: SUMMERHILL ROAD (NORTH)

[illegible]

Flow Diagram, Pendine Park

DATE: TUESDAY 30th JUNE 2015

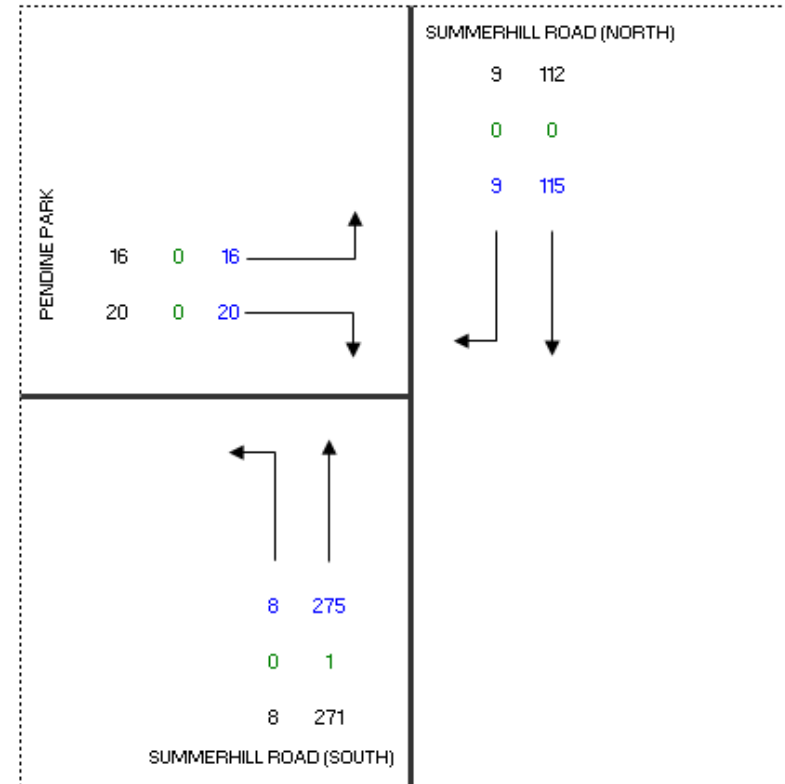
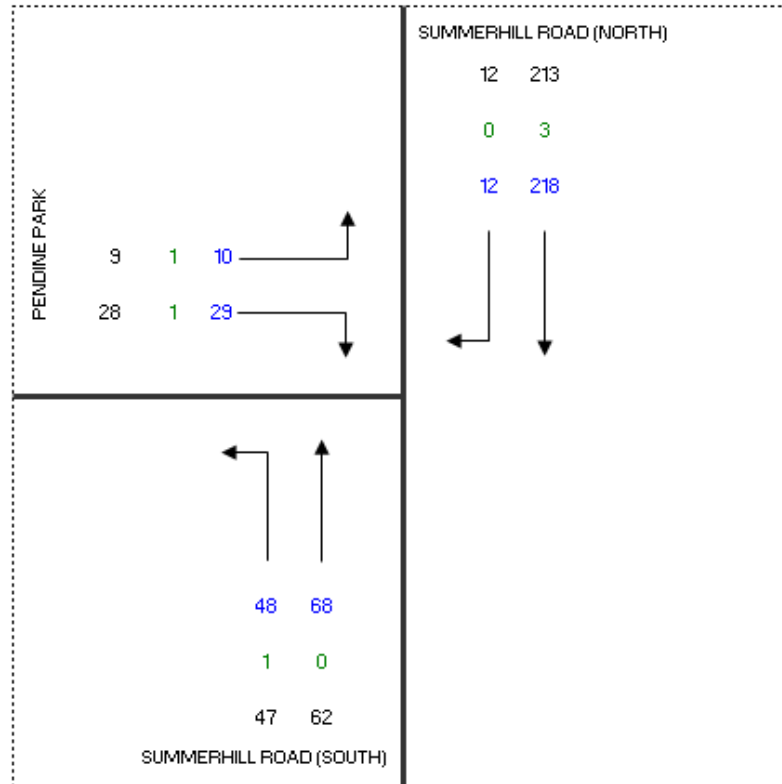
TOTAL HGV'S PCU'S



LOCATION: PENDINE PARK / SUMMERHILL ROAD

AM PEAK 7:15 - 8:15

PM PEAK 16:45 - 17:45



ARM / TURNING DIRECTION		LEFT TURN							STRAIGHT ON							RIGHT TURN									
		PEDA L	MOTO R	CAR TAXI	LGV	OGV1	OGV2	BUS COAC	TOTA L	PEDA L	MOTO R	CAR TAXI	LGV	OGV1	OGV2	BUS COAC	TOTA L	PEDA L	MOTO R	CAR TAXI	LGV	OGV1	OGV2	BUS COAC	TOTA L
AM PEAK	SUMMERHILL ROAD (SOUTH)	0	0	45	1	1	0	0	47	0	0	43	13	0	0	6	62								
	PENDINE PARK	0	0	8	0	1	0	0	9									0	0	26	1	1	0	0	28
	SUMMERHILL ROAD (NORTH)									0	3	179	23	3	0	5	213	0	0	12	0	0	0	0	12
PM PEAK	SUMMERHILL ROAD (SOUTH)	0	0	7	1	0	0	0	8	1	3	243	19	1	0	5	271								
	PENDINE PARK	0	0	14	2	0	0	0	16									0	0	19	1	0	0	0	20
	SUMMERHILL ROAD (NORTH)									0	2	99	7	0	0	4	112	0	0	9	0	0	0	0	9

Appendix 6

Picady Capacity Analysis

Junctions 9											
PICADY 9 - Priority Intersection Module											
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2016											
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk											
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Filename: Site Access_Summerhill Rd.j9

Path: C:\clients\HPS\Pendine Park

Report generation date: 11/10/2016 14:23:11

»With Development, AM

»With Development, PM

Summary of junction performance

	AM						PM					
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity
With Development												
Stream B-AC	0.1	7.79	0.12	A	A	280 %	0.1	7.89	0.10	A	A	227 %
Stream C-AB	0.1	5.19	0.04	A		[Stream B-AC]	0.0	5.83	0.03	A		[Stream B-AC]

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	Pendine Park Access / Summerhill Rd
Location	Wrexham
Site number	
Date	11/10/2016
Version	
Status	
Identifier	
Client	Highway Planning Solutions
Jobnumber	
Enumerator	AL
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Hour	perHour

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00



Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	With Development	AM	ONE HOUR	07:45	09:15	15	✓
D2	With Development	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

With Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Pendine Park Access / Summerhill Rd	T-Junction	Two-way	1.39	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	280	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	Summerhill Rd (S)		Major
B	Pendine Park Access		Minor
C	Summerhill Rd (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Summerhill Rd (N)	6.00			90.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Pendine Park Access	One lane	4.25	16	14

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	551	0.100	0.254	0.160	0.362
1	B-C	712	0.109	0.276	-	-
1	C-B	626	0.243	0.243	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	With Development	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	PCU Factors	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Summerhill Rd (S)		ONE HOUR	✓	118	100.000
B - Pendine Park Access		ONE HOUR	✓	55	100.000
C - Summerhill Rd (N)		ONE HOUR	✓	238	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Summerhill Rd (S)	B - Pendine Park Access	C - Summerhill Rd (N)
From	A - Summerhill Rd (S)	0	50	68
	B - Pendine Park Access	40	0	15
	C - Summerhill Rd (N)	218	20	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Summerhill Rd (S)	B - Pendine Park Access	C - Summerhill Rd (N)
From	A - Summerhill Rd (S)	0	0	0
	B - Pendine Park Access	0	0	0
	C - Summerhill Rd (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.12	7.79	0.1	A	50	76
C-AB	0.04	5.19	0.1	A	26	38
C-A					193	289
AB					46	69
A-C					62	94

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	41	10	543	0.076	41	0.0	0.1	7.161	A
C-AB	20	5	714	0.027	19	0.0	0.0	5.188	A
C-A	180	40			180				
A-B	38	9			38				
A-C	51	13			51				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	49	12	535	0.092	49	0.1	0.1	7.416	A
C-AB	25	6	731	0.034	25	0.0	0.0	5.095	A
C-A	189	47			189				
A-B	45	11			45				
A-C	61	15			61				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	61	15	523	0.116	60	0.1	0.1	7.784	A
C-AB	32	8	755	0.043	32	0.0	0.1	4.978	A
C-A	230	57			230				
A-B	55	14			55				
A-C	75	19			75				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	61	15	523	0.116	61	0.1	0.1	7.787	A
C-AB	32	8	755	0.043	32	0.1	0.1	4.979	A
C-A	230	57			230				
A-B	55	14			55				
A-C	75	19			75				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	49	12	535	0.092	50	0.1	0.1	7.423	A
C-AB	25	6	731	0.034	25	0.1	0.0	5.097	A
C-A	189	47			189				
A-B	45	11			45				
A-C	61	15			61				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	41	10	543	0.076	41	0.1	0.1	7.176	A
C-AB	20	5	714	0.027	20	0.0	0.0	5.188	A
C-A	180	40			180				
A-B	38	9			38				
A-C	51	13			51				

With Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Pendine Park Access / Summerhill Rd	T-Junction	Two-way	0.97	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	227	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	With Development	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	PCU Factors	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Summerhill Rd (S)		ONE HOUR	✓	294	100.000
B - Pendine Park Access		ONE HOUR	✓	46	100.000
C - Summerhill Rd (N)		ONE HOUR	✓	128	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Summerhill Rd (S)	B - Pendine Park Access	C - Summerhill Rd (N)
From	A - Summerhill Rd (S)	0	19	275
	B - Pendine Park Access	27	0	19
	C - Summerhill Rd (N)	115	13	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Summerhill Rd (S)	B - Pendine Park Access	C - Summerhill Rd (N)
From	A - Summerhill Rd (S)	0	0	0
	B - Pendine Park Access	0	0	0
	C - Summerhill Rd (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.10	7.89	0.1	A	42	63
C-AB	0.03	5.83	0.0	A	14	22
C-A					103	155
AB					17	26
AC					252	379

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	35	9	539	0.084	34	0.0	0.1	7.133	A
C-AB	11	3	631	0.018	11	0.0	0.0	5.804	A
C-A	85	21			85				
AB	14	4			14				
AC	207	52			207				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	41	10	525	0.079	41	0.1	0.1	7.437	A
C-AB	14	3	633	0.022	14	0.0	0.0	5.814	A
C-A	101	25			101				
AB	17	4			17				
AC	247	62			247				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	51	13	507	0.100	51	0.1	0.1	7.891	A
C-AB	18	4	636	0.028	18	0.0	0.0	5.826	A
C-A	123	31			123				
AB	21	5			21				
AC	303	76			303				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	51	13	507	0.100	51	0.1	0.1	7.894	A
C-AB	18	4	636	0.028	18	0.0	0.0	5.827	A
C-A	123	31			123				
AB	21	5			21				
AC	303	76			303				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	41	10	525	0.079	41	0.1	0.1	7.440	A
C-AB	14	3	633	0.022	14	0.0	0.0	5.815	A
C-A	101	25			101				
AB	17	4			17				
A-C	247	62			247				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	35	9	539	0.064	35	0.1	0.1	7.141	A
C-AB	11	3	631	0.018	11	0.0	0.0	5.805	A
C-A	85	21			85				
AB	14	4			14				
A-C	207	52			207				

Appendix 7

Personal Injury Accident Data

Map Satellite

Incident Details
Date: 16/04/2013
Severity: Serious
 Number of Vehicles Involved: 2
 Number of Casualties Involved: 5
[View Detailed Report](#)

Incident Details
Date: 09/03/2015
Severity: Slight
 Number of Vehicles Involved: 2
 Number of Casualties Involved: 2
[View Detailed Report](#)

Incident Details
Date: 20/02/2014
Severity: Serious
 Number of Vehicles Involved: 1
 Number of Casualties Involved: 1
[View Detailed Report](#)

Incident Severity
  
 Slight Serious Fatal

67 results found

Location: gwerysllt

Years
 5 of 17 years selected

Severity
 Fatal ☒
 Serious ☒
 Slight ☒

Casualty Types:
 All Casualty Types

Vehicles Involved:
 All Vehicle Types

[Search](#)

Crash Report including Vehicle and Casualty Information



Crash Date:	Tuesday, April 16, 2013	Time of Crash:	12:33:00 PM	Crash Reference:	201360P058212
Highest Injury Severity:	Serious	Number of Vehicles:	2	Number of Casualties:	5
Highway Authority:	Wrexham	OS Grid Reference:	331620	352350	
Local Authority:	Wrexham				
Road Number:	U0	Road Type:	Single carriageway		
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	60	Junction Control:	Give way or uncontrolled		
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	T or staggered junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	-1	Female	21 - 25	Vehicle is in the act of turning right	Offside	Other	Kerb	Other permanent object
2	Car (excluding private hire)	-1	Male	16 - 20	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	Kerb	Other permanent object

For more information about the data please visit: <http://www.crashmap.com/home/aboutthedata> and <http://www.crashmap.com/home/definitions>

Crash Report including Vehicle and Casualty Information



Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Female	21 - 25	Unknown or other	Unknown or other
1	4	Slight	Vehicle or pillion passenger	Male	26 - 35	Unknown or other	Unknown or other
1	5	Slight	Vehicle or pillion passenger	Male	0 - 5	Unknown or other	Unknown or other
2	2	Serious	Driver or rider	Male	16 - 20	Unknown or other	Unknown or other
2	3	Slight	Vehicle or pillion passenger	Male	16 - 20	Unknown or other	Unknown or other

Crash Report including Vehicle and Casualty Information



Crash Date:	Monday, March 09, 2015	Time of Crash:	2:00:00 PM	Crash Reference:	201560S033348
Highest Injury Severity:	Slight	Number of Vehicles:	2	Number of Casualties:	2
Highway Authority:	Wrexham	OS Grid Reference:	331790	352110	
Local Authority:	Wrexham				
Road Number:	U0	Road Type:	Single carriageway		
Weather Description:	Raining without high winds				
Road Surface Description:	Wet or Damp				
Speed Limit:	60	Junction Control:	Not Applicable		
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Not at or within 20 metres of junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	-1	Female	26 - 35	Vehicle proceeding normally along the carriageway, on a right hand bend	Front	Other	None	None
2	Car (excluding private hire)	-1	Male	46 - 55	Vehicle proceeding normally along the carriageway, on a left hand bend	Front	Other	None	None

For more information about the data please visit: <http://www.crashmap.com/home/aboutthedata> and <http://www.crashmap.com/home/definitions>

Crash Report including Vehicle and Casualty Information



Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Female	26 - 35	Unknown or other	Unknown or other
2	2	Slight	Driver or rider	Male	46 - 55	Unknown or other	Unknown or other

Crash Report including Vehicle and Casualty Information



Crash Date:	Thursday, February 20, 2014	Time of Crash:	8:43:00 PM	Crash Reference:	201460R026214
Highest Injury Severity:	Serious	Number of Vehicles:	1	Number of Casualties:	1
Highway Authority:	Wrexham			OS Grid Reference:	332198 351389
Local Authority:	Wrexham				
Road Number:	U0	Road Type:	Roundabout		
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	60	Junction Control:	Give way or uncontrolled		
Light Conditions:	Darkness: street lights present and lit				
Carriageway Hazards:	None				
Junction Detail:	Roundabout				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	-1	Male	26 - 35	Vehicle is in the act of turning right	Front	Other	Kerb	Entered ditch

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Serious	Driver or rider	Male	26 - 35	Unknown or other	Unknown or other

For more information about the data please visit: <http://www.crashmap.com/home/aboutthedata> and <http://www.crashmap.com/home/definitions>