

Henbury Parish Council Traffic Survey for LPS18: 17/4277M

EXECUTIVE SUMMARY

Henbury Parish Council have objected to planning application 17/4277M for housing development on land between Chelford Road and Whirley Road, Macclesfield. The objection contains a review of the Transport Assessment submitted as part of the planning application, and refers to data that Henbury Parish Council have obtained independently. This document presents that data, and compares it with the data submitted in the Transport Assessment.

The key findings from the comparison are that:

- queue lengths are between **200%** and **410%** higher than those submitted in the planning submission.
- vehicle flow counts are **27%** and **25%** higher, in the morning and afternoon periods, respectively.

The results in the Transport Assessment were used to estimate the impact of the development traffic on:

- Broken Cross roundabout traffic capacity
- Air quality within the Broken Cross Air Quality Management Area (AQMA)

It is concluded that those results, and the modelling on which they are based, are not representative of typical conditions, and are therefore invalid.

In view of such large discrepancies in the data, Henbury Parish Council request that no decisions are made based on the conclusions of the current Transport Assessment and Air Quality Report, until these have been reviewed in light of this new data.

The flawed information in the above two reports has also been used in the Statement of Community Involvement (received by HPC 26/9/17), to respond to residents' concerns. The conclusions in that document relating to Highways and Access and Air Pollution should also be discounted.

The background to this study, and the results obtained are described in detail below.

BACKGROUND

Planning application 17/4277M contains a Transport Assessment which used modelling to predict the load on the Broken Cross roundabout in the coming years. It is stated that the assessment is based on a traffic survey conducted on Wednesday June 28th, 2017, and that the periods covered were 0730-0930 and 1630-1830.

The source traffic volumes and maximum queue lengths of all four approaches to the Broken Cross roundabout were provided, and this data was used for the Transport Assessment modelling.

It was immediately apparent that the queue lengths were unreasonably short, being a maximum of 15 cars on any approach during the hours measured. Anybody that uses this roundabout during the morning or afternoon rush hour periods will have been surprised by these totals, as they simply do not reflect reality during most school term week days, when queues can be 400m or more long. Therefore, Henbury Parish Council commissioned the same survey company (Road Data Services Ltd) to undertake a further survey, on Wednesday Sep 13th, 2017. Using the same company and day of the week was specifically done to allow a like-for-like comparison of results. The same data was provided, i.e. traffic volumes on each approach road for each possible roundabout exit together with the maximum queue lengths on each approach.

The presence of roadworks was checked on the CEC website and none were shown that would have affected the flow and queue lengths. As it happened, at 0915 a temporary traffic light was installed on Chester Road (A537 East) to allow some roadworks to proceed, and since this may have affected queueing any results after this time should be treated with caution. However, all results prior to 0915 were unaffected and all works were cleared prior to the afternoon monitoring.

The survey company used video cameras along the approaches to gather the queuing and flow figures. Henbury Parish Council provided monitors who also tracked queue length manually during the full measurement periods to confirm the validity of the results. Once the video footage had been analysed by RDS Ltd it was found that the morning queue on Gawsworth Road and afternoon queue on Fallibroome Road were not fully measured, as the backs of the queues were beyond the view of the video cameras; fortunately, the HPC monitor data provided the missing information. RDS then performed a repeat survey on Thu Sep 21st to reattempt the measurement of those approaches at the times in question, and again the results show queueing at far higher levels than those used for the planning application.

RESULTS

Queueing

The following graphs show the queue lengths (measured as the number of queueing vehicles) and the legend is explained as below:

“13/9 Stationary”: data from RDS Ltd for stationary queue length.

“13/9 Slow moving”: data from RDS Ltd for length slow moving traffic which includes the stationary queue and slow-moving traffic to its rear.

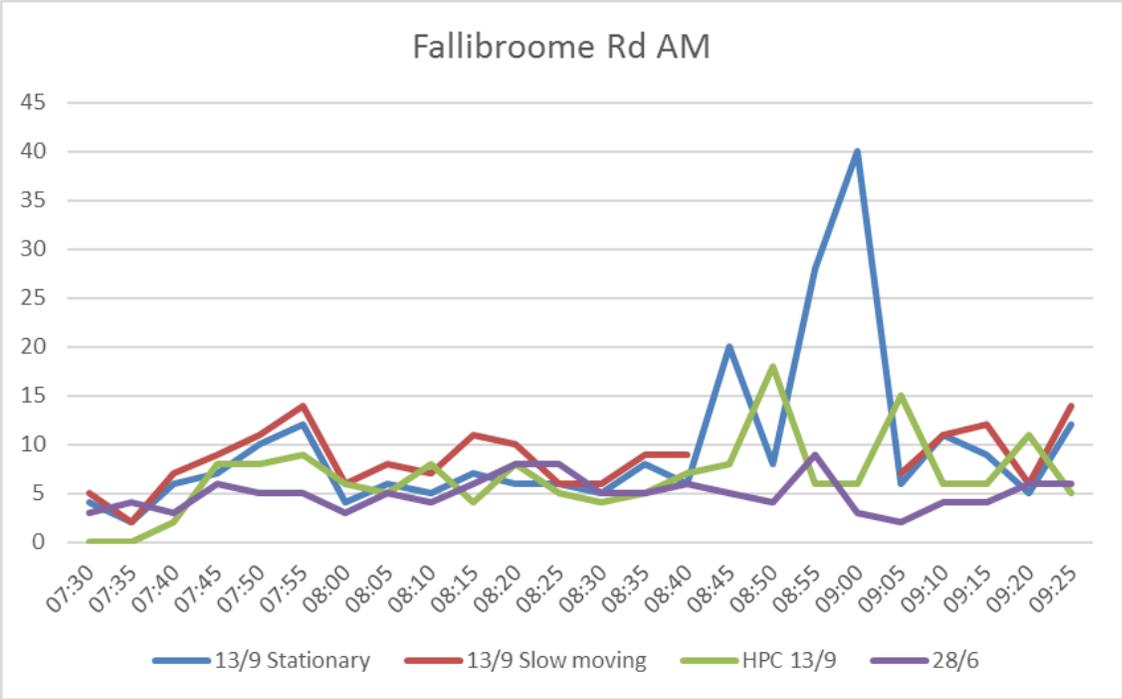
“HPC 13/9”: manual measurements from Henbury Parish Council monitors on 13/9

“28/6”: Results included in the Transport Assessment of application 17/4277M

“21/9 Stationary”: RDS Ltd measurements from 21/9 in a second attempt to record accurate queue length on two specific roads/periods; only shown where relevant.

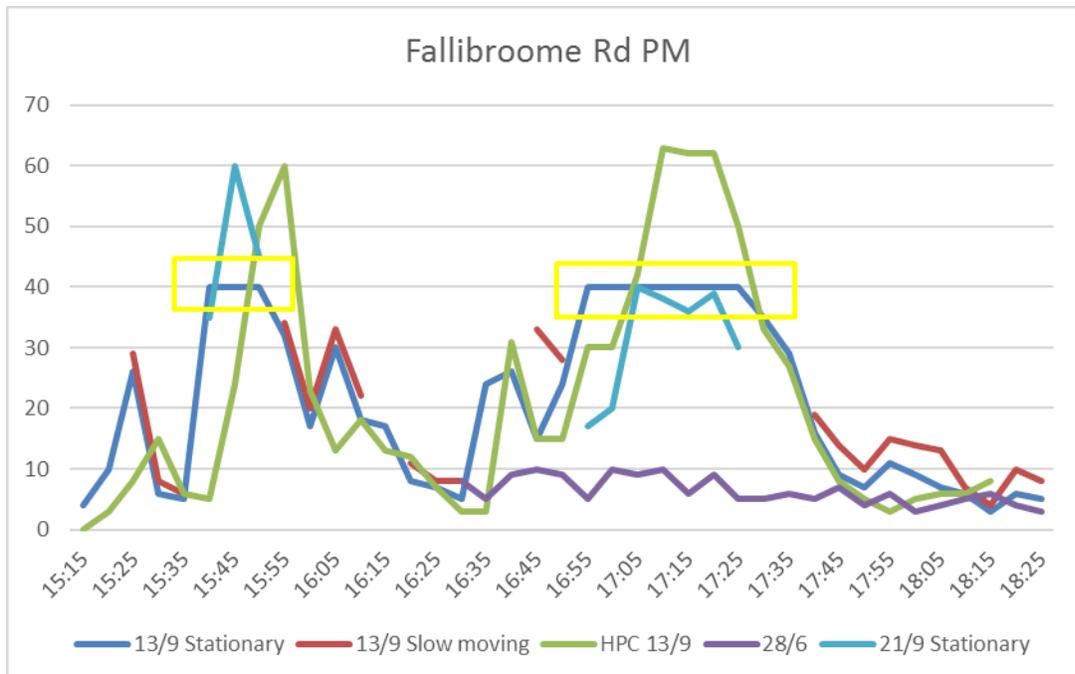
Fallibroome Road

Morning



Figures from 28/6 peak at 9 vehicles. On 13/9 numbers are significantly higher during the periods 0745-0800 and from 0840 to 0915.

Afternoon

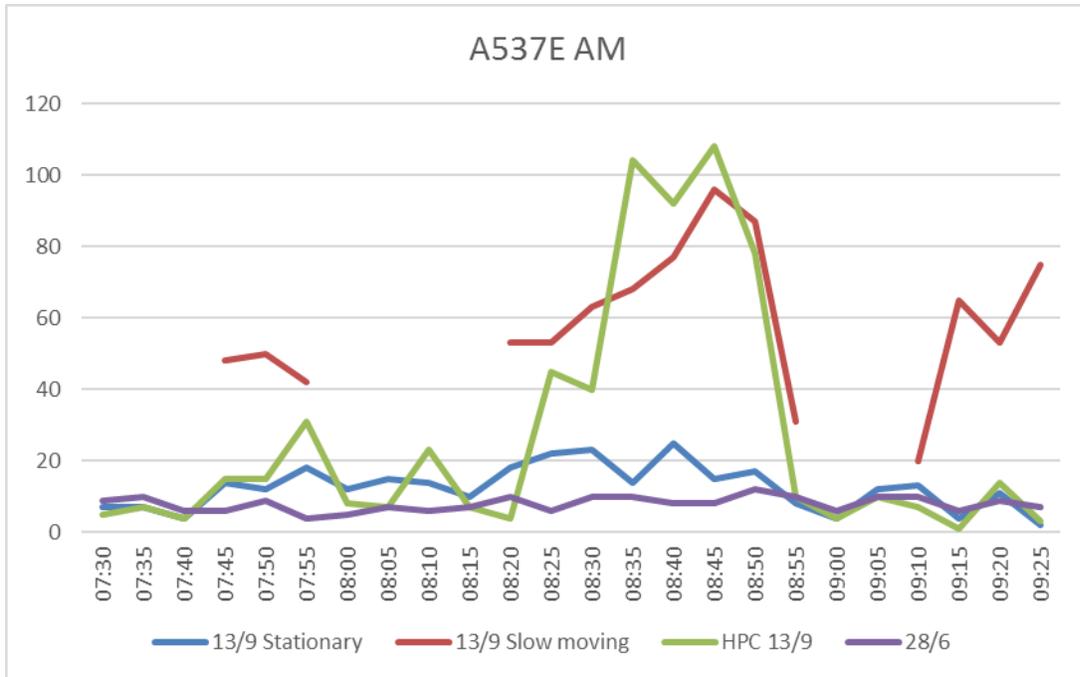


There are no measurements on 28/6 prior to 1630 and hence numbers for the school peak between 1530-1600 are not available. However long queues are found on 13/9 at that time – with the peak of 60 representing queueing all the way from the Victoria Road roundabout. The yellow boxes highlight the periods at which the maximum queue length on 13/9 is truncated by the video locations. This situation exists for the whole period 1655-1730 on 13/9 and HPC monitoring showed that queueing was as far as Victoria Road for a full 15 minutes. The data from the transport assessment shows a maximum queue length of only 10 cars for this entire period. Measurements from 21/9, while not as high as on the 13th, still show peaks of 40 cars, corresponding to a location around Dalesford Crescent. Residents of Dalesford Crescent confirm that queues are regularly beyond that road around 1700 and that difficulties are experienced entering and exiting the Crescent at that time.

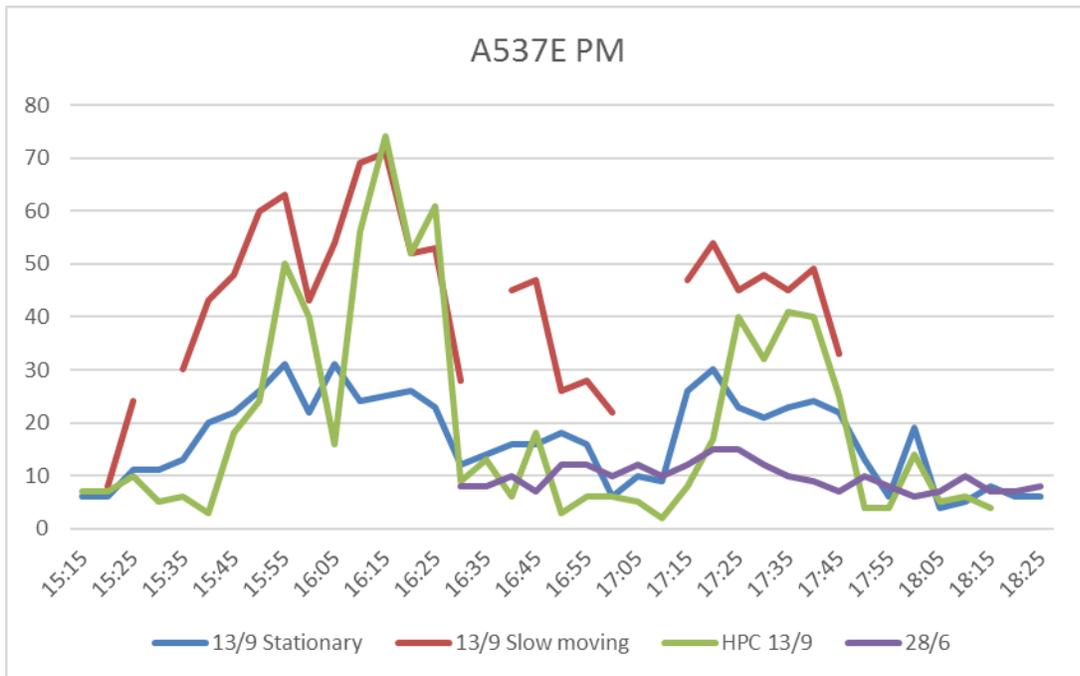
A537E/Chester Road/Broken Cross

Morning

The submitted data from 28/6 show a maximum count of 12 vehicles. On 13/9 this rose to 25 as a stationary queue but the slow-moving queue extended much further – to around 100 vehicles.



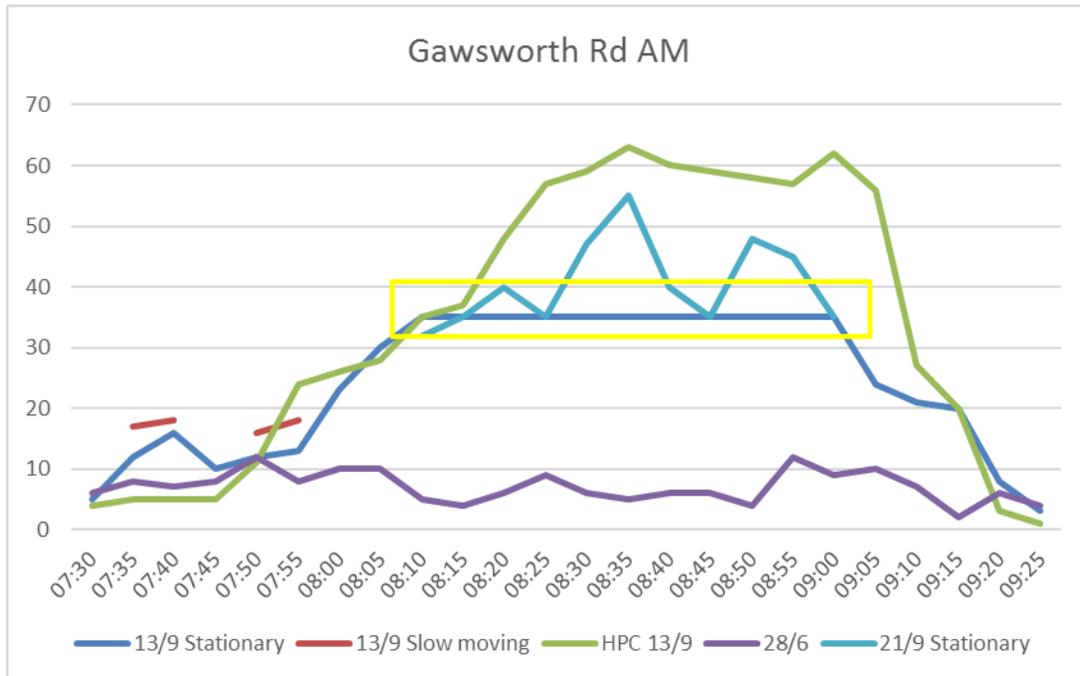
Afternoon



As no measurements before 1630 were available on 28/6, the peak of 31 vehicles and slow-moving queue of over 70 vehicles on 13/9 can't be compared. However, the later peak between 1715 and 1745 can be compared, with a peak of 30 vehicles on 13/9 doubling the count from 28/6, and the slow-moving queue extended to around 50 vehicles for a 30-minute period.

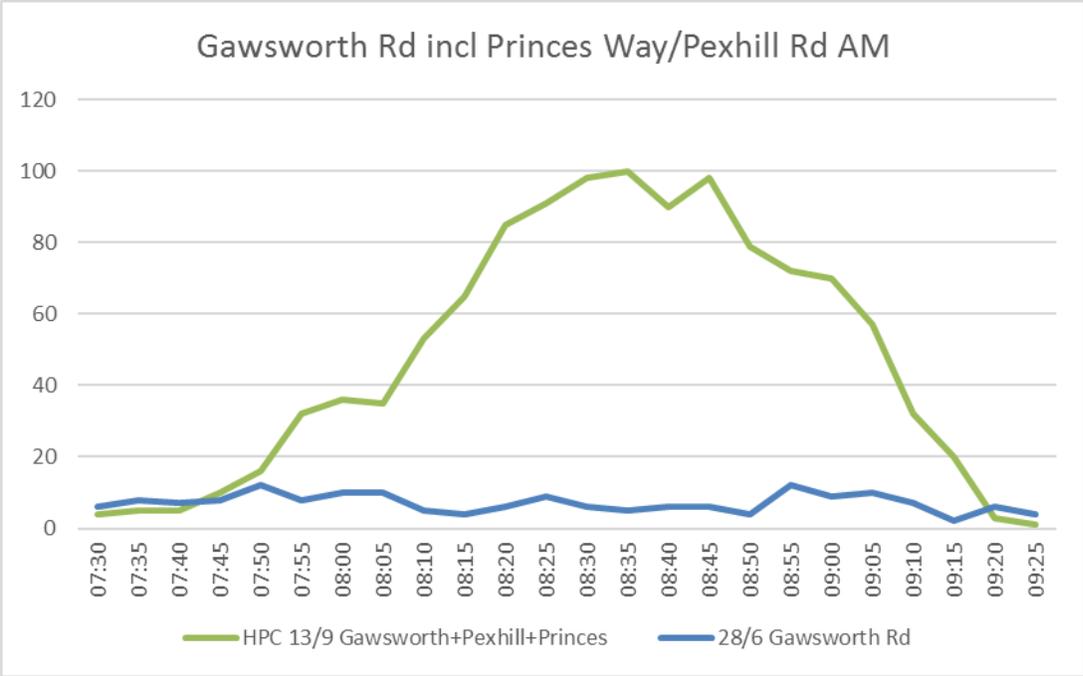
Gawsworth Road

Morning



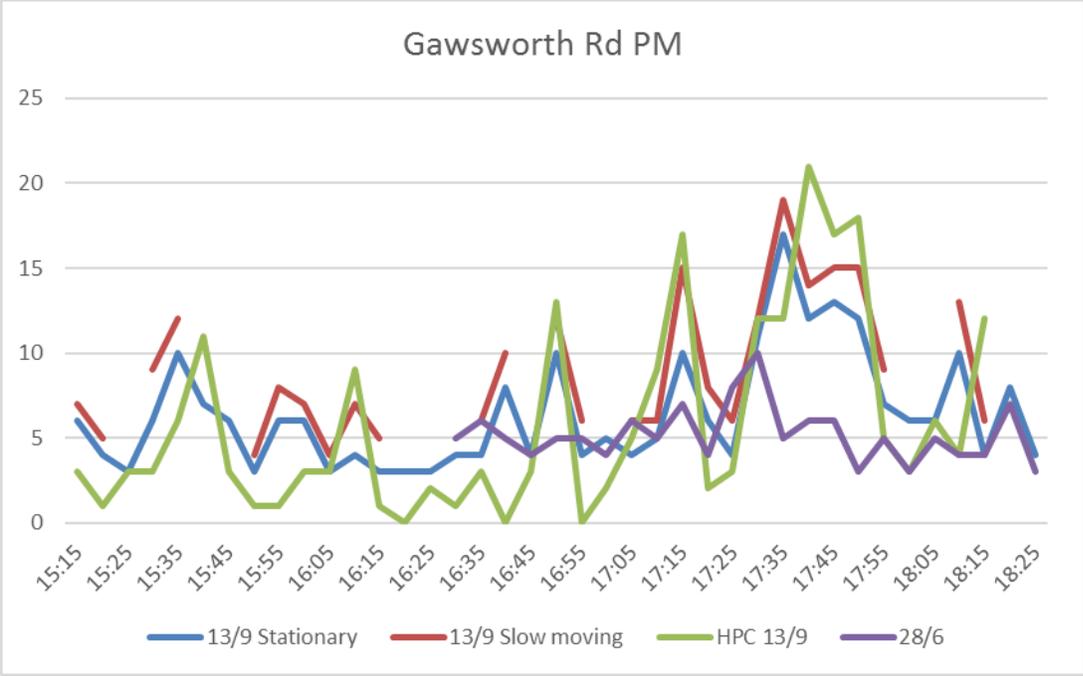
The queue from Gawsworth Road is often extensive in the morning with queueing traffic on both Pexhill Road and Princes Way adding to the total queue volume. The submitted data from 28/6 shows a maximum queue length of only 12 vehicles. The 13/9 survey for Gawsworth Rad alone showed a truncated length of 35 cars for the entire period 0810-0905, and HPC results showed that the reality was around 60 vehicles. The repeat RDS survey on 21/9 showed counts above 35 vehicles for 30 minutes and a peak of 55.

The queue on Gawsworth Road should not be taken in isolation, however, as traffic queues on Pexhill Road and Princes Way join the Gawsworth Road queue before approaching the Broken Cross roundabout. By monitoring all three approaches HPC have calculated the effective queue length on 13/9, with the results below. It is found that there were around 100 vehicles queueing at the peak time, and that a combined queue of more than 50 cars was present for a full hour.



Afternoon

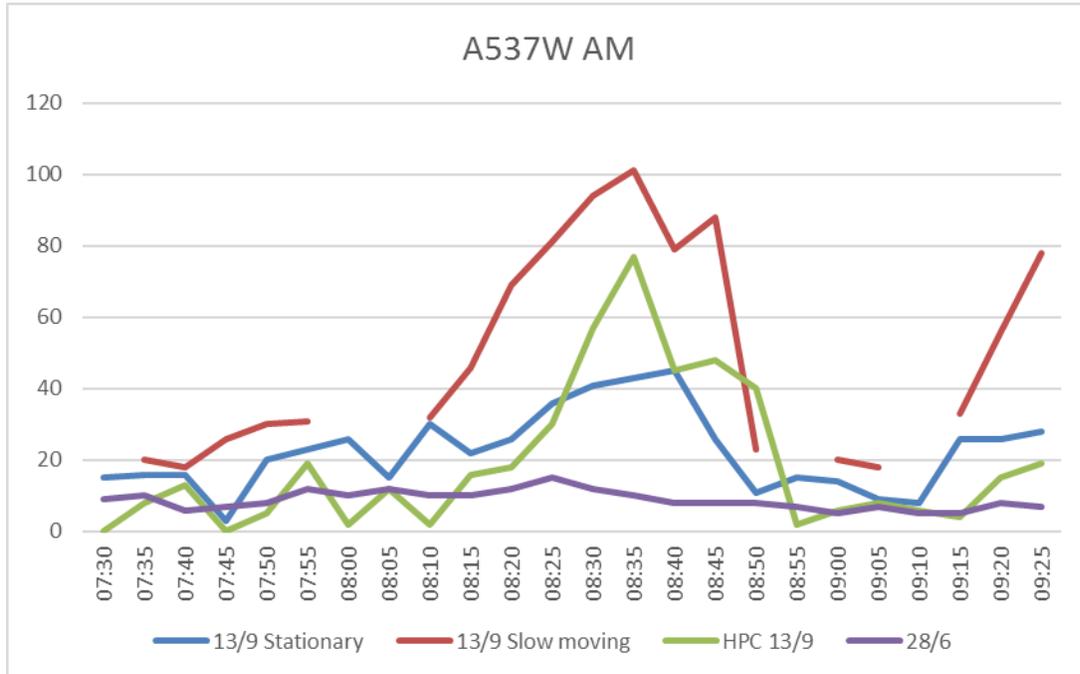
Although the queue lengths in the afternoon are shorter than in the morning on Gawsworth Rd, the numbers on 13/9 are still typically double those on 28/6 during the period 1715-1745.



A537W/Chelford Road

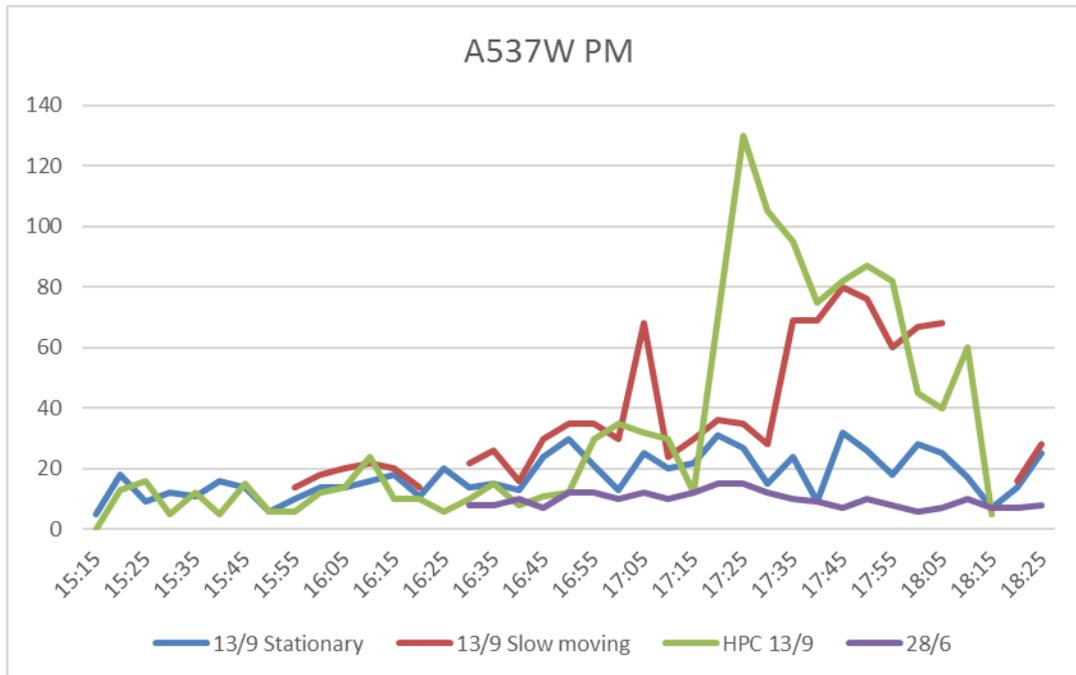
Morning

The morning queue on the A537W splits between the almost stationary traffic and the slow-moving traffic, with the longest queue occurring between 0820 and 0850. On 28/6 the highest count was 15 cars, but on 13/9 the stationary queue extended to 45 vehicles and the slow-moving queue to 101 vehicles. This is well back into Henbury.



Afternoon

The afternoon shows a similar profile with a stationary queue of 20-30 vehicles and a slow-moving queue of over 80 vehicles, with over 120 being recorded in one period – back to Church Lane, Henbury. This can be contrasted with the maximum count of 15 vehicles on 28/6.



Combined Queue Lengths

By summing the individual queue counts it's possible to estimate the combined total of queuing vehicles approaching the roundabout.

Morning

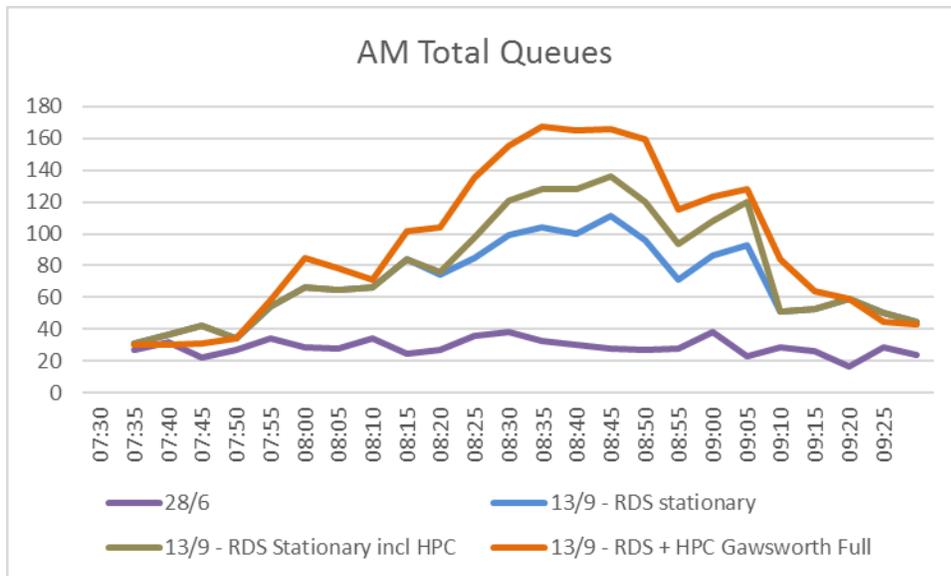
The graph shows the summed counts as follows:

“28/6” – Data from Transport Assessment document

“13/9 – RDS Stationary” – RDS data from 13/9 which includes the truncated queue count on Gawsworth Road.

“13/9 – RDS Stationary incl HPC” – as above except that HPC queue counts are substituted for the RDS figures on Gawsworth Road when the truncation occurred.

“13/9 – RDS Stationary + HPC Gawsworth Full” – as “13/9 – RDS Stationary” except that HPC results for the combined Gawsworth Road/Princes Way/Pexhill Road queues are substituted for the RDS data for Gawsworth Road for the whole period.



While a combined queue total of 40 vehicles was measured on 28/6, far higher counts were found on 13/9. Even the truncated data shows a count of 111 vehicles, while using HPC data to more accurately measure Gawsworth Rd increases the peak count to 136 vehicles. Finally, when considering the combined queue on Gawsworth Road a peak of 167 vehicles occurs and the queue exceeds 150 vehicles for a 25-minute period.

For the period 0800-0900 the counts on 13/9 are 2.8 times, 3.3 times, and 4.1 times, respectively, greater than those on 28/6.

Afternoon

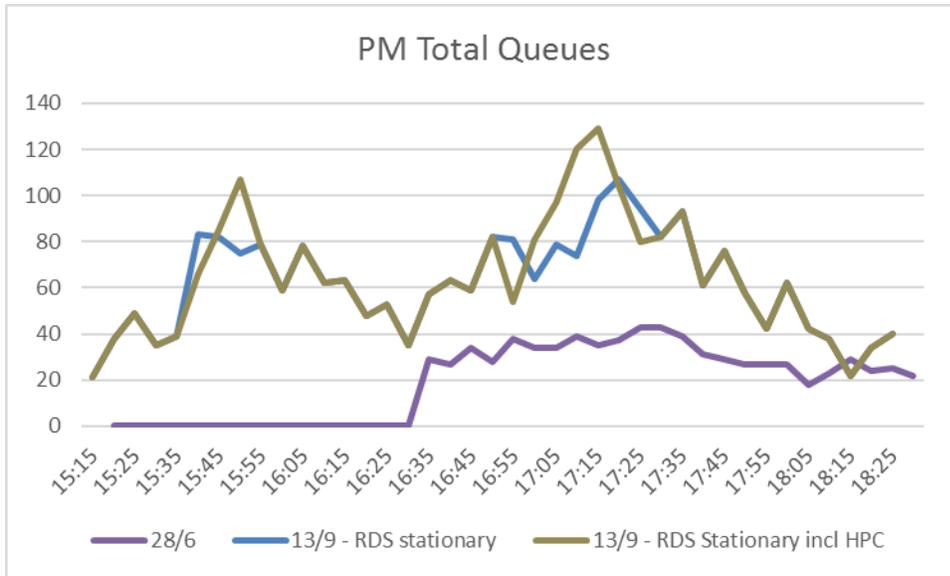
The afternoon counts are shown below, with the following data:

“28/6” – Data from Transport Assessment document

“13/9 – RDS Stationary” – RDS data from 13/9 which includes the truncated queue count on Fallibroome Road.

“13/9 – RDS Stationary incl HPC” – as above except that HPC queue counts are substituted for the RDS figures on Fallibroome Road when the truncation occurred.

The results show a peak of 43 vehicles on 28/6 which increased to 104 on 13/9 (truncated data) and 129 (HPC counts replacing truncated data). During the period for which measurements were available on 28/6 the counts on 13/9 were generally at least double those on 28/6.

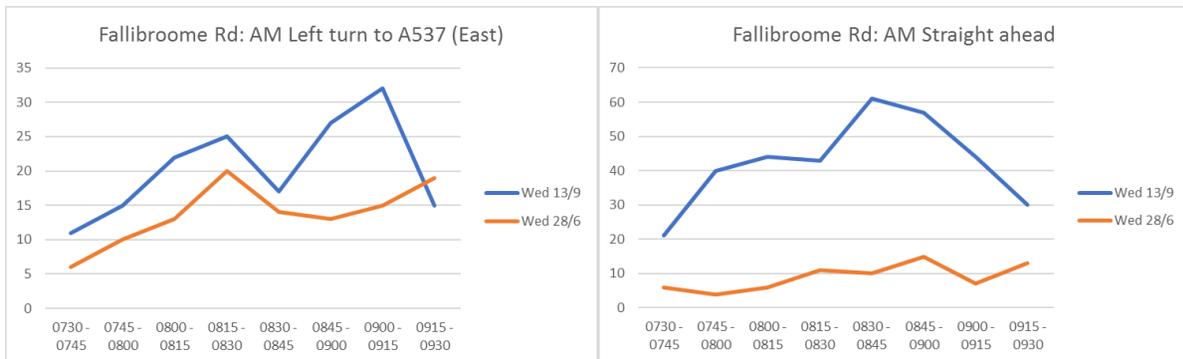


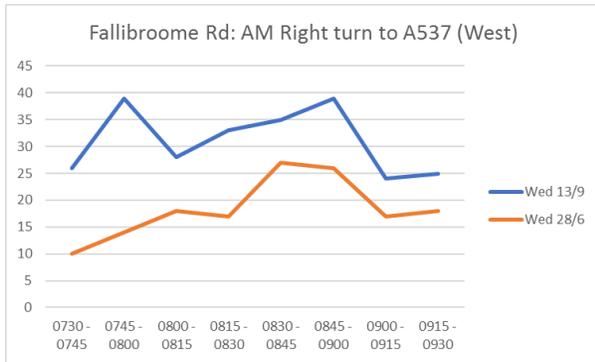
Traffic Counts

Each approach/exit is compared in the following graphs, in terms of the number of vehicles using the roundabout per 15-minute period. As the survey from 28/6 did not measure during the period 1515-1630, the time covering afternoon school activity, the traffic values are shown as zero for that period.

Fallibroome Road

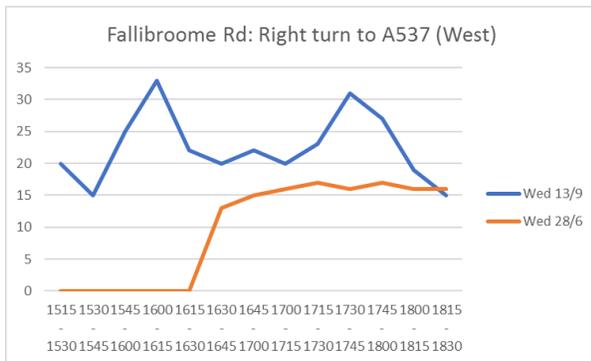
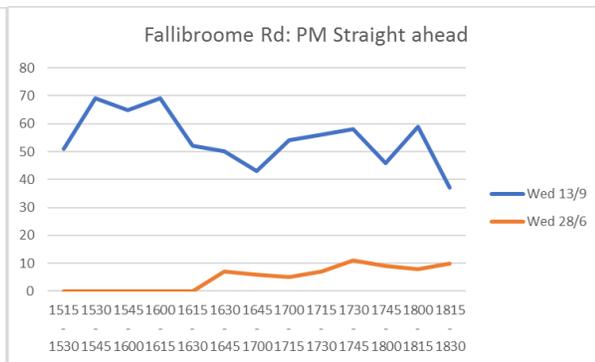
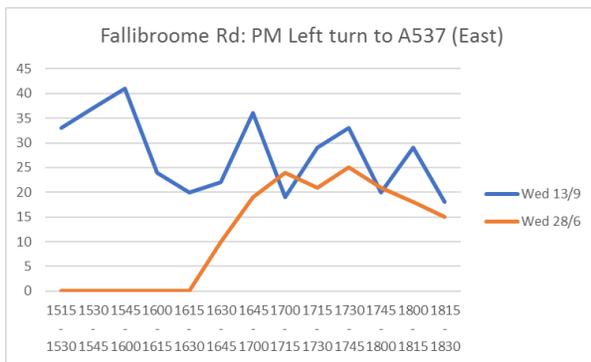
Morning





In the period 0730-0930 traffic levels are far higher on 13/9.

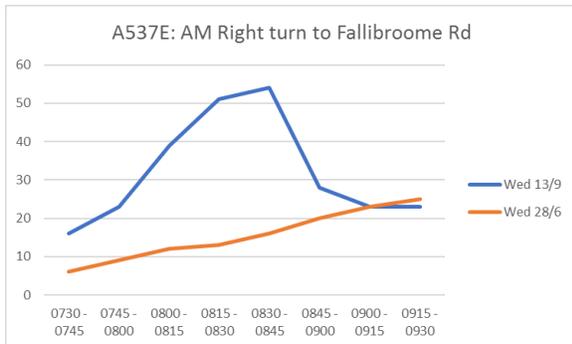
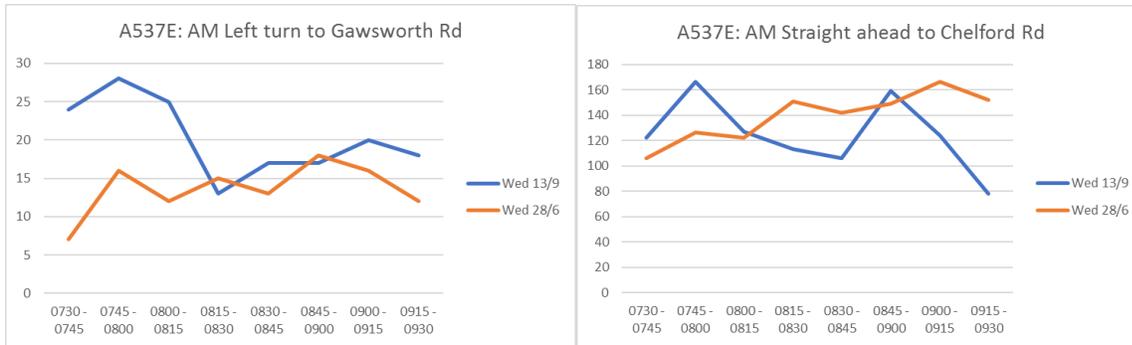
Afternoon



Again, the afternoon period shows a very different profile on Fallibroome Road, with a complete contrast in vehicle counts travelling south to Gawsworth Road, and a lack of a peak in westbound traffic between 1730-1800.

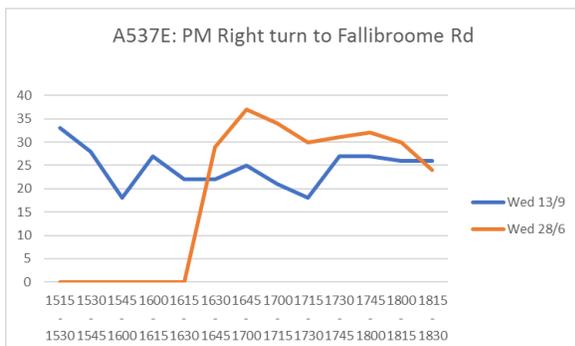
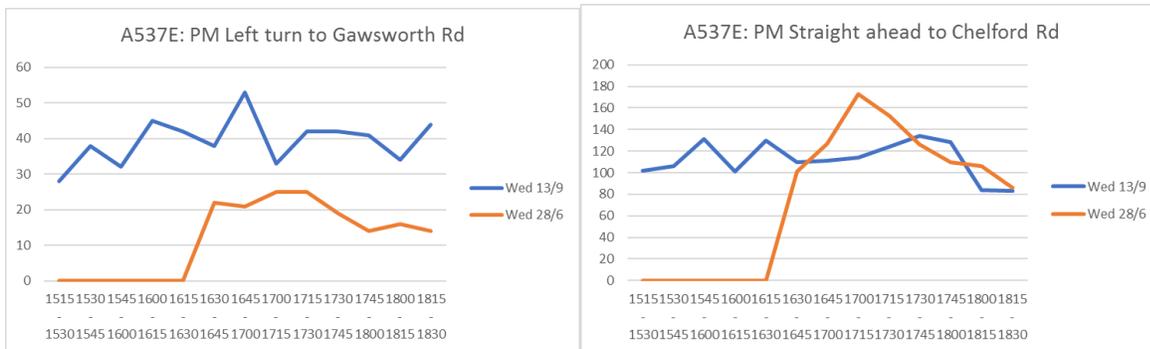
A537E/Chester Road/Broken Cross

Morning



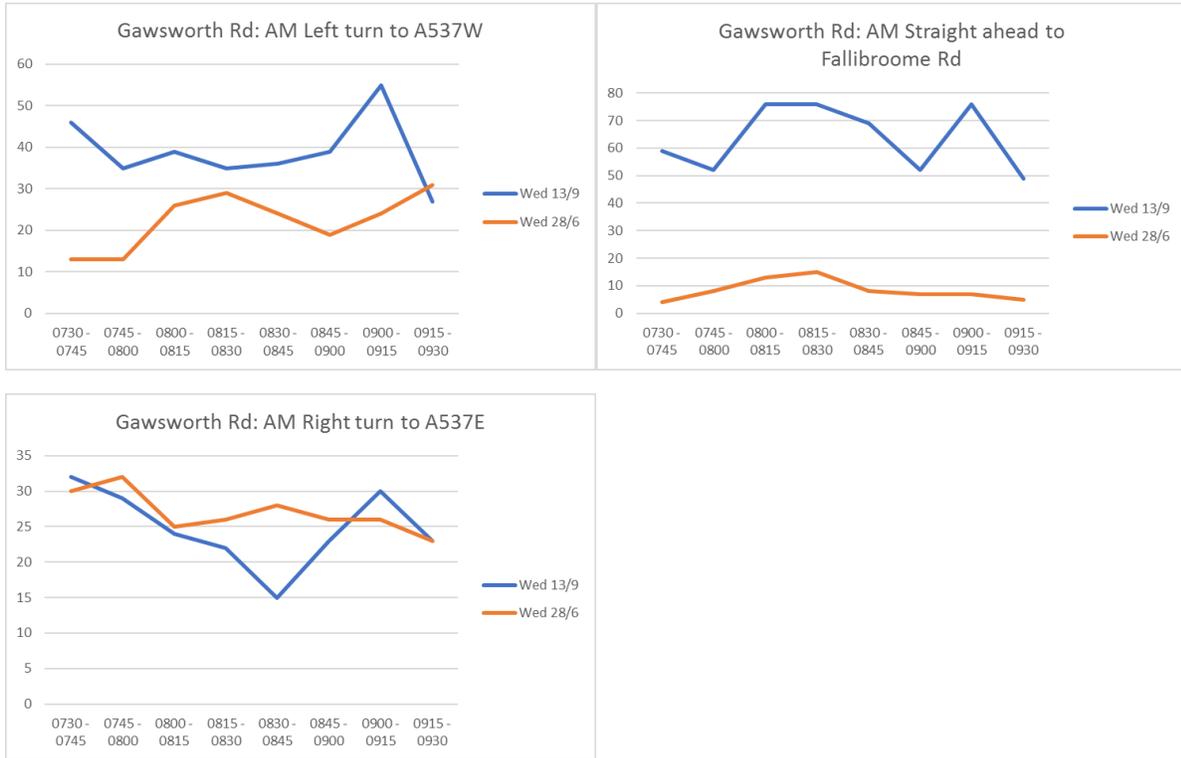
One key difference in the morning statistics is the significantly higher amount of traffic turning right to Fallibroome Road between 0800 and 0845 on 13/9.

Afternoon



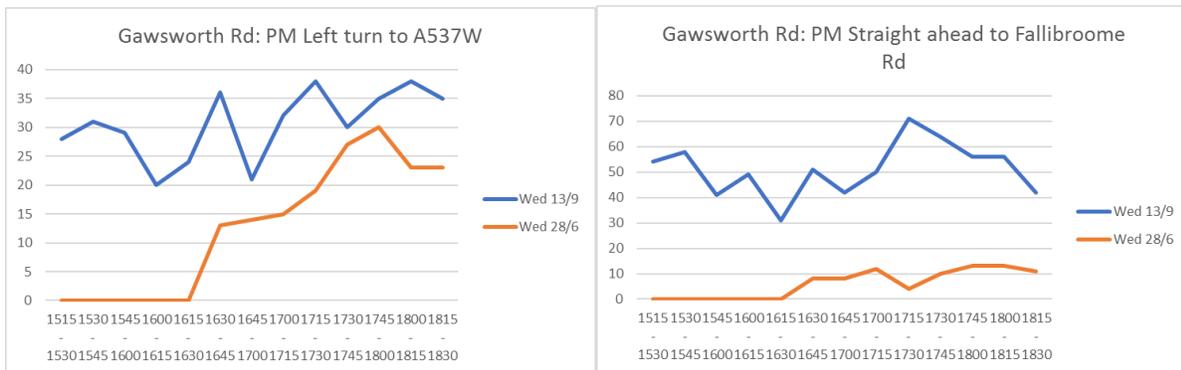
Gawsworth Road

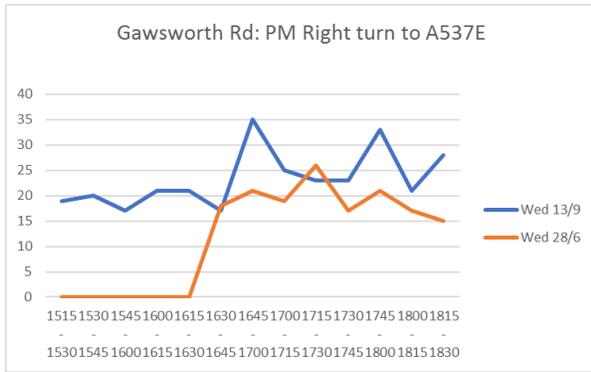
Morning



There is a noticeably low level of traffic heading north to Fallibroome Road throughout the morning period on 28/6.

Afternoon

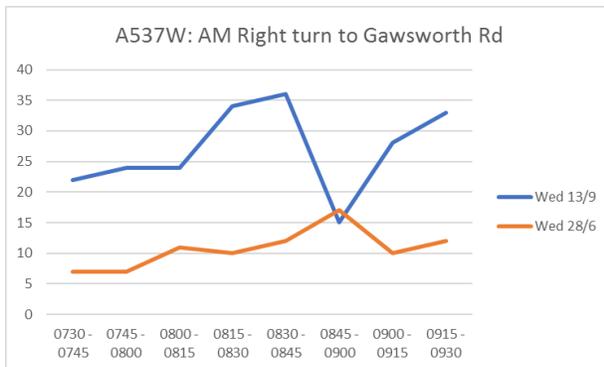
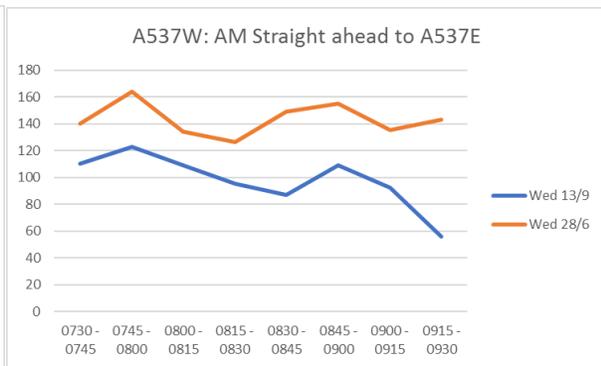
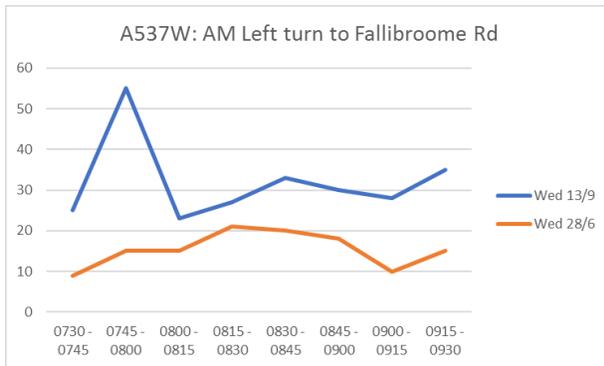




As in the morning, the main difference between the two dates is the traffic heading north to Fallibroome Road – which is at very low levels on 28/6.

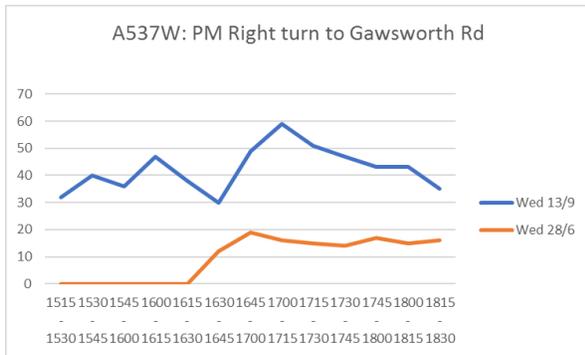
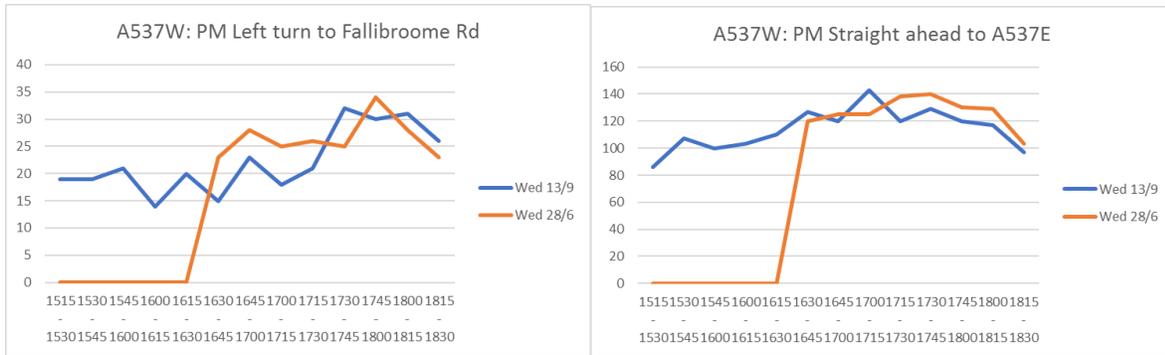
A537W/Chelford Road

Morning



While greater traffic levels are found in the northbound and southbound routes, levels are higher on traffic heading east from Chelford Road on 28/6.

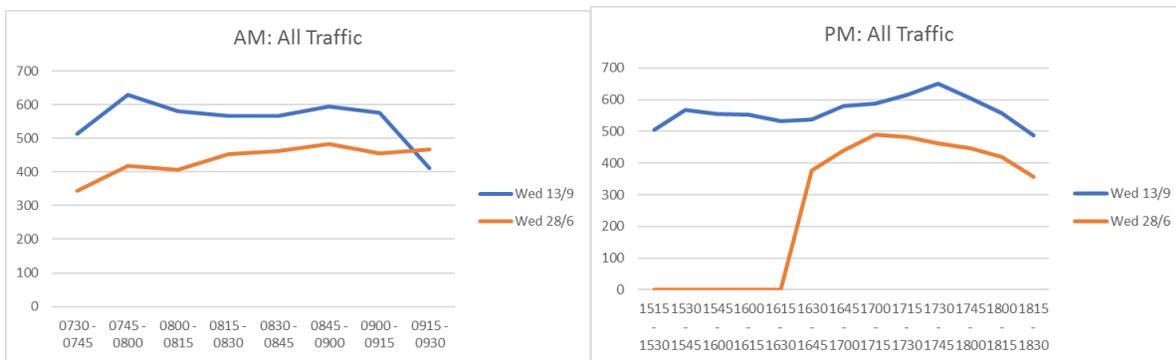
Afternoon



Comparable traffic levels are found on the northbound and eastbound exits, but during the afternoon of 13/9 more than double the traffic exits to the south.

Total Traffic

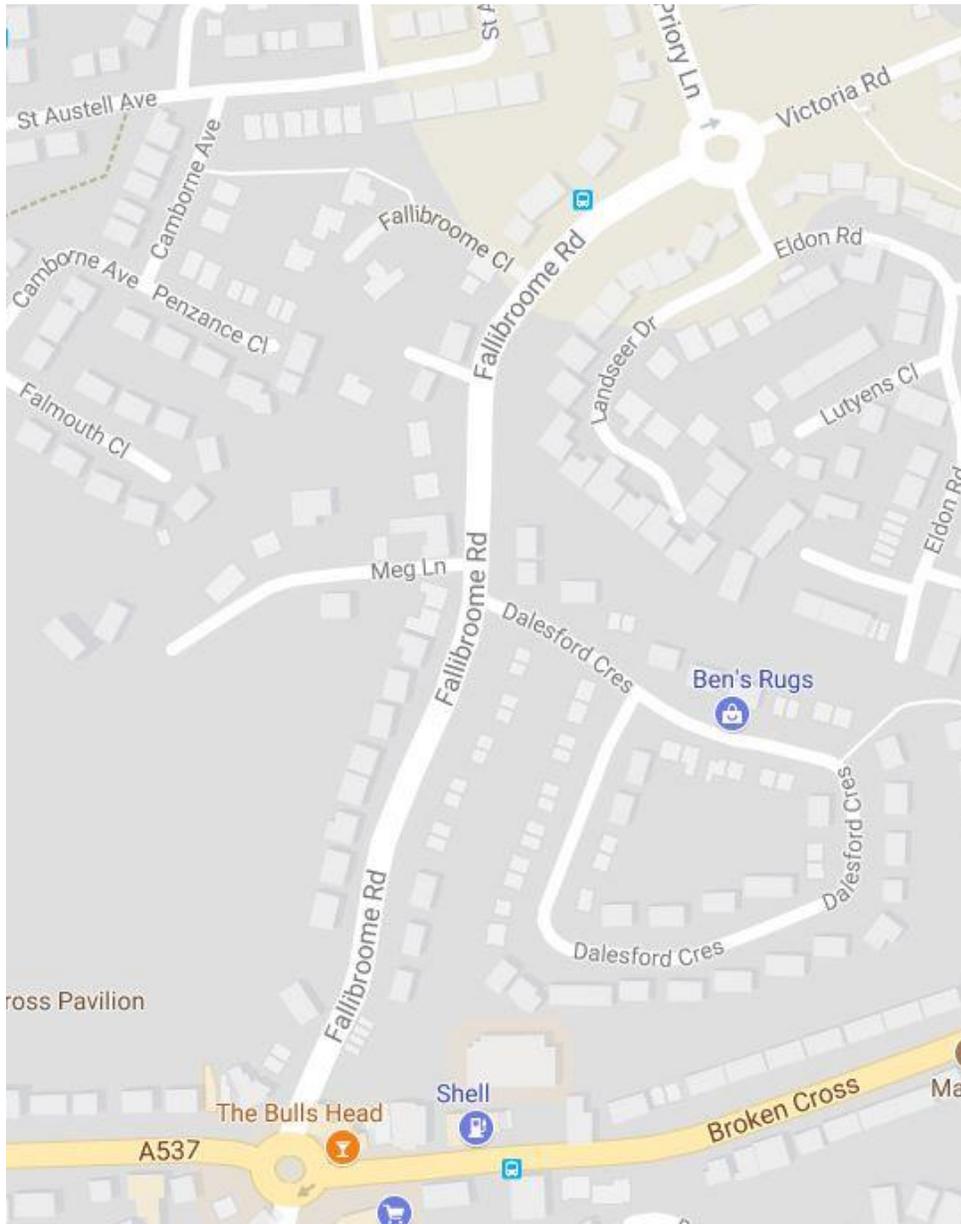
The sum of all four approaches is shown below, for both morning and afternoon periods.



In both cases traffic on 13/9 is at greater levels – on average by 27% in the morning and 25% in the afternoon (taking the afternoon period starting 1630 for both dates). This, together with the large reduction in Fallibroome Road traffic, suggests that the first set of measurements were not taken on a typical school day.

ANNEX

Maps



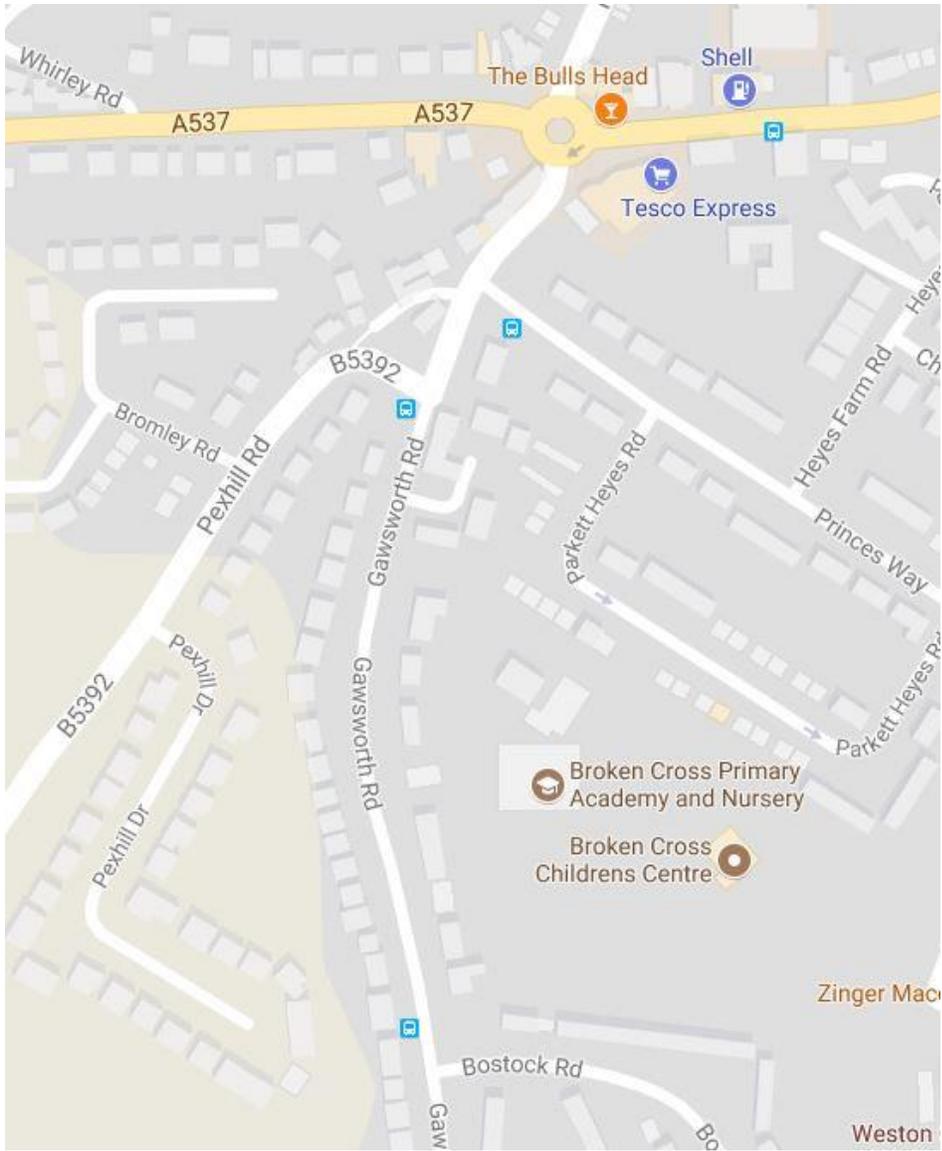
Fallibroome Road



A537 East/Broken Cross/Chester Road



A537 West/Chelford Road



Gawsworth Road

Photographs



Fallibroome Road: 13/9 at 1709. Queue from Victoria Road roundabout.



Fallibroome Road: 13/9 at 1704. Queuing traffic beyond Dalesford Crescent.



A537E 13/9 at 0850. Eastbound queue beyond Toll Bar Road.



Gawsworth Road: 13/9 at 0840. Queue beyond Bostock Road.



A537E 13/9 at 0835. Queue to Frame Art, Henbury

SURVEY DATA

Traffic Flows

Fallibroome Road

Macclesfield - Manual Traffic Survey, Wednesday 13th September 2017

Produced by Road Data Services Ltd

Junction: Fallibroome Road / A537 / Broken Cross																										
Approach: Fallibroome Road																										
TIME	Left to A537 (East)								S/R to Broken Cross								Right to A537 (West)									
	PI	CY	MI	CAR	LG	OG	OG	BUS	TOTAL	PI	CY	MI	CAR	LG	OG	OG	BUS	TOTAL	PI	CY	MI	CAR	LG	OG	OG	BUS
0730-0745	0	0	8	3	0	0	0	11	0	0	17	4	0	0	0	0	21	0	0	23	3	0	0	0	26	
0745-0800	0	0	14	1	0	0	0	15	0	0	38	2	0	0	0	0	40	0	0	34	4	0	0	0	39	
Hourly Total	0	0	22	4	0	0	0	26	0	0	55	6	0	0	0	0	61	0	0	57	7	0	0	0	65	
0800-0815	0	1	19	1	0	0	1	22	0	0	40	4	0	0	0	0	44	0	0	27	1	0	0	0	28	
0815-0830	0	0	21	4	0	0	0	25	0	0	38	5	0	0	0	0	43	0	0	32	1	0	0	0	33	
0830-0845	0	0	16	0	1	0	0	17	0	0	54	5	2	0	0	0	61	0	0	32	0	0	0	0	35	
0845-0900	0	0	25	2	0	0	0	27	0	0	54	2	1	0	0	0	57	0	0	37	1	1	0	0	39	
Hourly Total	0	1	81	7	1	0	1	91	0	0	166	16	3	0	0	0	205	0	0	128	3	1	0	0	135	
0900-0915	0	0	31	0	0	0	1	32	2	0	38	2	2	0	0	0	44	0	0	22	2	0	0	0	24	
0915-0930	0	0	13	1	1	0	0	15	0	0	26	3	1	0	0	0	30	0	0	21	3	1	0	0	25	
Hourly Total	0	0	44	1	1	0	1	47	2	0	64	5	3	0	0	0	74	0	0	43	5	1	0	0	49	
Session Total	0	1	147	12	2	0	2	164	2	0	305	27	6	0	0	0	340	0	0	228	15	2	0	0	249	
1500-1515	0	0	3	0	0	0	0	3	0	0	9	0	0	0	0	0	9	0	0	3	0	0	0	0	3	
1515-1530	0	0	32	0	1	0	0	33	0	0	45	5	1	0	0	0	51	0	0	17	2	1	0	0	20	
1530-1545	0	0	34	2	0	0	1	37	0	1	64	3	1	0	0	0	69	0	0	12	1	2	0	0	15	
1545-1600	0	0	40	0	0	0	1	41	0	0	64	1	0	0	0	0	65	0	0	22	2	1	0	0	25	
Hourly Total	0	0	106	2	1	0	2	111	0	1	173	9	2	0	0	0	185	0	0	51	5	4	0	0	60	
1600-1615	0	0	22	2	0	0	0	24	0	0	58	10	1	0	0	0	69	0	0	26	5	1	0	0	33	
1615-1630	0	0	16	4	0	0	0	20	0	0	44	7	1	0	0	0	52	0	0	17	4	0	0	0	22	
1630-1645	0	0	20	2	0	0	0	22	0	0	44	5	1	0	0	0	50	0	0	18	1	0	0	0	20	
1645-1700	0	0	29	7	0	0	0	36	0	0	41	1	1	0	0	0	43	0	0	21	0	0	0	0	22	
Hourly Total	0	0	87	15	0	0	0	102	0	0	187	23	4	0	0	0	214	0	0	82	10	1	0	0	97	
1700-1715	0	0	17	2	0	0	0	19	0	0	43	5	0	0	0	0	54	0	0	16	2	0	0	0	20	
1715-1730	0	0	27	2	0	0	0	29	0	0	52	3	1	0	0	0	56	0	0	22	1	0	0	0	23	
1730-1745	0	0	28	5	0	0	0	33	0	0	54	4	0	0	0	0	58	0	0	29	1	0	0	0	31	
1745-1800	0	0	19	1	0	0	0	20	0	0	42	4	0	0	0	0	46	0	0	25	2	0	0	0	27	
Hourly Total	0	0	91	10	0	0	0	101	0	0	197	16	1	0	0	0	214	0	0	94	6	0	0	0	101	
1800-1815	0	0	28	3	0	0	0	29	0	0	53	6	0	0	0	0	59	0	0	18	0	0	0	0	19	
1815-1830	1	0	16	1	0	0	0	18	0	0	36	1	0	0	0	0	37	0	0	15	0	0	0	0	15	
Hourly Total	1	0	42	4	0	0	0	47	0	0	89	7	0	0	0	0	96	0	0	33	0	0	0	0	34	
Session Total	1	0	326	31	1	0	2	361	0	1	646	55	7	0	0	0	709	0	0	260	21	5	0	0	292	

A537 East/Broken Cross/Chester Road

Macclesfield - Manual Traffic Survey, Wednesday 13th September 2017

Produced by Road Data Services Ltd

Junction: Fallibroome Road / A537 / Broken Cross																										
Approach: A537 (East)																										
TIME	Left to Broken Cross								W/B to A537 (West)								Right to Fallibroome Road									
	PI	CY	MI	CAR	LG	OG	OG	BUS	TOTAL	PI	CY	MI	CAR	LG	OG	OG	BUS	TOTAL	PI	CY	MI	CAR	LG	OG	OG	BUS
0730-0745	0	1	18	4	1	0	0	24	0	1	92	16	6	5	2	122	0	0	15	1	0	0	0	0	16	
0745-0800	0	0	18	9	1	0	0	28	0	0	144	13	6	3	0	166	0	0	18	3	2	0	0	0	23	
Hourly Total	0	1	36	13	2	0	0	52	0	1	236	29	12	8	2	288	0	0	33	4	2	0	0	0	39	
0800-0815	0	0	22	2	1	0	0	25	0	0	107	11	5	4	0	127	0	1	34	4	0	0	0	0	39	
0815-0830	0	0	3	4	0	0	0	7	0	1	36	8	0	5	1	49	0	0	47	4	0	0	0	0	51	
0830-0845	0	0	12	5	0	0	0	17	0	0	89	8	5	4	0	106	0	0	50	3	0	0	0	0	54	
0845-0900	0	0	13	3	1	0	0	17	0	1	125	20	6	7	0	159	0	0	22	5	0	1	0	0	28	
Hourly Total	0	0	56	14	2	0	0	72	0	2	419	47	16	20	1	505	0	1	153	16	0	1	1	1	172	
0900-0915	0	0	14	6	0	0	0	20	1	0	33	17	5	6	2	124	0	0	21	2	0	0	0	0	23	
0915-0930	2	0	15	1	0	0	0	18	1	1	52	11	8	5	0	78	0	0	22	0	0	0	0	0	23	
Hourly Total	2	0	29	7	0	0	0	38	2	1	145	28	13	11	2	202	0	0	43	2	0	0	0	0	46	
Session Total	2	1	121	34	4	0	0	162	2	4	800	104	41	39	5	995	0	1	229	22	2	1	2	2	257	
1500-1515	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	
1515-1530	0	0	27	1	0	0	0	28	0	0	74	15	7	5	0	102	0	0	28	5	0	0	0	0	33	
1530-1545	0	0	30	8	0	0	0	38	0	0	74	18	7	5	2	106	0	0	26	1	1	0	0	0	28	
1545-1600	0	0	29	3	0	0	0	32	1	1	59	24	3	2	1	131	0	0	15	3	0	0	0	0	18	
Hourly Total	0	0	86	12	0	0	0	98	1	2	247	57	17	12	3	333	0	0	69	9	1	0	0	0	79	
1600-1615	0	0	41	3	1	0	0	45	0	0	83	12	2	3	1	101	0	0	23	4	0	0	0	0	27	
1615-1630	0	0	41	1	0	0	0	42	0	1	111	12	1	4	1	130	0	0	19	3	0	0	0	0	22	
1630-1645	0	0	33	5	0	0	0	38	0	1	88	13	4	3	1	110	0	0	22	0	0	0	0	0	22	
1645-1700	0	0	46	7	0	0	0	53	0	0	96	12	2	0	1	111	0	0	25	0	0	0	0	0	25	
Hourly Total	0	0	161	16	1	0	0	178	0	2	378	49	9	10	4	452	0	0	89	7	0	0	0	0	96	
1700-1715	0	0	32	1	0	0	0	33	0	0	36	11	2	2	1	114	0	0	19	2	0	0	0	0	21	
1715-1730	0	0	40	2	0	0	0	42	0	1	108	9	4	2	0	124	0	0	17	1	1	0	0	0	18	
1730-1745	1	0	36	5	0	0	0	42	0	2	113	14	1	2	2	134	0	1	23	3	0	0	0	0	27	
1745-1800	0	0	39	2	0	0	0	41	0	0	120	4	2	1	1	128	0	1	23	3	0	0	0	0	27	
Hourly Total	1	0	147	10	0	0	0	158	0	3	439	38	9	7	4	500	0	2	82	9	0	0	0	0	93	
1800-1815	0	1	32	1	0	0	0	34	0	0	77	4	1	2	0	84	0	1	22	3	0	0	0	0	26	
1815-1830	0	0	38	5	1	0	0	44	0	0	76	5	0	1	1	83	0	0	23	3	0	0	0	0	26	
Hourly Total	0	1	70	6	1	0	0	78	0	0	153	9	1	3	1	167	0	1	45	6	0	0	0	0	52	
Session Total	1	1	464	44	2	0	0	512	1	7	1217	153	36	32	12	1458	0	3	285	31	1	0	0	0	320	

Gawsworth Road (note that the labelling of "Approach: Broken Cross" is misleading, this is Gawsworth Rd as can be seen by the exits)

Macclesfield - Manual Traffic Survey, Wednesday 13th September 2017

Produced by Road Data Services Ltd

Junction: Fallibroome Road / A537 / Broken Cross

Approach: Broken Cross

TIME	Left to A537 (West)								NB to Fallibroome Road								Right to A537 (East)							
	PICYCLE	MICYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PICYCLE	MICYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PICYCLE	MICYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0730 - 0745	0	0	42	3	1	0	0	46	0	0	52	5	2	0	0	59	0	0	28	3	1	0	0	32
0745 - 0800	0	0	26	7	1	0	0	35	0	0	47	3	2	0	0	52	0	0	22	7	0	0	0	29
Hourly Total	0	0	68	10	2	0	1	81	0	0	99	8	4	0	0	111	0	0	50	10	1	0	0	61
0800 - 0815	0	0	32	5	1	1	0	39	0	0	2	66	7	1	0	76	0	0	21	3	0	0	0	24
0815 - 0830	0	1	30	3	1	0	0	35	0	0	70	5	0	1	0	76	1	0	20	1	0	0	0	22
0830 - 0845	0	0	28	7	0	1	0	36	0	0	63	6	0	0	69	0	1	8	3	3	0	0	15	
0845 - 0900	0	0	35	4	0	0	0	39	0	0	48	2	1	1	0	52	0	0	21	2	0	0	0	23
Hourly Total	0	1	125	19	2	2	0	149	0	2	247	20	2	2	0	273	1	1	70	9	3	0	0	84
0900 - 0915	2	0	46	5	1	1	0	55	0	0	67	3	0	0	0	76	0	0	27	3	0	0	0	30
0915 - 0930	0	0	24	1	2	0	0	27	0	1	45	3	0	0	0	49	0	0	19	3	1	0	0	23
Hourly Total	2	0	70	6	3	1	0	82	0	1	112	12	0	0	0	125	0	0	46	6	1	0	0	53
Session Total	2	1	263	35	7	3	1	312	0	3	458	40	6	2	0	509	1	1	166	25	5	0	0	198
1500 - 1515	0	0	24	2	2	0	0	28	0	0	50	3	1	0	0	54	0	0	13	5	0	1	0	19
1515 - 1530	0	0	24	4	0	0	0	31	0	0	54	4	0	0	0	58	0	0	20	0	0	0	0	20
1530 - 1545	0	0	24	4	5	0	0	29	0	0	31	9	1	0	0	41	0	0	14	3	0	0	0	17
Hourly Total	0	0	72	11	5	0	0	88	0	0	135	16	2	0	0	153	0	0	47	8	0	1	0	56
1600 - 1615	0	0	15	5	0	0	0	20	0	0	43	5	1	0	0	49	0	0	19	2	0	0	0	21
1615 - 1630	0	0	21	3	0	0	0	24	0	0	26	5	0	0	0	31	0	0	19	2	0	0	0	21
1630 - 1645	0	0	30	6	0	0	0	36	0	0	44	7	0	0	0	51	0	0	15	2	0	0	0	17
1645 - 1700	0	0	20	1	0	0	0	21	0	0	40	2	0	0	0	42	0	0	31	3	1	0	0	35
Hourly Total	0	0	86	15	0	0	0	101	0	0	153	19	1	0	0	173	0	0	84	9	1	0	0	94
1700 - 1715	0	1	27	4	0	0	0	32	0	0	47	3	0	0	0	50	0	0	23	1	0	1	0	25
1715 - 1730	0	0	35	3	0	0	0	38	0	0	67	4	0	0	0	71	0	0	22	1	0	0	0	23
1730 - 1745	0	0	23	7	0	0	0	30	0	0	58	6	0	0	0	64	0	0	22	1	0	0	0	23
1745 - 1800	0	0	33	2	0	0	0	35	0	1	53	2	0	0	0	56	0	0	30	3	0	0	0	33
Hourly Total	0	1	116	16	0	0	0	135	0	1	225	15	0	0	0	241	0	0	97	6	0	1	0	104
1800 - 1815	0	0	34	1	0	0	0	35	1	1	43	5	0	0	0	56	0	0	20	1	0	0	0	21
1815 - 1830	0	0	34	1	0	0	0	35	0	0	36	4	1	0	1	42	0	0	25	3	0	0	0	28
Hourly Total	0	0	68	4	1	0	0	73	1	1	85	9	1	0	1	98	0	0	45	4	0	0	0	49
Session Total	0	1	344	46	6	0	0	397	1	2	598	59	4	0	1	665	0	0	273	27	1	2	0	303

A537 West/Chelford Road

Macclesfield - Manual Traffic Survey, Wednesday 13th September 2017

Produced by Road Data Services Ltd

Junction: Fallibroome Road / A537 / Broken Cross

Approach: A537 (West)

TIME	Left to Fallibroome Road								E/B to A537 (East)								Right to Broken Cross							
	PICYCLE	MICYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PICYCLE	MICYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PICYCLE	MICYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0730 - 0745	0	0	23	1	1	0	0	25	0	0	83	12	3	5	1	110	0	0	15	6	1	0	0	22
0745 - 0800	0	0	47	5	1	0	2	55	1	0	93	17	7	5	0	123	0	0	19	5	0	0	0	24
Hourly Total	0	0	70	6	2	0	2	80	1	0	182	29	10	10	1	233	0	0	34	11	1	0	0	46
0800 - 0815	0	0	22	1	0	0	0	23	0	2	81	8	3	8	1	109	0	0	16	5	2	1	0	24
0815 - 0830	0	0	25	1	1	0	0	27	0	0	74	10	3	6	2	95	0	0	27	6	1	0	0	34
0830 - 0845	0	0	28	2	3	0	0	33	0	1	85	10	5	3	3	97	0	0	28	7	1	0	0	36
0845 - 0900	0	0	25	2	2	0	1	30	0	0	87	13	7	2	0	109	0	0	14	1	0	0	0	15
Hourly Total	0	0	100	6	6	0	1	113	0	3	307	41	24	19	6	400	0	0	85	19	4	1	0	109
0900 - 0915	0	0	22	4	1	1	0	28	0	0	73	10	5	4	0	92	0	0	23	5	0	0	0	28
0915 - 0930	0	0	29	3	1	0	2	35	0	0	39	9	4	4	0	56	0	0	24	7	2	0	0	33
Hourly Total	0	0	51	7	2	1	2	63	0	0	112	19	9	8	0	148	0	0	47	12	2	0	0	61
Session Total	0	0	221	19	10	1	5	256	1	3	601	89	43	37	7	781	0	0	166	42	7	1	0	216
1500 - 1515	0	0	16	1	1	0	0	19	0	0	71	13	0	1	1	86	0	0	25	5	1	1	0	32
1515 - 1530	0	0	16	1	1	0	1	19	0	0	86	13	4	4	0	107	0	0	33	7	0	0	0	40
1530 - 1545	0	0	19	1	1	0	0	21	0	0	79	16	5	0	0	100	0	1	31	3	1	0	0	36
Hourly Total	0	0	51	3	3	0	2	59	0	0	236	42	9	5	1	293	0	1	89	15	2	1	0	106
1600 - 1615	0	0	10	2	0	0	2	14	0	0	81	12	4	2	0	103	0	0	38	8	1	0	0	47
1615 - 1630	0	0	19	1	0	0	0	20	0	0	93	10	1	6	0	110	0	0	28	9	1	0	0	38
1630 - 1645	0	0	15	0	0	0	0	15	0	0	99	16	3	8	1	127	0	0	25	4	1	0	0	30
1645 - 1700	0	0	21	0	0	0	2	23	1	1	96	16	4	0	0	120	0	0	43	6	0	0	0	49
Hourly Total	0	0	65	3	0	0	4	72	1	1	371	54	12	18	3	460	0	0	134	27	3	0	0	164
1700 - 1715	0	0	16	2	0	0	0	18	0	0	124	13	3	2	1	143	1	0	49	9	0	0	0	59
1715 - 1730	0	0	19	1	0	0	1	21	1	0	99	15	1	3	1	120	0	0	43	7	1	0	0	51
1730 - 1745	0	1	30	1	0	0	0	32	0	1	108	16	1	3	0	129	0	0	41	6	0	0	0	47
1745 - 1800	0	0	28	1	1	0	0	30	0	0	108	12	0	0	0	120	0	0	37	5	1	0	0	43
Hourly Total	0	1	93	5																				

Overall Flows, 0730-0930

Macclesfield - Manual Traffic Survey, Wednesday 13th September 2017

Produced by Road Data Services Ltd

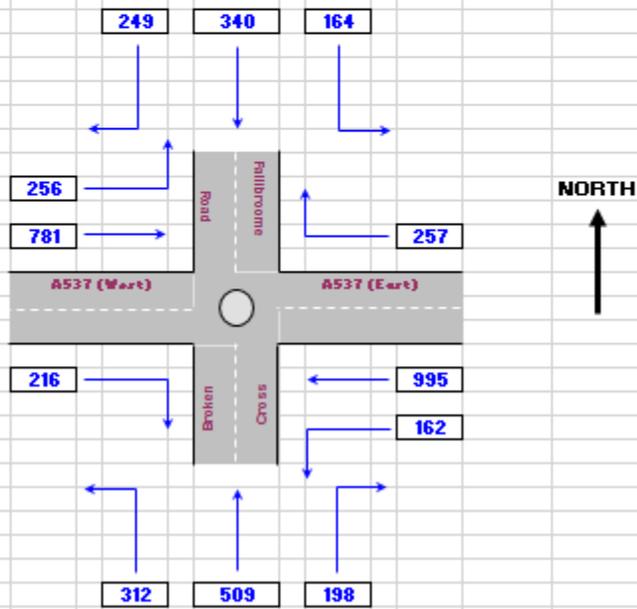
Location: **Fallibroome Road / A537 / Broken Cross**

Vehicle Class: ALL CLASSES

Start Time: 11 0730

End Time: 11 0930

Peak Hour



Queue Results

Morning

TIME	Fallibroome Road		A537 West		Broken Cross		A537 East		TIME
	Stationary Queue	Slow Moving Traffic							
07:30	4	5	15		5		7		07:30
07:35	2	2	16	20	12	17	7		07:35
07:40	6	7	16	18	16	18	4		07:40
07:45	7	9	3	26	10		14	48	07:45
07:50	10	11	20	30	12	16	12	50	07:50
07:55	12	14	23	31	13	18	18	42	07:55
08:00	4	6	26		23		12		08:00
08:05	6	8	15		30		15		08:05
08:10	5	7	30	32	35 +		14	48	08:10
08:15	7	11	22	46	35 +		10		08:15
08:20	6	10	26	69	35 +		18	53	08:20
08:25	6	6	36	81	35 +		22	53	08:25
08:30	5	6	41	94	35 +		23	63	08:30
08:35	8	9	43	101	35 +		14	68	08:35
08:40	6	9	45	79	35 +		25	77	08:40
08:45	20		26	88	35 +		15	96	08:45
08:50	8	15	11	23	35 +		17	87	08:50
08:55	28		15		35 +		8	31	08:55
09:00	40 +		14	20	35 +		4		09:00
09:05	6	7	9	18	24		12		09:05
09:10	11	11	8		21		13	20	09:10
09:15	9	12	26	33	20		4	65	09:15
09:20	5	6	26	56	8		11	53	09:20
09:25	12	14	28	78	3	5	2	75	09:25
AVE	8.04	7.71	22.50	39.29	8.21	3.08	12.54	38.71	AVE

Afternoon

TIME	Fallibroome Road		A537 West		Broken Cross		A537 East		TIME
	Stationary Queue	Slow Moving Traffic							
15:15	4		5	6	6	7	6		15:15
15:20	10		18		4	5	6	8	15:20
15:25	26	29	9	11	3		11	24	15:25
15:30	6	8	12		6	9	11		15:30
15:35	5	6	11		10	12	13	30	15:35
15:40	40+		16	21	7		20	43	15:40
15:45	40+		14		6		22	48	15:45
15:50	40+		6		3	4	26	60	15:50
15:55	32	34	10	14	6	8	31	63	15:55
16:00	17	20	14	18	6	7	22	43	16:00
16:05	30	33	14	20	3	4	31	54	16:05
16:10	18	22	16	22	4	7	24	69	16:10
16:15	17		18	20	3	5	25	71	16:15
16:20	8	11	11	14	3		26	52	16:20
16:25	7	8	20		3	4	23	53	16:25
16:30	5	8	14	22	4		12	28	16:30
16:35	24		15	26	4	6	14		16:35
16:40	26		13	16	8	10	16	45	16:40
16:45	15	33	24	30	4		16	47	16:45
16:50	24	28	30	35	10	12	18	26	16:50
16:55	40+		21	35	4	6	16	28	16:55
17:00	40+		13	30	5		6	22	17:00
17:05	40+		25	68	4	6	10		17:05
17:10	40+		20	24	5	6	9		17:10
17:15	40+		22	30	10	15	26	47	17:15
17:20	40+		31	36	6	8	30	54	17:20
17:25	40+		27	35	4	6	23	45	17:25
17:30	35		15	28	11	12	21	48	17:30
17:35	29		24	69	17	19	23	45	17:35
17:40	16	19	9	69	12	14	24	49	17:40
17:45	9	14	32	80	13	15	22	33	17:45
17:50	7	10	26	76	12	15	13		17:50
17:55	11	15	18	60	7	9	6		17:55
18:00	9	14	28	67	6		19	29	18:00
18:05	7	13	25	68	6		4		18:05
18:10	6	7	17		10	13	5		18:10
18:15	3	4	7		4	6	8	11	18:15
18:20	6	10	14	16	8		6		18:20
18:25	5	8	25	28	4		6	8	18:25
AVE	11.58	9.83	19.14	30.39	6.97	6.94	18.06	32.86	AVE