

The Whaddon Speeding Story – 2016 Update

The most consistent complaint heard among villagers has over many years been the speed of vehicles travelling through the village — in fact it is part of Whaddon lore... Some brief history: back in early 2009 a group of volunteers formed one of the first Community Speedwatch teams in Cambridgeshire. Trained and operating under the aegis of the police, Whaddon, sharing a speedwatch kit with an increasing number of local villages, still monitors traffic through the village. Details of vehicles exceeding the speed limit are reported to the police, resulting in letters to vehicle owners. But we are only able to do so some half a dozen times a month when we have access to the kit and then only for an hour or so at a time. Nonetheless, the data we acquired combined with the government's 'localism' agenda, allowed us to build a case to have the speed limit throughout Whaddon reduced in 2012 from 40 to 30mph.

But the complaints about speeding, admittedly less numerous, still came in leaving no doubt that what we really needed was an extended and continuous period of traffic monitoring. The opportunity came to achieve this when, earlier this year, we were invited, at an advantageous cost, to join the A10 Corridor Survey.

How we did it



Fig. 1 Map of Whaddon showing locations of ATCs (Automatic Traffic Counters)

Three recorders (wires across the road), known as ATCs (Automatic Traffic Counters), were set up for us by Road Data Services at Whaddon Gap adjacent to the village sign, by College Farm in Church Street and on Meldreth Road (see fig). After a few initial location problems, the recorders operated over 24 hours for a week from Thursday 19 May to Wednesday 25 May. They recorded within hourly time zones the speed and category of each vehicle, ranging from cars to HGVs as well as the numbers of vehicles.

The data was returned to us in a form that still needed a lot of post-processing to make a sensible and understandable analysis possible. A limitation at the outset was that data was grouped in hourly bands, and thus a reading in the 10:00 time bracket could range from 10:00 to 10:59. With data recorded continuously at these three locations in both an easterly and westerly directions over for a week, we were given no fewer than 35,023 entries.

Fortunately, that did not mean over 35,000 vehicle movements in Whaddon in one week! As the devices do not identify the individual vehicle they are recording, a vehicle entering the village at Meldreth Road, driving through, and leaving at Whaddon Gap is listed 3 times. If entering at one end and not leaving then it is either a resident or visitor and will appear once or twice. We can be reasonably certain, however, that there were over 11,000 vehicle movements in the week.

Snapshots of the data

To present a report to the village that was reasonably understandable and possibly even interesting, we have simplified the data as follows: weekdays have been grouped together as one and averaged, but Saturday and Sunday have been listed separately. This is because the broad pattern for weekdays is much the same but there are significant differences over the weekend. A selection of tables and graphs are given to illustrate the data.

Overview of number of vehicles and speeds

Overview of data for each site with numbers of vehicles and speed averages (mph)				
Meldreth Road, eastbound	Total vehicles	Average speed	Maximum speed	Minimum speed
Average weekday	915	30.26	60	7
Saturday	580	30.98	61	7
Sunday	484	30.91	56	6
Meldreth Road, westbound	Total vehicles	Average speed	Maximum speed	Minimum speed
Average weekday	846	30.07	68	6
Saturday	589	30.32	53	6
Sunday	483	30.50	58	7
Whaddon Gap, eastbound	Total vehicles	Average speed	Maximum speed	Minimum speed
Average weekday	1090	27.71	48	7
Saturday	738	28.00	43	12
Sunday	558	28.34	40	12
Whaddon Gap, westbound	Total vehicles	Average speed	Maximum speed	Minimum speed
Average weekday	1059	26.87	60	9
Saturday	593	27.16	39	11
Sunday	214	26.86	39	10
College Farm, eastbound	Total vehicles	Average speed	Maximum speed	Minimum speed
Average weekday	940	27.92	50	6
Saturday	584	28.13	43	11
Sunday	504	27.85	42	6
College Farm, westbound	Total vehicles	Average speed	Maximum speed	Minimum speed
Average weekday	871	27.61	47	6
Saturday	601	27.69	47	6
Sunday	495	27.49	49	6

Fig. 2 Overview of data for each site with vehicle numbers

Overview by speed bands

We have placed speeds into four groups; these may be characterised as within the limit accepted by the police ($30+10\%+2 = 35\text{mph}$), a band just over the limit (36–40mph), more seriously over (41–50mph) and off the scale (51mph+)

Overview of data for each site with numbers of vehicles in speed bands (mph)

Meldreth Road, eastbound	<=35	36-40	41-50	51+	Total vehicles
Average weekday	774 84.5%	104 11.3%	36 3.9%	2 0.2%	915
Saturday	463 79.8%	78 13.4%	36 6.2%	3 0.5%	580
Sunday	368 76.0%	87 18.0%	26 5.4%	3 0.6%	484
Meldreth Road, westbound	<=35	36-40	41-50	51+	Total vehicles
Average weekday	713 84.3%	95 11.2%	36 4.2%	3 0.3%	846
Saturday	494 83.9%	59 10.0%	33 5.6%	3 0.5%	589
Sunday	391 81.0%	55 11.4%	34 7.0%	3 0.6%	483
Whaddon Gap, eastbound	<=35	36-40	41-50	51+	Total vehicles
Average weekday	1,068 98.0%	21 1.9%	1 0.1%	0 0.0%	1,090
Saturday	718 97.3%	19 2.6%	1 0.1%	0 0.0%	738
Sunday	549 98.4%	9 1.6%	0 0.0%	0 0.0%	558
Whaddon Gap, westbound	<=35	36-40	41-50	51+	Total vehicles
Average weekday	1,016 96.0%	24 2.2%	17 1.6%	2 0.2%	1,059
Saturday	587 99.0%	6 1.0%	0 0.0%	0 0.0%	593
Sunday	211 98.6%	3 1.4%	0 0.0%	0 0.0%	214
College Farm, eastbound	<=35	36-40	41-50	51+	Total vehicles
Average weekday	910 96.8%	28 3.0%	2 0.3%	0 0.0%	940
Saturday	561 96.1%	21 3.6%	2 0.3%	0 0.0%	584
Sunday	483 95.8%	19 3.8%	2 0.4%	0 0.0%	504
College Farm, westbound	<=35	36-40	41-50	51+	Total vehicles
Average weekday	858 98.6%	10 1.2%	2 0.2%	0 0.0%	871
Saturday	594 98.8%	5 0.8%	2 0.3%	0 0.0%	601
Sunday	483 97.6%	10 2.0%	2 0.4%	0 0.0%	495

Fig. 3 Overview of data for each site with vehicle numbers broken down by speed

Overview by time bands

Four time bands have been chosen to represent the morning and evening peaks, the interval between and the evening/overnight. Remember again that e.g. the 06:00–09:00 time band actually covers from 06:00 to 09:59.

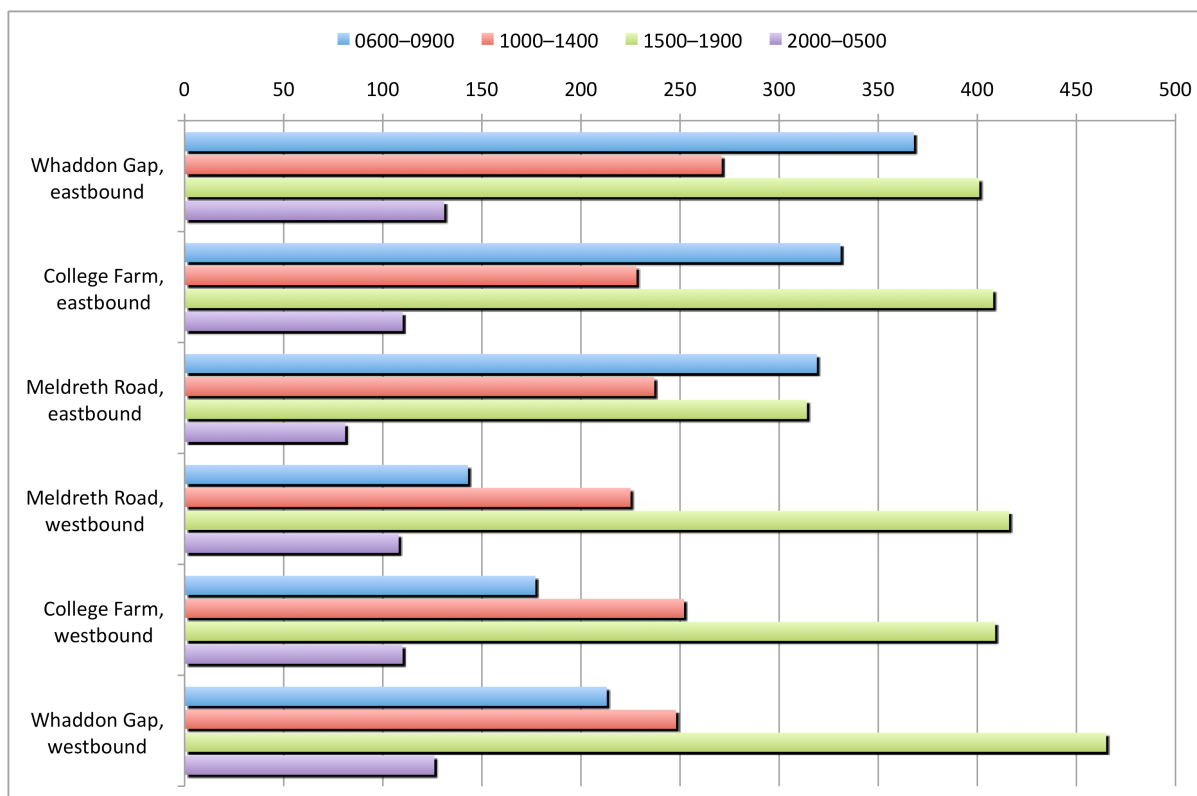
Overview of data for each site with numbers of vehicles by time bands				
Meldreth Road, eastbound	0600–0900	1000–1400	1500–1900	2000–0500
Average weekday	316	227	293	79
Saturday	58	235	209	78
Sunday	29	189	181	85
Meldreth Road, westbound	0600–0900	1000–1400	1500–1900	2000–0500
Average weekday	143	205	390	108
Saturday	52	238	214	85
Sunday	28	194	187	74
Whaddon Gap, eastbound	0600–0900	1000–1400	1500–1900	2000–0500
Average weekday	315	282	376	116
Saturday	66	307	271	94
Sunday	31	208	222	97
Whaddon Gap, westbound	0600–0900	1000–1400	1500–1900	2000–0500
Average weekday	214	270	457	118
Saturday	67	281	200	45
Sunday	14	101	82	17
College Farm, eastbound	0600–0900	1000–1400	1500–1900	2000–0500
Average weekday	314	230	308	88
Saturday	58	234	220	72
Sunday	30	191	193	90
College Farm, westbound	0600–0900	1000–1400	1500–1900	2000–0500
Average weekday	161	220	382	108
Saturday	52	251	214	84
Sunday	28	203	187	77

Fig. 4 Overview of data for each site with vehicle numbers broken down by time of day

Transit (or not) of vehicles through the village:

One quite interesting analysis looks at the three data points in the village by their direction so you can see for example the number of vehicles that enter at Whaddon Gap compared with those that pass College Farm and exit the village in the Meldreth direction. A large drop-off during the week is evident for vehicles coming from the Whaddon Gap direction, no doubt as a result of the two Bumpkins locations, Bridge Street and the Golf Centre. These sample graphs show this data for Thursday, as a typical weekday, and for Sunday.

Thursday



Sunday

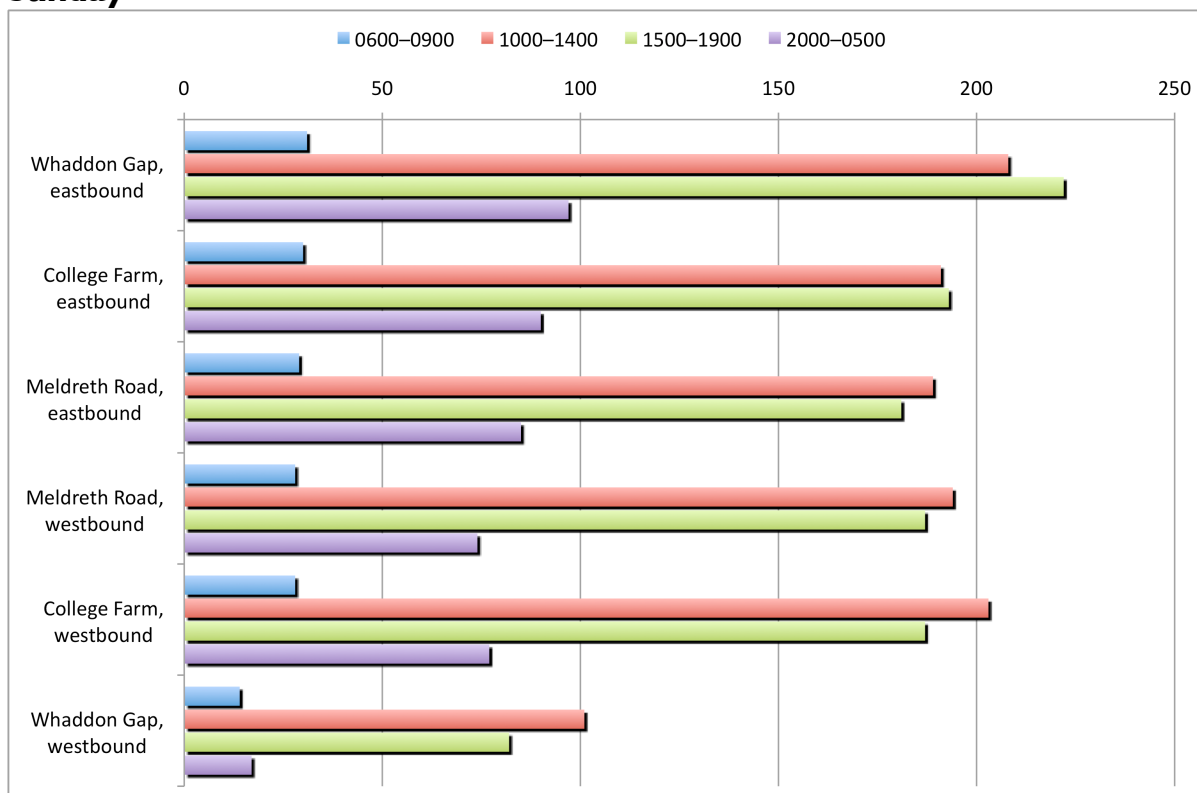


Fig. 5a and 5b Vehicle traffic through Whaddon on Thursday and Sunday

Vehicle Category

Although not shown in the tables here, the data broadly shows: 94–95% cars, 4.5–5.5% vans and similar, 0.35% HGV (1–8 per day).

What the data shows

1. That there are at least 11,000 vehicle movements in the course of a week.
2. That the number of vehicles exceeding 35mph is less than 4% at Whaddon Gap and College Farm, but up to 15% in Meldreth Road during the week, and as much as 24% on Sundays. Clearly the decision to put our first speed reduction measure at the Meldreth end of the village was the right choice. However, the majority of vehicles at all times of the day are within the police guideline limit of 35mph.
3. The number of vehicles travelling significantly above the speed limit (51mph+) barely registers at well under 1%, but is again highest on Meldreth Road.
4. The number of large lorries (HGVs) passing through the village is under 1% of the total vehicle movements.

We believe that these observations should go a long way to reassuring villagers that two of the most commonly heard complaints around the village should be committed to the realms of myth as the data just does not support them: a) that cars are racing through the village and b) that there is a large number of HGVs using the road. That said, there remains a strong case for Speedwatch to continue in the village and further consideration needs to be given to other speed monitoring systems.

A much fuller breakdown of the data, in particular showing all seven days and 24 individual hours, will be found on the Whaddon web site (www.whaddon.org)

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