

Oakley Traffic Information Survey

Sponsored by Bakers Recovery

Report number 6
Survey location - Hill Road
October 2019
Revision number 1



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Copies of this report can be downloaded from Oakley and Deane’s Parish Council website.

<http://www.oakleydeane-pc.gov.uk/community/oakley-deane-parish-council-6507/speed-monitoring/>

Alternatively, e-mail hwp.odpc@gmx.com.



1 Survey methodology

This survey was made using an MSID Counter device, known as OTIS (Oakley Traffic Information Surveyor), mounted on lamp post no 11 (GPS 51° 14.771' N, 001° 10.589' W) in Hill Road, Oakley. The survey was carried out over a three week period from September 22nd to 13th October.



Figure 1: OTIS on lamp post 11 in Hill Road

Hill Road is one of the main routes in the village running roughly north west/south east it connects the southern and south western areas of the village to its centre. It slopes down hill towards the north west with the gradient being steepest where it crosses the railway bridge. Both sides of the road have housing of mixed types and ages. A footway runs the full length of the road on its north side. Sight lines are reasonable in the lower part of the road, poor between The Drive and the railway bridge, and reasonable again above the railway bridge.





Figure 2: looking downhill from the survey point towards the pond



Figure 3: looking uphill from the survey point towards the railway bridge



Many of the older houses do not have garages so have to park vehicles in the road. This is particularly prevalent in the lower north western part of the road

The road forms part of the number 11 bus route which provides an hourly service using single decked buses.

At the time the survey was done, the western end of Hill Road as far as Upper Farm road is being used by construction traffic accessing the Beech Tree Close development

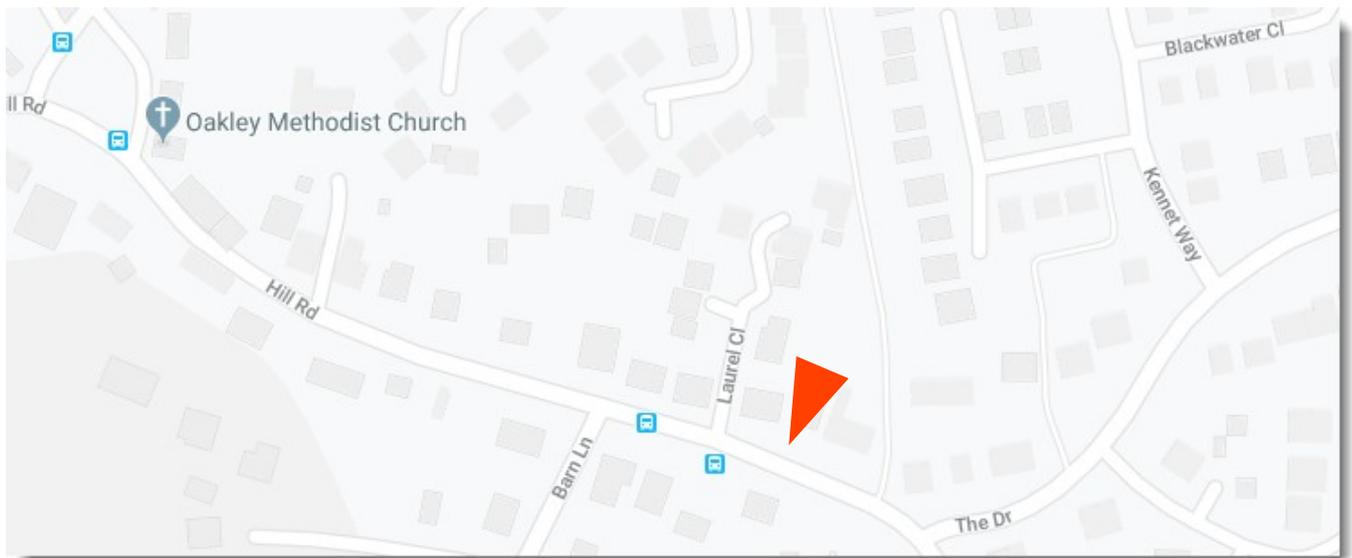


Figure 4: showing OTIS' position



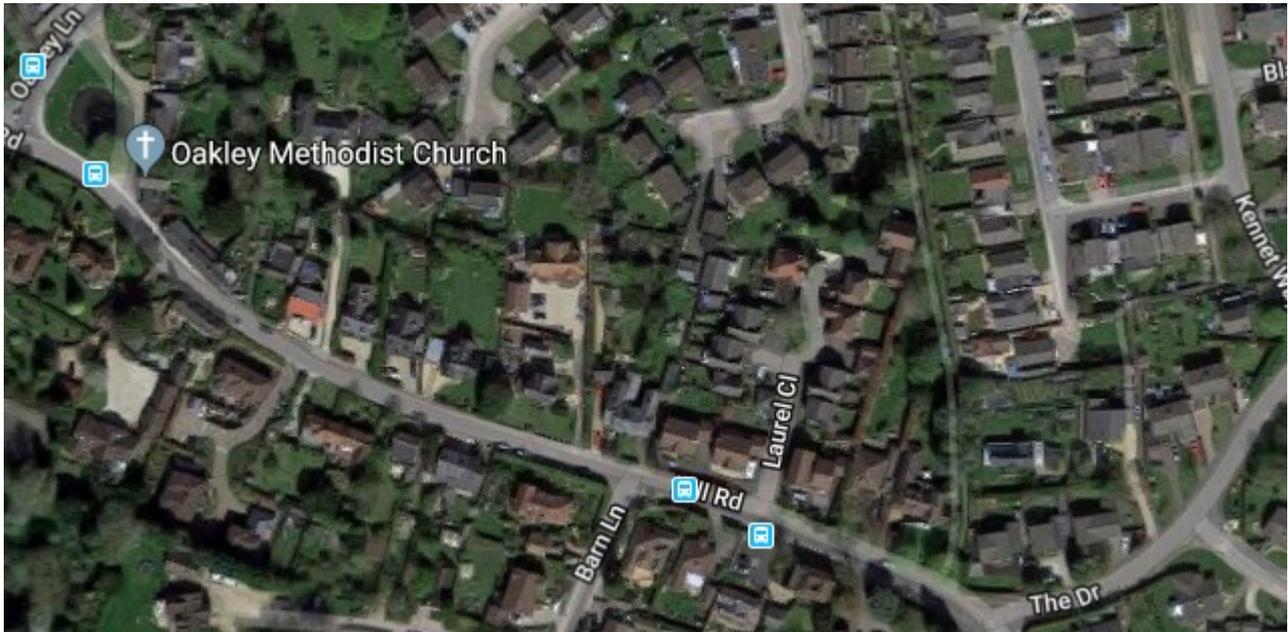


Figure 5: showing a satellite view of OTIS' position

The MSID Counter uses a radar beam to detect and measure the vehicle's speed, length (which is used to determine vehicle type), direction of travel and separation gap between vehicles. A date/time stamp is added to each vehicle record. Every vehicle passing the survey point is recorded.

2 Survey results

2.1 85th percentile data

Data for the 85th percentile has been included in the results because it is on this data that speed limits are frequently set. The 85th percentile speed is what the majority of drivers will drive at and assumes that only 15% of drivers will exceed the speed limit. In Oakley this is clearly not the case.

The 85th percentile speed is based on the assisted clear distance ahead concept (ACDA) which is the distance ahead of the vehicle within which the driver would be able to bring it safely to a halt. It assumes the majority of drivers are reasonable and prudent, do not want to have a crash and wish to reach their destination in the shortest possible time. It also assumes weather and road conditions are good. Therefore, the 85th percentile can be considered as the maximum safe speed for the location where and when the data was collected.



2.2 Summary

The number of vehicles passing the survey point was roughly the same in weeks one and three but week two showed almost double the count as shown in table 1.

The unusually high number of heavy goods vehicles of both types is due to the building work being done in Beech Tree Close. However, the bulk of vehicles is private cars and vans and is typical of traffic monitored in other areas of the village.

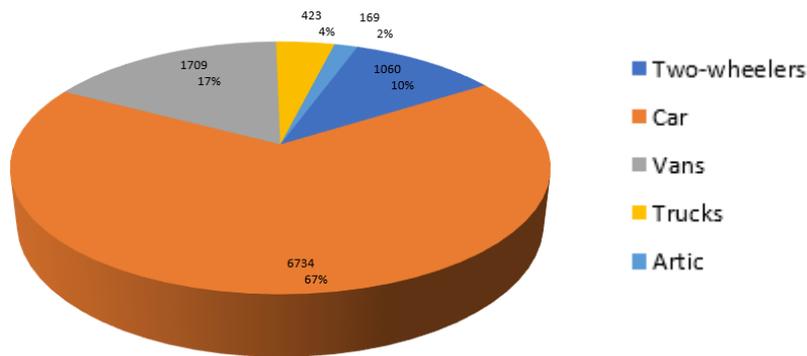


Figure 6: typical vehicle distribution by type

Speeding would appear to be not as big an issue as in other parts of the village with roughly 20% of traffic exceeding the speed limit. Maximum speeds are also slightly lower than other areas of the village.

	Week 1			Week 2			Week 3		
	Count	Max speed mph	85 th percentile	Count	Max speed mph	85 th percentile	Count	Max speed mph	85 th percentile
2 wheelers	877	46	14	1875	46	13	1060	43	17
Cars	6513	55	32	13193	55	32	6734	48	32
Vans	2294	45	32	4647	45	32	1709	42	31
Rigid HGV	511	38	30	1027	42	30	423	40	29
Artic HGV	171	32	25	336	32	24	169	33	24
Total	10366			21078			10095		
% speeding		19.73%			19.62			18.74%	
			Total survey count	41539					

Table 1: summary of vehicle numbers and speeds

In all three weeks the maximum recorded speed was by a car. In weeks one and two, 55 miles an hour and in week three, 48 miles an hour.

A more detailed view of speeding in Hill road can be seen by looking at table 2 where the day has been split into 14 timeslots. The percentage of speeding vehicles and their maximum speed is indicated for each timeslot.



Time	22 nd - 29 th Sept		29 th Sept - 6 th Oct		6 th - 13 th Oct	
	% speeding	Max speed mph	% speeding	Max speed mph	% speeding	Max speed mph
00:00 to 07:00	25.1	43	25.13	43	20.48	40
07:01 to 08:00	24.03	28	21.77	43	20.27	44
08:01 to 09:00	17.52	43	15.51	46	16.61	39
09:01 to 10:00	14.41	43	16.42	43	14.24	40
10:01 to 11:00	13.83	40	15.36	41	13.38	42
11:10 to 12:00	14.68	41	15.64	42	14.98	42
12:01 to 13:00	23.88	41	23.96	46	17.59	44
13:01 to 14:00	18.45	42	20.59	46	20.27	42
14:01 to 15:00	16.19	39	17.6	46	19.79	43
15:01 to 16:00	15.85	43	15.37	43	18.96	39
16:01 to 17:00	22.2	40	20.41	40	21.27	41
17:01 to 18:00	27.5	46	26.61	46	26.82	46
18:01 to 19:00	29.42	44	16.31	42	23.52	43
19:01 to 23:59	20.78	55	22.13	55	17.72	48

Table 2: percentage of speeding vehicles and their maximum speed by timeslot

2.3 Week 1 – 22nd to 29th September

Traffic travelling downhill towards the village pond is shown in table 3 in 5mph blocks.

speed mph	2 wheeler	Car	Van	Rigid HGVS	Artic HGVS	Total
15 or less	366	73	22	17	6	484
16 – 20	8	191	76	37	14	326
21 – 25	23	857	278	66	3	1227
26 – 30	20	1303	403	84	4	1814
31 – 35	6	523	211	25	0	765
36 – 40	4	80	25	4	0	113
41 – 45	0	10	1	0	0	11
46 – 50	0	0	0	0	0	0
Over 50	0	0	0	0	0	0
Total	427	3037	1016	233	27	4740

Table 3: breakdown of vehicle speeds by type travelling towards the pond

Table 4 shows traffic travelling uphill towards the railway bridge, again in 5mph blocks.



speed mph	2 wheeler	Car	Van	Rigid HGV	Artic HGV	Total
15 or less	390	104	36	25	25	580
16 – 20	10	159	67	30	64	330
21 – 25	13	802	334	88	34	1271
26 – 30	23	1614	544	93	16	2290
31 – 35	8	683	243	30	5	969
36 – 40	4	111	45	12	0	172
41 – 45	1	3	9	0	0	13
46 – 50	1	0	0	0	0	1
Over 50	0	1	0	0	0	1
Total	450	3477	1278	278	144	5627

Table 4: breakdown of vehicle speeds by type travelling uphill

The tables show that most speeding is in the range of 31 to 35mph closely followed by 36 to 40mph which is consistent with other OTIS surveys in the village.

2.4 Week 2 – 29th September to 6th October

Traffic travelling downhill towards the village pond is shown in table 5 in 5mph blocks.

speed mph	2 wheeler	Car	Van	Rigid HGV	Artic HGV	Total
15 or less	776	141	49	35	13	1014
16 – 20	16	387	146	67	37	653
21 – 25	34	1732	506	115	9	2396
26 – 30	40	2862	827	151	5	3885
31 – 35	16	1122	378	48	0	1564
36 – 40	7	172	52	7	0	238
41 – 45	0	16	5	0	0	21
46 – 50	0	0	0	0	0	0
Over 50	0	0	0	0	0	0
Total	889	6432	1963	423	64	9771

Table 5: breakdown of vehicle speeds by type travelling towards the pond

Table 6 shows traffic travelling uphill towards the railway bridge, again in 5mph blocks.



speed mph	2 wheeler	Car	Van	Rigid HGV	Artic HGV	Total
15 or less	856	226	76	48	43	1249
16 – 20	18	362	166	73	125	744
21 – 25	28	1602	687	167	70	2554
26 – 30	48	2990	1163	220	27	4448
31 – 35	24	1341	503	74	7	1949
36 – 40	9	226	78	21	0	334
41 – 45	1	10	11	1	0	23
46 – 50	2	3	0	0	0	5
Over 50	0	1	0	0	0	1
Total	986	6761	2684	604	272	11307

Table 6: breakdown of vehicle speed by type travelling uphill

The tables show that most speeding is in the range of 31 to 35mph closely followed by 36 to 40mph which is consistent with week one.

2.5 Week 3 – 6th to 13th October

Table 7 shows traffic travelling downhill towards the pond in 5mph blocks.

speed mph	2 wheeler	Car	Van	Rigid HGV	Artic HGV	Total
15 or less	477	121	47	23	23	691
16 – 20	7	195	90	33	68	393
21 – 25	24	818	286	76	36	1240
26 – 30	39	1439	453	92	12	2035
31 – 35	19	627	175	22	2	845
36 – 40	7	121	30	2	0	160
41 – 45	2	11	2	0	0	15
46 – 50	0	2	0	0	0	2
Over 50	0	0	0	0	0	0
Total	575	3334	1083	248	141	5381

Table 7: breakdown of vehicle speed by type travelling towards the pond

Table 8 shows traffic travelling uphill in 5mph blocks.



speed mph	2 wheeler	Car	Van	Rigid HGV	Artic HGV	Total
15 or less	414	70	27	24	9	544
16 – 20	8	230	51	25	7	321
21 – 25	15	941	181	56	11	1204
26 – 30	30	1431	263	50	1	1775
31 – 35	15	628	87	14	0	744
36 – 40	3	91	15	6	0	115
41 – 45	0	9	2	0	0	11
46 – 50	0	0	0	0	0	0
Over 50	0	0	0	0	0	0
Total	485	3400	626	175	28	4714

Table 8: breakdown of vehicle speed by type travelling uphill

3 Conclusions and recommendations

Maintaining a speed limit is not just important because it improves safety, it also has a significant impact on pollution and fuel consumption. Carbon emissions from exhaust gases, dust from brake pads and tyre wear all contribute to atmospheric and rainwater run-off pollution. Driving at the speed limit also reduces fuel consumption which can reduce the cost of motoring considerably.

An education programme is needed to raise drivers' awareness of the effects of speeding and the Highways Working party needs to explore ways of doing this. Purchase of a speed indication device that can be mounted on a lamppost at speeding hotspots to tell drivers their speed would make a good first step.

4 Comments and suggestions

Your comments on this report are very welcome as are any suggestions you may have for improving Oakley's traffic management. Please send them to hwp.odpc@gmx.com.

5 Acknowledgements

Figures 4 and 5 are derived from Google Maps

Thanks to Bakers Recovery of Oakley for sponsoring Oakley's traffic surveys.

6 MSID Counter set up parameters

Default setting parameters for the MSID Counter are as follows:



Mounting height – lower edge of the MSID Counter device is approximately 2.25m from ground level.

Distance from near kerb – approximately 1m

Measurement parameters (manufacturer's default):

	Bicycle/motor cycle	Car	Large van	Rigid HGV/bus	Artic HGV
Physical length	<2.5m	<5.2m	<9m	<12m	>12m
Measurement length on-coming traffic					
	<250	<450	<650	<870	>870
Measurement length departing traffic					
	<290	<500	<750	<850	>850

Table 9: set up parameters used in OTIS

7 Laser measuring device

Model Tracklife MLR01 serial number K024-UKAKKOB167547-FBA40

8 Data sources

The following files were used to provide data for this report:

- Week 1 – 22nd to 29th September -vx290919.039 and vc290919.040
- Week 2 – 29th September to 6th October – vc061019.043 and vc061019.044
- Week 3 – 6th to 13th October – vc131019.045 and vc131019.046

Data was extracted from the files using the app Viagraph 5 supplied by Via Traffic Controlling, the manufacturer of the M-SID device.

9 Revision history

Date	Revision no	Detail	Author
7/11/2019	1	Initial draft	Stephen Harding



