

# Oakley Traffic Information Survey

Sponsored by Bakers Recovery

Report number 9  
Survey location - Pack Lane (east)  
March 2020  
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](mailto: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 84 (GPS 51° 15.179' N, 001° 8.438' W) in Pack Lane near the junction of Pack Lane and Buckskin Lane (Fiveways). The chosen lamp post is where Kite Hill joins Pack Lane. This location was chosen because there are no substantial mounting positions nearer Oakley.



Figure 1: OTIS mounted on the lamp post at the junction of Kite Hill and Pack Lane

The purpose of this survey was to establish the volume of traffic leaving Oakley helping to give an overall picture of traffic in and around Oakley. Previous surveys have been more concerned with speeding rather than traffic volumes, but to maintain compatibility with previous studies, speeding data has been analysed as well.





Pack Lane is one of the main routes into Basingstoke from the west serving the southern side of the town. It is part of an ancient routeway, hence the name.



*Figure 2: showing the location of the survey point*

The survey point is just inside the 30mph limit so it was anticipated traffic travelling towards Basingstoke (travelling east) would be likely to be above the speed limit but not by a significant amount because the Fiveways Traffic signals are clearly visible from this point. However, traffic approaching the lights, seeing them at green and the road ahead clear, might be tempted to speed up to try and “beat” the lights before they change.



*Figure 3: looking east towards the clearly visible traffic lights at Fiveways*



Traffic travelling west towards Oakley may be tempted to increase speed as it clears the 30mph limit and can see the road ahead clear.



*Figure 4: looking west with the end of the 30mph limit clearly visible*

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 85<sup>th</sup> percentile data

Data for the 85<sup>th</sup> percentile has been included in the results because it is on this data that speed limits are frequently set. The 85<sup>th</sup> 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 85<sup>th</sup> 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 85<sup>th</sup> percentile can be considered as the maximum safe speed for the location where and when the data was collected.

## 2.2 Summary

It was anticipated the majority of the traffic would be cars and light vans, but a surprisingly high number of heavy goods vehicle was recorded. On further investigation it was discovered that rail engineering was taking place being done at weekends. Access to the railway is via a gate on the west side of Battledown Bridge. It was also apparent that a significant number of heavy goods vehicles are using Pack Lane as a short cut to the building development sites in Oakley.

The number of vehicles passing the survey point was roughly the same each week with a total of 87,456 vehicles being recorded in the three weeks as shown in table 1.

	Week 1			Week 2			Week 3		
	Count	Max speed mph	85th Percentile	Count	Max speed mph	85th Percentile	Count	Max speed mph	85th Percentile
2 wheelers	938	60	37	553	52	37	496	52	38
Cars	19078	61	38	21889	63	39	22043	63	39
Vans	5263	61	39	6253	55	39	6496	65	39
Rigid HGV	1378	54	39	1152	55	38	1370	60	39
Artic HGV	274	44	33	169	44	34	194	47	36
Total	<b>26931</b>			<b>30016</b>			<b>30599</b>		
Survey total				<b>87546</b>					

Table 1: summary of vehicle numbers, their maximum speed and 85th percentile

Figure 3 shows the typical vehicle distribution by type. As expected, the majority of the traffic was cars and light vans.

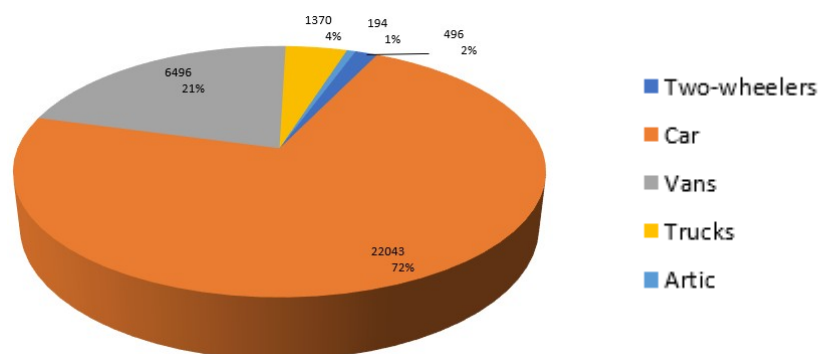


Figure 3: typical vehicle distribution by type



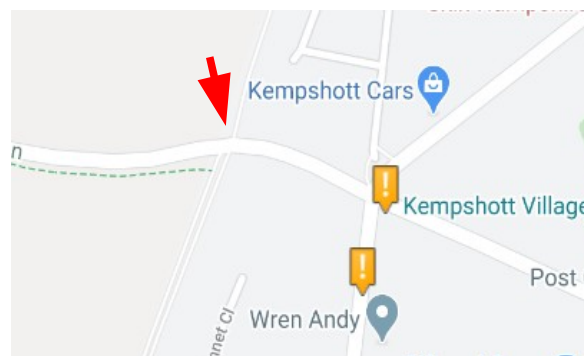
Recorded speeds were higher than anticipated and given that east of the survey point this stretch of road has a number of residential properties on either side, there is a high risk for traffic emerging from or entering properties.

Traffic speeds and the percentage of speeding traffic was analysed in time slots for the Wednesday of each survey week and the results are shown in table 2. Worryingly, throughout the day, over 50% of vehicles were recorded exceeding the speed limit, often by a significant amount. It is hoped this is for the reasons suggested above rather than a flagrant disregard for the speed limit.

Time	19th February		26th February		4th March	
	% speeding	Max speed mph	% speeding	Max speed mph	% speeding	Max speed mph
00:00 to 07:00	89.4	46	83.07	57	93.55	49
07:01 to 08:00	63.78	61	74.76	61	84.85	49
08:01 to 09:00	70.34	51	75.3	61	66.34	51
09:01 to 10:00	77.65	44	75.47	51	74.83	50
10:01 to 11:00	64.01	44	78.86	49	75.48	58
11:01 to 12:00	67.96	47	71.12	50	75.25	44
12:01 to 13:00	70.93	59	72.99	59	79.45	49
13:01 to 14:00	74.7	48	65.55	50	72.81	48
14:01 to 15:00	71.3	44	74.61	52	76.43	44
15:01 to 16:00	77.36	48	78.1	52	70.36	51
16:01 to 17:00	69.09	48	72.47	60	69.42	45
17:01 to 18:00	72.58	49	75.59	52	74.74	48
18:01 to 19:00	69.8	48	72.77	60	76.76	58
19:01 to 23:59	81.31	53	80.59	61	75.83	60

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

Crashmap data for this section of Pack Lane shows no accidents in the survey area (red arrow) but several slight injury accidents in the Fiveways junction area.



*Figure 6: crashmap data for Fiveways*





### 2.3 Week 1 – 15<sup>th</sup> to 22<sup>nd</sup> February 2020

Daily traffic flows towards Oakley are shown in table 3. Weekend traffic is lower than weekday apart from the high number of 2 wheelers on the Saturday. This is most likely to be one of the local cycling clubs on their weekly ride.

Cars are the most significant vehicle type closely followed by vans.

	Sat	Sun	Mon	Tue	Wed	Thur	Fri	Total	W'end av	W'day av
2 wheelers	55	18	13	26	51	43	7	<b>213</b>	36.5	28
										1253.8
										333333
Cars	999	708	1282	1277	1410	1421	1425	<b>8522</b>	853.5	3333
Vans	176	143	544	536	364	337	695	<b>2795</b>	159.5	495.2
Rigid HGV	46	54	161	151	139	85	160	<b>796</b>	50	139.2
Artic HGV	1	3	12	7	6	12	20	<b>61</b>	2	11.4
Totals	<b>1277</b>	<b>926</b>	<b>2012</b>	<b>1997</b>	<b>1970</b>	<b>1898</b>	<b>2307</b>	<b>12387</b>		

Table 3: daily traffic flows for traffic travelling towards Oakley

Traffic flows towards Basingstoke are shown in table 4 and show there is a higher volume of traffic travelling in this direction. Daily numbers are fairly consistent apart from the high number of two wheelers on the Sunday. This again attributed to one of the local cycling groups on a weekly ride.

	Sat	Sun	Mon	Tue	Wed	Thur	Fri	Total	W'end av	W'day av
2 wheelers	45	169	31	101	42	308	24	<b>720</b>	107	101.2
Cars	1325	1011	1513	1579	1620	1765	1671	<b>10484</b>	1168	1629.6
Vans	180	186	447	425	359	328	512	<b>2437</b>	183	414.2
Rigid HGV	18	109	88	104	84	80	85	<b>568</b>	63.5	88.2
Artic HGV	2	94	12	42	4	42	17	<b>213</b>	48	23.4
Totals	<b>1570</b>	<b>1569</b>	<b>2091</b>	<b>2251</b>	<b>2109</b>	<b>2523</b>	<b>2309</b>	<b>14422</b>		

Table 4: daily traffic flows for traffic travelling towards Basingstoke

When maximum vehicle speeds by vehicle type are examined it can be seen the worst offenders are cars, closely followed by two wheelers (motorcycles and scooters?) and vans. All vehicle types exceeded the speed limit. Table 5 shows the breakdown by vehicle type.





	Maximum speeds in miles per hour						
	Sat	Sun	Mon	Tue	Wed	Thur	Fri
2 wheelers	48	47	55	60	48	50	48
Cars	53	51	57	53	59	61	57
Vans	47	49	49	54	61	52	56
Rigid HGV	47	47	51	54	49	48	52
Artic HGV	32	44	42	40	31	35	43

Table 5: maximum speeds in miles per hour by vehicle type

## 2.4 Week 2 – 23<sup>rd</sup> to 29<sup>th</sup> February 2020

The traffic patterns for the second week are broadly similar to those of week 1. Table 6 shows the daily traffic flows by vehicle type for traffic travelling west towards Oakley.

	Sat	Sun	Mon	Tue	Wed	Thur	Fri	Total	W'end av	W'day av
2 wheelers	12	17	32	25	23	41	85	235	14.5	41.2
Cars	1487	1279	1510	1787	1789	1731	1707	11290	1383	1704.8
Vans	304	248	268	402	459	345	154	2180	276	325.6
Rigid HGV	52	41	55	96	96	75	33	448	46.5	71
Artic HGV	5	0	6	15	13	7	6	52	2.5	9.4
Totals	<b>1860</b>	<b>1585</b>	<b>1871</b>	<b>2325</b>	<b>2380</b>	<b>2199</b>	<b>1985</b>	<b>14205</b>		

Table 6: daily traffic flows for traffic travelling towards Oakley

Table 7 shows the daily traffic flows for traffic travelling east towards Basingstoke. Just over 1000 more vehicles travelled in this direction during the week.

	Sat	Sun	Mon	Tue	Wed	Thur	Fri	Total	W'end av	W'day av
2 wheelers	33	25	37	82	48	33	26	284	29	45.2
Cars	1229	1140	1449	1579	1496	1661	1945	10499	1184.5	1626
Vans	550	462	535	736	756	618	406	4063	506	610.2
Rigid HGV	55	52	107	144	159	109	63	689	53.5	116.4
Artic HGV	3	2	16	32	19	17	17	106	2.5	20.2
Totals	<b>1870</b>	<b>1681</b>	<b>2144</b>	<b>2573</b>	<b>2478</b>	<b>2438</b>	<b>2457</b>	<b>15641</b>		

Table 7: daily traffic flows for traffic travelling towards Basingstoke



When maximum vehicle speeds by vehicle type are examined it can be seen the worst offenders are cars, closely followed by two wheelers (motorcycles and scooters?) and vans. All vehicle types exceeded the speed limit. Table 8 shows the breakdown by vehicle type.

Maximum speeds in miles per hour							
	Sat	Sun	Mon	Tue	Wed	Thur	Fri
2 wheelers	50	47	47	47	50	47	45
Cars	63	56	52	53	55	55	50
Vans	55	50	51	52	53	54	54
Rigid HGV	55	47	46	45	47	47	42
Artic HGV	31	31	42	37	36	38	30

*Table 8: maximum vehicle speeds by vehicle type*

## 2.5 Week 3 – 1<sup>st</sup> to 7<sup>th</sup> March 2020

The traffic patterns for the second week are broadly similar to those of weeks 1 and 2. Table 9 shows the daily traffic flows by vehicle type for traffic travelling west towards Oakley.

	Sat	Sun	Mon	Tue	Wed	Thur	Fri	Total	W'end av	W'day av
2 wheelers	16	16	22	21	51	54	24	204	16	34.4
Cars	1294	1124	1458	1542	1633	1287	1621	9959	1209	1508.2
Vans	421	469	615	675	361	179	698	3418	445	505.6
Rigid HGV	122	92	138	181	84	60	183	860	107	129.2
Artic HGV	3	6	19	20	13	3	9	73	4.5	12.8
Totals	<b>1856</b>	<b>1707</b>	<b>2252</b>	<b>2439</b>	<b>2142</b>	<b>1583</b>	<b>2535</b>	<b>14514</b>		

*Table 9: daily traffic flows for traffic travelling towards Oakley*

Table 7 shows the daily traffic flows for traffic travelling east towards Basingstoke. Just under 1500 more vehicles travelled in this direction during the week.

	Sat	Sun	Mon	Tue	Wed	Thur	Fri	Total	W'end av	W'day av
2 wheelers	69	29	44	26	29	64	26	287	49	37.8
Cars	1465	1327	1691	1792	1972	1808	1920	11975	1396	1836.6
Vans	361	357	497	595	373	285	590	3058	359	468
Rigid HGV	55	24	97	99	67	60	108	510	39.5	86.2
Artic HGV	34	3	32	18	20	9	5	121	18.5	16.8
Totals	<b>1984</b>	<b>1740</b>	<b>2361</b>	<b>2530</b>	<b>2461</b>	<b>2226</b>	<b>2649</b>	<b>15951</b>		

*Table 10: daily traffic flows for traffic travelling towards Basingstoke*



When maximum vehicle speeds by vehicle type are examined it can be seen the worst offenders are cars, closely followed by two wheelers (motorcycles and scooters?) and vans. All vehicle types exceeded the speed limit. Table 8 shows the breakdown by vehicle type.

	Maximum speeds in miles per hour						
	Sat	Sun	Mon	Tue	Wed	Thur	Fri
2 wheelers	51	42	52	48	47	47	43
Cars	53	55	56	55	58	58	63
Vans	50	51	61	55	52	52	61
Rigid HGV	60	48	47	46	51	50	51
Artic HGV	36	29	47	37	39	35	33

*Table 11: maximum speeds by vehicle type*

### 3 Conclusions and recommendations

Speeding is an issue on this stretch of road. Traffic travelling east towards Basingstoke is constrained by Pack Lane traffic lights so is naturally slowing down unless it is trying to “beat the lights”. Traffic travelling in the opposite direction is entering a national speed limit (60mph) section of Pack Lane and is very likely anxious to get up to speed as quickly as possible. However, given the mix of traffic with a significant number of HGVs on a relatively narrow and far from straight road, this is not a good idea. It is thought that the high number of HGVs are servicing the building sites in Oakley and anecdotal evidence has seen convoys of several vehicles regularly using this road.

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..

### 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](mailto:hwp.odpc@gmx.com).

### 5 Acknowledgements

Figure 2 is derived from Google Maps

Figure 6 is derived from Crashmap.



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 12: 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 – 15<sup>th</sup> to 22<sup>nd</sup> February 2020 – vc220220.059 and vc220220.060
- Week 2 – 23<sup>rd</sup> to 29<sup>th</sup> February 2020 – vc290220.061 and vc290220.062
- Week 3 – 1<sup>st</sup> to 7<sup>th</sup> March 2020 – vc070320.063 and vc070320.064

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





## 9 Revision history

Date	Revision no	Detail	Author
29/4/2020	1	Initial draft	Stephen Harding

