

Technical Note

Project:	Dunsbury Hill Farm	To:	John Malyon
Subject:	Survey of B2150 Hulbert Road lay-bys	From:	Richard Franklin
Date:	23 rd August 2011	cc:	Steve Dimmock

1. Introduction

A survey of the northbound and southbound lay-bys on the B2150 Hulbert Road, just to the south of the A3(M) Junction 3 was undertaken between Monday 8th and Sunday 14th August 2011 inclusive by Count On Us. The survey involved undertaking a video survey of the lay-bys, with the results supplied showing vehicle type, arrival time, departure time and stay duration.

The survey was undertaken to understand the use of the lay-bys, with a view to replacing them as part of the Dunsbury Hill Farm development.

2. Lay-by Details

The existing lay-bys are comprised as follows:

- Northbound: 37m lay-by with a width of 3m, a 28m entry taper and 18m exit taper; and
- Southbound: 45m lay-by with a width of 3m, a 25m entry taper and 18m exit taper.

3. Results

Three breakdowns were observed: one northbound on Tuesday 9th August (with a stay duration of 01:24:36); one southbound on Thursday 11th August (with a stay duration of 02:18:42); and one southbound on Saturday 13th August (with a stay duration of 01:05:25). The broken down vehicles generated an additional vehicle each associated with the repair vehicle. As the results show below, these stays were far longer than the average stay, thus increasing the average stay statistics.

3.1 Number of vehicles

Table 3.1 below shows the number of vehicles using the Northbound and Southbound lay-bys on B2150 Hulbert Road by type between Monday 8th and Sunday 14th August 2011.

Table 3.1 shows that the northbound lay-by is used more than the southbound lay-by, and this applies every day apart from Sunday 14th August 2011, when more vehicles used the southbound lay-by. Over the course of the week, 344 vehicles used the northbound lay-by in comparison to 248 using the southbound lay-by. The results show that the vehicle types most commonly using both lay-bys are in descending order:

- Cars;
- Light Goods Vehicles (LGVs), such as a 7.5T box van;
- Other Goods Vehicle 1 (OGV1) – 2- or 3-axle rigid vehicles;
- Other Goods Vehicle 2 (OGV2) – 4-axle rigid or articulated vehicles;
- Motorcycles (MCYs);

- Pedal cycles (PCYs);
- Public Service Vehicles (PSVs); and
- Coaches.

Wednesday 10th August 2011 was the busiest day in terms of numbers of vehicles for both lay-bys, with 64 using the northbound lay-by and 42 using the southbound lay-by, while Sunday 14th August 2011 was the quietest day in terms of number of vehicles, with 25 using the northbound lay-by and 39 using the southbound lay-by.

3.2 Time in Use

Table 3.2 below shows the average and total stay durations per day and week.

Table 3.2 again demonstrates that the northbound lay-by is the used more, apart from Thursday 11th and Sunday 14th August 2011, when the southbound lay-by was used for more time (this is mainly due to the aforementioned breakdowns).

The duration of stays for the northbound lay-by was longest on Wednesday 10th August 2011 and shortest on Sunday 14th August 2011. The duration of stays for the southbound lay-by was longest on Thursday 11th August 2011 and shortest on Saturday 13th August 2011.

Table 3.3 shows that use of the lay-bys is sporadic. Generally however, there is little use between 2200 and 0400 hours. The period of maximum use occurs during the day (this occurred between 1300 and 1400 hours on Wednesday 10th August 2011), with only a few instances when the lay-bys are used by more than one vehicle outside of 0800-2000 hours.

3.3 Maximum use/capacity

Table 3.4 below shows the maximum number of vehicles using the lay-bys at any one time.

Table 3.4 shows that a maximum of four vehicles was observed to use both the northbound and southbound lay-bys at any one time. This was on Wednesday 10th August 2011.

For the northbound lay-by, the four vehicles were comprised as follows: 1 x OGV1; 1 x OGV2; 1 x car; and 1 x LGV. This resulted in the lay-by being fully occupied. For the southbound lay-by, the four vehicles were comprised as follows: 2 x LGVs; and 2 x cars. This resulted in the lay-by being close to capacity, with space available for approximately one more small vehicle.

It should however be noted that two of the vehicles using the southbound lay-by were in fact northbound vehicles (1 LGV and 1 car). This means that the peak demand for the northbound lay-by was actually six vehicles (1 x OGV1; 1 x OGV2; 2 x cars; and 2 x LGVs), and eight vehicles for the two lay-bys combined (1 x OGV1; 1 x OGV2; 3 x cars; and 3 x LGVs).

The peak demand for southbound vehicles was therefore on Tuesday 9th August 2011 between 1200 and 1300 hours, which was made up of 1 x OGV1, 1 x OGV2 and 1 x car.

Technical Note

Table 3.1 - Number of vehicles using Northbound and Southbound lay-bys on B2150 Hulbert Road by type Monday 8th - Sunday 14th August 2011

Vehicle Type	Direction	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total week
		08/08/11	09/08/11	10/08/11	11/08/11	12/08/11	13/08/11	14/08/11	
Cars	North	26	43	37	29	24	47	24	230
	South	17	21	21	19	26	12	32	148
LGV	North	13	14	14	11	14	6	0	72
	South	9	8	11	11	8	8	3	58
OGV1	North	10	1	7	3	3	0	1	25
	South	2	4	5	2	4	3	2	22
OGV2	North	0	2	4	0	2	0	0	8
	South	2	3	3	2	3	1	0	14
MCY	North	0	1	0	0	1	2	0	4
	South	0	1	2	0	0	0	0	3
PCY	North	0	1	1	0	0	1	0	3
	South	0	0	0	0	0	0	2	2
PSV	North	0	0	1	0	0	0	0	1
	South	1	0	0	0	0	0	0	1
Coach	North	1	0	0	0	0	0	0	1
	South	0	0	0	0	0	0	0	0
Total vehicles	North	50	62	64	43	44	56	25	344
	South	31	37	42	34	41	24	39	248

Table 3.2 - Average and total length of stays

Vehicle Type	Direction	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total week
		08/08/11	09/08/11	10/08/11	11/08/11	12/08/11	13/08/11	14/08/11	
Average stay duration	North	00:09:10	00:06:07	00:07:46	00:07:57	00:11:56	00:03:05	00:04:27	00:07:13
	South	00:05:30	00:08:03	00:06:57	00:10:51	00:04:44	00:06:25	00:06:14	00:06:56
Total duration of all stays	North	07:38:07	06:19:18	08:16:40	05:41:50	08:45:01	02:52:30	01:51:08	41:24:34
	South	02:50:42	04:57:55	04:52:01	06:09:03	03:13:56	02:34:06	04:02:48	28:40:31

Table 3.3 – Earliest arrival, latest departure and earliest and latest times when more than 1 vehicle was using the lay-bys

Vehicle Type	Direction	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Average
		08/08/11	09/08/11	10/08/11	11/08/11	12/08/11	13/08/11	14/08/11	
Earliest arrival	North	05:43:18	05:18:54	00:14:05	06:53:06	04:27:34	05:33:35	00:39:23	04:07:08
	South	06:10:13	03:50:11	03:55:59	07:21:43	02:32:19	06:04:06	01:41:16	04:30:50
Latest departure	North	22:55:39	22:54:53	20:44:04	23:13:25	21:54:46	23:18:55	21:13:24	22:19:18
	South	23:26:46	22:11:55	20:56:34	23:08:25	23:29:27	22:11:40	21:06:06	22:21:33
Earliest time with more than 1 vehicle	North	05:43:22	07:36:55	00:17:11	07:59:54	09:44:57	09:17:39	14:49:31	07:55:38
	South	12:23:29	11:01:56	11:37:52	10:13:42	12:19:56	08:21:32	09:26:16	10:46:23
Latest time with more than 1 vehicle	North	20:41:05	21:25:22	19:11:04	23:13:11	19:54:19	17:49:44	15:13:55	19:38:23
	South	16:39:25	18:54:49	20:56:34	22:54:22	16:02:52	12:03:30	16:58:41	17:47:10

Table 3.4 - Maximum number of vehicles using lay-bys each day and over the course of the week

	Direction	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total week
		08/08/11	09/08/11	10/08/11	11/08/11	12/08/11	13/08/11	14/08/11	
Max no. of vehicles at any one time	North	3	3	4	3	3	3	2	4
	South	2	3	4	2	2	2	3	4

4. Conclusion

A survey of the northbound and southbound lay-bys on the B2150 Hulbert Road, just to the south of the A3(M) Junction 3 was undertaken to understand the use of the lay-bys, with a view to replacing them as part of the Dunsbury Hill Farm development.

Generally, use of the lay-bys outside of 0800-2000 hours is sporadic with only a few instances when the lay-bys are used by more than one vehicle, while there is little use between 2200 and 0400 hours. The northbound lay-by is used more than the southbound lay-by.

The peak demand for the lay-bys was eight vehicles in total (six northbound and two southbound), which occurred between 1300 and 1400 hours on Wednesday 10th August 2011. At this time, the northbound lay-by was at capacity (four vehicles), leading to two northbound vehicles using the southbound lay-by. The southbound lay-by however, still retained some spare capacity at this time.

It is recommended that the lay-bys are replaced to accommodate the period of peak capacity as a minimum, especially when considering the timing of the survey during the school holidays.

The location and design of potential options for the relocated lay-bys need to be considered. It is noted that to the south of the proposed Hulbert Road roundabout the ability to implement lay-bys is restricted by the SINC and the fact that land is owned by a third party. Possible options include:

- The extension of the existing lay-bys on Hulbert Road west of the A3(M) Junction 3; and
- Implementation of parking bays between the A3(M) and Hulbert Road with access provided via a fourth arm on the proposed development roundabout.