



**Wolfstones Heights Farm, Holmfirth** 

**Highway Surveys** 

**March 2019** 

Project 1406(A)

#### **Paragon Highways**

Unit 2 The Office Campus Paragon Business Park, Red Hall Court Wakefield, WF1 2UY



### **Quality Management**

	First Issue	Revision 1	Revision 2	Revision 3
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Checked by	РАН	CS		

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#### 1.0 Introduction

- 1.1 Planning approvals have been granted for the relocation of an existing access, stopping up of an existing access and the diversion of a public right of way HOL/60/20 (part) together with external works to the host property situated off the Wolfstones Road at Wolfstones Heights Farm to the north of Upperthong near Holmfirth in the District of Kirklees.
- 1.2 As part of that approvals ref: 2014/62/92814/W and 2017/91374, as amended by 2018/NMA/93302 and 2018/NMA/93277, the applicants are seeking approval under section 257 of the Town and Country Planning Act for the diversion of the aforementioned definitive footpath (part).
- 1.3 The principle of the development has obviously been approved by the Council and the line of the proposed diversion of the definitive footpath agreed with the Councils Public Rights of Way Officers (PRoW) accordingly. The diverted route will separate potential conflict between users of the driveway to the development site and pedestrians utilising the right of way which can only be a benefit to the safety of all users.
- 1.4 The diversion seeks to divert the footpath from a point east of the existing dwelling along a route heading northward for a distance of approximately 150 metres or thereabouts, then returning back onto Wolfstones Road. This is at a point on the outside of a sweeping bend where intervisibility for both drivers travelling along Wolfstones Road and those pedestrians leaving the definitive right of way is to a very good standard and above that of the existing situation.
- 1.5 Initial full Highway Surveys were undertaken in November / December 2017 and the results from those surveys and the additional surveys carried out in February and March 2019 are presented below.

#### 2.0 Survey Considerations

- 2.1 The survey(s) have been undertaken to establish the following:
  - ✓ usage of the public right of way under consideration HOL/60/20
  - ✓ the speed of vehicles past the site frontage on Wolfstones Road and the associated traffic movements
  - ✓ Pedestrian / cycle and equestrian usage of the immediate highway

Surveys were originally undertaken at the site on the  $30^{th}$  November (Thursday) and  $3^{rd}$  December 2017 (Sunday). On the 30th November the weather was dry, clear and cold (temperature range 0-2 degrees C) and on the  $3^{rd}$  December, it was dull and overcast (temperature range 5- 9 degrees C). The data collected over the two days was between the hours of 08.00 - 16.00hrs.

2.2 Additional surveys have been undertaken with the first one being carried out on Monday the 11<sup>th</sup> February 2019 and the second on the 17th March 2019. The weather on the February survey date was cold with an average temperature of 5 degrees C with no rain / snow. The weather on the 17<sup>th</sup> March was between 1 and 5 degrees C bright but with occasional snow showers.

#### 3.0 Survey Data

#### 3.1 Speed Surveys and traffic data

3.1.1 The initial speed surveys were undertaken along Wolfstones Road on Thursday 30/11/17 and Sunday 3/12/17 respectively between the hours of 8am and 4pm at a point close to the exit location onto the major road of the diverted footpath. The speed survey data also provided information on the number of trips made along Wolfstones Road during a typical weekday and on potentially the busiest day for walkers i.e. on a Sunday. A second set of surveys have been undertaken in 2019 again between the hours of 8amd an 4pm in the same location as the 2017 surveys.

#### 3.1.2 Thursday the 30/11/17

This survey was undertaken on a dry but cold day with temperatures of between 0- and 2-degrees during daylight hours. Traffic was very light both from the Upperthong direction and Moor Lane (B6107), with only 150 vehicles recorded in total. 84 vehicle trips were recorded from the B6107 direction and 66 from Upperthong.

- 3.1.3 The 85<sup>th</sup> percentile wet weather speed of vehicles travelling from Upperthong was 18.85mph. The 85<sup>th</sup> Percentile wet weather speeds from Moor Lane was 18.23mph. The speed survey data can be found in Appendix A.
- 3.1.4 As part of the speed survey data, the survey Company were able to provide details of the actual times of vehicle usage of the lane. This data can be found on our spreadsheet in Appendix B. It can be noted from the data collected on the 30<sup>th</sup> November that there was no real peak time along this route apart from a minor peak between 09.00 09.15hrs when there were 12 recorded trips. The remainder of the day had between 2 and 9 trips but with the average being some 5 trips during any 15-minute period i.e., 1 trip every 3 minutes or so. This trip rate, associated with the very low 85%ile speeds, would have no detriment to pedestrian safety given the relatively short section of highway that the pedestrians would have to traverse to meet the former Prow exit point onto Wolfstones Road.

#### 3.1.5 Sunday 3<sup>rd</sup> December

This survey was undertaken again during dry conditions when the weather was overcast and with day time temperatures between 5- and 9-degrees C during daylight hours. Traffic movements were lighter than on the previous Thursday with only 122 trips during the survey

period – again 08.00 - 16.00hrs. 73 vehicle trips were recorded from the B6107 direction and only 49 from the direction of Upperthong.

- 3.1.6 The 85%ile wet weather speed of vehicles on the 3<sup>rd</sup> December travelling from the direction of the B6107 was 21.782 mph and from Upperthong 21.485 mph, slightly higher than those recorded on the 30<sup>th</sup> November which could be attributed to the weather conditions. The speed survey data can be found on the spreadsheet in Appendix A.
- 3.1.7 The traffic data collected in 2017 revealed that during most of the day the vehicle movements were low, however, there were slight peaks between 12.00 12.15 / 13.00 13.15 and 13.45 14.00hrs. The additional trips at these times could be associated with the "Sunday Lunch" trade. During some of the 15-minute segments there was no traffic movements at all and with a lower overall average of only 4 trips. Notwithstanding the minor increase in 85%ile speeds, it must be acknowledged that vehicle movements are lighter overall on a weekend. The data associated with the vehicle trips on this date can be found in Appendix B.

#### 3.1.8 Monday 11th February 2019

The survey was again undertaken during dry road surface conditions. The weather was cold with an average temperature of 5 degrees C with no rain / snow. The data was collected between the hours of 08.00 - 16.00 hrs for consistency. The overall traffic movements were higher than the previous survey dates with 179 two-way trips recorded with almost the same number of trips in both directions with only one trip by a farm vehicle recorded.

- 3.1.9 The 85%ile vehicle speed of vehicles recorded during this survey revealed that from the direction of the B6107 was 18.178 mph and from Upperthong 19.915 mph. Slightly higher than the November 2017 survey but lower than the survey recorded in December 2017. The speed survey data can be found at Appendix A.
- 3.1.10 The traffic survey data for February 2019 again revealed slight peaks between 09.30 09.45 / 12.15.-12.30 / 13.45 14.00 and 15.30 and 15.45. Also, during some of the 15-minute segments there were again no traffic movements at all or just some 3 4 trips. Traffic speeds were again low with speeds recorded between 18 and 20mph. The survey data for February 2019 can be found in Appendix A.

#### 3.1.11 Sunday 17<sup>th</sup> March 2019

The survey data for the 17<sup>th</sup> March 2019 again revealed that there were peaks at the beginning and end of the recognised lunch times. Speeds were slightly higher with recorded 85%ile speeds of some 20-21 mph. The Survey data can be found in Appendix A.

#### 3.2 Pedestrian Surveys

#### 3.2.1 **30th November 2017**

Pedestrian survey data was collected during the same period as the traffic count data and we have transposed this onto our spreadsheet which can be found in Appendix C. The basic information this provided was that out of the total number of pedestrian movements in that location there were just 13 pedestrians who utilised the definitive right of way out of the 32 pedestrian movements in that location during the 8-hour survey period – some 40%.

#### 3.2.2 3<sup>rd</sup> December 2017

Acknowledging the data collected on Thursday in November the December survey information confirmed that the number of pedestrians utilising the PRoW was significantly higher on a Sunday with 23 pedestrian movements along the PRoW out of the total pedestrian journeys (59 no.) made in and around this location – some 38%. Our spreadsheet can be found in Appendix C.

#### 3.2.3 11th February 2019

The survey revealed that the number of pedestrians utilising the PRoW was only 12 no. out of an overall 32 pedestrian journeys carried out in the locality – 37.5%.

#### 3.2.4 17<sup>th</sup> March 2019

This survey information revealed that out of the 64 pedestrians using the local network only 24 utilised the Public Right of Way again accounting for 37.5% of the journeys on foot in this locality.

#### 3.3 Cycle and Equestrian survey

#### 3.3.1 **30**th November 2017

The data collected on this date revealed that only a small number of trips were made by cycle on that day – just 5 trips in total. 4 trips towards Upperthong and just 1 trip towards the B6107. No cyclists were noted utilising the PRoW. The results of the survey can be found in Appendix D.

#### 3.3.2 3<sup>rd</sup> December 2017

The information obtained on Sunday the 3<sup>rd</sup> December obviously highlighted an increase in the number journeys made by cycle and also that there was also some equestrian use of Wolfstones Road. The survey details identify there were 26 journeys made by cycle in several directions, however, the majority were along Wolfstones Road. However, the number of cycle journeys was not significant to warrant a reason for concern in relation to any conflict with pedestrians.

#### 3.3.3 11th February 2019

The information gained from this survey revealed that the number of journeys made by cycle were low with only 4 trips made during a 5-hour period, however, the number of trips made on horseback slightly increased to 5 trips with 4 journeys utilising the public footpath and 1 journey from the Moor Lane direction towards Upperthong.

#### 3.3.4 17<sup>th</sup> March 2019

The data collected revealed that no horse riders used this section of Wolfstones Road during the survey period. The number of cyclists using the Wolfstones Road was considered low for a Sunday.

3.3.5 The surveys did note that equestrian use of Wolfstones Road was evident during the survey period, however, the trips generated were very low over all the survey dates. This, however, still identifies that horse riders feel safe using Wolfstones Road as a means of access as part of their journey in the local area, by the number of trips made by this mode of transport would not pose a conflict with other road users.

#### 4.0 Accident data

4.1 The accident records for the area in and around the site for the 5 years up to December 2018 along the Wolfstones Road has been obtained from the Department for Transports web site – Crashmap which revealed that there have been no recorded injury accidents in this location during the search period. This confirms that the local highway operates in a safe and efficient manner.

#### 5.0 Journey times

5.1 The agreed diversion of the public footpath will see an increase in journey times for walkers / pedestrians who are travelling towards Upperthong or the Trig point. Walkers travelling towards the B6107 will not be affected by the changes in alignment. The additional distance to travel for those affected by the changes is approximately 400 metres or so which is no more than a 5-minute walk based upon the IHT guidelines.

#### 6.0 Overall Comparisons

#### 6.1 Vehicle Speeds

30/11/	2017	3/12/	2/2017	
From B6107	From Upperthong	From B6107	From Upperthong	
18.23	18.85	21.78	21.48	

11/2	/2019	17/3/	/2019
From B6107	From Upperthong	From B6107 From Uppertho	
18.17	19.91	21.06	20.41

6.2 As can be noted from the information provided above the speeds varied over the survey dates as follows:

From B6107 between - 18.17 – 21.78 mph

From Upperthong between - 18.85 – 21.48 mph

Notwithstanding the minor variations in the recorded speeds they are still within accepted tolerances for variations in traffic speeds and are well below the speed limit. Vehicle speeds along this length of the highway are confirmed as being low which probably acknowledges the general nature of the route and its horizontal and vertical alignment.

#### 6.3 Traffic Movements

30/11/2017		3/12/2017	
From B6107	From Upperthong From B6107 U		From Upperthong
84	66	73	49
Total Trips	150	Total Trips	122

11/2	2/2019	17/3/2019	
From B6107	From Upperthong	From B6107	From Upperthong
87	92	93	73
Total Trips	179	Total Trips	166

- 6.4 The traffic surveys revealed that Wolfstones Road is only lightly trafficked and even on the most recorded heavily trafficked day (11/2/19) still only generated a vehicle trip along the site frontage every 2.68 minutes or so on average. However, the data provided does acknowledge that the actual movements across the site frontage were generally over a greater timescale.
- 6.5 This level of traffic movement across the site frontage and the related vehicle speeds would not warrant a reason for concern in relation to highway / pedestrian safety in respect of the additional distance of approximately 150 metres or thereabouts, that pedestrians will have to travel as a result of the minor diversion of the public footpath.

#### 6.6 Pedestrian Movements

30/11/	2017	3/12/2017	
Utilising PRoW	Wolfstones Road / TRIG Point	Utilising PRoW	Wolfstones Road / TRIG Point
13	19	23	36
Total Trips	32	Total Trips	59

11/2/2	2019	17/3/2019		
Utilising PRoW	Wolfstones Road / TRIG Point	Utilising PRoW	Wolfstones Road / TRIG Point	
12	20	24	40	
Total Trips	32	Total Trips	64	

6.7 The Public Right of Way is reasonably well used with pedestrian trips along the route varying across the survey's dates with between 12 and 24 trips. Notwithstanding this pedestrian movements along the Wolfstones Road were noted to be at a higher level on each of the survey dates. The accident data confirms that the Wolfstones Road operates safely with wide verges to utilise should pedestrians meet an oncoming vehicle. Bearing in mind that vehicle speeds are low the potential for pedestrian vehicle conflict are considered to be equally low.

#### 6.8 Equestrian Use

A table of equestrian related movements along the site frontage has not been provided as these have been low or non-existent. Th use of the footpath by horse riders was more than likely to be the land owner who keeps and exercises horses. Therefore, potential conflict with horse riders is equally low.

#### 6.9 Cycle Use

The use of Wolfstones Road by cyclist has varied considerably over the survey dates as follows:

Date	30/11/17	3/12/17	11/2/19	17/3/19
Cycle trips	5	26	4	15

The survey data did note as expected that Sundays were the busiest days for cyclists, however, the overall number involved were not particularly high.

#### 7.0 Conclusion

- 7.1 In conclusion, the surveys undertaken provide a detailed snapshot of the use of the local highway, which will see a slight increase in pedestrian trips over a relatively short distance, due to the agreement to divert a public footpath linking onto the Wolfstones Road. The surveys include a typical working day and the most popular day to walk in the local area i.e. a Sunday. The surveys revealed that traffic speeds are low along this section of Wolfstones Road and the number of vehicle trips is also low over the 8-hour periods surveyed.
- 7.2 The visibility for pedestrians egressing the new footpath location of oncoming traffic on Wolfstones Road is considerably improved from the existing situation. Intervisibility for drivers travelling along the major road of pedestrians stepping onto the carriageway or verge is also to a high standard. Taking into account the frequency of vehicle movements along Wolfstones Road, the low speed of those vehicles, together with the frequency of pedestrian activity, the proposed relocation of the footpath entry point onto Wolfstones Road can only further reduce the potential for accidents.
- 7.3 The information obtained would also confirm that the local highway network operates safely and the increase in journey length along a short section of the Wolfstones Road should not result in any significant conflict with existing users and the Council are respectfully requested to accept the findings of this report.

### Appendix A

**Speed Surveys** 



30/11/17
08:00
16:00

#### **SPEED SURVEY 1**

**LOCATION** Wolfstones Heights Farm Wolfstone Road **DIRECTION OF TRAVEL** From Upperthong

Temp 0 upto 2 Degrees

SPEED (MPH)	NO. OF READINGS						
1		26		51		76	
2		27				77	
3		28		53		78	
4		29		54		79	
5		30		55		80	
6		31		56		81	
7		32		57		82	
8		33		58		83	
9		34		59		84	
10		35		60		85	
11		36		61		86	
12		37		62		87	
13		38		63		88	
14	4	39		64		89	
15	5	40		65		90	
16	8	41		66		91	
17	8	42		67		92	
18	6	43		68		93	
19	8	44		69		94	
20	11	45		70		95	
21	5	46		71		96	
22	6	47		72		97	
23	2	48		73		98	
24	3	49		74		99	
25		50		75		100	

DUAL CARRIAGEWAY?	66
SINGLE CARRIAGEWAY? Y	MEAN SPEED 18.6363636
WET ROAD SURFACE? N	STANDARD DEVIATION 2.69835485
	85th PERCENTILE 21.3347185
<b>✓</b>	85th PERCENTILE WET WEATHER SPEED 18.8497185



30/11/17
08:00
16:00

#### **SPEED SURVEY 2**

**LOCATION** Wolfstones Heights Farm Wolfstones Road Upperthong **DIRECTION OF TRAVEL** From Moor Lane

Temp 0 to 2 Degrees

SPEED (MPH)	NO. OF READINGS						
1		26		51		76	
2		27				77	
3		28		53		78	
4		29		54		79	
5		30		55		80	
6		31		56		81	
7		32		57		82	
8		33		58		83	
9		34		59		84	
10		35		60		85	
11		36		61		86	
12	2	37		62		87	
13	2	38		63		88	
14	9	39		64		89	
15	7	40		65		90	
16	11	41		66		91	
17	9	42		67		92	
18	15	43		68		93	
19	4	44		69		94	
20	12	45		70		95	
21	2	46		71		96	
22	4	47		72		97	
23	3	48		73		98	
24	4	49		74		99	
25		50		75		100	

	84	DUAL CARRIAGEWAY?	
		·	
MEAN SPEED		SINGLE CARRIAGEWAY?	
		·	
STANDARD DEVIATION		WET ROAD SURFACE?	N
		·	
85th PERCENTILE	20.7151591		
85th PERCENTILE WET WEATHER SPEED		✓	



03/12/2017 08:00 16:00

#### **SPEED SURVEY 3**

**LOCATION** Wolfstones Heights Farm Wolfstones Road Upperthong **DIRECTION OF TRAVEL** From Upperthong

Temp 5 to 9 Degrees

SPEED (MPH)	NO. OF READINGS						
1		26	2	51		76	
2		27	1			77	
3		28		53		78	
4		29	1	54		79	
5		30	1	55		80	
6		31		56		81	
7		32		57		82	
8		33		58		83	
9		34		59		84	
10		35		60		85	
11		36		61		86	
12		37		62		87	
13		38		63		88	
14	2	39		64		89	
15	2	40		65		90	
16	5	41		66		91	
17		42		67		92	
18	7	43		68		93	
19	4	44		69		94	
20	9	45		70		95	
21	3	46		71		96	
22	7	47		72		97	
23	1	48		73		98	
24	3	49		74		99	
25	1	50		75		100	

DUAL CARRIAGEWAY?	49
SINGLE CARRIAGEWAY?	MEAN SPEED 20.3061224
WET ROAD SURFACE? N	STANDARD DEVIATION 3.6640374
	85th PERCENTILE 23.9701598
/	5th PERCENTILE WET WEATHER SPEED 21.4851598



03/12/2017 08:00 16:00

#### **SPEED SURVEY 4**

**LOCATION** Wolfstones Heights Farm Wolfstones Road Upperthong **DIRECTION OF TRAVEL** From Moor Lane

Temp 5 to 9 Degrees

SPEED (MPH)	NO. OF READINGS						
1		26	4	51		76	
2		27	3			77	
3		28	2	53		78	
4		29		54		79	
5		30		55		80	
6		31		56		81	
7		32		57		82	
8		33		58		83	
9		34		59		84	
10		35		60		85	
11		36		61		86	
12		37		62		87	
13		38		63		88	
14	1	39		64		89	
15		40		65		90	
16	6	41		66		91	
17	2	42		67		92	
18	12	43		68		93	
19	7	44		69		94	
20	10	45		70		95	
21	7	46		71		96	
22	4	47		72		97	
23	7	48		73		98	
24	4	49		74		99	
25	4	50		75		100	

DUAL CARRIAGEWAY?	73
SINGLE CARRIAGEWAY?	MEAN SPEED 20.9041096
WET ROAD SURFACE? N	STANDARD DEVIATION 3.36305245
	85th PERCENTILE 24.267162
/	85th PERCENTILE WET WEATHER SPEED 21.782162



17/03/2019 08:00 16:00

**SPEED SURVEY** 

LOCATION Wolfstones
DIRECTION OF TRAVEL From Upperthong

SPEED (MPH)	NO. OF READINGS						
1		26	2	51		76	
2		27	1	52		77	
3		28		53		78	
4		29		54		79	
5		30		55		80	
6		31		56		81	
7		32		57		82	
8		33		58		83	
9		34		59		84	
10		35		60		85	
11		36		61		86	
12		37		62		87	
13	1	38		63		88	
14		39		64		89	
15	2	40		65		90	
16	5	41		66		91	
17	5	42		67		92	
18	8	43		68		93	
19	8	44		69		94	
20	10	45		70		95	
21	12	46		71		96	
22	8	47		72		97	
23	3	48		73		98	
24	2	49		74		99	
25	3	50		75		100	

DUAL CARRIAGEWAY?	70
SINGLE CARRIAGEWAY? Y	MEAN SPEED 20.0428571
WET ROAD SURFACE? N	STANDARD DEVIATION 2.85614372
	85th PERCENTILE 22.8990009
✓	85th PERCENTILE WET WEATHER SPEED 20.4140009



17/03/2019 08:00 16:00

**SPEED SURVEY** 

**LOCATION** Wolfstones **DIRECTION OF TRAVEL** From Moor Lane

SPEED (MPH)	NO. OF READINGS						
1		26	4	51		76	
2		27	1	52		77	
3		28	1	53		78	
4		29	1	54		79	
5		30		55		80	
6		31	1	56		81	
7		32		57		82	
8		33		58		83	
9		34		59		84	
10		35		60		85	
11		36		61		86	
12		37		62		87	
13		38		63		88	
14		39		64		89	
15		40		65		90	
16	4	41		66		91	
17	4	42		67		92	
18	14	43		68		93	
19	19	44		69		94	
20	11	45		70		95	
21	13	46		71		96	
22	8	47		72		97	
23	7	48		73		98	
24	1	49		74		99	
25	3	50		75		100	

DUAL CARRIAGEWAY?	92
SINGLE CARRIAGEWAY? Y	MEAN SPEED 20.576087
WET ROAD SURFACE? N	STANDARD DEVIATION 2.96956613
	85th PERCENTILE 23.5456531
✓	85th PERCENTILE WET WEATHER SPEED 21.0606531

### Appendix B

#### **Vehicle Movements**



Time		pperthong	From M	Accumulated Numbers	
	Non-Farm Traffic	Farm Traffic	Non-Farm Traffic	Farm Traffic	rambolo
08:00-08:15					0
08:15-08:30	1		1		2
08:30-08:45					0
08:45-09:00	2		1		3
09:00-09:15	1		2		3
09:15-09:30	2				2
09:30-09:45	2		2		4
09:45-10:00	2		1		3
10:00-10:15			2		2
10:15-10:30	4		2		6
10:30-10:45	2		3		5
10:45-11:00	1		1		2
11:00-11:15	1		2		3
11:15-11:30	3		2		5
11:30-11:45	2		4		6
11:45-12:00		1	3		4
12:00-12:15	10		2		12
12:15-12:30	1		0		1
12:30-12:45	2		2		4
12:45-13:00	1		5		6
13:00-13:15	3		6		9
13:15-13:30	0		4		4
13:30-13:45	1		1		2
13:45-14:00	5		6	1	12
14:00-14:15	0		7		7
14:15-14:30	1		3		4
14:30-14:45	0		0		0
14:45-15:00	2		2		4
15:00-15:15	0		3		3
15:15-15:30	1		0		1
15:30-15:45	1		2		3
15:45-16:00	1		1		2
Total	52	1	70	1	124



Time	From Up	pperthong	From M	Accumulated Numbers	
	Non-Farm Traffic	Farm Traffic	Non-Farm Traffic	Farm Traffic	Numbers
08:00-08:15	1		2		3
08:15-08:30	1		1		2
08:30-08:45	1		1		2
08:45-09:00	1		3		4
09:00-09:15	8		4		12
09:15-09:30	3		3	2	8
09:30-09:45	2		3		5
09:45-10:00	1		4		5
10:00-10:15	2		4		6
10:15-10:30	0		3		3
10:30-10:45	2		4	1	7
10:45-11:00	1		1		2
11:00-11:15	2		3	1	6
11:15-11:30	1		2		3
11:30-11:45	6	1	2		9
11:45-12:00	2	1	0		3
12:00-12:15	3		1		4
12:15-12:30	2		2		4
12:30-12:45	4		2		6
12:45-13:00	2		2		4
13:00-13:15	1		3		4
13:15-13:30	3		3		6
13:30-13:45	2		3		5
13:45-14:00	4		1		5
14:00-14:15	2		2		4
14:15-14:30	2		1		3
14:30-14:45	3		3		6
14:45-15:00	2		2		4
15:00-15:15	3		2		5
15:15-15:30	2		5		7
15:30-15:45	1		2		3
15:45-16:00	2		4		6
Total	72	2	78	4	156



Time	From Up	pperthong	From M	oor Lane	Accumulated Numbers
	Non-Farm Traffic	Farm Traffic	Non-Farm Traffic	Farm Traffic	ramboro
08:00-08:15	3		1		4
08:15-08:30	3		1		4
08:30-08:45	3		1		4
08:45-09:00	5		3		8
09:00-09:15	2		5		7
09:15-09:30	1		3		4
09:30-09:45	3		7		10
09:45-10:00	2		1		3
10:00-10:15	3		3		6
10:15-10:30	4		0		4
10:30-10:45	2		2		4
10:45-11:00	2		4		6
11:00-11:15	3		1		4
11:15-11:30	2		3		5
11:30-11:45	4		4		8
11:45-12:00	2		2	1	5
12:00-12:15	2		4		6
12:15-12:30	7		4		11
12:30-12:45	5		3		8
12:45-13:00	1		3		4
13:00-13:15	2		2		4
13:15-13:30	6		2		8
13:30-13:45	2		2		4
13:45-14:00	5		5		10
14:00-14:15	0		0		0
14:15-14:30	2		1		3
14:30-14:45	1		1		2
14:45-15:00	2		4		6
15:00-15:15	1		2		3
15:15-15:30	1		2		3
15:30-15:45	3		10		13
15:45-16:00	3		5		8
Total	87	0	91	1	179



Time	From Up	pperthong	From M	oor Lane	Accumulated Numbers
	Non-Farm Traffic	Farm Traffic	Non-Farm Traffic	Farm Traffic	Numbers
08:00-08:15	1		0		1
08:15-08:30	0		1		1
08:30-08:45	0		1		1
08:45-09:00	1		2		3
09:00-09:15	0		2		2
09:15-09:30	1		2		3
09:30-09:45	0		2		2
09:45-10:00	2		1		3
10:00-10:15	2		5		7
10:15-10:30	2		4		6
10:30-10:45	6		3		9
10:45-11:00	5		2		7
11:00-11:15	4		2		6
11:15-11:30	3		4		7
11:30-11:45	4		3		7
11:45-12:00	2		4		6
12:00-12:15	2		8		10
12:15-12:30	5		7		12
12:30-12:45	1		1		2
12:45-13:00	4		4		8
13:00-13:15	5		3		8
13:15-13:30	3		7		10
13:30-13:45	4		4		8
13:45-14:00	3		7		10
14:00-14:15	2		2		4
14:15-14:30	1		1		2
14:30-14:45	2		3		5
14:45-15:00	2		1		3
15:00-15:15	3		2		5
15:15-15:30	0		2		2
15:30-15:45	2		2		4
15:45-16:00	1		1		2
Total	73	0	93	0	166

### Appendix C

#### **Pedestrian Movements**



Time	From Footpath HOL/60/20 Towards Moor Lane	From Footpath HOL/60/20 towards Upperthong	From Footpath HOL/60/20 Towards Trig Point	From Moor Lane Towards Footpath HOL/60/20	From Moor Lane Towards Upperthong	From Moor Lane Towards Trig Point	From Upperthong Towards Footpath HOL/60/20	From Upperthong Towards Moor Lane	From Upperthong Towards Trig Point	From Trig Point Towards Footpath HOL/60/20	From Trig Point Towards Moor Lane	From Trig Point Towards Upperthong
08:00-08:15												
08:15-08:30												
08:30-08:45												
08:45-09:00												
09:00-09:15												
09:15-09:30								2			1	
09:30-09:45			1	1								
09:45-10:00										1		
10:00-10:15				2						1		
10:15-10:30							1					
10:30-10:45	1								1			
10:45-11:00							2	2				
11:00-11:15								1	2			
11:15-11:30			3									
11:30-11:45								3				
11:45-12:00			1						3			
12:00-12:15			2				1					
12:15-12:30									2			
12:30-12:45					2							2
12:45-13:00					1							
13:00-13:15			6			3						
13:15-13:30					2							
13:30-13:45												
13:45-14:00											3	
14:00-14:15												
14:15-14:30					1							1
14:30-14:45												
14:45-15:00												1
15:00-15:15												
15:15-15:30					1							
15:30-15:45								2				
15:45-16:00												
Total	1	0	13	3	7	3	4	10	8	2	4	4



Time	From Footpath HOL/60/20 Towards Moor Lane	From Footpath	From Footpath HOL/60/20 Towards Trig Point	From Moor Lane Towards Footpath HOL/60/20	From Moor Lane Towards Upperthong	From Moor Lane Towards Trig Point	From Upperthong Towards Footpath HOL/60/20	From Upperthong Towards Moor Lane	From Upperthong Towards Trig Point	From Trig Point Towards Footpath HOL/60/20	From Trig Point Towards Moor Lane	From Trig Point Towards Upperthong
08:00-08:15												
08:15-08:30												
08:30-08:45												
08:45-09:00				1								
09:00-09:15							1					
09:15-09:30												
09:30-09:45			1									
09:45-10:00												
10:00-10:15							1					
10:15-10:30						2						
10:30-10:45					1							
10:45-11:00					2	1						
11:00-11:15												
11:15-11:30			1									
11:30-11:45								1			1	
11:45-12:00										1		
12:00-12:15		1		1								
12:15-12:30												
12:30-12:45					2							
12:45-13:00		1							1			
13:00-13:15			1		1							
13:15-13:30												
13:30-13:45					2							
13:45-14:00												
14:00-14:15		1				1						
14:15-14:30		1			1			1				
14:30-14:45		1			2			1				1
14:45-15:00		1			1			1				1
15:00-15:15			1		1							
15:15-15:30												
15:30-15:45		1			1			1				
15:45-16:00												
Total	0	4	4	2	11	4	2	2	1	1	1	0



	From Footpath HOL/60/20 Towards Moor Lane	From Footpath HOL/60/20 towards Upperthong	From Footpath HOL/60/20 Towards Trig Point	From Moor Lane Towards Footpath HOL/60/20	From Moor Lane Towards Upperthong	From Moor Lane Towards Trig Point	From Upperthong Towards Footpath HOL/60/20	From Upperthong Towards Moor Lane	From Upperthong Towards Trig Point	From Trig Point Towards Footpath HOL/60/20	From Trig Point Towards Moor Lane	From Trig Point Towards Upperthong
08:00-08:15												
08:15-08:30					1							
08:30-08:45												
08:45-09:00												
09:00-09:15												
09:15-09:30					1		2					
09:30-09:45		1			2							
09:45-10:00												
10:00-10:15					1							
10:15-10:30												4
10:30-10:45												
10:45-11:00											1	
11:00-11:15												
11:15-11:30												
11:30-11:45												
11:45-12:00												
12:00-12:15					1				1			
12:15-12:30			1									
12:30-12:45												
12:45-13:00		1							1			
13:00-13:15												
13:15-13:30								1				2
13:30-13:45									1			
13:45-14:00		1	3									
14:00-14:15												
14:15-14:30												
14:30-14:45					1		2	1				1
14:45-15:00							1					
15:00-15:15												
15:15-15:30												
15:30-15:45												
15:45-16:00												
Total	0	3	4	0	7	0	5	2	3	0	1	7





Time	From Footpath HOL/60/20 Towards Moor Lane	From Footpath HOL/60/20 towards Upperthong	From Footpath HOL/60/20 Towards Trig Point	From Moor Lane Towards Footpath HOL/60/20	From Moor Lane Towards Upperthong	From Moor Lane Towards Trig Point	From Upperthong Towards Footpath HOL/60/20	From Upperthong Towards Moor Lane	From Upperthong Towards Trig Point	From Trig Point Towards Footpath HOL/60/20	From Trig Point Towards Moor Lane	From Trig Point Towards Upperthong
08:00-08:15	WOOT LUTE	opportiong	Ting I Olit	1102/00/20			TIOLIOUIZO			110000020		
08:15-08:30												
08:30-08:45								1				
08:45-09:00								1		1		
09:00-09:15										'		
09:15-09:30												
09:30-09:45								1				
09:45-10:00						1						
10:00-10:15					1	•						
10:15-10:30					•							
10:30-10:45						1	3					
10:45-11:00						1	-					
11:00-11:15					2	1		2	1			
11:15-11:30		1			2 2							
11:30-11:45			1					2				
11:45-12:00									1			
12:00-12:15									2			
12:15-12:30												
12:30-12:45							2					
12:45-13:00			2									
13:00-13:15					2				3			3
13:15-13:30		1										
13:30-13:45							2					
13:45-14:00							3					
14:00-14:15							4					
14:15-14:30			1									
14:30-14:45					1							2
14:45-15:00			1				1					
15:00-15:15												
15:15-15:30		1	1		1	1			2		1	
15:30-15:45		1			2						1	
15:45-16:00					2							2
Total	0	2	6	0	12	5	15	7	9	1	0	7

### Appendix D

**Cycle and Equestrian Movements** 



	Cycles	r Lane	Upper	) towards thong	Trig	0 Towards Point	Towards F HOL/6	0/20	Towards U		Towards		Towards HOL/			perthong Moor Lane	Towards	perthong Trig Point		Footpath /60/20	Towards N		Towards U	rig Point Jpperthong
	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses
08:00-08:15																								
08:15-08:30																								
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09:45-10:00									1															
10:00-10:15									1															
10:15-10:30									_						1									
10:30-10:45									2						_									
10:45-11:00															3									
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14:30-14:45 14:45-15:00									2															
14:45-15:00 15:00-15:15									2															
15:15-15:15																								
15:15-15:30																								
15:45-16:00																								
Total	0	0	0	0	0	0	0	0	16	2	3	0	0	0	4	2	0	0	3	0	0	0	0	0



Time	HOL/60/ Mod	Footpath 20 Towards or Lane	HOL/60/ Uppe	Footpath 20 towards erthong	HOL/60/2 Trig	Footpath 20 Towards Point	From Mo Towards HOL/6	Footpath 60/20		Jpperthong	Towards	oor Lane Trig Point	From Up Towards HOL/	Footpath 60/20	Towards	operthong Moor Lane	Towards	perthong Trig Point	Towards HOL	rig Point Footpath /60/20		Moor Lane	From Tr Towards U	Jpperthong
	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses
08:00-08:15																								
08:15-08:30																								
08:30-08:45																								
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15:00-15:15									1															
15:15-15:30																								
15:30-15:45									1															
15:45-16:00																								
Total	0	0	0	0	0	0	0	0	4	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0



Time	HOL/60/2 Mod	Footpath 20 Towards or Lane	HOL/60/2 Uppe	ootpath 20 towards erthong	HOL/60/2 Trig	Footpath 20 Towards Point	From Mo Towards HOL/	Footpath 60/20		Jpperthong	Towards	oor Lane Trig Point	From Up Towards HOL/	Footpath 60/20	Towards	operthong Moor Lane	Towards	perthong Trig Point	Towards HOL	rig Point Footpath /60/20	From Tr Towards M	Moor Lane	From Tr Towards U	Jpperthong
	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses
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15:15-15:30							1																	
15:30-15:45							1		1															
15:45-16:00									'															
Total	0	0	0	2	0	0	0	0	4	1	0	0	0	2	0	0	0	0	0	0	n	0	0	0



Time	HOL/60/ Mod	Footpath 20 Towards or Lane	HOL/60/2 Uppe	ootpath 0 towards rthong	Trig	0 Towards Point	From Mo Towards I HOL/6	Footpath 60/20	From Mo Towards U	Jpperthong	Towards	oor Lane Trig Point	HOL	Footpath 60/20	Towards I	perthong Moor Lane	Towards	operthong Trig Point	Towards HOL	rig Point Footpath /60/20	From Tr Towards M	Moor Lane	From Tr Towards U	pperthong
	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses	Cycles	Horses
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14:00-14:15							1														1			
14:15-14:30																								
14:30-14:45																								
14:45-15:00							1																	
15:00-15:15							l														1			
15:15-15:30																								
15:30-15:45							1																	
15:45-16:00																								
Total	0	0	0	0	0	0	9	0	0	0	2	0	0	0	3	0	1	0	0	0	0	0	0	0