

NR25

**Summaries of Censuses for
Cambridgeshire sites**

Mott MacDonald

LEVEL CROSSING TRAFFIC CENSUS

SURVEY REPORT JUNE 2016

3267-LON SITE C01 – CHITTERING LEVEL CROSSING

Job Number	3267-LON-C01
Checked	03/10/2016
Date	30/09/2016
Contact	Ross De Vere
Revision	1



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Introduction

Tracsis Traffic Data Limited were commissioned by Mott MacDonald to undertake a level crossing survey at Chittering Level Crossing. The survey consisted of a nine day video traffic census. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census	Appendix A
Road Closure	not available
Traffic Turning	not available
Blocking Back	not available
Speed Survey	not available

In addition to this, further analysis could be carried out in the form of different pedestrian classifications, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendix A)

The pedestrian census undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 18th June 2016 to Sunday 26th June 2016 over the hours 00:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. Resulting camera images recorded at each crossing were then analysed by experienced staff, all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below, all in accordance with the specification:

- Type of Foot Traffic Using the Crossing by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Unaccompanied Children
 4. Elderly
 5. Impaired
 6. Wheelchair
 7. Pushchair/Pram
 8. Mobility Scooter
 9. Railway Personnel

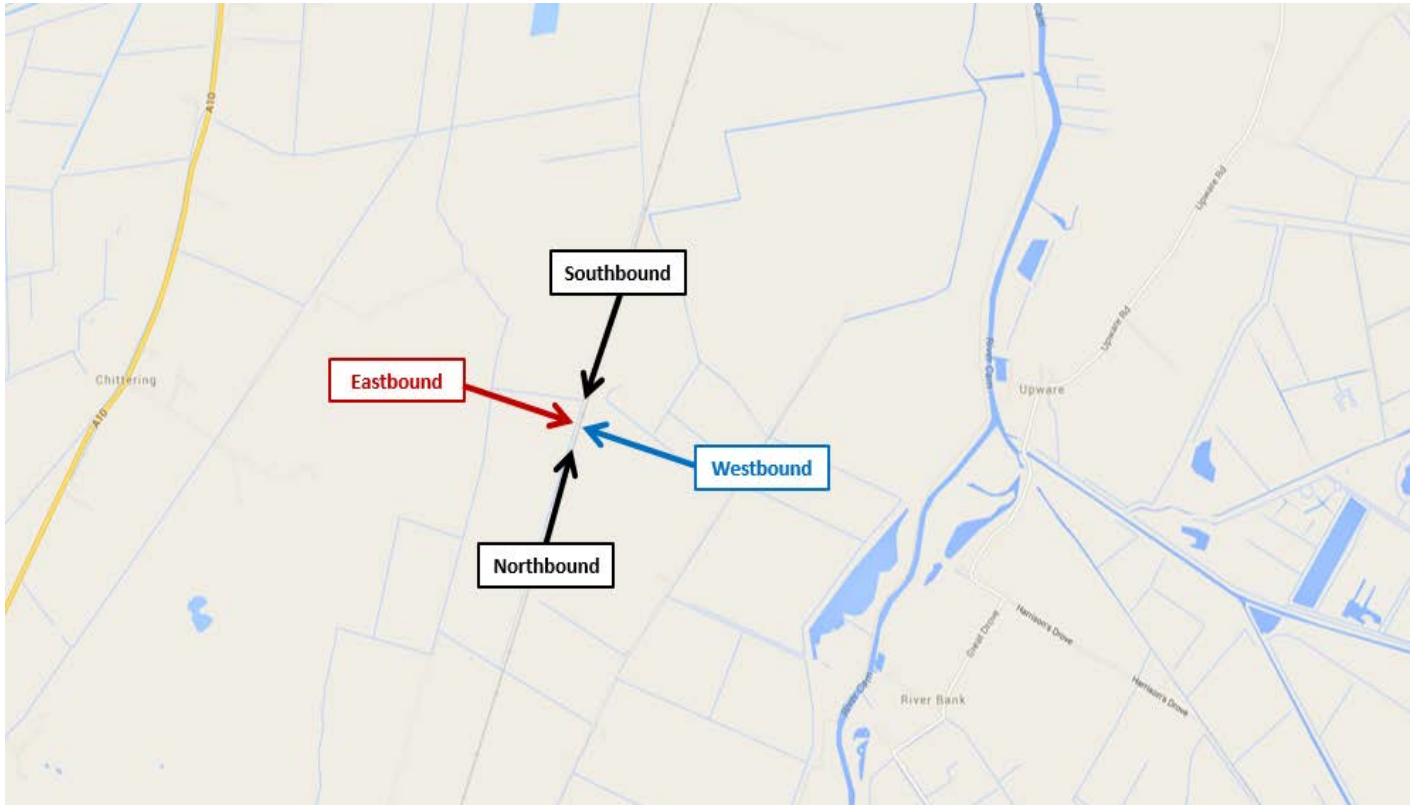
In addition, Tracsis Traffic Data Limited have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

Busiest Quarter Hourly Periods

No cyclists or horse-riders were observed on the level crossing during this census.

No pedestrians used the crossing during the survey period.

Figure 1 - Location Plan



Camera View/Site Equipment



Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Count, for pedestrian users, started on Saturday 18th June 2016 and continued for nine days until Sunday 26th June 2016 with survey hours of 00:00 to 24:00. This data is summarised below.

Throughout the whole period of the survey pedestrian traffic operated in normal free flow conditions and was only restricted by train movements at this site.

Footage will be provided for the survey, as per the specification. There was not a busiest day for 3267-LON Site C01, Chittering Level Crossing, as no pedestrians used the crossing.

Pedestrians

		Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheel-chair	Pushchair / Pram	Mobility Scooter	Railway Personnel	Total
Saturday	18/06/2016	0	0	0	0	0	0	0	0	0	0
Sunday	19/06/2016	0	0	0	0	0	0	0	0	0	0
Monday	20/06/2016	0	0	0	0	0	0	0	0	0	0
Tuesday	21/06/2016	0	0	0	0	0	0	0	0	0	0
Wednesday	22/06/2016	0	0	0	0	0	0	0	0	0	0
Thursday	23/06/2016	0	0	0	0	0	0	0	0	0	0
Friday	24/06/2016	0	0	0	0	0	0	0	0	0	0
Saturday	25/06/2016	0	0	0	0	0	0	0	0	0	0
Sunday	26/06/2016	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0

Equestrians and Cyclists*

Horses	Ridden bicycles	Pushed bicycles	Total
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Saturday	18/06/2016			
Sunday	19/06/2016			
Monday	20/06/2016			
Tuesday	21/06/2016	0	0	0
Wednesday	22/06/2016	0	0	0
Thursday	23/06/2016	0	0	0
Friday	24/06/2016	0	0	0
Saturday	25/06/2016	0	0	0
Sunday	26/06/2016	0	0	0
		0	0	0

*Please note that following discussion with Mott MacDonald following delivery of the first 3 days' worth of census data, the methodology was changed for counting pedestrians and cyclists during census days 4-9. For clarity, during the first 3 days' of census, counts of Ridden bicycles & pushed bicycles were categorised within the regular pedestrian classifications.

Weather

AM

PM

Saturday	18/06/2016	Dry, Cloudy, Windy	Dry, Cloudy, Windy
Sunday	03/07/2016	Sunny spells, Passing clouds	Sun, Scattered clouds, Rain later
Monday	20/06/2016	Overcast, Rain	Partly Sunny, Broken Clouds, Clearing Later
Tuesday	21/06/2016	Dry, Cloudy	Dry, Cloudy
Wednesday	22/06/2016	Cloudy, Rain	Passing Clouds, Sunny
Thursday	23/06/2016	Dry, Cloudy	Dry, Cloudy
Friday	24/06/2016	Dry, Cloudy	Dry, Cloudy
Saturday	25/06/2016	Dry, Sunny	Dry, Sunny
Sunday	26/06/2016	Dry, Windy	Dry, Windy, Sunny

Appendix A – Nine-Day Census

See Excel spreadsheet “3267-LON Site C01 Chittering Census”



Sky High-Count On Us



NETWORK RAIL

8801 LEVEL CROSSING TRAFFIC CENSUS

SURVEY REPORT JUNE 2013

TASK 4 SITE 17 – WEST RIVER BRIDGE LEVEL CROSSING

Job Number	8801-4
Checked	09/07/2013
Date	09/07/2013
Contact	Phil Steward
Revision	1



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Introduction

Sky High-Count On Us were commissioned by Network Rail under the Call-Off Contract Number 2012/LCTC&SS to undertake a level crossing survey at West River Bridge. The survey consisted of a nine day video traffic census, with the addition of an automatic traffic count installation. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

In accordance with our contract, the Surveys were carried out in association with Network Rail Specification GRD 007 dated 2nd February 2013. The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census	Appendix A
Road Closure	Appendix B
Traffic Turning	Appendix C
Blocking Back	Appendix D
Speed Survey	Not Available

In addition to this, further analysis could be carried out in the form of additional time periods, different vehicle/pedestrian classifications, and queuing data, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendix A)

The vehicle surveys were undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 8th June 2013 to Sunday 16th June 2013 over the hours 06:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. The resulting camera images (consisting of nine days, 18 hours per day) recorded at each crossing was then analysed by experienced staff all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below, all in accordance with the Network Rail specification:

- The Number of Road Vehicles Using The Crossing by Direction, Classified to:
 1. Cars
 2. Light Goods Vehicles
 3. Motorcycles
 4. Heavy Goods Vehicles
 5. Agricultural Vehicles
 6. Buses
 7. Equestrians
 8. Pedal Cycles
 9. Herded Animals
 10. Large/Slow Vehicles
- Type of Foot Traffic Using The Crossing. by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Railway Personnel
 4. Unaccompanied Children
- The Number of Trains Passing, by Direction

For each of the crossings the daily number of vehicles and pedestrians that used the level crossing over the 18 hours are summed for each category as specified. The specification also requires the busiest quarter hour period for both vehicles and pedestrians these are detailed below for each level crossing. In addition, Sky High-Count On Us have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

Survey Conduct/Data Presentation – Road Closure (Appendix B)

Road closure analysis is the period during which movement of vehicles and pedestrians over the level crossing is impeded by the complete operational cycle of equipment, recording the following:

- The barrier open and closure times, and the duration the road was closed in each instance.
- The minimum, maximum, and average road closure times.
- Whether or not a train utilises the crossing during each cycle of closure equipment.

Survey Conduct/Data Presentation – Traffic Turning (Appendix C)

Activity of vehicles utilising the side roads in the immediate vicinity of the level crossing, including any observations related to traffic turning causes any adjustment in the flow of other traffic

Survey Conduct/Data Presentation – Blocking Back (Appendix D)

Instances of when vehicles are forced to stop on or near the crossing due to queuing, coded to the following:

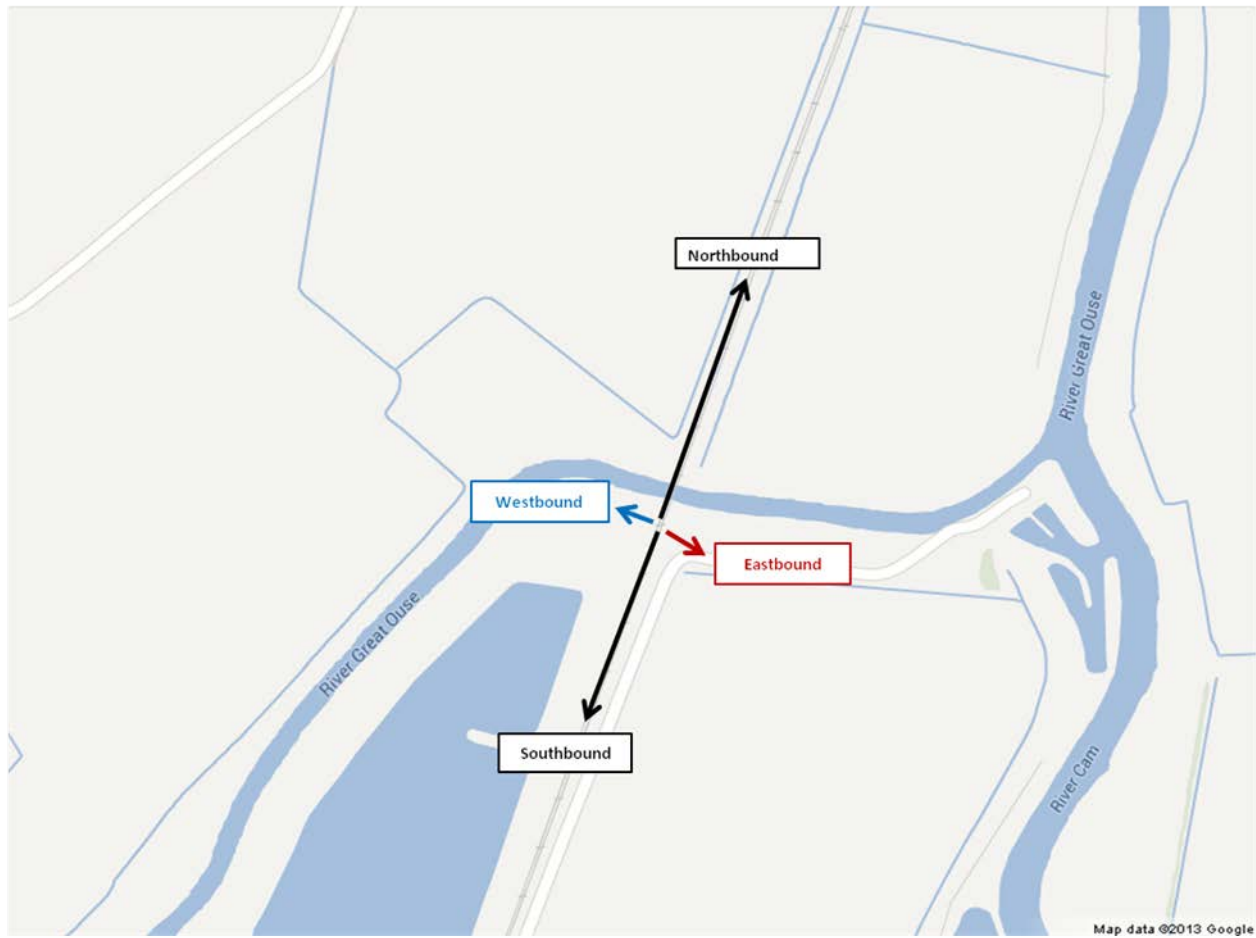
1. Amber 1: Rear of queue extends to between 11m and 50m downstream of the crossing.
2. Amber 2: Rear of queue extends to between the crossing barrier and 11m downstream.
3. Red 1: Vehicle fouls the barrier but not within 1.25m of the running line.
4. Red 2: Vehicle fouls the crossing line, or within 1.25m either side of the running line, and are stationary for three or more seconds.
5. Red 3: Similar to Red 2, but where no escape route is available, either forwards or backwards.

West River Bridge – Busiest Quarter Hourly Periods

For vehicles, there was no road crossing at this site.

For pedestrians, there were no incidents of pedestrians crossing at this site; however two pedestrians approach the railway line at 09:45 – 10:00 hours & 13:00 – 13:15 hours on Saturday 15th June 2013.

Figure 1 - Location Plan



Camera View/Site Equipment



Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Count for road, rail, and pedestrian users, started on Saturday 8th June 2013 and continued for nine days until Sunday 16th June 2013 with survey hours of 06:00 to 24:00. This data is summarised below.

Throughout the whole period of the survey traffic operated in normal free flow conditions and was only restricted during barrier closure periods.

Footage will be provided for the busiest day of the survey, as per the specification. The busiest day for Task 4 Site 17 West River Bridge, is Saturday 15th June 2013.

Vehicles

		Car	Lgv	Mcl	Hgv	Tractor & Trailers	Bus	Horse Riders	Pcl	Herded Animals & Horses	Large / Slow Vehicles	Total
Saturday	08/06/2013	0	0	0	0	0	0	0	0	0	0	0
Sunday	09/06/2013	0	0	0	0	0	0	0	0	0	0	0
Monday	10/06/2013	0	0	0	0	0	0	0	0	0	0	0
Tuesday	11/06/2013	0	0	0	0	0	0	0	0	0	0	0
Wednesday	12/06/2013	0	0	0	0	0	0	0	0	0	0	0
Thursday	13/06/2013	0	0	0	0	0	0	0	0	0	0	0
Friday	14/06/2013	0	0	0	0	0	0	0	0	0	0	0
Saturday	15/06/2013	0	0	0	0	0	0	0	0	0	0	0
Sunday	16/06/2013	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0

Pedestrians

		Adult	Accompanied Child	Railway Personnel	Unaccompanied Child	Total
Saturday	08/06/2013	0	0	0	0	0
Sunday	09/06/2013	0	0	0	0	0
Monday	10/06/2013	0	0	0	0	0
Tuesday	11/06/2013	0	0	0	0	0
Wednesday	12/06/2013	0	0	0	0	0
Thursday	13/06/2013	0	0	0	0	0
Friday	14/06/2013	0	0	0	0	0
Saturday	15/06/2013	0	0	0	0	0
Sunday	16/06/2013	0	0	0	0	0
		0	0	0	0	0

Trains

		Northbound	Southbound	Train Totals
Saturday	08/06/2013	57	53	110
Sunday	09/06/2013	37	38	75
Monday	10/06/2013	63	63	126
Tuesday	11/06/2013	71	68	139
Wednesday	12/06/2013	69	70	139
Thursday	13/06/2013	71	70	141
Friday	14/06/2013	69	70	139
Saturday	15/06/2013	54	52	106
Sunday	16/06/2013	39	37	76
		530	521	1051

Appendix A – Nine-Day Census

See Excel spreadsheet “8801 Task 4 Site 17 Census”

Appendix B – Road Closure

There were no incidents of road closure observed throughout the survey period.

Appendix C – Traffic Turning Analysis

There were no incidents of traffic turning observed throughout the survey period.

Appendix D – Blocking Back

There were no incidents of blocking back observed throughout the survey period.

MOTT MacDONALD

LEVEL CROSSING TRAFFIC CENSUS

SURVEY REPORT JUNE 2016

3267-LON SITE C04 – NUMBER 20 LEVEL CROSSING

Job Number	3267-LON-C04
Checked	Ross De Vere
Date	30/09/2016
Contact	Ross De Vere
Revision	1



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Introduction

Tracsis Traffic Data Limited were commissioned by Mott MacDonald to undertake a level crossing survey at Number 37 Level Crossing. The survey consisted of a nine day video traffic census. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census	Appendix A
Road Closure	not available
Traffic Turning	not available
Blocking Back	not available
Speed Survey	not available

In addition to this, further analysis could be carried out in the form of different pedestrian classifications, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendix A)

The pedestrian surveys were undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 18th June 2016 to Sunday 26th June 2016 over the hours 00:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. Resulting camera images recorded at each crossing were then analysed by experienced staff, all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below, all in accordance with the Network Rail specification:

- Type of Foot Traffic Using the Crossing by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Unaccompanied Children
 4. Elderly
 5. Impaired
 6. Wheelchair
 7. Pushchair/Pram
 8. Mobility Scooter
 9. Railway Personnel

For each of the crossings the daily number of pedestrians that used the level crossing over the 24 hours are summed for each category as specified. The specification also requires the busiest quarter hour period for pedestrians. These are detailed below for each level crossing. In addition, Tracsis Traffic Data Limited have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

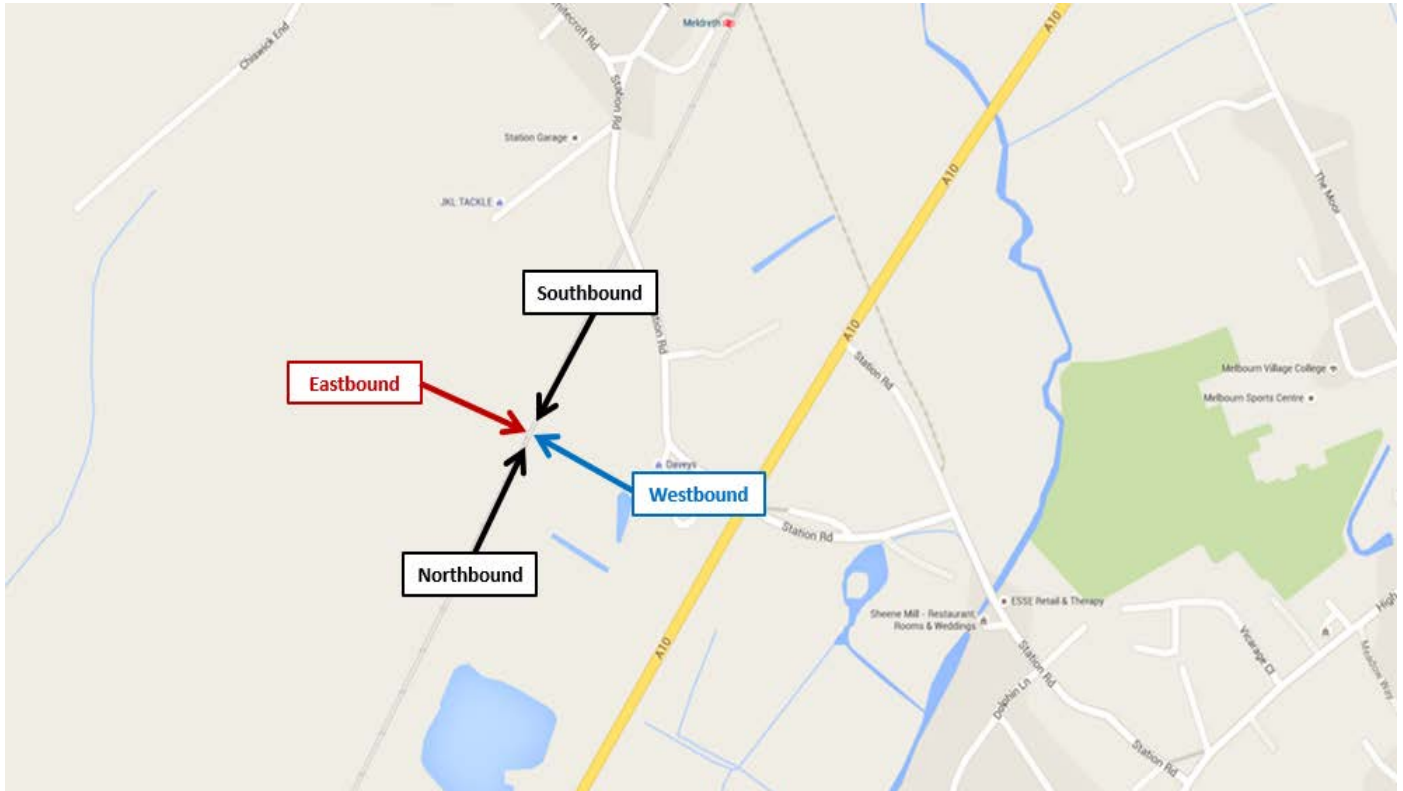
Number 37 Level Crossing – Busiest Quarter Hourly Periods

No cyclists or horse-riders were observed on the level crossing during this census.

For Pedestrians, the busiest quarter hourly period occurred at 10:45 on Day 2 with 4 pedestrians.

* This time period is the first occurrence of the busiest period, but not the only occurrence.

Figure 1 - Location Plan



Camera View/Site Equipment



Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Count, for pedestrian users, started on Saturday 18th June 2016 and continued for nine days until Sunday 26th June 2016 with survey hours of 00:00 to 24:00. This data is summarised below.

Throughout the whole period of the survey pedestrian traffic operated in normal free flow conditions and was only restricted by train movements at this site.

No separate equestrian and bicycle results were recorded for the first three days of the census. Cyclists pushing their vehicles were counted as pedestrians on these days.

Footage will be provided for the survey, as per the specification. The busiest day for 3267-LON Site C04, Number 20 Level Crossing, is Sunday 19th June 2016.

Pedestrians

	Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheel-chair	Pushchair / Pram	Mobility Scooter	Railway Personnel	Total
Saturday 18/06/2016	10	0	0	0	0	0	0	0	0	10
Sunday 19/06/2016	12	0	0	0	0	0	0	0	0	12
Monday 20/06/2016	4	0	1	0	0	0	0	0	0	5
Tuesday 21/06/2016	5	0	0	0	0	0	0	0	0	5
Wednesday 22/06/2016	1	0	0	0	0	0	0	0	0	1
Thursday 23/06/2016	7	0	0	0	0	0	0	0	0	7
Friday 24/06/2016	4	0	0	0	0	0	0	0	0	4
Saturday 25/06/2016	2	0	0	0	0	0	0	0	0	2
Sunday 26/06/2016	7	0	0	0	0	0	0	0	0	7
	52	0	1	0	0	0	0	0	0	53

Equestrians and Cyclists*

Horses	Ridden bicycles	Pushed bicycles	Total
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Saturday 18/06/2016	0	0	0	0
Sunday 19/06/2016	0	0	0	0
Monday 20/06/2016	0	0	0	0
Tuesday 21/06/2016	0	0	0	0
Wednesday 22/06/2016	0	0	0	0
Thursday 23/06/2016	0	0	0	0
Friday 24/06/2016	0	0	0	0
Saturday 25/06/2016	0	0	0	0
Sunday 26/06/2016	0	0	0	0
	0	0	0	0

*Please note that methodology was changed for counting pedestrians and cycles following day 3. Before their counts were included in the regular pedestrian counts.

Weather

AM

PM

Saturday	18/06/2016	Dry, Cloudy	Dry, Cloudy
Sunday	03/07/2016	Sunny Spells, Passing Clouds	Sun, scattered clouds, Rain later
Monday	20/06/2016	Overcast, Rain	Partly sunny, Broken clouds, Clearing later
Tuesday	21/06/2016	Dry, Cloudy	Dry, Cloudy
Wednesday	22/06/2016	Dry, passing clouds	Dry, passing clouds
Thursday	23/06/2016	Dry, Passing Clouds	Passing Clouds, Partial Rain
Friday	24/06/2016	Dry, Sunny	Dry, Sunny
Saturday	25/06/2016	Dry, Sunny	Dry, Sunny
Sunday	26/06/2016	Dry, Cloudy	Dry, Cloudy

Appendix A – Nine-Day Census

See Excel spreadsheet “3267-LON Site C04 Number 20 Census”

Mott MacDonald

LEVEL CROSSING TRAFFIC CENSUS

SURVEY REPORT JUNE 2016

3267-LON SITE C07 – NUMBER 37 LEVEL CROSSING

Job Number	3267-LON-C07
Checked	03/10/2016
Date	30/09/2016
Contact	Ross De Vere
Revision	1



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Introduction

Tracsis Traffic Data Limited were commissioned by Mott MacDonald to undertake a level crossing survey at Number 37 Level Crossing. The survey consisted of a nine-day video traffic census. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census	Appendix A
Road Closure	not available
Traffic Turning	not available
Blocking Back	not available
Speed Survey	not available

In addition to this, further analysis could be carried out in the form of different pedestrian classifications, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendix A)

The pedestrian surveys were undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 18th June 2016 to Sunday 26th June 2016 over the hours 00:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. Resulting camera images recorded at each crossing were then analysed by experienced staff, all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below, all in accordance with the Network Rail specification:

- Type of Foot Traffic Using the Crossing by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Unaccompanied Children
 4. Elderly
 5. Impaired
 6. Wheelchair
 7. Pushchair/Pram
 8. Mobility Scooter
 9. Railway Personnel

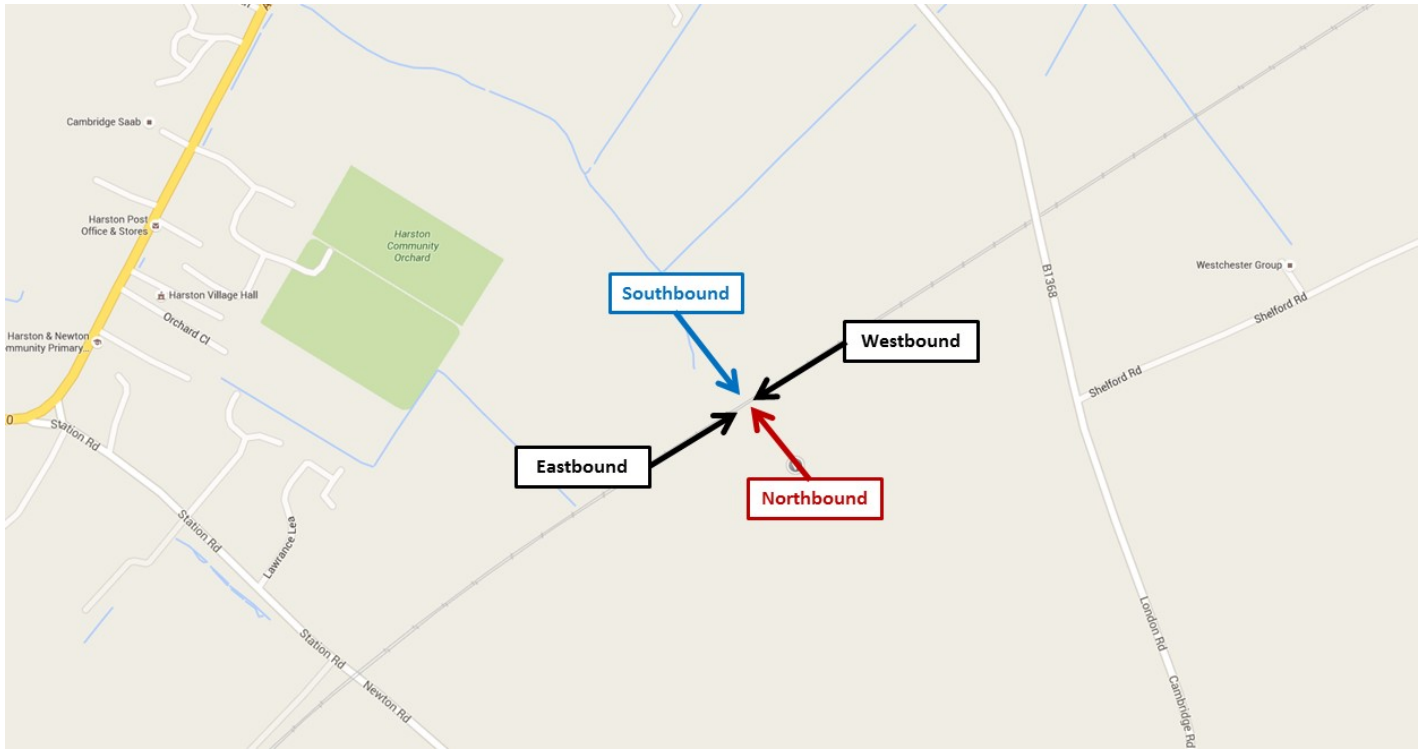
The daily number of pedestrians that used the level crossing over the 24 hours are summed for each category as specified. The specification also requires the busiest quarter hour period for pedestrians. In addition, Tracsis Traffic Data Limited have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

Number 37 Level Crossing – Busiest Quarter Hourly Periods

No cyclists or horse-riders were observed on the level crossing during this census.

For Pedestrians, the busiest quarter hourly period occurred at 15:15 on Day 3 with 4 pedestrians.

Figure 1 - Location Plan



Camera View/Site Equipment



Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Count, for pedestrian users, started on Saturday 18th June 2016 and continued for nine days until Sunday 26th June 2016 with survey hours of 00:00 to 24:00. This data is summarised below.

Throughout the whole period of the survey pedestrian traffic operated in normal free flow conditions and was only restricted by train movements at this site.

Footage will be provided for the survey, as per the specification. The busiest day for 3267-LON Site C07, Number 37 Level Crossing, is Monday 20th June 2016.

Pedestrians

	Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheel-chair	Pushchair / Pram	Mobility Scooter	Railway Personnel	Total
Saturday 18/06/2016	4	0	0	0	0	0	0	0	0	4
Sunday 19/06/2016	7	0	0	0	0	0	0	0	0	7
Monday 20/06/2016	4	2	0	0	0	0	0	0	0	6
Tuesday 21/06/2016	0	0	0	0	0	0	0	0	0	0
Wednesday 22/06/2016	2	0	0	0	0	0	0	0	0	2
Thursday 23/06/2016	2	0	0	0	0	0	0	0	0	2
Friday 24/06/2016	1	0	0	0	0	0	0	0	0	1
Saturday 25/06/2016	5	0	0	0	0	0	0	0	0	5
Sunday 26/06/2016	2	0	0	0	0	0	0	0	0	2
	27	2	0	0	0	0	0	0	0	29

Equestrians and Cyclists*

Horses	Ridden bicycles	Pushed bicycles	Total
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Saturday 18/06/2016			
Sunday 19/06/2016			
Monday 20/06/2016			
Tuesday 21/06/2016	0	0	0
Wednesday 22/06/2016	0	0	0
Thursday 23/06/2016	0	0	0
Friday 24/06/2016	0	0	0
Saturday 25/06/2016	0	0	0
Sunday 26/06/2016	0	0	0
	0	0	0

*Please note that following discussion with Mott MacDonald following delivery of the first 3 days' worth of census data, the methodology was changed for counting pedestrians and cyclists during census days 4-9. For clarity, during the first 3 days' of census, counts of Ridden bicycles & pushed bicycles were categorised within the regular pedestrian classifications.

Weather		AM	PM
Saturday	18/06/2016	Overcast	Sunny periods, Some showers
Sunday	03/07/2016	Sunny spells, Passing clouds	Sun, Scattered clouds, Rain later
Monday	20/06/2016	Overcast, Rain	Partly sunny, Broken clouds, Clearing later
Tuesday	21/06/2016	Dry, Cloudy	Dry, Cloudy
Wednesday	22/06/2016	Dry, Clear	Dry, Clear
Thursday	23/06/2016	Dry, Cloudy	Dry, Cloudy
Friday	24/06/2016	Dry, Sunny	Dry, Sunny
Saturday	25/06/2016	Dry, Cloudy	Dry, Sunny
Sunday	26/06/2016	Dry, Sunny	Dry, Sunny

Appendix A – Nine-Day Census

See Excel spreadsheet “3267-LON Site C07 Number 37 Census”

Mott MacDonald

LEVEL CROSSING TRAFFIC CENSUS

SURVEY REPORT JUNE 2016

3267-LON SITE C08 – ELY NORTH JUNCTION LEVEL CROSSING

Job Number	3267-LON-C08
Checked	05/10/2016
Date	30/09/2016
Contact	Ross De Vere
Revision	2



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Introduction

Tracsis Traffic Data Limited were commissioned by Mott MacDonald to undertake a level crossing survey at Ely North Junction Level Crossing. The survey consisted of a nine day video traffic census. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census	Appendix A
Road Closure	not available
Traffic Turning	not available
Blocking Back	not available
Speed Survey	not available

In addition to this, further analysis could be carried out in the form of different pedestrian classifications, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendix A)

The pedestrian surveys were undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 18th June 2016 to Sunday 26th June 2016 over the hours 00:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. Resulting camera images recorded at each crossing were then analysed by experienced staff, all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below, all in accordance with the Mott MacDonald specification:

- Type of Foot Traffic Using the Crossing by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Unaccompanied Children
 4. Elderly
 5. Impaired
 6. Wheelchair
 7. Pushchair/Pram
 8. Mobility Scooter
 9. Railway Personnel

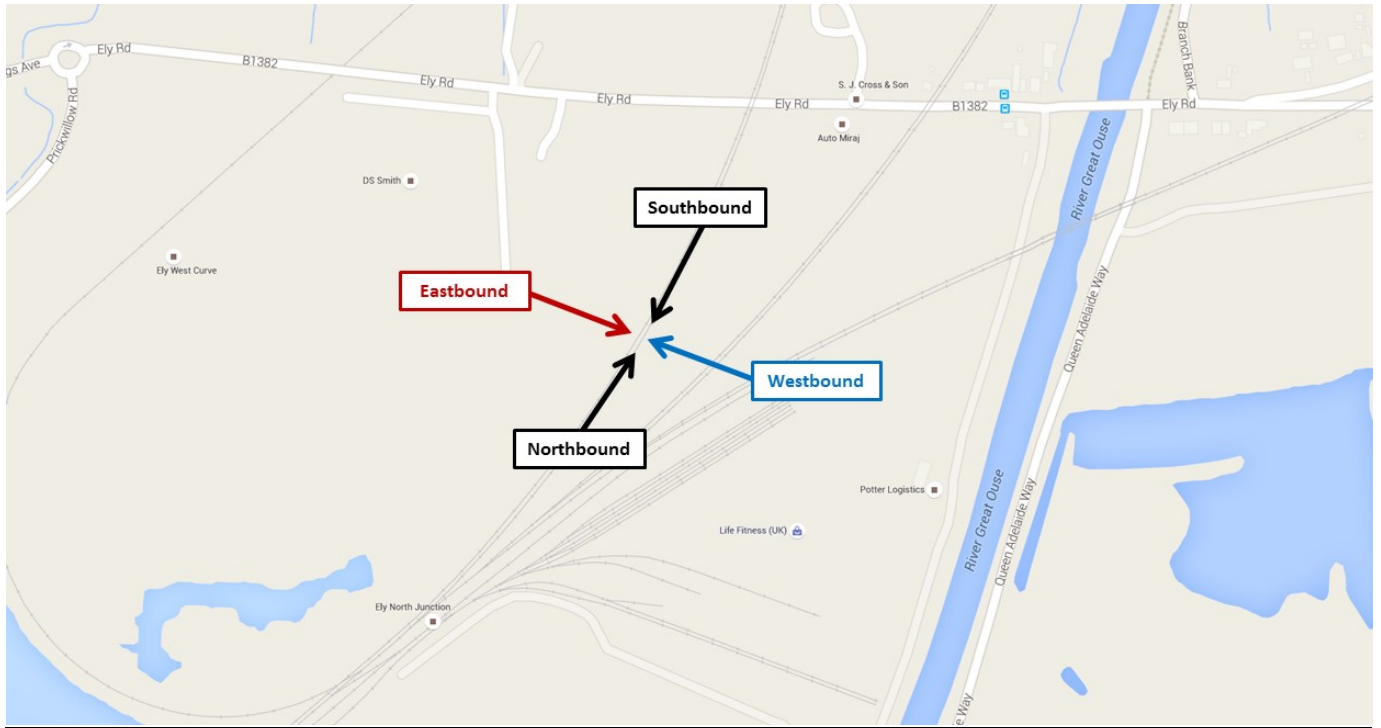
The daily number of pedestrians that used the level crossing over the 24 hours are summed for each category as specified. The specification also requires the busiest quarter hour period for pedestrians. In addition, Tracsis Traffic Data Limited have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

Ely North Busiest Quarter Hourly Periods

No cyclists or horse-riders were observed on the level crossing during this census.

For Pedestrians, the busiest quarter hourly period occurred at 12:00 on Day 2 with 5 pedestrians.

Figure 1 - Location Plan



Camera View/Site Equipment



Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Count, for pedestrian users, started on Saturday 18th June 2016 and continued for nine days until Sunday 26th June 2016 with survey hours of 00:00 to 24:00. This data is summarised below.

Throughout the whole period of the survey pedestrian traffic operated in normal free flow conditions and was only restricted by train movements at this site.

Footage will be provided for the survey, as per the specification. The busiest day for 3267-LON Site C08, Ely North Junction Level Crossing, is Sunday 19th June 2016.

Pedestrians

	Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheel-chair	Pushchair / Pram	Mobility Scooter	Railway Personnel	Total
Saturday 18/06/2016	1	0	0	0	0	0	0	0	0	1
Sunday 19/06/2016	7	1	0	0	0	0	0	0	0	8
Monday 20/06/2016	1	0	0	0	0	0	0	0	0	1
Tuesday 21/06/2016	1	0	0	0	0	0	0	0	0	1
Wednesday 22/06/2016	0	0	0	0	0	0	0	0	0	0
Thursday 23/06/2016	0	0	0	0	0	0	0	0	0	0
Friday 24/06/2016	0	0	0	0	0	0	0	0	0	0
Saturday 25/06/2016	0	0	0	0	0	0	0	0	0	0
Sunday 26/06/2016	0	0	0	0	0	0	0	0	0	0
	10	1	0	0	0	0	0	0	0	11

Equestrians and Cyclists*

Horses	Ridden bicycles	Pushed bicycles	Total
--------	-----------------	-----------------	-------

Saturday 18/06/2016			
Sunday 19/06/2016			
Monday 20/06/2016			
Tuesday 21/06/2016	0	0	0
Wednesday 22/06/2016	0	0	0
Thursday 23/06/2016	0	0	0
Friday 24/06/2016	0	0	0
Saturday 25/06/2016	0	0	0
Sunday 26/06/2016	0	0	0
	0	0	0

*Please note that following discussion with Mott MacDonald following delivery of the first 3 days' worth of census data, the methodology was changed for counting pedestrians and cyclists during census days 4-9. For clarity, during the first 3 days' of census, counts of Ridden bicycles & pushed bicycles were categorised within the regular pedestrian classifications.

Weather

AM

PM

Saturday	18/06/2016	Overcast	Sunny periods, Some showers
Sunday	03/07/2016	Sunny Spells, Passing Clouds	Sun, Scattered clouds, Rain later
Monday	20/06/2016	Overcast, Rain	Partly sunny, Broken clouds, Clearing later
Tuesday	21/06/2016	Cloudy, Windy	Cloudy, Windy
Wednesday	22/06/2016	Partial sun, Cloudy, Windy	Partial sun, Cloudy, Windy
Thursday	23/06/2016	Rain, Overcast	Rain, Overcast
Friday	24/06/2016	Dry, Cloudy	Dry, Cloudy
Saturday	25/06/2016	Dry, Cloudy, Partial rain	Dry, Cloudy
Sunday	26/06/2016	Dry, Cloudy	Dry, Cloudy

Appendix A – Nine-Day Census

See Excel spreadsheet “3267-LON Site C08 Ely North Junction 9-day Census”

Mott MacDonald

LEVEL CROSSING TRAFFIC CENSUS

SURVEY REPORT JUNE 2016

3267-LON SITE C09 – SECOND DROVE LEVEL CROSSING

Job Number	3267-LON-C09
Checked	03/10/2016
Date	30/09/2016
Contact	Ross De Vere
Revision	1



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Introduction

Tracsis Traffic Data Limited were commissioned by Mott MacDonald to undertake a level crossing survey at Number 37 Level Crossing. The survey consisted of a nine day video traffic census. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census	Appendix A
Road Closure	not available
Traffic Turning	not available
Blocking Back	not available
Speed Survey	not available

In addition to this, further analysis could be carried out in the form of different pedestrian classifications, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendix A)

The pedestrian surveys were undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 18th June 2016 to Sunday 26th June 2016 over the hours 00:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. Resulting camera images recorded at each crossing were then analysed by experienced staff, all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below in accordance with the specification:

- Type of Foot Traffic Using the Crossing by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Unaccompanied Children
 4. Elderly
 5. Impaired
 6. Wheelchair
 7. Pushchair/Pram
 8. Mobility Scooter
 9. Railway Personnel

The daily number of pedestrians that used the level crossing over the 24 hours are summed for each category as specified. The specification also requires the busiest quarter hour period for pedestrians. In addition, Tracsis Traffic Data Limited have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

Data Loss

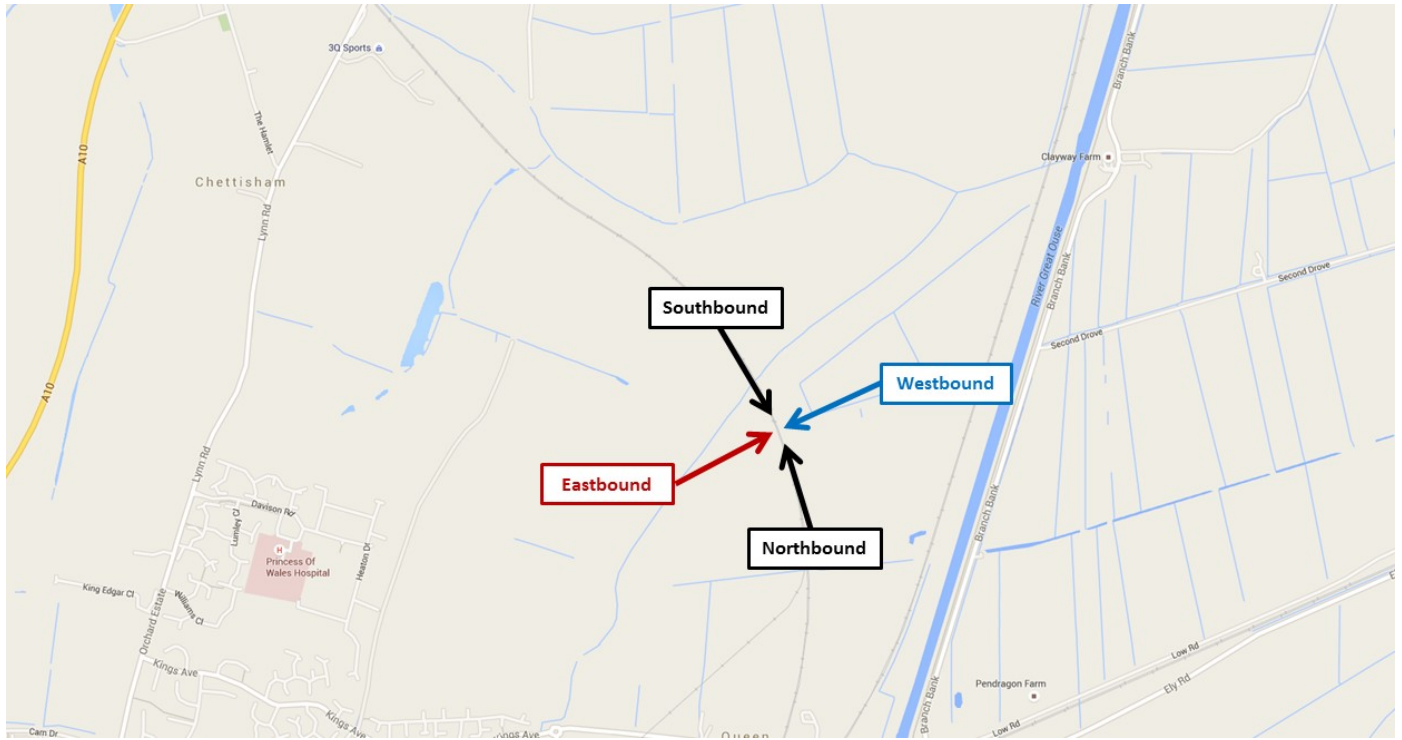
Due to maintenance of equipment, data loss occurred during the period 10:00-11:30 on Monday 20th June 2016. No use of the crossing by pedestrians was observed by our technician during this period.

Second Drove Level Crossing – Busiest Quarter Hourly Periods

No cyclists or horse-riders were observed on the level crossing during this census.

For Pedestrians, the busiest crossing period was 11:45 on Day 3, with 3 pedestrians.

Figure 1 - Location Plan



Camera View/Site Equipment



Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Count, for pedestrian users, started on Saturday 18th June 2016 and continued for nine days until Sunday 26th June 2016 with survey hours of 00:00 to 24:00 (please note Data Loss section of this report). This data is summarised below.

Throughout the whole period of the survey pedestrian traffic operated in normal free flow conditions and was only restricted by train movements at this site.

Footage will be provided for the survey, as per the specification. The busiest day for 3267-LON Site C09, Second Drove Level Crossing, is Friday 24th June 2016.

Pedestrians

Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheel-chair	Pushchair / Pram	Mobility Scooter	Railway Personnel	Total
-------	-------------------	---------------------	---------	----------	-------------	------------------	------------------	-------------------	-------

Saturday	18/06/2016	0	0	0	0	0	0	0	0	0
Sunday	19/06/2016	1	0	0	0	0	0	0	6	7
Monday	20/06/2016	0	0	0	0	0	0	0	0	0
Tuesday	21/06/2016	0	0	0	0	0	0	0	0	0
Wednesday	22/06/2016	0	0	0	1	0	0	0	0	1
Thursday	23/06/2016	0	0	0	0	0	0	0	1	1
Friday	24/06/2016	4	0	0	0	0	0	0	0	4
Saturday	25/06/2016	0	0	0	0	0	0	0	0	0
Sunday	26/06/2016	0	0	0	0	0	0	0	0	0
		5	0	0	1	0	0	0	7	13

Equestrians and Cyclists*

Horses	Ridden bicycles	Pushed bicycles	Total
--------	-----------------	-----------------	-------

Saturday	18/06/2016			
Sunday	19/06/2016			
Monday	20/06/2016			
Tuesday	21/06/2016	0	0	0
Wednesday	22/06/2016	0	0	0
Thursday	23/06/2016	0	0	0
Friday	24/06/2016	0	0	0
Saturday	25/06/2016	0	0	0
Sunday	26/06/2016	0	0	0
		0	0	0

*Please note that following discussion with Mott MacDonald following delivery of the first 3 days' worth of census data, the methodology was changed for counting pedestrians and cyclists during census days 4-9. For clarity, during the first 3 days' of census, counts of Ridden bicycles & pushed bicycles were categorised within the regular pedestrian classifications.

Weather

AM

PM

Saturday	18/06/2016	Cloudy, windy	Cloudy, windy
Sunday	19/06/2016	Overcast, Windy	Partially Cloudy, Windy
Monday	20/06/2016	Partial Rain, Windy	Partial Rain, Windy
Tuesday	21/06/2016	Sunny, Dry	Sunny, Dry
Wednesday	22/06/2016	Cloudy, Windy	Rain, Windy
Thursday	23/06/2016	Dry, Cloudy	Dry, Cloudy
Friday	24/06/2016	Sunny, Dry	Sunny, Dry
Saturday	25/06/2016	Cloudy	Cloudy, partial sun
Sunday	26/06/2016	Cloudy, Windy	Cloudy, Windy

Appendix A – Nine-Day Census

See Excel spreadsheet “3267-LON Site C09 Second Drove 9-day Census”

Mott MacDonald

LEVEL CROSSING TRAFFIC CENSUS

SURVEY REPORT JUNE 2016

3267-LON SITE C11 – FURLONG DROVE LEVEL CROSSING

Job Number	3267-LON-C11
Checked	25/11/2016
Date	25/11//2016
Contact	Ross De Vere
Revision	3



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Introduction

Tracsis Traffic Data Limited were commissioned by Mott MacDonald to undertake a level crossing survey at Furlong Drove Level Crossing. The survey consisted of a nine-day video traffic census. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census	Appendix A
Road Closure	not available
Traffic Turning	not available
Blocking Back	not available
Speed Survey	not available

In addition to this, further analysis could be carried out in the form of different pedestrian classifications, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendix A)

The pedestrian surveys were undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 18th June 2016 to Sunday 26th June 2016 over the hours 00:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. Resulting camera images recorded at each crossing were then analysed by experienced staff, all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below, all in accordance with the specification:

- The Number of Road Vehicles Using the Crossing by Direction, Classified to:
 1. Cars
 2. Light Goods Vehicles
 3. Motorcycles
 4. Heavy Goods Vehicles
 5. Agricultural Vehicles
 6. Buses
 7. Equestrians
 8. Pedal Cycles being ridden
 9. Pedal Cycles being walked
 10. Herded Animals
 11. Large/Slow Vehicles
- Type of Foot Traffic Using the Crossing by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Unaccompanied Children
 4. Elderly
 5. Impaired
 6. Wheelchair
 7. Pushchair/Pram
 8. Mobility Scooter
 9. Railway Personnel

The daily number of pedestrians that used the level crossing over the 24 hours are summed for each category as specified. The specification also requires the busiest quarter hour period for pedestrians. In addition, Tracsis Traffic Data Limited have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

Furlong Drove Level Crossing – Busiest Quarter Hourly Periods

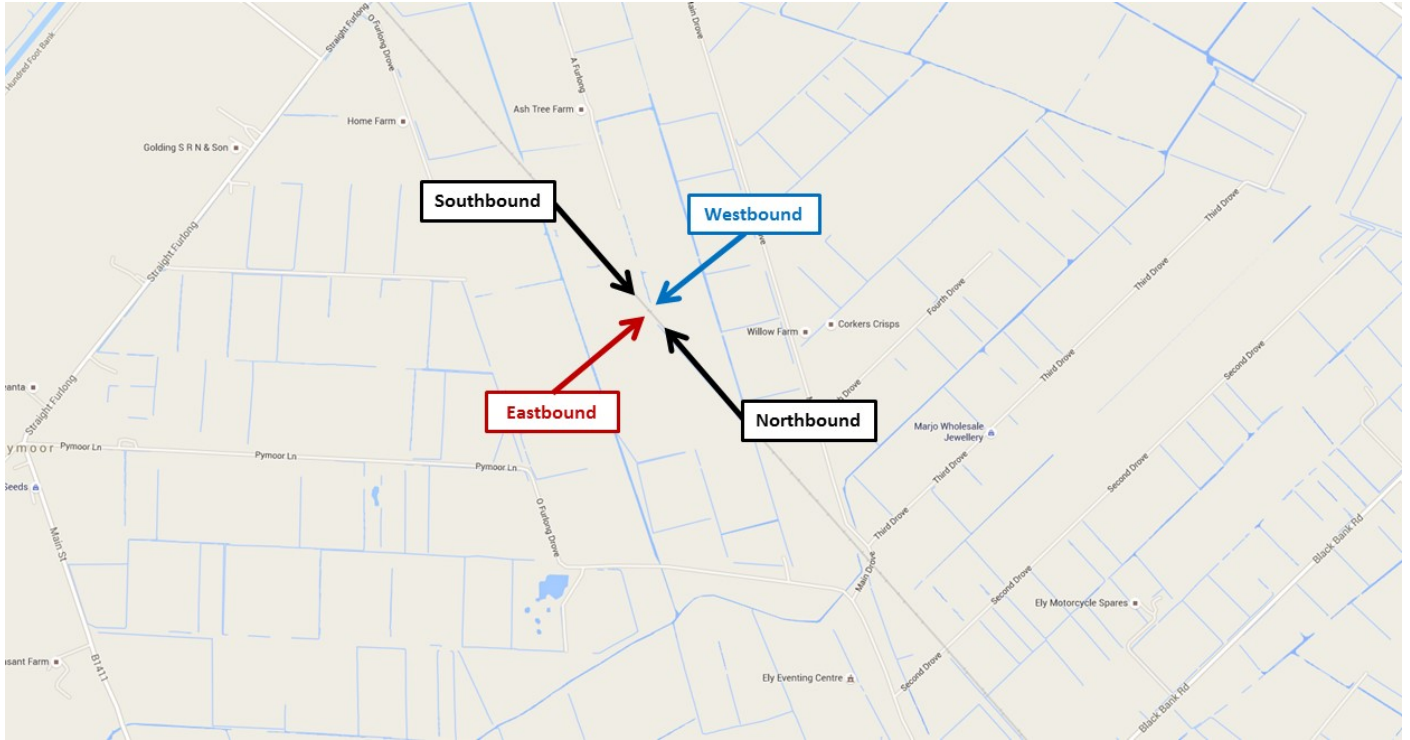
No vehicles were observed on the level crossing during the census.

No cyclists or horse-riders were observed on the level crossing during this census.

For Pedestrians, the busiest quarter hourly period occurred at 15:30 on Day 1* with 2 pedestrians.

* This time period is the first occurrence of the busiest period, but not the only occurrence.

Figure 1 - Location Plan



Camera View/Site Equipment



Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Count, for pedestrian users, started on Saturday 18th June 2016 and continued for nine days until Sunday 26th June 2016 with survey hours of 00:00 to 24:00. This data is summarised below.

Throughout the whole period of the survey pedestrian traffic operated in normal free flow conditions and was only restricted by train movements at this site.

Footage will be provided for the survey, as per the specification. There were multiple busiest days for 3267-LON Site C11, Furlong Drove Level Crossing, the first of these being Saturday 18th June 2016.

Vehicles

	Car	Lgv	Mcl	Hgv	Tractor & Trailer	Bus	Equestri an	Riding Bicycle	Walking Bicycle	Herded Animals & Horses	Large / Slow Vehicl e	Total
Saturday 18/06/2016	0	0	0	0	0	0	0	0	0	0	0	0
Sunday 19/06/2016	0	0	0	0	0	0	0	0	0	0	0	0
Monday 20/06/2016	0	0	0	0	0	0	0	0	0	0	0	0
Tuesday 21/06/2016	0	0	0	0	0	0	0	0	0	0	0	0
Wednesday 22/06/2016	0	0	0	0	0	0	0	0	0	0	0	0
Thursday 23/06/2016	0	0	0	0	0	0	0	0	0	0	0	0
Friday 24/06/2016	0	0	0	0	0	0	0	0	0	0	0	0
Saturday 25/06/2016	0	0	0	0	0	0	0	0	0	0	0	0
Sunday 26/06/2016	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0

No vehicles were observed to use the level crossing during the census.

Pedestrians

	Adult	Accom- panied Child	Unaccom- panied Child	Elderly	Impaired	Wheel- chair	Pushchair / Pram	Mobility Scooter	Railway Personnel	Total
Saturday 18/06/2016	2	0	0	0	0	0	0	0	0	2
Sunday 19/06/2016	0	0	0	0	0	0	0	0	0	0
Monday 20/06/2016	0	0	0	0	0	0	0	0	0	0
Tuesday 21/06/2016	2	0	0	0	0	0	0	0	0	2
Wednesday 22/06/2016	0	0	0	0	0	0	0	0	2	2
Thursday 23/06/2016	0	0	0	0	0	0	0	0	0	0
Friday 24/06/2016	0	0	0	0	0	0	0	0	0	0
Saturday 25/06/2016	0	0	0	0	0	0	0	0	0	0
Sunday 26/06/2016	0	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	2	6

Weather

AM

PM

Saturday	18/06/2016	Overcast	Sunny periods, some showers
Sunday	03/07/2016	Sunny spells, passing clouds	Sun, scattered clouds, rain later
Monday	20/06/2016	Overcast, rain	Partly sunny, broken clouds, clearing later
Tuesday	21/06/2016	Dry, Passing clouds	Dry, Passing clouds
Wednesday	22/06/2016	Rain, Cloudy	Overcast, Passing Clouds
Thursday	23/06/2016	Dry, Passing Clouds	Dry, Passing Clouds
Friday	24/06/2016	Dry, Sunny, passing clouds	Rain, Dark Clouds
Saturday	25/06/2016	Dry, Cloudy	Dry, Clear, passing clouds
Sunday	26/06/2016	Dry, Sunny, passing clouds	Dry, Sunny, passing clouds

Appendix A – Nine-Day Census

See Excel spreadsheet “3267-LON Site C11 Furlong Drove 9-day Census”

Mott MacDonald

LEVEL CROSSING TRAFFIC CENSUS

SURVEY REPORT JUNE 2016

3267-LON SITE C12 – SILT DROVE LEVEL CROSSING

Job Number	3267-LON-C12
Checked	03/10/2016
Date	30/09/2016
Contact	Ross De Vere
Revision	1



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Introduction

Tracsis Traffic Data Limited were commissioned by Mott MacDonald to undertake a level crossing survey at Silt Drove Level Crossing. The survey consisted of a nine day video traffic census. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census	Appendix A
Road Closure	not available
Traffic Turning	not available
Blocking Back	not available
Speed Survey	not available

In addition to this, further analysis could be carried out in the form of different pedestrian classifications, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendix A)

The pedestrian surveys were undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 18th June 2016 to Sunday 26th June 2016 over the hours 00:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. Resulting camera images recorded at each crossing were then analysed by experienced staff, all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below, all in accordance with the specification:

- Type of Foot Traffic Using the Crossing by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Unaccompanied Children
 4. Elderly
 5. Impaired
 6. Wheelchair
 7. Pushchair/Pram
 8. Mobility Scooter
 9. Railway Personnel

The daily number of pedestrians that used the level crossing over the 24 hours are summed for each category as specified. The specification also requires the busiest quarter hour period for pedestrians. In addition, Tracsis Traffic Data Limited have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

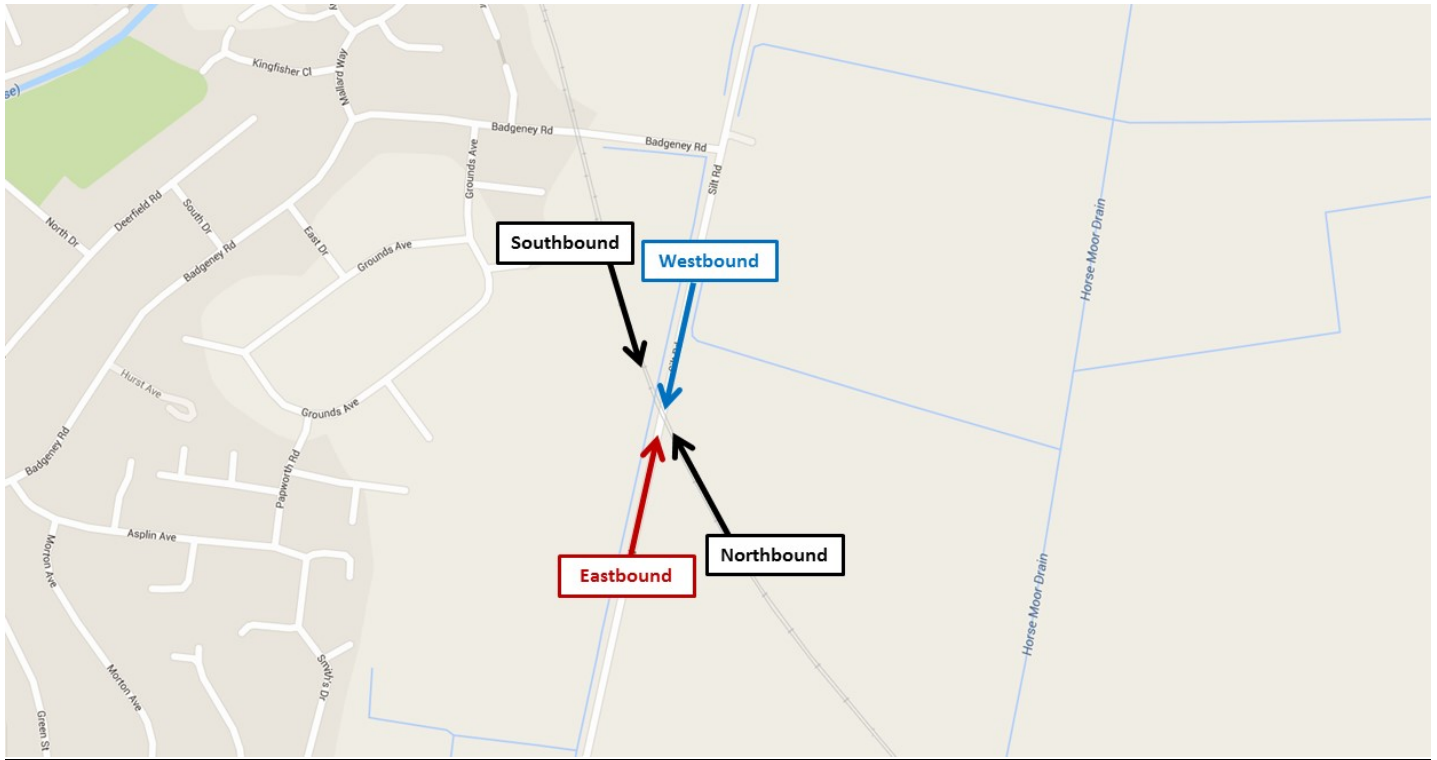
Busiest Quarter Hourly Periods

No horse-riders were observed on the level crossing during this census.

Day 9 was the busiest day for cyclists, with 19 cyclists using the level crossing that day.

For Pedestrians, the busiest quarter hourly period occurred at 19:00 on Day 5 with 20 pedestrians.

Figure 1 - Location Plan



Camera View/Site Equipment



Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Count, for pedestrian users, started on Saturday 18th June 2016 and continued for nine days until Sunday 26th June 2016 with survey hours of 00:00 to 24:00. This data is summarised below.

Throughout the whole period of the survey pedestrian traffic operated in normal free flow conditions and was only restricted by train movements at this site.

Footage will be provided for the survey, as per the specification. The busiest day for 3267-LON Site C12, Silt Drove Level Crossing, is Wednesday 22nd June 2016.

Pedestrians

	Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheel-chair	Pushchair / Pram	Mobility Scooter	Railway Personnel	Total
Saturday 18/06/2016	46	11	0	0	0	0	4	0	0	61
Sunday 19/06/2016	56	5	0	0	0	0	1	0	0	62
Monday 20/06/2016	31	3	0	0	0	0	1	0	0	35
Tuesday 21/06/2016	32	0	0	0	0	0	1	0	0	33
Wednesday 22/06/2016	28	14	0	0	0	0	0	0	0	42
Thursday 23/06/2016	13	0	0	0	0	0	0	0	0	13
Friday 24/06/2016	30	0	0	0	0	0	1	0	0	31
Saturday 25/06/2016	25	2	0	0	0	0	1	0	0	28
Sunday 26/06/2016	47	4	0	0	0	0	1	0	0	52
	308	39	0	0	0	0	10	0	0	357

Equestrians and Cyclists*

Horses	Ridden bicycles	Pushed bicycles	Total
--------	-----------------	-----------------	-------

Saturday	18/06/2016				
Sunday	19/06/2016				
Monday	20/06/2016				
Tuesday	21/06/2016	0	0	0	0
Wednesday	22/06/2016	0	0	7	7
Thursday	23/06/2016	0	0	3	3
Friday	24/06/2016	0	0	0	0
Saturday	25/06/2016	0	0	10	10
Sunday	26/06/2016	0	0	19	19
		0	0	39	39

*Please note that following discussion with Mott MacDonald following delivery of the first 3 days' worth of census data, the methodology was changed for counting pedestrians and cyclists during census days 4-9. For clarity, during the first 3 days' of census, counts of Ridden bicycles & pushed bicycles were categorised within the regular pedestrian classifications.

Weather		AM	PM
Saturday	18/06/2016	Dry, Cloudy	Dry, Cloudy
Sunday	19/06/2016	Sunny, passing clouds	Dry, passing clouds
Monday	20/06/2016	Rain, Overcast	Cloudy, sunny later on
Tuesday	21/06/2016	Sunny, passing clouds	Sunny, passing clouds
Wednesday	22/06/2016	Partial rain, cloudy	Rain, cloudy
Thursday	23/06/2016	Rain, Cloudy	Overcast
Friday	24/06/2016	Sunny, passing clouds	Partial Rain, Cloudy
Saturday	25/06/2016	Dry, Sunny	Dry, Sunny
Sunday	26/06/2016	Dry, Sunny	Dry, Sunny

Appendix A – Nine-Day Census

See Excel spreadsheet “3267-LON Site C12 Silt Drove 9-day Census”

Mott MacDonald

LEVEL CROSSING TRAFFIC CENSUS

SURVEY REPORT JUNE 2016

3267-LON SITE C13 – MIDDLE DROVE LEVEL CROSSING

Job Number	3267-LON-C13
Checked	03/10/2016
Date	30/09/2016
Contact	Ross De Vere
Revision	1



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Introduction

Tracsis Traffic Data Limited were commissioned by Mott MacDonald to undertake a level crossing survey at Middle Drove Level Crossing. The survey consisted of a nine day video traffic census. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census	Appendix A
Road Closure	not available
Traffic Turning	not available
Blocking Back	not available
Speed Survey	not available

In addition to this, further analysis could be carried out in the form of different pedestrian classifications, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendix A)

The pedestrian surveys were undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 18th June 2016 to Sunday 26th June 2016 over the hours 00:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. Resulting camera images recorded at each crossing were then analysed by experienced staff, all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below, all in accordance with the specification:

- Type of Foot Traffic Using the Crossing by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Unaccompanied Children
 4. Elderly
 5. Impaired
 6. Wheelchair
 7. Pushchair/Pram
 8. Mobility Scooter
 9. Railway Personnel

The daily number of pedestrians that used the level crossing over the 24 hours are summed for each category as specified. The specification also requires the busiest quarter hour period for pedestrians. In addition, Tracsis Traffic Data Limited have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

Busiest Quarter Hourly Periods

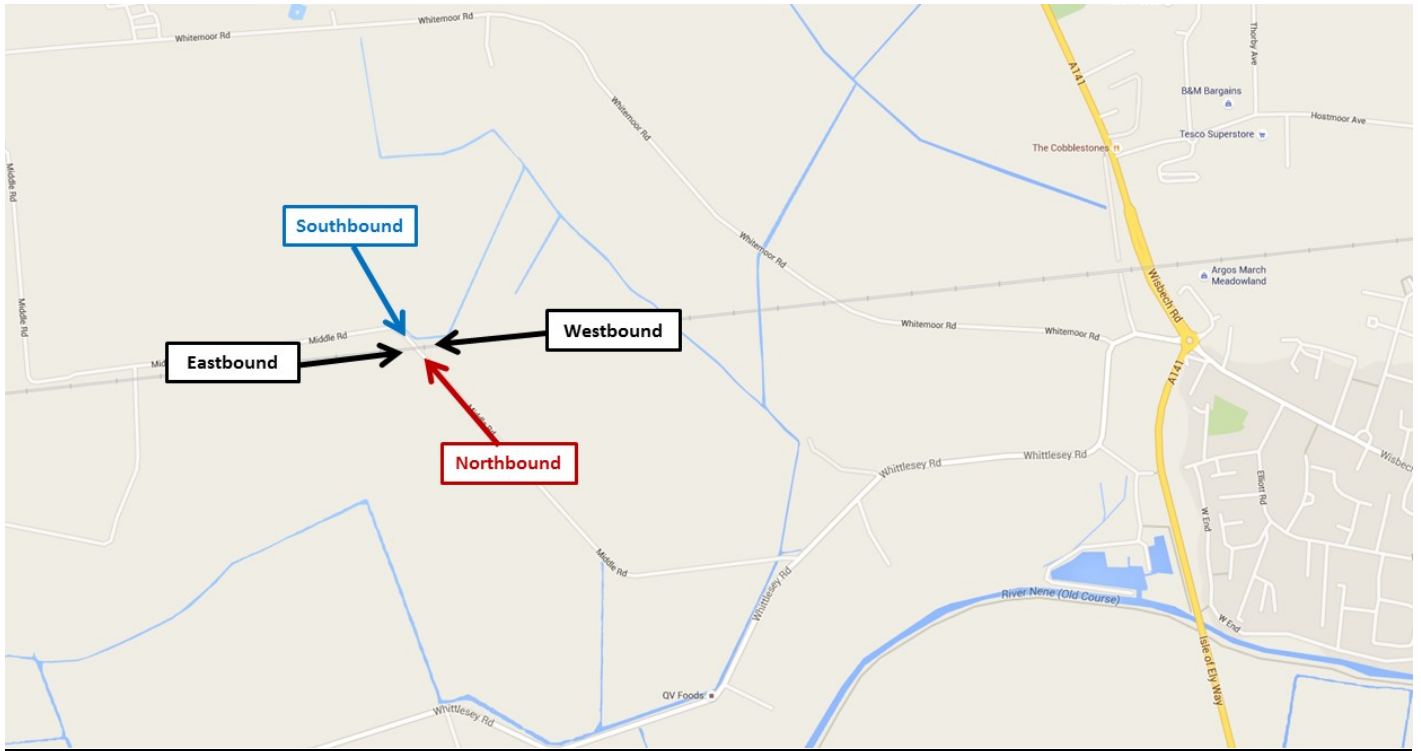
1 horse-rider was observed on the level crossing during this census.

18 cyclists were observed during the census. All bicycles were pushed over the crossing by the users.

For Pedestrians, the busiest quarter hourly period occurred at 16:00 on Day 2* with 4 pedestrians.

* This time period is the first occurrence of the busiest period, but not the only occurrence.

Figure 1 - Location Plan



Camera View/Site Equipment



Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Count, for pedestrian users, started on Saturday 18th June 2016 and continued for nine days until Sunday 26th June 2016 with survey hours of 00:00 to 24:00. This data is summarised below.

Throughout the whole period of the survey pedestrian traffic operated in normal free flow conditions and was only restricted by train movements at this site.

Footage will be provided for the survey, as per the specification. The two busiest days for 3267-LON Site C13, Middle Drove Level Crossing, are Sunday 19th and Tuesday 21st June 2016.

Pedestrians

	Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheel-chair	Pushchair / Pram	Mobility Scooter	Railway Personnel	Total
Saturday 18/06/2016	11	0	0	0	0	0	0	0	0	11
Sunday 19/06/2016	11	1	0	0	0	0	0	0	0	12
Monday 20/06/2016	2	0	0	0	0	0	0	0	0	2
Tuesday 21/06/2016	9	0	0	0	0	0	0	0	2	11
Wednesday 22/06/2016	6	0	0	0	0	0	0	0	0	6
Thursday 23/06/2016	5	0	0	0	0	0	0	0	0	5
Friday 24/06/2016	4	0	0	0	0	0	0	0	0	4
Saturday 25/06/2016	0	0	0	0	0	0	0	0	0	0
Sunday 26/06/2016	0	0	0	0	0	0	0	0	0	0
	48	1	0	0	0	0	0	0	2	51

Equestrians and Cyclists*

Horses	Ridden bicycles	Pushed bicycles	Total
--------	-----------------	-----------------	-------

Saturday	18/06/2016				
Sunday	19/06/2016				
Monday	20/06/2016				
Tuesday	21/06/2016	1	0	1	2
Wednesday	22/06/2016	0	0	2	2
Thursday	23/06/2016	0	0	3	3
Friday	24/06/2016	0	0	0	0
Saturday	25/06/2016	0	0	5	5
Sunday	26/06/2016	0	0	7	7
		1	0	18	19

*Please note that following discussion with Mott MacDonald following delivery of the first 3 days' worth of census data, the methodology was changed for counting pedestrians and cyclists during census days 4-9. For clarity, during the first 3 days' of census, counts of Ridden bicycles & pushed bicycles were categorised within the regular pedestrian classifications.

Weather

AM

PM

Saturday	18/06/2016	Overcast	Sunny periods, some showers
Sunday	03/07/2016	Sunny spells, passing clouds	Sun, scattered clouds, rain later
Monday	20/06/2016	Overcast, rain	Partly sunny, broken clouds, clearing later
Tuesday	21/06/2016	Sunny, Passing Clouds	Sunny, Passing Clouds
Wednesday	22/06/2016	Dry, Cloudy	Dry, Cloudy
Thursday	23/06/2016	Dry, Dark Clouds	Dry, Clouds
Friday	24/06/2016	Sunny, passing clouds	dry, cloudy
Saturday	25/06/2016	Dry, Cloudy	Dry, Cloudy
Sunday	26/06/2016	Dry, Sunny	Dry, Sunny

Appendix A – Nine-Day Census

See Excel spreadsheet “3267-LON Site C13 Middle Drove 9-day Census”

Mott MacDonald

LEVEL CROSSING TRAFFIC CENSUS

SURVEY REPORT JUNE 2016

3267-LON SITE C14 – EASTREA CROSS DROVE LEVEL CROSSING

Job Number	3267-LON-C14
Checked	03/10/2016
Date	26/09/2016
Contact	Ross De Vere
Revision	1



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Introduction

Tracsis Traffic Data Limited were commissioned by Mott MacDonald to undertake a level crossing survey at Eastrea Cross Drove Level Crossing. The survey consisted of a nine day video traffic census. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census	Appendix A
Road Closure	not available
Traffic Turning	not available
Blocking Back	not available
Speed Survey	not available

In addition to this, further analysis could be carried out in the form of different pedestrian classifications, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendix A)

The pedestrian surveys were undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 18th June 2016 to Sunday 26th June 2016 over the hours 00:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. Resulting camera images recorded at each crossing were then analysed by experienced staff, all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below, all in accordance with the specification.

- Type of Foot Traffic Using the Crossing by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Unaccompanied Children
 4. Elderly
 5. Impaired
 6. Wheelchair
 7. Pushchair/Pram
 8. Mobility Scooter
 9. Railway Personnel

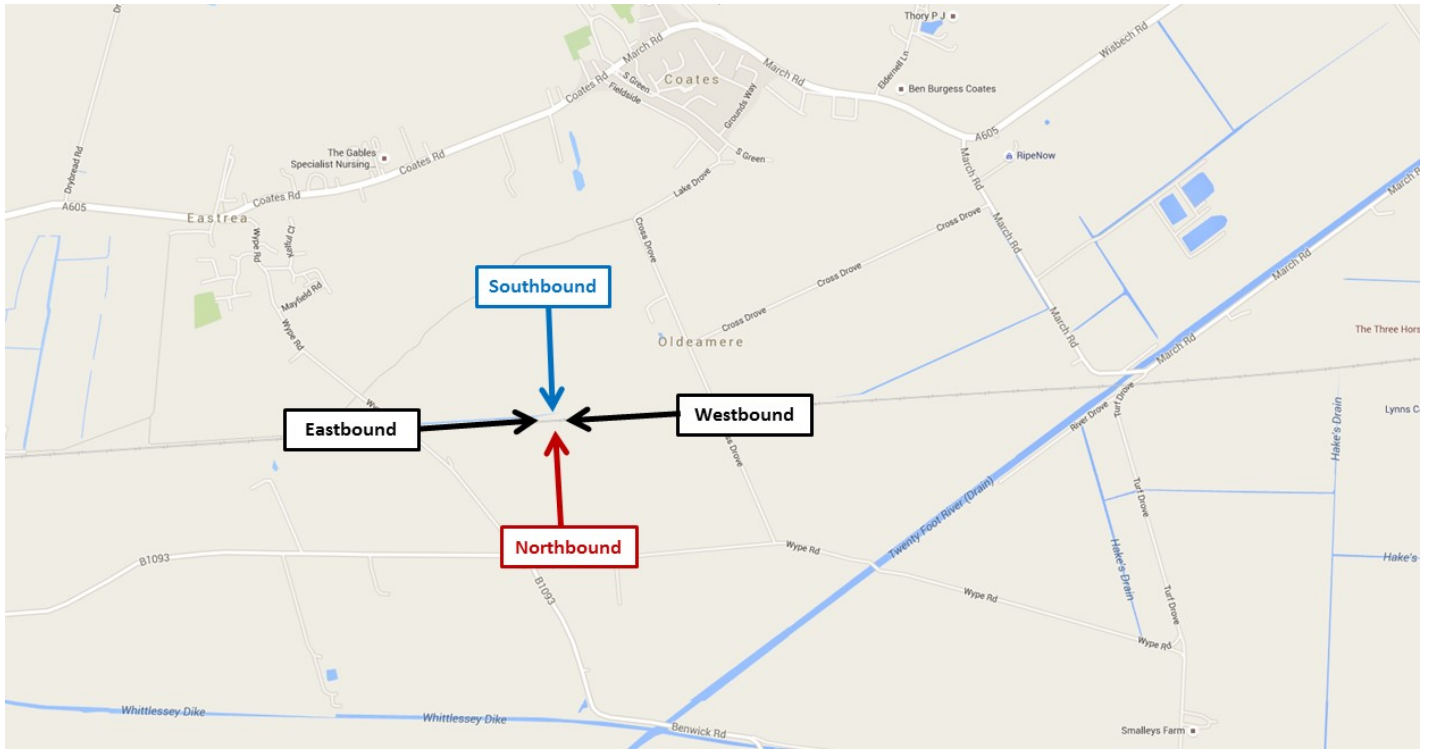
The daily number of pedestrians that used the level crossing over the 24 hours are summed for each category as specified. The specification also requires the busiest quarter hour period for pedestrians. In addition, Tracsis Traffic Data Limited have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

Busiest Quarter Hourly Periods

No cyclists or horse-riders were observed on the level crossing during this census.

For Pedestrians, the busiest quarter hourly period occurred at 18:00 on Day 2 with 2 pedestrians.

Figure 1 - Location Plan



Camera View/Site Equipment



Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Count, for pedestrian users, started on Saturday 18th June 2016 and continued for nine days until Sunday 26th June 2016 with survey hours of 00:00 to 24:00. This data is summarised below.

Throughout the whole period of the survey pedestrian traffic operated in normal free flow conditions and was only restricted by train movements at this site.

Footage will be provided for the survey, as per the specification. The busiest day for 3267-LON Site C14 Eastrea Cross Drove Level Crossing, is Sunday 19th June 2016.

Pedestrians

	Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheel-chair	Pushchair / Pram	Mobility Scooter	Railway Personnel	Total
Saturday 18/06/2016	0	0	0	0	0	0	0	0	0	0
Sunday 19/06/2016	2	0	0	0	0	0	0	0	0	2
Monday 20/06/2016	0	0	0	0	0	0	0	0	0	0
Tuesday 21/06/2016	0	0	0	0	0	0	0	0	0	0
Wednesday 22/06/2016	0	0	0	0	0	0	0	0	0	0
Thursday 23/06/2016	0	0	0	0	0	0	0	0	0	0
Friday 24/06/2016	0	0	0	0	0	0	0	0	0	0
Saturday 25/06/2016	0	0	0	0	0	0	0	0	0	0
Sunday 26/06/2016	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	2

Equestrians and Cyclists*

Horses	Ridden bicycles	Pushed bicycles	Total
--------	-----------------	-----------------	-------

Saturday 18/06/2016			
Sunday 19/06/2016			
Monday 20/06/2016			
Tuesday 21/06/2016	0	0	0
Wednesday 22/06/2016	0	0	0
Thursday 23/06/2016	0	0	0
Friday 24/06/2016	0	0	0
Saturday 25/06/2016	0	0	0
Sunday 26/06/2016	0	0	0
	0	0	0

*Please note that following discussion with Mott MacDonald following delivery of the first 3 days' worth of census data, the methodology was changed for counting pedestrians and cyclists during census days 4-9. For clarity, during the first 3 days' of census, counts of Ridden bicycles & pushed bicycles were categorised within the regular pedestrian classifications.

Weather

AM

PM

Saturday	18/06/2016	Dry, windy, cloudy	Dry, windy, cloudy
Sunday	03/07/2016	Dry, Cloudy	Dry, Cloudy
Monday	20/06/2016	Overcast	Cloudy, Windy
Tuesday	21/06/2016	Sunny	Sunny
Wednesday	22/06/2016	Dry, Cloudy	Dry, Cloudy
Thursday	23/06/2016	Dry, Cloudy	Dry, Cloudy
Friday	24/06/2016	Sunny, Passing Clouds	Sunny, Passing Clouds
Saturday	25/06/2016	Dry, Sunny	Dry, Sunny
Sunday	26/06/2016	Dry, Sunny, Windy	Dry, Sunny, Windy

Appendix A – Nine-Day Census

See Excel spreadsheet “3267-LON Site C14 Eastrea Cross Drove 9-day Census”

Mott MacDonald

LEVEL CROSSING TRAFFIC CENSUS

SURVEY REPORT JUNE 2016

3267-LON SITE C15 – BRICKYARD DROVE LEVEL CROSSING

Job Number	3267-LON-C15
Checked	03/10/2016
Date	30/09/2016
Contact	Ross De Vere
Revision	1



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Introduction

Tracsis Traffic Data Limited were commissioned by Mott MacDonald to undertake a level crossing survey at Brickyard Drove Level Crossing. The survey consisted of a nine day video traffic census. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census	Appendix A
Road Closure	not available
Traffic Turning	not available
Blocking Back	not available
Speed Survey	not available

In addition to this, further analysis could be carried out in the form of different pedestrian classifications, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendix A)

The pedestrian surveys were undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 18th June 2016 to Sunday 26th June 2016 over the hours 00:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. Resulting camera images recorded at each crossing were then analysed by experienced staff, all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below, all in accordance with the specification:

- Type of Foot Traffic Using the Crossing by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Unaccompanied Children
 4. Elderly
 5. Impaired
 6. Wheelchair
 7. Pushchair/Pram
 8. Mobility Scooter
 9. Railway Personnel

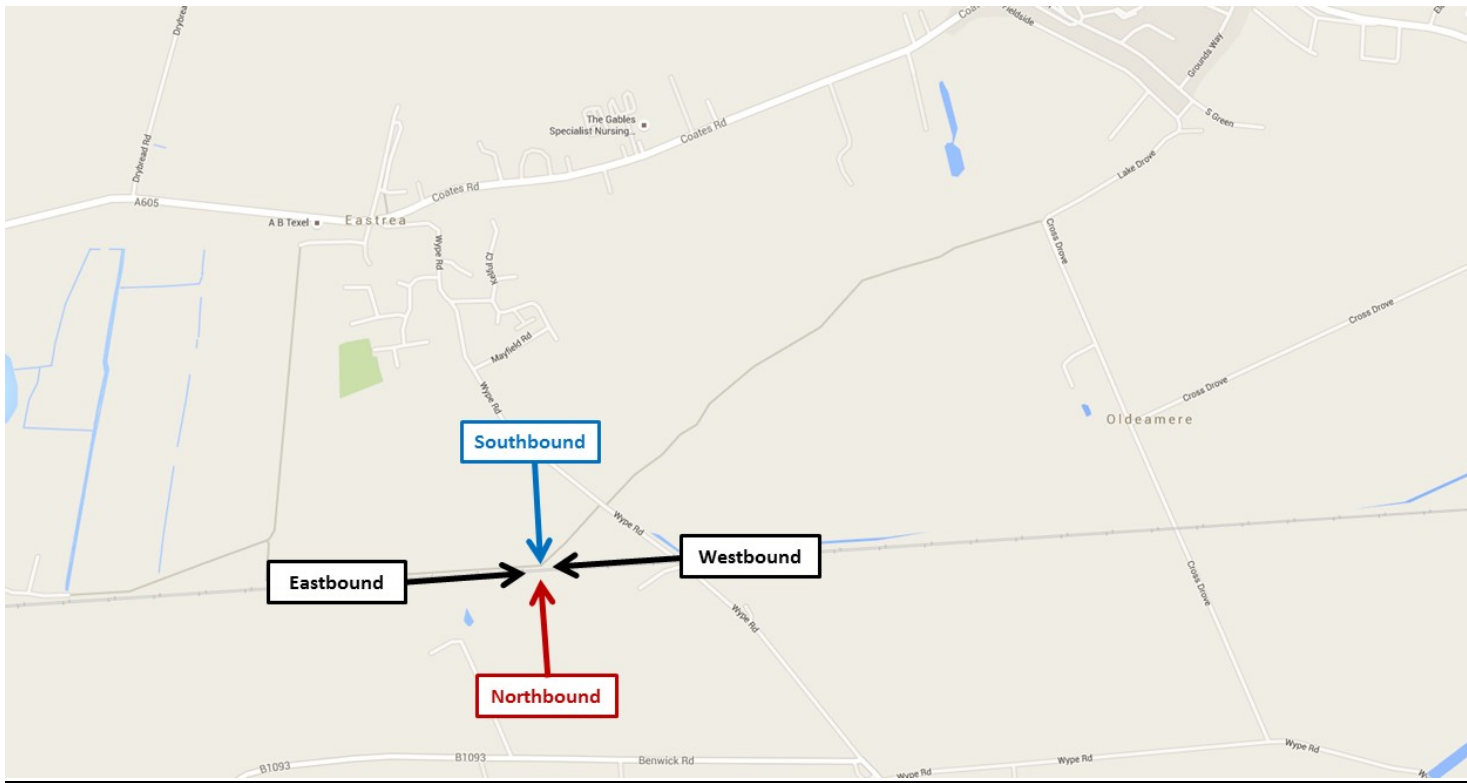
The daily number of pedestrians that used the level crossing over the 24 hours are summed for each category as specified. The specification also requires the busiest quarter hour period for pedestrians. In addition, Tracsis Traffic Data Limited have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

Busiest Quarter Hourly Periods

No cyclists or horse-riders were observed on the level crossing during this census.

For Pedestrians, the busiest quarter hourly period occurred at 16:00 on Day 8 with 6 pedestrians.

Figure 1 - Location Plan



Camera View/Site Equipment



Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Count, for pedestrian users, started on Saturday 18th June 2016 and continued for nine days until Sunday 26th June 2016 with survey hours of 00:00 to 24:00. This data is summarised below.

Throughout the whole period of the survey pedestrian traffic operated in normal free flow conditions and was only restricted by train movements at this site.

Footage will be provided for the survey, as per the specification. The busiest day for 3267-LON Site C15 Brickyard Drove Level Crossing, is Saturday 25th June 2016.

Pedestrians

	Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheel-chair	Pushchair / Pram	Mobility Scooter	Railway Personnel	Total
Saturday 18/06/2016	0	0	0	0	0	0	0	0	0	0
Sunday 19/06/2016	6	0	0	0	0	0	0	0	0	6
Monday 20/06/2016	0	0	0	0	0	0	0	0	0	0
Tuesday 21/06/2016	0	0	0	0	0	0	0	0	0	0
Wednesday 22/06/2016	4	0	0	0	0	0	0	0	0	4
Thursday 23/06/2016	0	0	0	0	0	0	0	0	0	0
Friday 24/06/2016	2	0	0	0	0	0	0	0	0	2
Saturday 25/06/2016	6	0	0	0	0	0	0	0	0	6
Sunday 26/06/2016	4	0	0	0	0	0	0	0	0	4
	22	0	0	0	0	0	0	0	0	22

Equestrians and Cyclists*

Horses	Ridden bicycles	Pushed bicycles	Total
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Saturday 18/06/2016			
Sunday 19/06/2016			
Monday 20/06/2016			
Tuesday 21/06/2016	0	0	0
Wednesday 22/06/2016	0	0	0
Thursday 23/06/2016	0	0	0
Friday 24/06/2016	0	0	0
Saturday 25/06/2016	0	0	0
Sunday 26/06/2016	0	0	0
	0	0	0

*Please note that following discussion with Mott MacDonald following delivery of the first 3 days' worth of census data, the methodology was changed for counting pedestrians and cyclists during census days 4-9. For clarity, during the first 3 days' of census, counts of Ridden bicycles & pushed bicycles were categorised within the regular pedestrian classifications.

Weather		AM	PM
Saturday	18/06/2016	Dry, Sunny, Windy	Dry, Sunny, Windy
Sunday	03/07/2016	Dry, Cloudy	Dry, Cloudy
Monday	20/06/2016	Dry, Cloudy, Windy	Dry, Cloudy, Windy
Tuesday	21/06/2016	Dry, Cloudy	Dry, Cloudy, Sunny periods
Wednesday	22/06/2016	Dry, Cloudy, Windy	Dry, Cloudy, Windy
Thursday	23/06/2016	Dry, Cloudy	Dry, Cloudy
Friday	24/06/2016	Dry, Sunny	Dry, Sunny
Saturday	25/06/2016	Dry, Cloudy	Dry, Cloudy, rain later on
Sunday	26/06/2016	Dry, Sunny, Windy	Dry, Sunny, Windy

Appendix A – Nine-Day Census

See Excel spreadsheet “3267-LON Site C15 Brickyard Drove 9-day Census”

Mott MacDonald

LEVEL CROSSING TRAFFIC CENSUS

SURVEY REPORT JUNE 2016

3267-LON SITE C20 – LEONARDS LEVEL CROSSING

Job Number	3267-LON-C20
Checked	05/10/2016
Date	30/09/2016
Contact	Ross De Vere
Revision	2



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Introduction

Tracsis Traffic Data Limited were commissioned by Mott MacDonald to undertake a level crossing survey at Leonards Level Crossing. The survey consisted of a nine day video traffic census. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census	Appendix A
Road Closure	not available
Traffic Turning	not available
Blocking Back	not available
Speed Survey	not available

In addition to this, further analysis could be carried out in the form of different pedestrian classifications, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendix A)

The pedestrian surveys were undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 18th June 2016 to Sunday 26th June 2016 over the hours 00:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. Resulting camera images recorded at each crossing were then analysed by experienced staff, all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below, all in accordance with the specification:

- Type of Foot Traffic Using the Crossing by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Unaccompanied Children
 4. Elderly
 5. Impaired
 6. Wheelchair
 7. Pushchair/Pram
 8. Mobility Scooter
 9. Railway Personnel

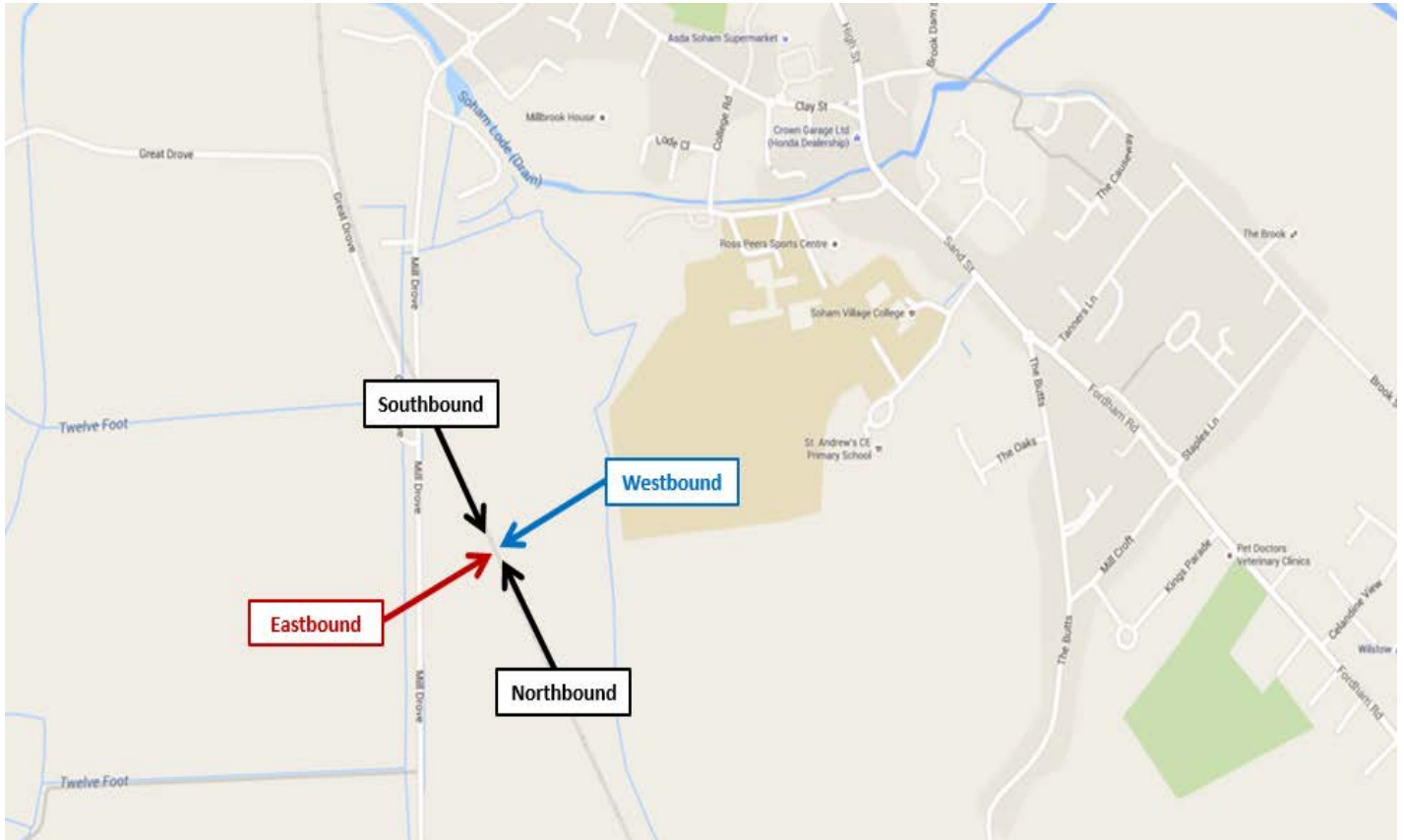
The daily number of pedestrians that used the level crossing over the 24 hours are summed for each category as specified. The specification also requires the busiest quarter hour period for pedestrians. In addition, Tracsis Traffic Data Limited have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

Busiest Quarter Hourly Periods

No cyclists or horse-riders were observed on the level crossing during this census.

For Pedestrians, the busiest quarter hourly period occurred at 15:45 on Day 6 with 25 pedestrians.

Figure 1 - Location Plan



Camera View/Site Equipment



Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Count, for pedestrian users, started on Saturday 18th June 2016 and continued for nine days until Sunday 26th June 2016 with survey hours of 00:00 to 24:00. This data is summarised below.

Throughout the whole period of the survey pedestrian traffic operated in normal free flow conditions and was only restricted by train movements at this site.

Footage will be provided for the survey, as per the specification. The busiest day for 3267-LON Site C20, Leonards Level Crossing, is Thursday 23rd June 2016.

Pedestrians

		Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheel-chair	Pushchair / Pram	Mobility Scooter	Railway Personnel	Total
Saturday	18/06/2016	18	0	0	0	0	0	0	0	0	18
Sunday	19/06/2016	33	2	0	0	0	0	0	0	0	35
Monday	20/06/2016	7	0	0	0	0	0	0	0	0	7
Tuesday	21/06/2016	24	0	0	0	0	0	0	0	0	24
Wednesday	22/06/2016	5	0	0	0	0	0	0	0	0	5
Thursday	23/06/2016	17	19	0	0	0	0	0	0	0	36
Friday	24/06/2016	12	0	0	0	0	0	0	0	0	12
Saturday	25/06/2016	10	2	0	0	0	0	0	0	0	12
Sunday	26/06/2016	28	4	0	0	0	0	0	0	0	32
		154	27	0	0	0	0	0	0	0	181

Equestrians and Cyclists*

Horses	Ridden bicycles	Pushed bicycles	Total
--------	-----------------	-----------------	-------

Saturday	18/06/2016			
Sunday	19/06/2016			
Monday	20/06/2016			
Tuesday	21/06/2016	0	0	0
Wednesday	22/06/2016	0	0	0
Thursday	23/06/2016	0	0	0
Friday	24/06/2016	0	0	0
Saturday	25/06/2016	0	0	0
Sunday	26/06/2016	0	0	0
		0	0	0

*Please note that following discussion with Mott MacDonald following delivery of the first 3 days' worth of census data, the methodology was changed for counting pedestrians and cyclists during census days 4-9. For clarity, during the first 3 days' of census, counts of Ridden bicycles & pushed bicycles were categorised within the regular pedestrian classifications.

Weather

AM

PM

Saturday	18/06/2016	Overcast	Sunny periods, some showers
Sunday	03/07/2016	Dry, sunny, passing clouds	Dry, sunny, passing clouds
Monday	20/06/2016	Overcast, rain	Partly sunny, broken clouds, clearing later
Tuesday	21/06/2016	Dry, sunny	Dry, sunny
Wednesday	22/06/2016	Overcast, rain	Passing Clouds, Drys Up Later On
Thursday	23/06/2016	Dry, cloudy	Dry, cloudy
Friday	24/06/2016	Dry, passing clouds	Dry, passing clouds
Saturday	25/06/2016	Overcast, rain	Overcast, clouds
Sunday	26/06/2016	Dry, sunny, passing clouds	Dry, sunny, passing clouds

Appendix A – Nine-Day Census

See Excel spreadsheet “3267-LON Site C20 Leonards 9-day Census”

Mott MacDonald

LEVEL CROSSING TRAFFIC CENSUS

SURVEY REPORT JUNE 2016

3267-LON SITE C21 – NEWMARKET BRIDGE LEVEL CROSSING

Job Number	3267-LON-C21
Checked	03/10/2016
Date	30/09/2016
Contact	Ross De Vere
Revision	1



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Introduction

Tracsis Traffic Data Limited were commissioned by Mott MacDonald to undertake a level crossing survey at Newmarket Bridge Level Crossing. The survey consisted of a nine day video traffic census. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census	Appendix A
Road Closure	not available
Traffic Turning	not available
Blocking Back	not available
Speed Survey	not available

In addition to this, further analysis could be carried out in the form of different pedestrian classifications, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendix A)

The pedestrian surveys were undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 18th June 2016 to Sunday 26th June 2016 over the hours 00:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. Resulting camera images recorded at each crossing were then analysed by experienced staff, all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below, all in accordance with the specification:

- Type of Foot Traffic Using the Crossing by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Unaccompanied Children
 4. Elderly
 5. Impaired
 6. Wheelchair
 7. Pushchair/Pram
 8. Mobility Scooter
 9. Railway Personnel

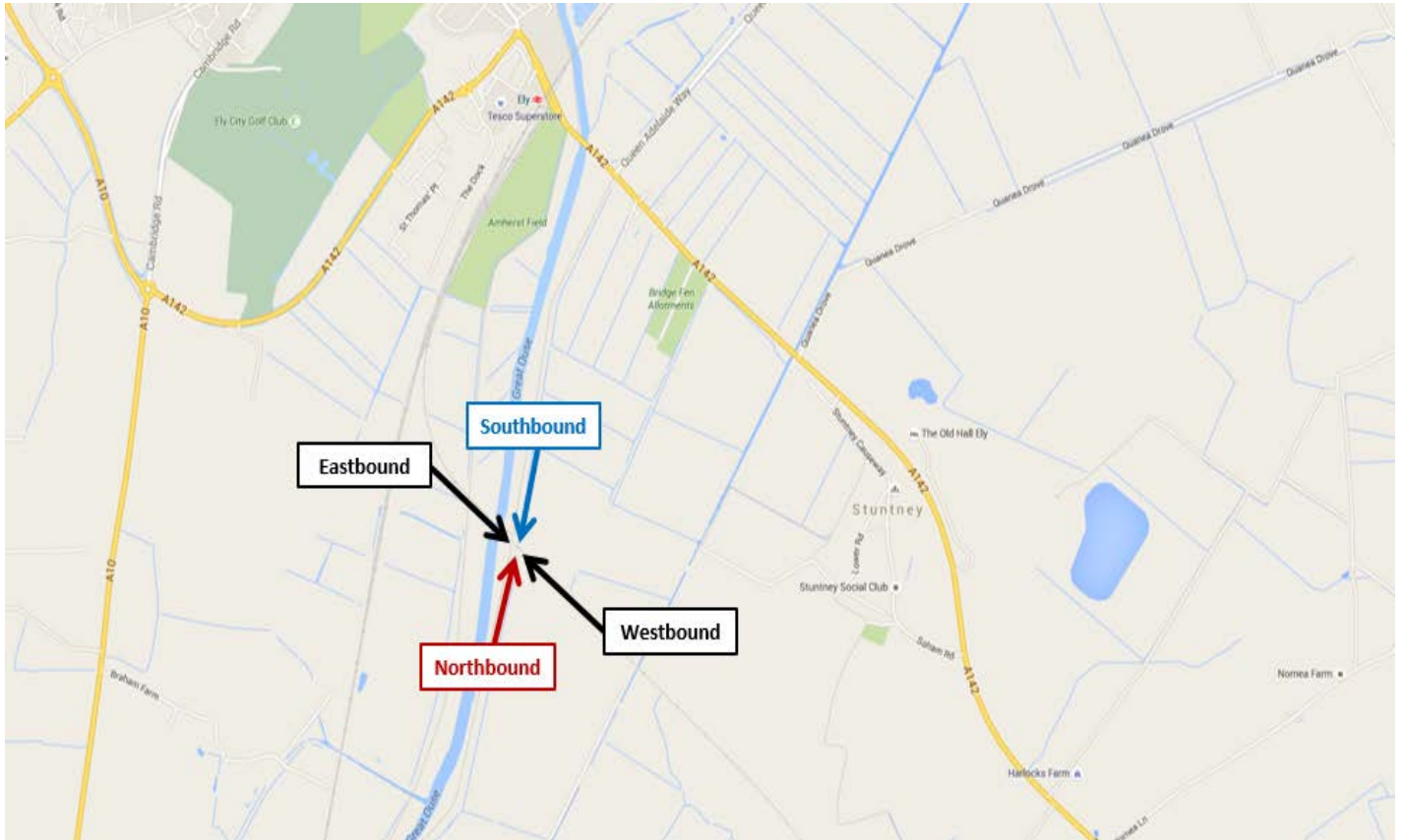
The daily number of pedestrians that used the level crossing over the 24 hours are summed for each category as specified. The specification also requires the busiest quarter hour period for pedestrians. In addition, Tracsis Traffic Data Limited have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

Busiest Quarter Hourly Periods

No cyclists or horse-riders were observed on the level crossing during this census.

For Pedestrians, the busiest quarter hourly period occurred at 12:15 on Day 7 with 14 pedestrians.

Figure 1 - Location Plan



Camera View/Site Equipment



Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Count, for pedestrian users, started on Saturday 18th June 2016 and continued for nine days until Sunday 26th June 2016 with survey hours of 00:00 to 24:00. This data is summarised below.

Throughout the whole period of the survey pedestrian traffic operated in normal free flow conditions and was only restricted by train movements at this site.

Footage will be provided for the survey, as per the specification. The busiest day for 3267-LON Site C21, Newmarket Bridge Level Crossing, is Friday 24th June 2016.

Pedestrians

	Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheel-chair	Pushchair / Pram	Mobility Scooter	Railway Personnel	Total
Saturday 18/06/2016	21	0	0	0	0	0	0	0	0	21
Sunday 19/06/2016	16	0	0	0	0	0	0	0	0	16
Monday 20/06/2016	18	0	0	0	0	0	0	0	0	18
Tuesday 21/06/2016	5	0	0	0	0	0	0	0	0	5
Wednesday 22/06/2016	18	0	0	0	0	0	0	0	0	18
Thursday 23/06/2016	5	0	0	0	0	0	0	0	4	9
Friday 24/06/2016	28	0	0	0	0	0	0	0	0	28
Saturday 25/06/2016	20	0	0	0	0	0	0	0	0	20
Sunday 26/06/2016	17	0	0	0	0	0	0	0	0	17
	148	0	0	0	0	0	0	0	4	152

Equestrians and Cyclists*

Horses	Ridden bicycles	Pushed bicycles	Total
--------	-----------------	-----------------	-------

Saturday 18/06/2016			
Sunday 19/06/2016			
Monday 20/06/2016			
Tuesday 21/06/2016	0	0	0
Wednesday 22/06/2016	0	0	0
Thursday 23/06/2016	0	0	0
Friday 24/06/2016	0	0	0
Saturday 25/06/2016	0	0	0
Sunday 26/06/2016	0	0	0
	0	0	0

*Please note that following discussion with Mott MacDonald following delivery of the first 3 days' worth of census data, the methodology was changed for counting pedestrians and cyclists during census days 4-9. For clarity, during the first 3 days' of census, counts of Ridden bicycles & pushed bicycles were categorised within the regular pedestrian classifications.

Weather

AM

PM

Saturday	18/06/2016	Overcast	Sunny periods, some showers
Sunday	03/07/2016	Dry, sunny, passing clouds	Dry, sunny, passing clouds
Monday	20/06/2016	Overcast, rain	Partly sunny, broken clouds, clearing later
Tuesday	21/06/2016	Dry, sunny	Dry, sunny
Wednesday	22/06/2016	Overcast, rain	Passing Clouds, Dries Up Later On
Thursday	23/06/2016	Dry, cloudy	Dry, cloudy
Friday	24/06/2016	Dry, passing clouds	Dry, passing clouds
Saturday	25/06/2016	Overcast, rain	Overcast, clouds
Sunday	26/06/2016	Dry, sunny, passing clouds	Dry, sunny, passing clouds

Appendix A – Nine-Day Census

See Excel spreadsheet “3267-LON Site C21 Newmarket Bridge 9-day Census”

Mott MacDonald

LEVEL CROSSING TRAFFIC CENSUS

SURVEY REPORT JUNE 2016

3267-LON SITE C22 – WELLS ENGINE LEVEL CROSSING

Job Number	3267-LON-C22
Checked	03/10/2016
Date	30/09/2016
Contact	Ross De Vere
Revision	1



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Introduction

Tracsis Traffic Data Limited were commissioned by Mott MacDonald to undertake a level crossing survey at Wells Engine Level Crossing. The survey consisted of a nine day video traffic census. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census	Appendix A
Road Closure	not available
Traffic Turning	not available
Blocking Back	not available
Speed Survey	not available

In addition to this, further analysis could be carried out in the form of different pedestrian classifications, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendix A)

The pedestrian surveys were undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 18th June 2016 to Sunday 26th June 2016 over the hours 00:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. Resulting camera images recorded at each crossing were then analysed by experienced staff, all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below, all in accordance with the specification:

- Type of Foot Traffic Using the Crossing by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Unaccompanied Children
 4. Elderly
 5. Impaired
 6. Wheelchair
 7. Pushchair/Pram
 8. Mobility Scooter
 9. Railway Personnel

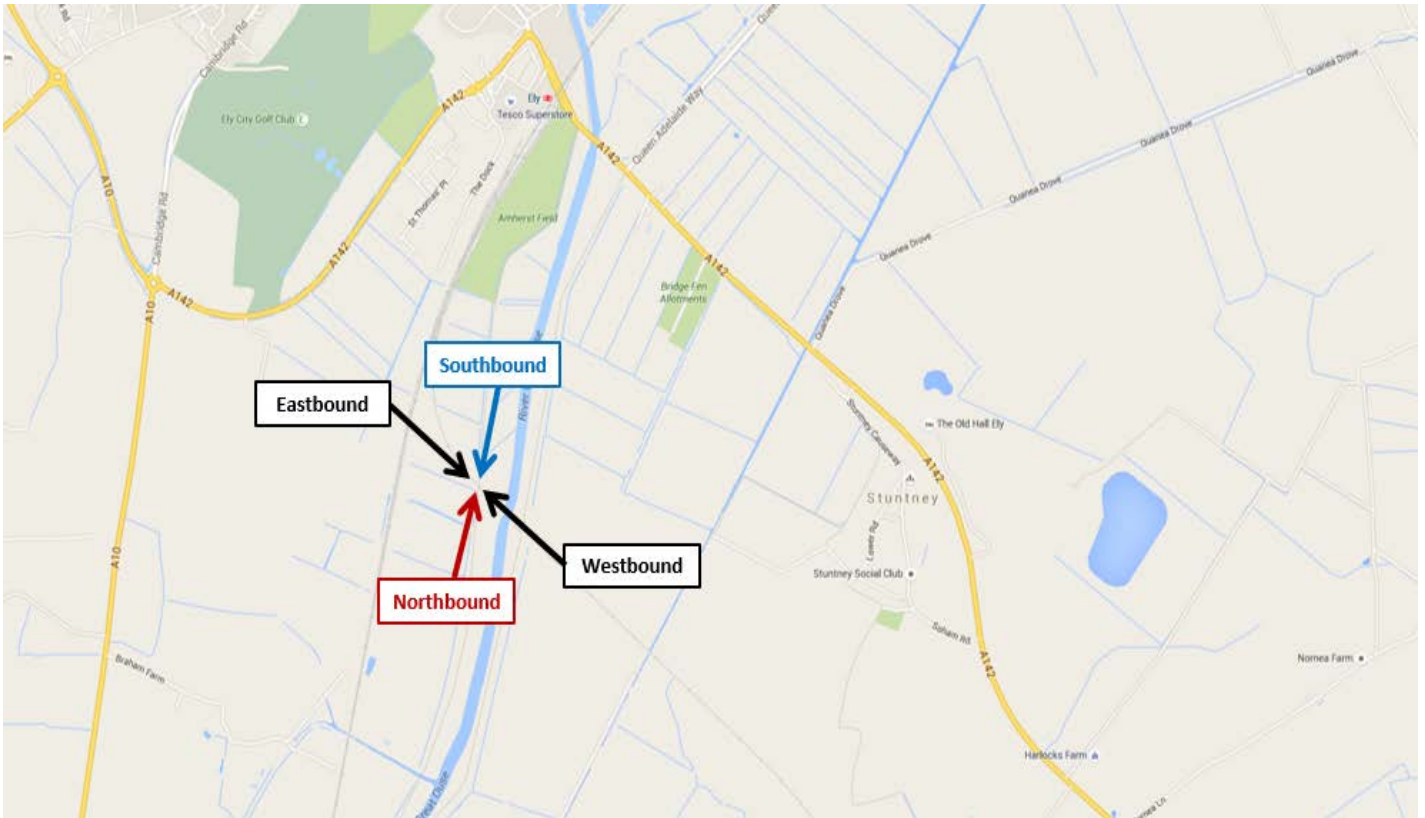
The daily number of pedestrians that used the level crossing over the 24 hours are summed for each category as specified. The specification also requires the busiest quarter hour period for pedestrians. In addition, Tracsis Traffic Data Limited have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

Busiest Quarter Hourly Periods

No cyclists or horse-riders were observed on the level crossing during this census.

For Pedestrians, the busiest quarter hourly period occurred at 13:45 on Day 9 with 4 pedestrians.

Figure 1 - Location Plan



Camera View/Site Equipment



Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Count, for pedestrian users, started on Saturday 18th June 2016 and continued for nine days until Sunday 26th June 2016 with survey hours of 00:00 to 24:00. This data is summarised below.

Throughout the whole period of the survey pedestrian traffic operated in normal free flow conditions and was only restricted by train movements at this site.

Footage will be provided for the survey, as per the specification. The busiest day for 3267-LON Site C22, Wells Engine Level Crossing, is Sunday 26th June 2016.

Pedestrians

	Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheel-chair	Pushchair / Pram	Mobility Scooter	Railway Personnel	Total
Saturday 18/06/2016	9	2	0	0	0	0	0	0	0	11
Sunday 19/06/2016	3	0	0	0	0	0	0	0	0	3
Monday 20/06/2016	7	0	0	0	0	0	0	0	0	7
Tuesday 21/06/2016	8	0	0	0	0	0	0	0	0	8
Wednesday 22/06/2016	5	0	0	0	0	0	0	0	0	5
Thursday 23/06/2016	5	0	0	0	0	0	0	0	0	5
Friday 24/06/2016	6	0	0	0	0	0	0	0	0	6
Saturday 25/06/2016	12	0	0	0	0	0	0	0	0	12
Sunday 26/06/2016	12	0	0	0	0	0	0	0	0	12
	67	2	0	0	0	0	0	0	0	69

Equestrians and Cyclists*

Horses	Ridden bicycles	Pushed bicycles	Total
--------	-----------------	-----------------	-------

Saturday 18/06/2016			
Sunday 19/06/2016			
Monday 20/06/2016			
Tuesday 21/06/2016	0	0	0
Wednesday 22/06/2016	0	0	0
Thursday 23/06/2016	0	0	0
Friday 24/06/2016	0	0	0
Saturday 25/06/2016	0	0	0
Sunday 26/06/2016	0	0	0
	0	0	0

*Please note that following discussion with Mott MacDonald following delivery of the first 3 days' worth of census data, the methodology was changed for counting pedestrians and cyclists during census days 4-9. For clarity, during the first 3 days' of census, counts of Ridden bicycles & pushed bicycles were categorised within the regular pedestrian classifications.

Weather

AM

PM

Saturday	18/06/2016	Dry, Windy	Dry, sunny periods
Sunday	03/07/2016	Sunny spells, passing clouds	Sun, scattered clouds, rain later
Monday	20/06/2016	Overcast, rain	Partly sunny, broken clouds, clearing later
Tuesday	21/06/2016	Dry, Cloudy	Dry, Cloudy
Wednesday	22/06/2016	Overcast, Rain	Dry later on, passing clouds
Thursday	23/06/2016	Dry, Windy	Dry, Cloudy
Friday	24/06/2016	Dry, passing clouds	Dry, passing clouds, sunny periods
Saturday	25/06/2016	Dry, Windy	Dry, Windy
Sunday	26/06/2016	Dry, Windy	Dry, Windy, sunny periods

Appendix A – Nine-Day Census

See Excel spreadsheet “3267-LON Site C22 Wells Engine Census”

Mott MacDonald

LEVEL CROSSING TRAFFIC CENSUS

SURVEY REPORT JUNE 2016

3267-LON SITE C24 – CROSS KEYS LEVEL CROSSING

Job Number	3267-LON-C24
Checked	03/10/2016
Date	30/09/2016
Contact	Ross De Vere
Revision	1



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Introduction

Tracsis Traffic Data Limited were commissioned by Mott MacDonald to undertake a level crossing survey at Cross Keys Level Crossing. The survey consisted of a nine day video traffic census. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census	Appendix A
Road Closure	not available
Traffic Turning	not available
Blocking Back	not available
Speed Survey	not available

In addition to this, further analysis could be carried out in the form of different pedestrian classifications, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendix A)

The pedestrian surveys were undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 18th June 2016 to Sunday 26th June 2016 over the hours 00:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. Resulting camera images recorded at each crossing were then analysed by experienced staff, all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below, all in accordance with the specification:

- Type of Foot Traffic Using the Crossing by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Unaccompanied Children
 4. Elderly
 5. Impaired
 6. Wheelchair
 7. Pushchair/Pram
 8. Mobility Scooter
 9. Railway Personnel

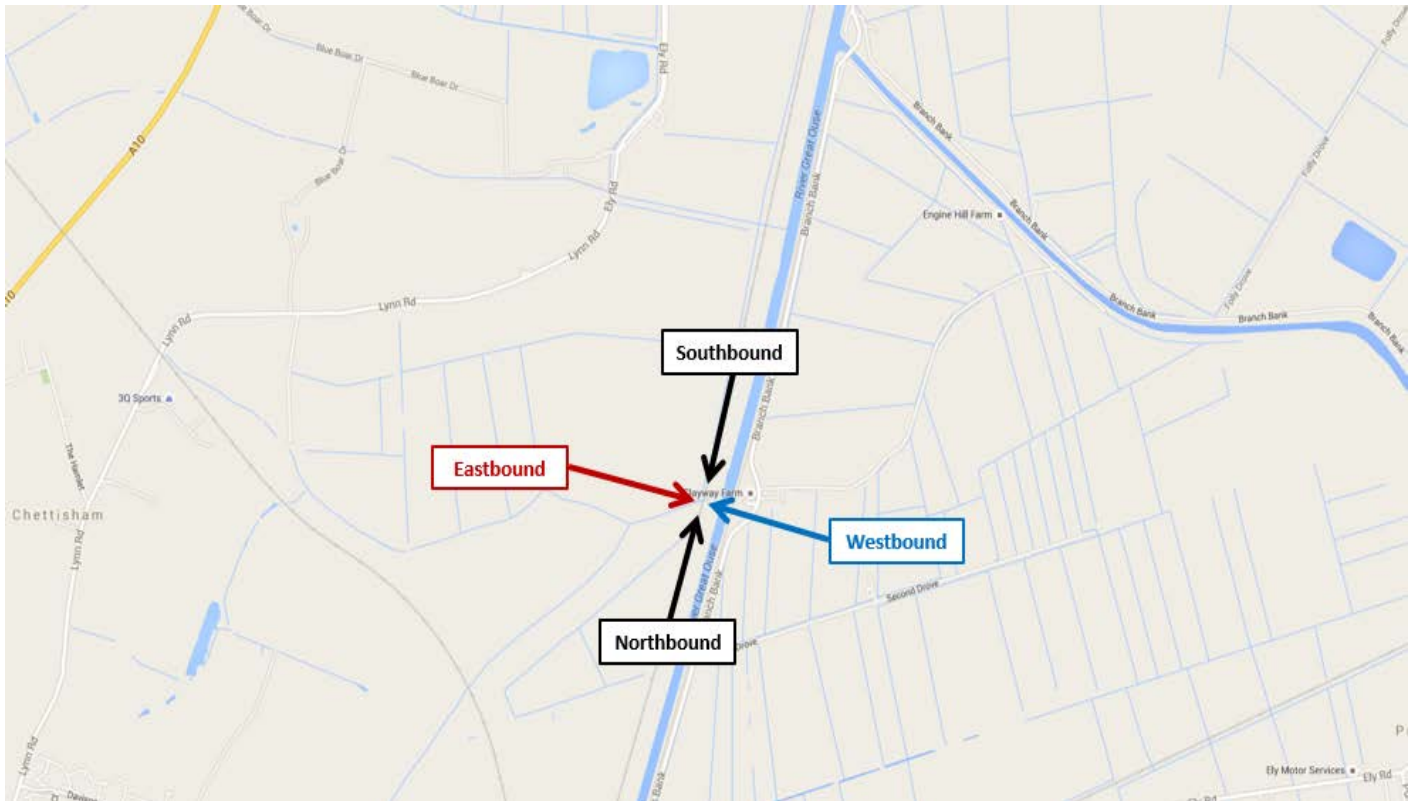
The daily number of pedestrians that used the level crossing over the 24 hours are summed for each category as specified. The specification also requires the busiest quarter hour period for pedestrians. In addition, Tracsis Traffic Data Limited have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

Busiest Quarter Hourly Periods

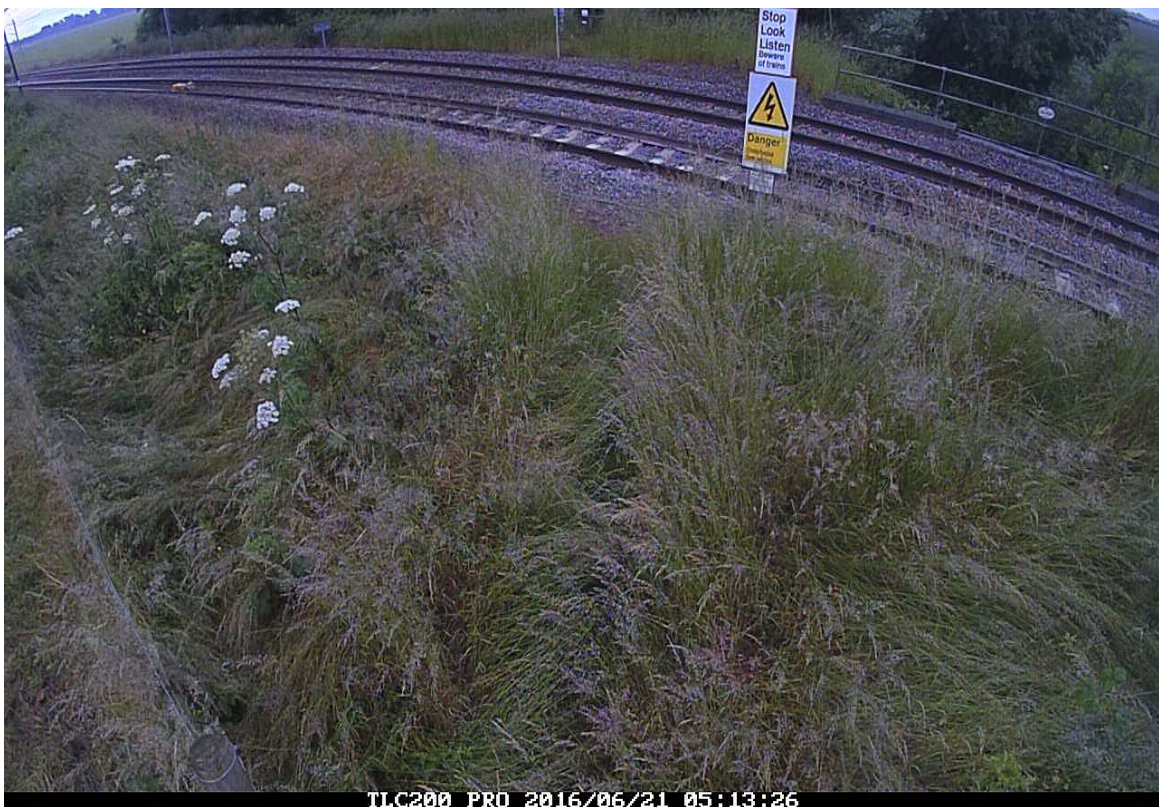
No cyclists or horse-riders were observed on the level crossing during this census.

For Pedestrians, the busiest quarter hourly period occurred at 16:00 on Day 9 with 4 pedestrians.

Figure 1 - Location Plan



Camera View/Site Equipment



Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Count, for pedestrian users, started on Saturday 18th June 2016 and continued for nine days until Sunday 26th June 2016 with survey hours of 00:00 to 24:00. This data is summarised below.

Throughout the whole period of the survey pedestrian traffic operated in normal free flow conditions and was only restricted by train movements at this site.

Footage will be provided for the survey, as per the specification. The busiest day for 3267-LON Site C24, Cross Keys Level Crossing, is Sunday 26th June 2016.

Pedestrians

	Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheel-chair	Pushchair / Pram	Mobility Scooter	Railway Personnel	Total
Saturday 18/06/2016	1	0	0	0	0	0	0	0	0	1
Sunday 19/06/2016	2	0	0	0	0	0	0	0	0	2
Monday 20/06/2016	0	0	0	0	0	0	0	0	0	0
Tuesday 21/06/2016	7	0	0	0	0	0	0	0	0	7
Wednesday 22/06/2016	2	0	0	0	0	0	0	0	0	2
Thursday 23/06/2016	1	0	0	0	0	0	0	0	0	1
Friday 24/06/2016	4	0	0	0	0	0	0	0	0	4
Saturday 25/06/2016	7	0	0	0	0	0	0	0	0	7
Sunday 26/06/2016	6	0	0	0	0	0	0	0	2	8
	30	0	0	0	0	0	0	0	2	32

Equestrians and Cyclists*

Horses	Ridden bicycles	Pushed bicycles	Total
--------	-----------------	-----------------	-------

Saturday 18/06/2016			
Sunday 19/06/2016			
Monday 20/06/2016			
Tuesday 21/06/2016	0	0	0
Wednesday 22/06/2016	0	0	0
Thursday 23/06/2016	0	0	0
Friday 24/06/2016	0	0	0
Saturday 25/06/2016	0	0	0
Sunday 26/06/2016	0	0	0
	0	0	0

*Please note that following discussion with Mott MacDonald following delivery of the first 3 days' worth of census data, the methodology was changed for counting pedestrians and cyclists during census days 4-9. For clarity, during the first 3 days' of census, counts of Ridden bicycles & pushed bicycles were categorised within the regular pedestrian classifications.

Weather

AM

PM

Saturday	18/06/2016	Dry, Windy	Dry, Windy
Sunday	03/07/2016	Sunny Spells, Passing clouds	Sun, Scattered clouds, Rain later
Monday	20/06/2016	Overcast, Rain	Partly Sunny, Broken clouds, Clearing later
Tuesday	21/06/2016	Dry, Sunny periods	Dry, Sunny periods
Wednesday	22/06/2016	Overcast, Rain	Passing Clouds, Dry later on
Thursday	23/06/2016	Dry, windy, cloudy	Dry, cloudy
Friday	24/06/2016	Dry Windy	Dry Windy
Saturday	25/06/2016	Dry, Cloudy	Dry, Cloudy
Sunday	26/06/2016	Dry, Windy	Dry, Windy, sunny periods

Appendix A – Nine-Day Census

See Excel spreadsheet “3267-LON Site C24 Cross Keys Census”

Mott MacDonald

LEVEL CROSSING TRAFFIC CENSUS

SURVEY REPORT JUNE 2016

3267-LON SITE C25 – CLAYWAY LEVEL CROSSING

Job Number	3267-LON-C25
Checked	03/10/2016
Date	30/09/2016
Contact	Ross De Vere
Revision	1



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Introduction

Tracsis Traffic Data Limited were commissioned by Mott MacDonald to undertake a level crossing survey at Clayway Level Crossing. The survey consisted of a nine day video traffic census. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census	Appendix A
Road Closure	not available
Traffic Turning	not available
Blocking Back	not available
Speed Survey	not available

In addition to this, further analysis could be carried out in the form of different pedestrian classifications, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendix A)

The pedestrian surveys were undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 18th June 2016 to Sunday 26th June 2016 over the hours 00:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. Resulting camera images recorded at each crossing were then analysed by experienced staff, all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below, all in accordance with the specification:

- Type of Foot Traffic Using the Crossing by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Unaccompanied Children
 4. Elderly
 5. Impaired
 6. Wheelchair
 7. Pushchair/Pram
 8. Mobility Scooter
 9. Railway Personnel

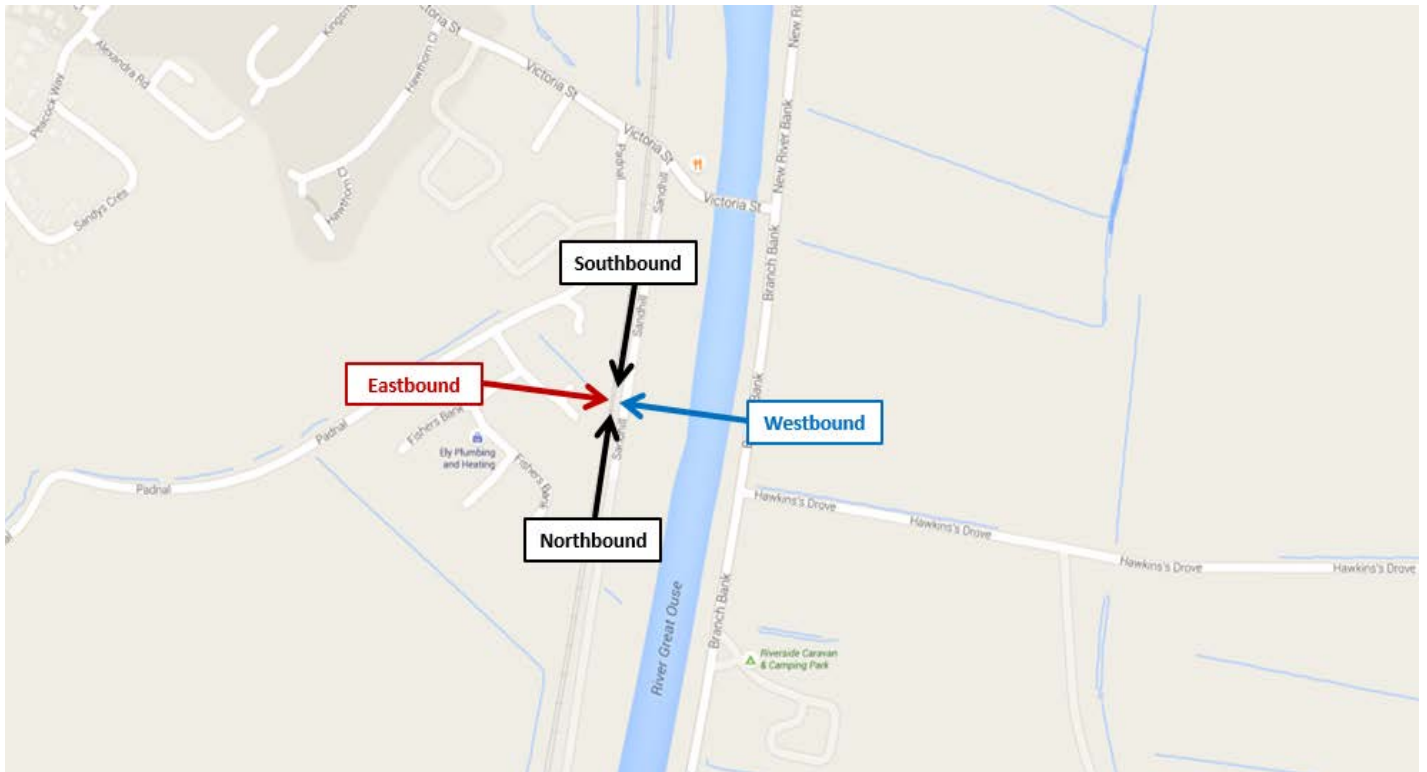
The daily number of pedestrians that used the level crossing over the 24 hours are summed for each category as specified. The specification also requires the busiest quarter hour period for pedestrians. In addition, Tracsis Traffic Data Limited have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

Busiest Quarter Hourly Periods

No cyclists or horse-riders were observed on the level crossing during this census.

For Pedestrians, the busiest quarter hourly period occurred at 11:15 on Day 4 with 18 pedestrians.

Figure 1 - Location Plan



Camera View/Site Equipment



Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Count, for pedestrian users, started on Saturday 18th June 2016 and continued for nine days until Sunday 26th June 2016 with survey hours of 00:00 to 24:00. This data is summarised below.

Throughout the whole period of the survey pedestrian traffic operated in normal free flow conditions and was only restricted by train movements at this site.

Footage will be provided for the survey, as per the specification. The busiest day for 3267-LON Site C25, Clayway Level Crossing, is Tuesday 21st June 2016.

Pedestrians

	Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheel-chair	Pushchair / Pram	Mobility Scooter	Railway Personnel	Total
Saturday 18/06/2016	16	1	2	0	0	0	0	0	0	19
Sunday 19/06/2016	15	0	0	0	0	0	0	0	0	15
Monday 20/06/2016	10	0	0	0	0	0	0	0	0	10
Tuesday 21/06/2016	24	2	0	0	0	0	0	0	0	26
Wednesday 22/06/2016	4	0	0	0	0	0	0	0	0	4
Thursday 23/06/2016	4	0	0	0	0	0	0	0	0	4
Friday 24/06/2016	14	0	0	0	0	0	0	0	0	14
Saturday 25/06/2016	8	0	4	0	0	0	0	0	0	12
Sunday 26/06/2016	11	2	2	0	0	0	0	0	0	15
	106	5	8	0	0	0	0	0	0	119

Equestrians and Cyclists*

Horses	Ridden bicycles	Pushed bicycles	Total
--------	-----------------	-----------------	-------

Saturday 18/06/2016			
Sunday 19/06/2016			
Monday 20/06/2016			
Tuesday 21/06/2016	0	0	0
Wednesday 22/06/2016	0	0	0
Thursday 23/06/2016	0	0	0
Friday 24/06/2016	0	0	0
Saturday 25/06/2016	0	0	0
Sunday 26/06/2016	0	0	0
	0	0	0

*Please note that following discussion with Mott MacDonald following delivery of the first 3 days' worth of census data, the methodology was changed for counting pedestrians and cyclists during census days 4-9. For clarity, during the first 3 days' of census, counts of Ridden bicycles & pushed bicycles were categorised within the regular pedestrian classifications.

Weather

AM

PM

Saturday	18/06/2016	Dry, sunny periods, passing clouds	Dry, sunny periods, passing clouds
Sunday	03/07/2016	Sunny spells, passing clouds	Sun, scattered clouds, rain later
Monday	20/06/2016	Overcast, rain	Partly sunny, broken clouds, clearing later
Tuesday	21/06/2016	Dry, sunny, passing clouds	Dry, sunny, passing clouds
Wednesday	22/06/2016	Overcast, Rain	Overcast, Rain, clears up later on
Thursday	23/06/2016	Dry, Cloudy	Dry, Cloudy, Sunny periods
Friday	24/06/2016	Dry, Sunny	Dry, Sunny
Saturday	25/06/2016	Rain, passing clouds	Dry, Sunny, passing clouds
Sunday	26/06/2016	Dry, sunny	Dry, sunny

Appendix A – Nine-Day Census

See Excel spreadsheet “3267-LON Site C25 Clayway Census”

Mott MacDonald

LEVEL CROSSING TRAFFIC CENSUS

SURVEY REPORT JUNE 2016

3267-LON SITE C26 – POPLAR DROVE LEVEL CROSSING

Job Number	3267-LON-C26
Checked	25/11/2016
Date	25/11/2016
Contact	Ross De Vere
Revision	2



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Introduction

Tracsis Traffic Data Limited were commissioned by Mott MacDonald to undertake a level crossing survey at Number 37 Level Crossing. The survey consisted of a nine-day video traffic census. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census	Appendix A
Road Closure	not available
Traffic Turning	not available
Blocking Back	not available
Speed Survey	not available

In addition to this, further analysis could be carried out in the form of different pedestrian classifications, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendix A)

The pedestrian surveys were undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 18th June 2016 to Sunday 26th June 2016 over the hours 00:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. Resulting camera images recorded at each crossing were then analysed by experienced staff, all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below, all in accordance with the specification:

- The Number of Road Vehicles Using the Crossing by Direction, Classified to:
 1. Cars
 2. Light Goods Vehicles
 3. Motorcycles
 4. Heavy Goods Vehicles
 5. Agricultural Vehicles
 6. Buses
 7. Equestrians
 8. Pedal Cycles being ridden
 9. Pedal Cycles being walked
 10. Herded Animals
 11. Large/Slow Vehicles
- Type of Foot Traffic Using the Crossing by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Unaccompanied Children
 4. Elderly
 5. Impaired
 6. Wheelchair
 7. Pushchair/Pram
 8. Mobility Scooter
 9. Railway Personnel

The daily number of pedestrians that used the level crossing over the 24 hours are summed for each category as specified. The specification also requires the busiest quarter hour period for pedestrians. In addition, Tracsis Traffic Data Limited have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

Busiest Quarter Hourly Periods

For Cars/Lgvs, the busiest quarter hourly period occurred at 20:00* on Day 2 with 1 vehicle.

No users riding bicycles, or horse-riders, were observed on the level crossing during this census.

For users pushing bicycles, the busiest quarter hourly period occurred at 13:15 on Day 4, with 2 such users.

For pedestrians, the busiest quarter hourly period occurred at 10:30 on Day 2* with 1 pedestrian.

* This time period is the first occurrence of the busiest period, but not the only occurrence.

A map of the A10 junction in Littleport, Cambridgeshire. The map shows the A10 road running horizontally across the middle. A red arrow labeled 'Eastbound' points right from the left side of the road. A black arrow labeled 'Southbound' points down from the top of the road. A black arrow labeled 'Northbound' points up from the bottom of the road. A blue arrow labeled 'Westbound' points left from the right side of the road. The map also shows surrounding streets like 'Holly Fens', 'Ten Mile Bank', and 'Shepherd's Drive', and landmarks like 'Allen's Skip Hire Ltd' and 'Unit One Store'.

Camera View/Site Equipment



Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Count, for pedestrian users, started on Saturday 18th June 2016 and continued for nine days until Sunday 26th June 2016 with survey hours of 00:00 to 24:00. This data is summarised below.

Throughout the whole period of the survey pedestrian traffic operated in normal free flow conditions and was only restricted by train movements at this site.

Footage will be provided for the survey, as per the specification. The busiest day for 3267-LON Site C26, Poplar Drove Level Crossing, is Sunday 19th June 2016.

Vehicles

	Car	Lgv	Mcl	Hgv	Tractor & Trailer	Bus	Equestrian	Riding Bicycle	Walking Bicycle	Herded Animals & Horses	Large / Slow Vehicle	Total
Saturday 18/06/2016	0	0	0	0	0	0	0	0	0	0	0	0
Sunday 19/06/2016	2	0	0	0	0	0	0	0	0	0	0	2
Monday 20/06/2016	0	0	0	0	0	0	0	0	0	0	0	0
Tuesday 21/06/2016	0	0	0	0	0	0	0	0	2	0	0	2
Wednesday 22/06/2016	0	0	0	0	0	0	0	0	0	0	0	0
Thursday 23/06/2016	0	0	0	0	0	0	0	0	2	0	0	2
Friday 24/06/2016	0	0	0	0	0	0	0	0	0	0	0	0
Saturday 25/06/2016	0	0	4	0	0	0	0	0	1	0	0	5
Sunday 26/06/2016	0	0	6	0	0	0	0	0	0	0	0	6
	2	0	10	0	0	0	0	0	5	0	0	17

Pedestrians

	Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheel- chair	Pushchair / Pram	Mobility Scooter	Railway Personnel	Total
Saturday 18/06/2016	0	0	0	0	0	0	0	0	0	0
Sunday 19/06/2016	5	0	0	0	0	0	0	0	0	5
Monday 20/06/2016	0	0	0	0	0	0	0	0	0	0
Tuesday 21/06/2016	0	0	0	0	0	0	0	0	0	0
Wednesday 22/06/2016	0	0	0	0	0	0	0	0	0	0
Thursday 23/06/2016	0	0	0	0	0	0	0	0	0	0
Friday 24/06/2016	0	0	0	0	0	0	0	0	0	0
Saturday 25/06/2016	0	0	0	0	0	0	0	0	0	0
Sunday 26/06/2016	0	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	5

Weather

AM

PM

Saturday	18/06/2016	Dry, Cloudy	Dry, cloudy
Sunday	03/07/2016	Dry, Sunny, Cloudy	Dry, sunny, cloudy
Monday	20/06/2016	Overcast, Rain	Overcast, rain
Tuesday	21/06/2016	Dry, Sunny	Dry, sunny
Wednesday	22/06/2016	Overcast, Rain	Overcast, cloudy
Thursday	23/06/2016	Dry, Cloudy	Dry, cloudy
Friday	24/06/2016	Dry, sunny Periods	Dry, sunny periods
Saturday	25/06/2016	Overcast, Rain	Sunny, dries up in the afternoon
Sunday	26/06/2016	Dry, sunny periods	Dry, sunny

Appendix A – Nine-Day Census

See Excel spreadsheet “3267-LON Site C26 Poplar Drove 9-day Census”

Mott MacDonald

LEVEL CROSSING TRAFFIC CENSUS

SURVEY REPORT JUNE 2016

3267-LON SITE C28 – BLACK HORSE DROVE LEVEL CROSSING

Job Number	3267-LON-C28
Checked	25/11/2016
Date	25/11/2016
Contact	Ross De Vere
Revision	4



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Introduction

Tracsis Traffic Data Limited were commissioned by Mott MacDonald to undertake a level crossing survey at Black Horse Drove Level Crossing. The survey consisted of a nine day video traffic census. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census	Appendix A
Road Closure	not available
Traffic Turning	not available
Blocking Back	not available
Speed Survey	not available

In addition to this, further analysis could be carried out in the form of different pedestrian classifications, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendix A)

The pedestrian surveys were undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 18th June 2016 to Sunday 26th June 2016 over the hours 00:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. Resulting camera images recorded at each crossing were then analysed by experienced staff, all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below, all in accordance with the specification:

- The Number of Road Vehicles Using the Crossing by Direction, Classified to:
 1. Cars
 2. Light Goods Vehicles
 3. Motorcycles
 4. Heavy Goods Vehicles
 5. Agricultural Vehicles
 6. Buses
 7. Equestrians
 8. Pedal Cycles being ridden
 9. Pedal Cycles being walked
 10. Herded Animals
 11. Large/Slow Vehicles
- Type of Foot Traffic Using the Crossing by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Unaccompanied Children
 4. Elderly
 5. Impaired
 6. Wheelchair
 7. Pushchair/Pram
 8. Mobility Scooter
 9. Railway Personnel

The daily number of pedestrians that used the level crossing over the 24 hours are summed for each category as specified. The specification also requires the busiest quarter hour period for pedestrians. In addition, Tracsis Traffic Data Limited have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

Busiest Quarter Hourly Periods

For Cars/Lgvs, the busiest quarter hourly period occurred at 12:00 on Day 9 with 4 vehicles.

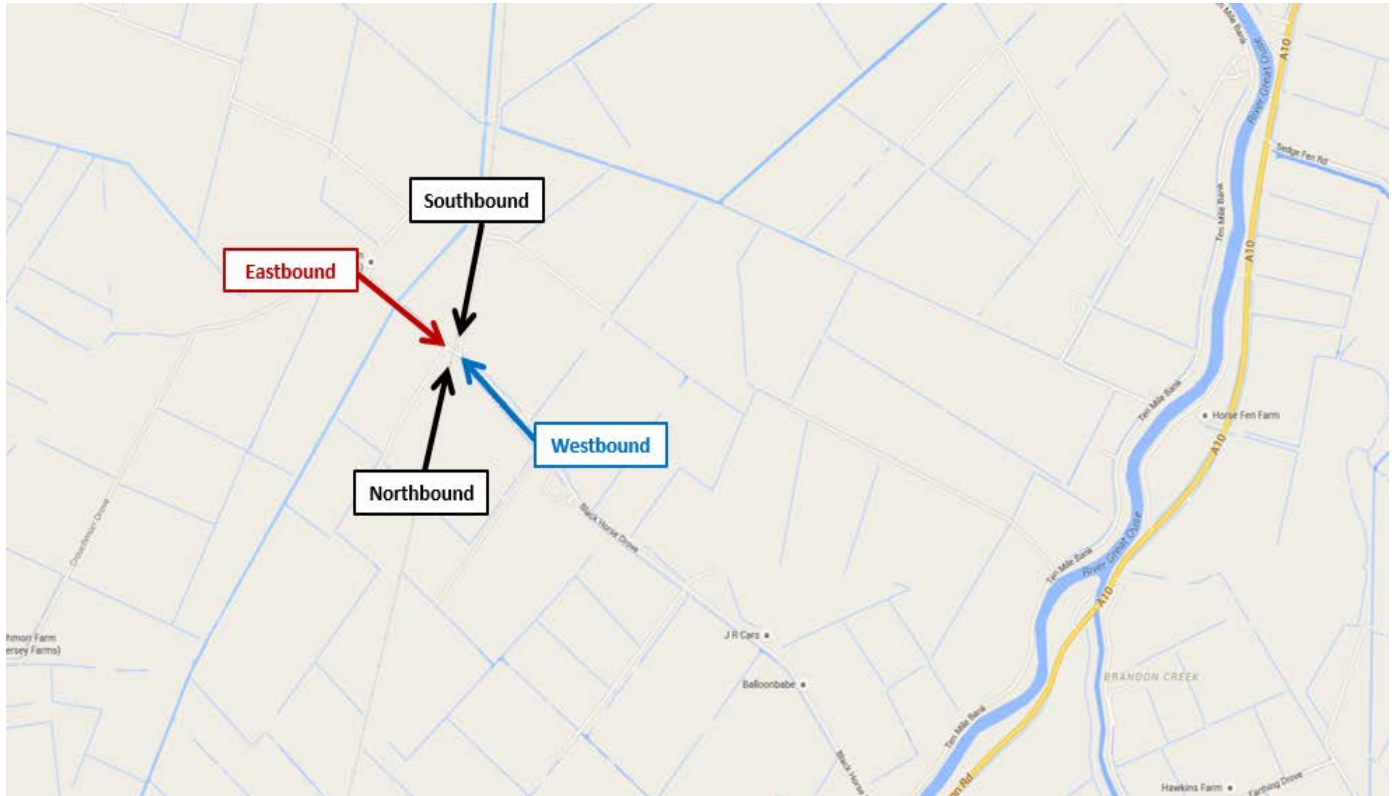
For Hgvs/Large Vehicles, the busiest quarter hourly period occurred at 16:30 on Day 3 with 2 vehicles.

For Vehicles, the busiest quarter hourly period occurred at 12:00 on Day 9 with 4 vehicles.

For Pedestrians, the busiest quarter hourly period occurred at 12:00 on Day 9 with 6 pedestrians.

Overall, the busiest quarter hourly period occurred at 12:00 on Day 9 with 10 vehicles and pedestrians.

Figure 1 - Location Plan



Camera View/Site Equipment



Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Count, for pedestrian users, started on Saturday 18th June 2016 and continued for nine days until Sunday 26th June 2016 with survey hours of 00:00 to 24:00. This data is summarised below.

Throughout the whole period of the survey pedestrian traffic operated in normal free flow conditions and was only restricted by train movements at this site.

Footage will be provided for the survey, as per the specification. The busiest day for 3267-LON Site C28, Black Horse Drove Level Crossing, is Saturday 26th June 2016.

Vehicles

	Car	Lgv	Mcl	Hgv	Tractor & Trailer	Bus	Equestrian	Riding Bicycle	Walking Bicycle	Herded Animals & Horses	Large / Slow Vehicle	Total
Saturday 18/06/2016	16	0	11	4	0	0	0	0	0	0	0	31
Sunday 19/06/2016	3	0	0	2	0	0	0	0	0	0	0	5
Monday 20/06/2016	1	8	0	2	0	0	0	0	0	0	0	11
Tuesday 21/06/2016	7	8	0	0	0	0	0	0	0	0	0	15
Wednesday 22/06/2016	5	6	10	2	2	0	0	0	0	0	0	25
Thursday 23/06/2016	10	6	0	0	2	0	0	0	0	0	0	18
Friday 24/06/2016	12	6	0	0	0	0	0	0	0	0	0	18
Saturday 25/06/2016	12	0	0	0	0	0	0	0	0	0	0	12
Sunday 26/06/2016	6	0	4	0	0	0	0	0	3	0	0	13
	72	34	25	10	4	0	0	0	3	0	0	148

Pedestrians

	Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheelchair	Pushchair / Pram	Mobility Scooter	Railway Personnel	Total
Saturday 18/06/2016	18	0	0	0	0	0	0	0	0	18
Sunday 19/06/2016	13	0	0	0	0	0	0	0	0	13
Monday 20/06/2016	6	0	0	0	0	0	0	0	0	6
Tuesday 21/06/2016	2	0	0	0	0	0	0	0	2	4
Wednesday 22/06/2016	13	0	0	0	0	0	0	0	0	13
Thursday 23/06/2016	9	0	0	0	0	0	0	0	0	9
Friday 24/06/2016	18	0	0	0	0	0	0	0	0	18
Saturday 25/06/2016	16	0	0	0	0	0	0	0	0	16
Sunday 26/06/2016	8	0	0	0	0	0	0	0	0	8
	103	0	0	0	0	0	0	0	2	105

Weather

AM

PM

Saturday	18/06/2016	Dry, Windy, Passing clouds	Dry, Windy, Passing clouds
Sunday	03/07/2016	Sunny spells, passing clouds	Sun, scattered clouds, rain later
Monday	20/06/2016	Overcast, rain	Partly sunny, broken clouds, clearing later
Tuesday	21/06/2016	Dry, passing clouds, sunny periods	Dry, passing clouds, sunny periods
Wednesday	22/06/2016	Overcast, Rain	Passing clouds, drying up
Thursday	23/06/2016	Overcast, Rain	Overcast, passing clouds
Friday	24/06/2016	Dry, Sunny	Dry, Sunny
Saturday	25/06/2016	Heavy Rain, Overcast	Cloudy, drying up later on
Sunday	26/06/2016	Dry, Sunny, Windy	Dry, Sunny, Windy

Appendix A – Nine-Day Census

See Excel spreadsheet “3267-LON Site C28 Black Horse Drove 9-day Census”

MOTT MacDONALD

LEVEL CROSSING TRAFFIC CENSUS

SURVEY REPORT JUNE 2016

3267-LON SITE C29 – CASSELLS LEVEL CROSSING

Job Number	3267-LON-C29
Checked	03/10/2016
Date	30/09/2016
Contact	Ross De Vere
Revision	1



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Introduction

Tracsis Traffic Data Limited were commissioned by Mott MacDonald to undertake a level crossing survey at Cassells Level Crossing. The survey consisted of a nine day video traffic census. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census	Appendix A
Road Closure	not available
Traffic Turning	not available
Blocking Back	not available
Speed Survey	not available

In addition to this, further analysis could be carried out in the form of different pedestrian classifications, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendix A)

The pedestrian surveys were undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 18th June 2016 to Sunday 26th June 2016 over the hours 00:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. Resulting camera images recorded at each crossing were then analysed by experienced staff, all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below, all in accordance with the specification:

- Type of Foot Traffic Using the Crossing by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Unaccompanied Children
 4. Elderly
 5. Impaired
 6. Wheelchair
 7. Pushchair/Pram
 8. Mobility Scooter
 9. Railway Personnel

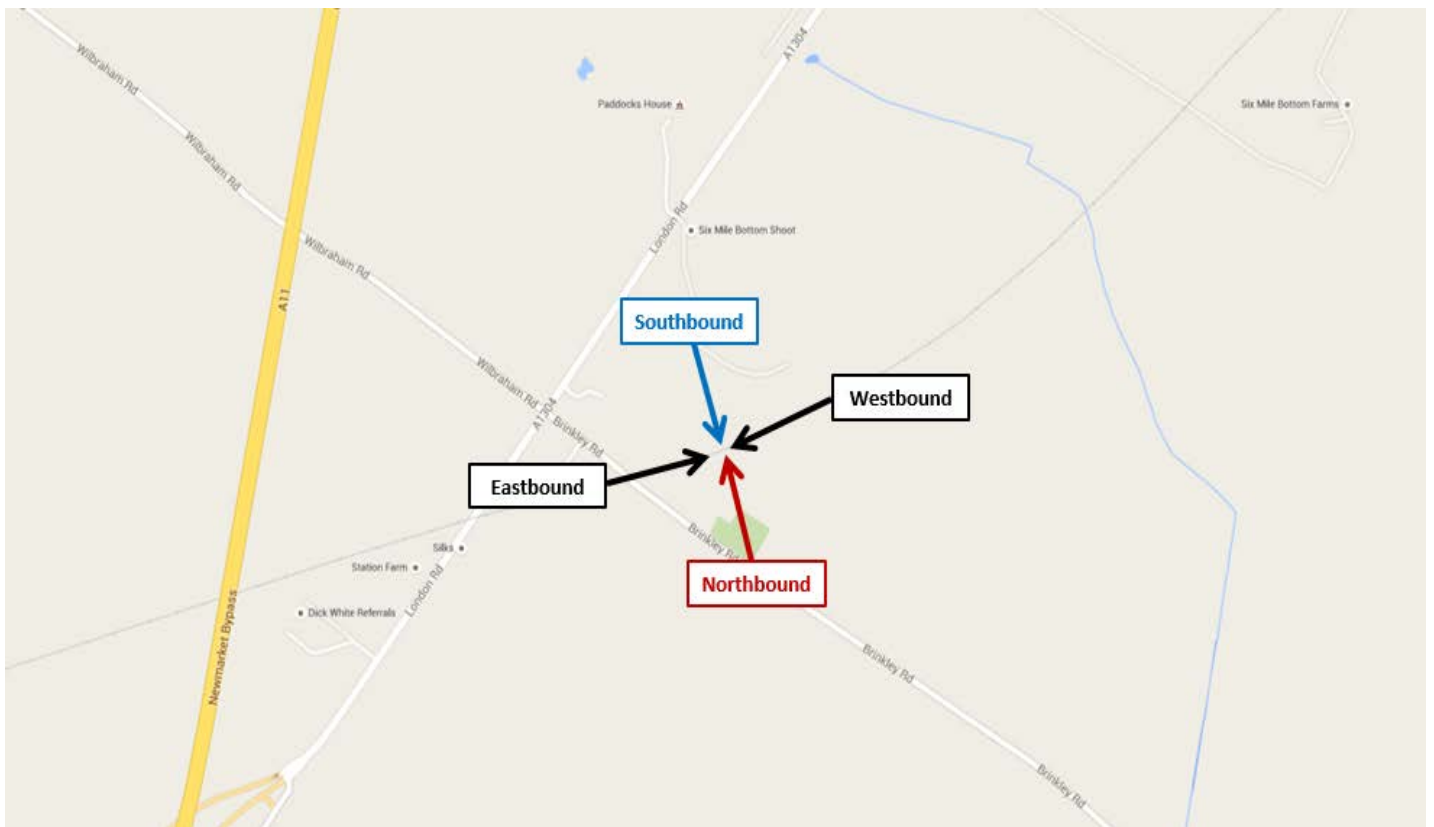
The daily number of pedestrians that used the level crossing over the 24 hours are summed for each category as specified. The specification also requires the busiest quarter hour period for pedestrians. In addition, Tracsis Traffic Data Limited have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

Busiest Quarter Hourly Periods

No cyclists or horse-riders were observed on the level crossing during this census.

For Pedestrians, the busiest quarter hourly period occurred at 20:45 on Day 5 with 2 pedestrians.

Figure 1 - Location Plan



Camera View/Site Equipment



Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Count, for pedestrian users, started on Saturday 18th June 2016 and continued for nine days until Sunday 26th June 2016 with survey hours of 00:00 to 24:00. This data is summarised below.

Throughout the whole period of the survey pedestrian traffic operated in normal free flow conditions and was only restricted by train movements at this site.

Footage will be provided for the survey, as per the specification. The busiest day for 3267-LON Site C29, Cassells Level Crossing, is Wednesday 22nd June 2016.

Pedestrians

	Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheel-chair	Pushchair / Pram	Mobility Scooter	Railway Personnel	Total
Saturday 18/06/2016	0	0	0	0	0	0	0	0	0	0
Sunday 19/06/2016	0	0	0	0	0	0	0	0	0	0
Monday 20/06/2016	0	0	0	0	0	0	0	0	0	0
Tuesday 21/06/2016	0	0	0	0	0	0	0	0	0	0
Wednesday 22/06/2016	2	0	0	0	0	0	0	0	0	2
Thursday 23/06/2016	0	0	0	0	0	0	0	0	0	0
Friday 24/06/2016	0	0	0	0	0	0	0	0	0	0
Saturday 25/06/2016	0	0	0	0	0	0	0	0	0	0
Sunday 26/06/2016	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	2

Equestrians and Cyclists*

Horses	Ridden bicycles	Pushed bicycles	Total
--------	-----------------	-----------------	-------

Saturday 18/06/2016			
Sunday 19/06/2016			
Monday 20/06/2016			
Tuesday 21/06/2016	0	0	0
Wednesday 22/06/2016	0	0	0
Thursday 23/06/2016	0	0	0
Friday 24/06/2016	0	0	0
Saturday 25/06/2016	0	0	0
Sunday 26/06/2016	0	0	0
	0	0	0

*Please note that following discussion with Mott MacDonald following delivery of the first 3 days' worth of census data, the methodology was changed for counting pedestrians and cyclists during census days 4-9. For clarity, during the first 3 days' of census, counts of Ridden bicycles & pushed bicycles were categorised within the regular pedestrian classifications.

Weather

AM

PM

Saturday	18/06/2016	Overcast	Sunny periods, some showers
Sunday	03/07/2016	Sunny spells, passing clouds	Sun, scattered clouds, rain later
Monday	20/06/2016	Overcast, rain	Partly sunny, broken clouds, clearing later
Tuesday	21/06/2016	Dry, Sunny, Passing Clouds	Dry, Sunny
Wednesday	22/06/2016	Dry, Cloudy	Dry, Cloudy
Thursday	23/06/2016	Dry, passing clouds	Dry, passing clouds
Friday	24/06/2016	Dry, Sunny, Windy	Dry, Sunny, Windy
Saturday	25/06/2016	Dry, Sunny	Dry, Sunny
Sunday	26/06/2016	Dry, Windy, Passing clouds	Dry, Windy, Passing clouds

Appendix A – Nine-Day Census

See Excel spreadsheet “3267-LON Site C29 Cassells Census”



Sky High-Count On Us



NETWORK RAIL

8801 LEVEL CROSSING TRAFFIC CENSUS

SURVEY REPORT APRIL 2013

TASK 4 SITE 28 – WESTLEY ROAD LEVEL CROSSING

Job Number	8801-4
Checked	
Date	15/05/2013
Contact	Phil Steward
Revision	1



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Introduction

Sky High-Count On Us were commissioned by Network Rail under the Call-Off Contract Number 2012/LCTC&SS to undertake a level crossing survey at Westley Road. The survey consisted of a nine day video traffic census, with the addition of an automatic traffic count installation. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

In accordance with our contract, the Surveys were carried out in association with Network Rail Specification GRD 007 dated 2nd February 2013. The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census	Appendix A
Road Closure	Appendix B
Traffic Turning	Appendix C
Blocking Back	Appendix D
Speed Survey	Appendix E

In addition to this, further analysis could be carried out in the form of additional time periods, different vehicle/pedestrian classifications, and queuing data, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendix A)

The vehicle surveys were undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 20th April 2013 to Sunday 28th April 2013 over the hours 06:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. The resulting camera images (consisting of nine days, 18 hours per day) recorded at each crossing was then analysed by experienced staff all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below, all in accordance with the Network Rail specification:

- The Number of Road Vehicles Using The Crossing by Direction, Classified to:
 1. Cars
 2. Light Goods Vehicles
 3. Motorcycles
 4. Heavy Goods Vehicles
 5. Agricultural Vehicles
 6. Buses
 7. Equestrians
 8. Pedal Cycles
 9. Herded Animals
 10. Large/Slow Vehicles
- Type of Foot Traffic Using The Crossing. by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Railway Personnel
 4. Unaccompanied Children
- The Number of Trains Passing, by Direction

For each of the crossings the daily number of vehicles and pedestrians that used the level crossing over the 18 hours are summed for each category as specified. The specification also requires the busiest quarter hour period for both vehicles and pedestrians these are detailed below for each level crossing. In addition, Sky High-Count On Us have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

Survey Conduct/Data Presentation – Road Closure (Appendix B)

Road closure analysis is the period during which movement of vehicles and pedestrians over the level crossing is impeded by the complete operational cycle of equipment, recording the following:

- The barrier open and closure times, and the duration the road was closed in each instance.
- The minimum, maximum, and average road closure times.
- Whether or not a train utilises the crossing during each cycle of closure equipment.

Survey Conduct/Data Presentation – Traffic Turning (Appendix C)

Activity of vehicles utilising the side roads in the immediate vicinity of the level crossing, including any observations related to traffic turning causes any adjustment in the flow of other traffic

Survey Conduct/Data Presentation – Blocking Back (Appendix D)

Instances of when vehicles are forced to stop on or near the crossing due to queuing, coded to the following:

1. Amber 1: Rear of queue extends to between 11m and 50m downstream of the crossing.
2. Amber 2: Rear of queue extends to between the crossing barrier and 11m downstream.
3. Red 1: Vehicle fouls the barrier but not within 1.25m of the running line.
4. Red 2: Vehicle fouls the crossing line, or within 1.25m either side of the running line, and are stationary for three or more seconds.
5. Red 3: Similar to Red 2, but where no escape route is available, either forwards or backwards.

Westley Road – Busiest Quarter Hourly Periods

For vehicles, the busiest quarter hourly period occurred at 10:45 – 11:00 hours on Sunday 21st April 2013, with 5 Vehicles.

For pedestrians, the busiest quarter hourly period occurred at 15:15 – 15:30 hours on Sunday 28th April 2013, with 4 Pedestrians.

Survey Conduct/Data Presentation – 85 Percentile Road Speed Survey (Specification - Appendix E)

Speed detection equipment was professionally installed either side of the crossing to record vehicle approach speeds over a nine day period. The results for the crossing have been provided in electronic format and are summarised in Appendix E.

A location plan included below.

Speed surveys were undertaken as follows:-

Site No.	Location.	Day / Date
Task 4 Site 28	Westley Road	Saturday 20 th April 2013 to Sunday 28 th April 2013

The survey was carried out for nine days with survey hours of 00:00 to 24:00.

The results have been provided in excel, in hourly totals and includes the following information:

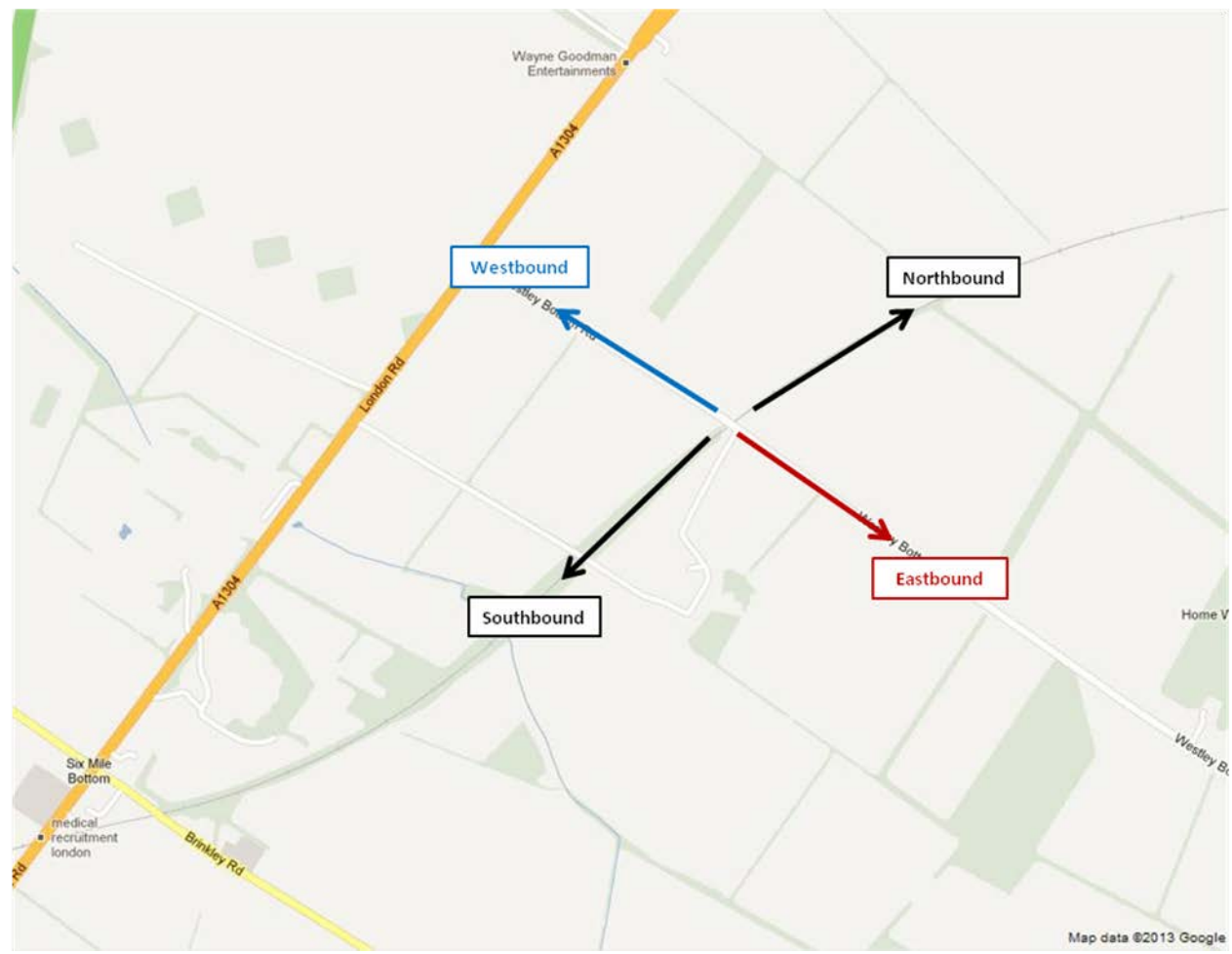
- Class Bin Totals (12 Class)
- Number of Vehicles over Speed Limit
- Percentage of Vehicles over Speed Limit
- Number of Vehicles over Speed Limit 1 (ACPO Standard – 110% Speed Limit + 2mph)

-
- Percentage of Vehicles over Speed Limit 1
 - Number of Vehicles over Speed Limit 2 – (DfT Standard – 100% Speed Limit + 2mph)
 - Percentage of Vehicles over Speed Limit 2
 - Mean Speed
 - 85th Percentile Speed
 - Speed Bin Totals (Range 0 to 140mph)

12hr (07:00 to 19:00), 16hr (06:00 to 22:00), 18hr (06:00 to 00:00) and 24hr (00:00 to 00:00) totals are also included along with a virtual day, week and grand total. The peak time period for both the a.m (00:00 to 12:00) and p.m (12:00 to 24:00) are also highlighted.

A detailed description of the above has also been included in each category and provided in Appendix E.

Figure 1 - Location Plan



Camera View/Site Equipment



Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Count for road, rail, and pedestrian users, started on Saturday 20th April 2013 and continued for nine days until Sunday 28th April 2013 with survey hours of 06:00 to 24:00. This data is summarised below.

Throughout the whole period of the survey traffic operated in normal free flow conditions and was only restricted during barrier closure periods.

Footage will be provided for the busiest day of the survey, as per the specification. The busiest day for Task 4 Site 28 Westley Road, is Sunday 28th April 2013.

Vehicles

	Car	Lgv	Mcl	Hgv	Tractor & Trailers	Bus	Horse Riders	Pcl	Herded Animals & Horses	Large / Slow Vehicles	Total
Saturday 20/04/2013	2	1	0	0	0	0	0	3	0	0	6
Sunday 21/04/2013	7	2	0	0	0	0	0	0	0	0	9
Monday 22/04/2013	2	0	2	0	0	0	0	0	0	0	4
Tuesday 23/04/2013	2	0	2	0	0	0	0	5	0	0	9
Wednesday 24/04/2013	1	1	0	0	0	0	0	0	0	0	2
Thursday 25/04/2013	6	1	0	1	0	0	0	3	0	0	11
Friday 26/04/2013	2	0	0	0	0	0	0	0	0	0	2
Saturday 27/04/2013	0	1	0	0	0	0	0	7	0	0	8
Sunday 28/04/2013	2	0	0	0	0	0	0	2	0	0	4
	24	6	4	1	0	0	0	20	0	0	55

Pedestrians

Adult	Accompanied Child	Railway Personnel	Unaccompanied Child	Total
-------	----------------------	----------------------	------------------------	-------

Saturday 20/04/2013	0	0	0	0	0
Sunday 21/04/2013	3	0	2	0	5
Monday 22/04/2013	4	0	4	0	8
Tuesday 23/04/2013	3	0	2	0	5
Wednesday 24/04/2013	4	0	0	0	4
Thursday 25/04/2013	3	0	0	0	3
Friday 26/04/2013	1	0	0	0	1
Saturday 27/04/2013	0	0	0	0	0
Sunday 28/04/2013	11	0	0	0	11
	29	0	8	0	37

Trains

		Northbound	Southbound	Train Totals
Saturday	20/04/2013	1	0	1
Sunday	21/04/2013	0	0	0
Monday	22/04/2013	16	17	33
Tuesday	23/04/2013	17	15	32
Wednesday	24/04/2013	17	16	33
Thursday	25/04/2013	15	17	32
Friday	26/04/2013	17	19	36
Saturday	27/04/2013	17	15	32
Sunday	28/04/2013	1	0	1
		101	99	200

Road Closures

		Minimum Time Road Open	Maximum Time Road Open	Average Time Road Open
Saturday	20/04/2013	00:00:29	00:01:07	00:00:44
Sunday	21/04/2013	00:00:18	00:02:04	00:01:09
Monday	22/04/2013	00:01:06	00:01:06	00:01:06
Tuesday	23/04/2013	00:00:11	00:01:10	00:00:46
Wednesday	24/04/2013	00:00:59	00:01:13	00:01:06
Thursday	25/04/2013	00:00:04	00:02:49	00:01:01
Friday	26/04/2013	00:01:09	00:03:08	00:02:09
Saturday	27/04/2013	00:00:40	00:01:27	00:01:04
Sunday	28/04/2013	00:00:11	00:00:13	00:00:12
		00:00:04	00:03:08	00:01:08

ATC Speed Summary

8801 T4-28		NETWORK RAIL - WESTLEY ROAD															
		APRIL 2013				Posted Speed Limit (PSL)	Total Vehicles	5 Day Ave.	Ave. Day	Posted Speed Limit (PSL)		110%(PSL) + 2 (SL1)		DfT PSL+15 (SL2)		Mean Speed	85%ile Speed
Site	Location	Exact	Direction	Start Date	End Date					>PSL	>PSL%	>SL1	>SL1%	>SL2	>SL2%		
T4-28	Westley Road -- Westley Road - Att to warning signs	52.19429 0.32711148	Eastbound	20 April 2013	28 April 2013	30	97	14	11	48	49.5	33	34.0	7	7.2	30.5	41.6
			Westbound	20 April 2013	28 April 2013		202	24	22	0	0.0	0	0.0	0	0.0	10.4	13.0

Appendix A – Nine-Day Census

See Excel spreadsheet “8801 Task 4 Site 28 Census”

Appendix B – Road Closure

See Excel spreadsheet “8801 Task 4 Site 28 Road Closure”

Appendix C – Traffic Turning Analysis

There were no incidents of traffic turning observed throughout the survey period.

Appendix D – Blocking Back

There were no incidents of blocking back observed throughout the survey period.

Appendix E – 85% Speed Survey

See Excel spreadsheet “8801 Task 4 Site 28 ATC Survey Report”

MOTT MacDONALD

**LEVEL CROSSING
TRAFFIC CENSUS**

**SURVEY REPORT
NOVEMBER 2016**

3474-TAD LITTLEPORT STATION LEVEL CROSSING

Job Number	3474-TAD
Checked	
Date	24/11/2016
Contact	Dan Bibby
Revision	1



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Introduction

Tracsis Traffic Data Limited were commissioned by Mott MacDonald to undertake a level crossing survey at Littleport Station Level Crossing. The survey consisted of a nine day video traffic census, a separate census for the underpass, and further analysis as detailed in the table below. A location plan is shown in Figure 1, which shows the exact position of the crossing surveyed.

Contract Specification

In accordance with our contract, the Surveys were carried out in association with Network Rail Specification GRD 007 dated 2nd February 2013. The table below shows the analysis carried out, and any further analysis that is possible from the camera views:

Analysis Type	Status
Nine Day Census, level crossing	Appendix A
Nine Day Census, underpass	Appendix B
Road Closure and census	Appendix C
Blocking Back	Appendix D
Junction Turning	Appendix E
Queuing	Appendix F
Speed Survey	not available

In addition to this, further analysis could be carried out in the form of different vehicle/pedestrian classifications, if requested.

Survey Conduct/Data Presentation – Traffic Census (Appendices A and B)

The vehicle surveys were undertaken at the level crossing by telescopically mounted cameras that were installed over nine consecutive days from Saturday 29th October 2016 to Sunday 6th November 2016 over the hours 00:00 – 24:00 each day. The camera equipment was installed from the highway and at no time did we go onto Network Rail land or property. The resulting camera images (consisting of nine days, 24 hours per day) recorded both at the crossing and at the neighbouring underpass were then analysed by experienced staff, all closely supervised. The traffic and pedestrian data was recorded in 15 minute intervals classifying the movements over the crossing into the categories shown below, all in accordance with the Mott MacDonald specification:

- The Number of Road Vehicles Using the Crossing by Direction, Classified to:
 1. Cars
 2. Light Goods Vehicles
 3. Motorcycles
 4. Heavy Goods Vehicles
 5. Agricultural Vehicles
 6. Buses
 7. Equestrians, mounted
 8. Equestrians, walking
 9. Pedal Cycles, ridden
 10. Pedal Cycles, being pushed
 11. Herded Animals
 12. Large/Slow Vehicles

(continued...)

- Type of Foot Traffic Using the Crossing by Direction, Classified to:
 1. Adults
 2. Accompanied Children
 3. Unaccompanied Children
 4. Elderly
 5. Impaired
 6. Wheelchair
 7. Pushchair/Pram
 8. Mobility Scooter
 9. Railway Personnel

- The Number of Trains Passing, by Direction (recorded during the level crossing census only)

For each of the crossings the daily number of vehicles and pedestrians that used the level crossing over the 24 hours are summed for each category as specified. The specification also requires the busiest quarter hour period for both vehicles and pedestrians. These are detailed below. In addition, Tracsis Traffic Data Limited have added any relevant observations during the analysis, relating to crossing misuse or unusual occurrences.

Survey Conduct/Data Presentation – Road Closure (Appendix C)

Road closure analysis is the period during which movement of vehicles and pedestrians over the level crossing is impeded by the complete operational cycle of equipment, recording the following:

- The barrier open and closure times, and the duration the road was closed in each instance.
- Whether or not a train utilises the crossing during each cycle of closure equipment.

For the purposes of this survey, road closures have been included in a separate client-supplied template, which details separate census figures accumulated during each barrier opening and closing period. A summary of the road closures has been included below.

In addition to this, further analysis could be supplied in the form of minimum, maximum, and average road closure times, if requested.

Survey Conduct/Data Presentation – Blocking Back (Appendix D)

Instances of when vehicles are forced to stop on or near the crossing due to queuing, coded to the following:

1. Amber 1: Rear of queue extends to between 11m and 50m downstream of the crossing.
2. Amber 2: Rear of queue extends to between the crossing barrier and 11m downstream.
3. Red 1: Vehicle fouls the barrier but not within 1.25m of the running line.
4. Red 2: Vehicle fouls the crossing line, or within 1.25m either side of the running line, and are stationary for three or more seconds.
5. Red 3: Similar to Red 2, but where no escape route is available, either forwards or backwards.

Survey Conduct/Data Presentation – Junction Turning Count (Appendix E)

Activity of vehicles utilising the side roads in the immediate vicinity of the level crossing, including any observations related to traffic turning which causes any adjustment in the flow of other traffic.

Three arms were identified at the junction immediately to the west of the underpass at Littleport Station. Through traffic used Arms B and C, as clarified in Figure 2 below, and details of this traffic has been included in the report.

Survey Conduct/Data Presentation – Queueing (Appendix F)

Instances of when vehicles are forced to stop near the three-arm junction due to queueing.

A queue is defined as those vehicles at a junction which are stationary or which have slowed down to walking speed or less.

A note on British Summer Time and Universal Time

The cameras and times recorded in this census use a period which overlapped between British Summer Time and Universal Time. The latter came into force during the weekend of October 29/30 2016.

The five cameras used in this census were reset, with their timings changed from BST to Universal Time, during the course of a half-hour maintenance visit by our technician, specifically between 23:06:46 and 23:36:15.

Littleport Station Level Crossing – Busiest Quarter Hourly Periods

For Cars/Lgvs, the busiest quarter hourly period occurred at 18:15 on Day 5 with 50 vehicles.

For Hgvs/Large Vehicles, the busiest quarter hourly period occurred at 07:00 on Day 2 with 8 vehicles.

For Vehicles, the busiest quarter hourly period occurred at 18:15 on Day 5 with 51 vehicles.

For Pedestrians, the busiest quarter hourly period occurred at 11:45 on Day 9 with 7 pedestrians.

For Trains, there were multiple days with the highest total number.

Overall, the busiest quarter hourly period occurred at 18:15 on Day 5 with 51 vehicles (no pedestrians).

Littleport Station Underpass – Busiest Quarter Hourly Periods

For Cars/Lgvs, the busiest quarter hourly period occurred at 07:30 on Day 7 with 34 vehicles.

For Hgvs/Large Vehicles, the busiest quarter hourly period occurred at *08:15 on Day 7 with 1 vehicle.

For Vehicles, the busiest quarter hourly period occurred at 07:30 on Day 7 with 35 vehicles.

For Pedestrians, the busiest quarter hourly period occurred at 18:00 on Day 4 with 13 pedestrians.

Overall, the busiest quarter hourly period occurred at 18:00 on Day 4 with 39 vehicles and pedestrians.

* This time period is the first occurrence of the busiest period, but not the only occurrence.

Figure 1 - Location Plan

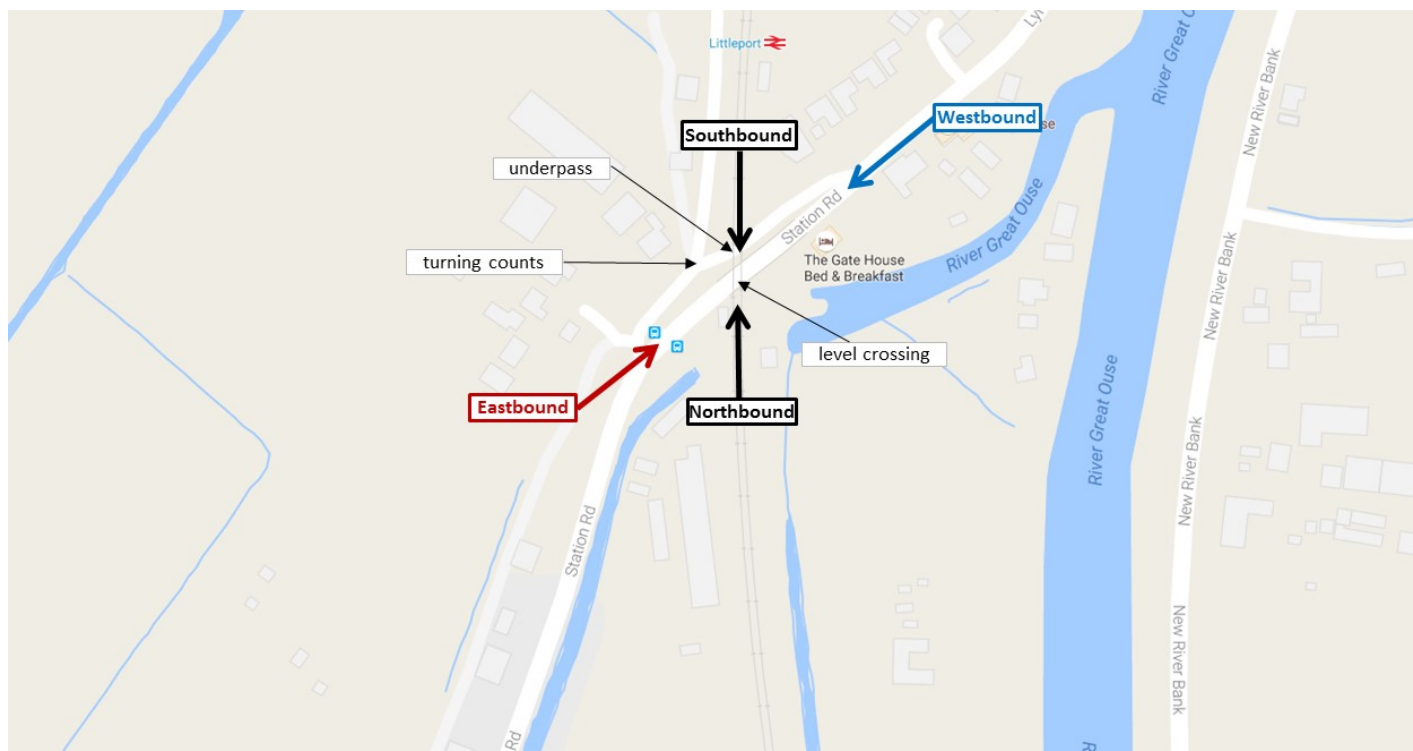


Figure 2 – Junction Turning Count



Camera View/Site Equipment







Summary

The surveys undertaken at the Level Crossing were successfully undertaken in accordance with the specification.

The Manual Level Crossing Counts for road, rail, and pedestrian users, started on Saturday 29th October 2016 and continued for nine days until Sunday 6th October 2016 with survey hours of 00:00 to 24:00. This data is summarised below.

Throughout the whole period of the survey traffic operated in normal free flow conditions and the main carriageway was only restricted during barrier closure periods.

Footage will be provided for the survey, as per the specification. The busiest day for 3474-TAD, Littleport Station Level Crossing, is Sunday 6th November 2016; the busiest day for the Underpass is Tuesday 1st November 2016.

Vehicles (level crossing)

	Car	Lgv	Mcl	Hgv	Tractor & Trailers	Bus	Horse Riders, mounted	Horse Riders, walking	Riding bicycle	Pushing bicycle	Herded Animals & Horses	Large / Slow Vehicle	Total
Saturday 29/10/2016	1257	109	13	36	4	4	0	0	17	1	0	1	1442
Sunday 30/10/2016	1587	138	39	31	9	36	0	0	22	1	0	26	1889
Monday 31/10/2016	1145	195	8	53	10	17	0	0	21	0	0	6	1455
Tuesday 01/11/2016	1211	202	4	52	6	12	0	0	14	0	0	13	1514
Wednesday 02/11/2016	1209	214	6	53	19	12	0	0	19	0	0	17	1549
Thursday 03/11/2016	1161	214	11	52	11	13	0	0	11	0	0	19	1492
Friday 04/11/2016	1310	224	4	60	10	10	1	0	9	0	0	19	1647
Saturday 05/11/2016	1136	136	9	19	6	0	0	0	18	1	0	2	1327
Sunday 06/11/2016	1439	134	11	17	3	40	0	0	24	0	0	21	1689
	11455	1566	105	373	78	144	1	0	155	3	0	124	14004

Pedestrians (level crossing)

	Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheel-chair	Pushchair / Pram*	Mobility Scooter	Railway Personnel	Total
Saturday 29/10/2016	49	3	0	0	0	0	0	0	0	52
Sunday 30/10/2016	68	6	0	0	0	0	0	0	0	74
Monday 31/10/2016	34	2	0	0	0	0	0	0	0	36
Tuesday 01/11/2016	35	0	0	0	0	0	0	0	0	35
Wednesday 02/11/2016	41	0	0	0	1	0	0	0	0	42
Thursday 03/11/2016	48	1	1	0	2	0	0	0	0	52
Friday 04/11/2016	22	0	0	0	0	0	0	0	0	22
Saturday 05/11/2016	36	2	0	0	0	0	2	0	0	40
Sunday 06/11/2016	45	2	6	0	0	0	0	0	2	55
	378	16	7	0	3	0	2	0	2	408

*Please note – Pushchairs/Prams may or may not contain a child. As it is often difficult to see into prams, in order to ensure consistency the children will not be counted separately.

Vehicles (underpass)

Car	Lgv	Mcl	Hgv	Tractor & Trailers	Bus	Horse Riders, mounted	Horse Riders, walking	Riding bicycle	Pushing bicycle	Herded Animals & Horses	Large / Slow Vehicle	Total
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Saturday	29/10/2016	295	24	5	0	0	0	0	14	2	0	0	340
Sunday	30/10/2016	94	12	0	0	0	0	0	5	0	0	0	111
Monday	31/10/2016	497	73	4	2	0	0	0	11	0	0	0	587
Tuesday	01/11/2016	509	63	2	1	0	0	0	16	0	0	0	591
Wednesday	02/11/2016	475	62	2	1	0	0	0	18	0	0	0	558
Thursday	03/11/2016	521	59	4	2	0	0	0	20	0	0	0	606
Friday	04/11/2016	555	86	12	4	0	0	0	12	0	0	0	669
Saturday	05/11/2016	320	24	4	0	0	0	0	10	1	0	0	359
Sunday	06/11/2016	56	3	1	1	0	0	0	4	0	0	0	65
		3322	406	34	11	0	0	0	110	3	0	0	3886

Pedestrians (underpass)

Adult	Accom- panied Child	Unaccom- panied Child	Elderly	Impaired	Wheel- chair	Pushchair / Pram*	Mobility Scooter	Railway Personnel	Total
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Saturday	29/10/2016	52	0	0	0	0	2	0	0	54
Sunday	30/10/2016	16	0	0	0	0	0	0	0	16
Monday	31/10/2016	61	1	0	0	0	2	0	0	64
Tuesday	01/11/2016	75	2	0	0	0	2	0	0	79
Wednesday	02/11/2016	77	2	0	0	0	0	0	0	79
Thursday	03/11/2016	82	1	0	0	0	0	0	0	83
Friday	04/11/2016	66	3	0	0	0	0	0	0	69
Saturday	05/11/2016	50	1	0	0	0	0	0	0	51
Sunday	06/11/2016	9	2	0	0	0	0	0	0	11
		488	12	0	0	0	6	0	0	506

*Please note – Pushchairs/Prams may or may not contain a child. As it is often difficult to see into prams, in order to ensure consistency the children will not be counted separately.

Trains

		Northbound	Southbound	Train Totals
Saturday	29/10/2016	22	21	43
Sunday	30/10/2016	3	0	3
Monday	31/10/2016	29	28	57
Tuesday	01/11/2016	30	30	60
Wednesday	02/11/2016	31	30	61
Thursday	03/11/2016	31	30	61
Friday	04/11/2016	29	30	59
Saturday	05/11/2016	24	24	48
Sunday	06/11/2016	1	0	1
		200	193	393

Road Closures

		Minimum Time Road Closed	Maximum Time Road Closed	Average Time Road Closed
Saturday	29/10/2016	00:04:10	00:11:49	00:05:47
Sunday	30/10/2016	00:02:50	00:16:38	00:07:43
Monday	31/10/2016	00:04:00	00:14:33	00:06:13
Tuesday	01/11/2016	00:03:25	00:16:04	00:06:27
Wednesday	02/11/2016	00:03:23	00:17:08	00:05:51
Thursday	03/11/2016	00:03:31	00:17:30	00:05:53
Friday	04/11/2016	00:03:50	00:17:48	00:05:53
Saturday	05/11/2016	00:04:15	00:17:02	00:06:32
Sunday	06/11/2016	00:04:44	00:04:44	00:04:44
		00:02:50	00:17:48	00:06:06

Blocking Back

Amber 1	Amber 2	Red 1	Red 2	Red 3	Total
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Saturday	29/10/2016	0	0	0	0	0	0
Sunday	30/10/2016	0	3	0	0	0	3
Monday	31/10/2016	0	0	0	0	0	0
Tuesday	01/11/2016	0	0	0	0	0	0
Wednesday	02/11/2016	1	0	0	0	0	1
Thursday	03/11/2016	1	0	0	0	0	1
Friday	04/11/2016	0	1	0	0	0	1
Saturday	05/11/2016	0	0	0	0	0	0
Sunday	06/11/2016	0	0	0	0	0	0
		2	4	0	0	0	6

Queues

maximum queue lengths, measured in vehicles

		Arm A	Arm B	Arm C
Saturday 29/10/2016	am	1	0	0
	pm	1	0	1
Sunday 30/10/2016	am	1	0	1
	pm	1	0	0
Monday 31/10/2016	am	1	2	1
	pm	5	1	0
Tuesday 01/11/2016	am	1	1	1
	pm	4	1	1
Wednesday 02/11/2016	am	2	1	1
	pm	2	2	0
Thursday 03/11/2016	am	2	1	2
	pm	4	0	1
Friday 04/11/2016	am	2	1	1
	pm	4	0	2
Saturday 05/11/2016	am	1	0	0
	pm	1	0	1
Sunday 06/11/2016	am	2	0	1
	pm	2	0	1

**Junction
Turning –
Origin /
Destination**

Car		Lgv		Mcl		Hgv		Wheeling bicycle		Pushing bicycle		Total	
Orig.	Dest.	Orig.	Dest.	Orig.	Dest.	Orig.	Dest.	Orig.	Dest.	Orig.	Dest.	Orig.	Dest.

Saturday 29/10/2016	A	115	114	6	6	3	3	3	3	26	22	3	3	156	151
	B	126	169	13	11	2	3	0	0	8	6	1	1	150	190
	C	236	194	13	15	4	3	3	3	20	26	2	2	278	243
Sunday 30/10/2016	A	52	50	16	16	1	1	0	0	5	3	0	0	74	70
	B	36	58	5	7	0	0	0	0	1	4	0	0	42	69
	C	94	74	19	17	1	1	0	0	4	3	0	0	118	95
Monday 31/10/2016	A	167	173	13	11	2	1	0	0	48	57	6	1	236	243
	B	253	244	33	40	1	3	2	0	5	6	0	0	294	293
	C	336	339	43	38	4	3	0	2	60	50	1	6	444	438
Tuesday 01/11/2016	A	194	196	13	13	1	1	1	1	55	69	5	0	269	280
	B	242	267	28	35	0	2	1	0	8	8	0	0	279	312
	C	357	330	41	34	3	1	2	3	69	55	0	5	472	428
Wednesday 02/11/2016	A	200	199	11	11	4	2	1	1	49	55	1	0	266	268
	B	225	250	28	34	1	1	1	0	7	11	0	0	262	296
	C	350	326	42	36	3	5	0	1	63	53	0	1	458	422
Thursday 03/11/2016	A	190	190	10	12	2	2	0	0	48	58	1	1	251	263
	B	246	275	31	28	3	1	1	1	7	13	0	0	288	318
	C	368	339	36	37	3	5	1	1	69	53	1	1	478	436
Friday 04/11/2016	A	208	210	14	16	1	1	0	0	52	52	3	0	278	279
	B	261	294	41	45	4	8	2	2	6	6	0	0	314	355
	C	406	371	47	41	9	5	2	2	53	53	0	3	517	475
Saturday 05/11/2016	A	126	124	7	6	1	1	0	0	14	18	1	0	149	149
	B	170	150	12	12	3	1	0	0	6	4	0	1	191	168
	C	246	268	16	17	1	3	0	0	20	18	0	0	283	306
Sunday 06/11/2016	A	50	48	3	3	3	2	0	1	3	5	0	0	59	59
	B	20	36	1	2	0	1	1	0	2	2	0	0	24	41
	C	69	55	2	1	3	3	0	0	7	5	0	0	81	64
Totals	A	1302	1304	93	94	18	14	5	6	300	339	20	5	1738	1762
	B	1579	1743	192	214	14	20	8	3	50	60	1	2	1844	2042
	C	2462	2296	259	236	31	29	8	12	365	316	4	18	3129	2907

For reasons of clarity, the following categories have not been included in this table, as none of them were observed in these turning counts during the course of the census:

- Tractors & Trailers
- Bus
- Horse Riders, mounted
- Horse Riders, walking
- Herded Animals & Horses
- Large / Slow Vehicles

Appendix A – Nine-Day Census, level crossing

See Excel spreadsheet “3474-TAD Littleport Census – Census, Level Crossing”

Appendix B – Nine-Day Census, underpass

See Excel spreadsheet “3474-TAD Littleport Census – Census, Underpass”

Appendix C – Nine-Day Census with Road Closures

See Excel spreadsheet “3474-TAD Littleport Census – Census and Road Closures”

Appendix D – Blocking Back

See Excel spreadsheet “3474-TAD Littleport Station - Blocking Back”

Appendix E – Junction Turning Counts

See Excel spreadsheet “3474-TAD Littleport Station – Junction Turning Count”

Appendix F – Queueing

See Excel spreadsheet “3474-TAD Littleport Station - Queues”