

Response to WSCC Strategic Planning Consultation Comments dated 6 September 2012

Proposed housing development at

**Roundstone Lane, Angmering
Arun Planning Application A/82/12**

On behalf of

Barratt David Wilson Southampton

23 November 2012

This note is prepared on behalf of the Applicant to respond to the content of the WSCC Strategic Planning Consultation response to Arun District Council dated 6 September 2012. We respond paragraph by paragraph with the WSCC comments in blue for clarity.

'Junction assessments: These do not appear to be consistent with observed traffic conditions on the A259 or at Water Lane/A283. The queue lengths in Appendix 11 appear to be lower than actual observed queue lengths during the morning and evening peak hours. Further detail should be provided on the junction assessments relating to the A259 to explain the relationship between observed congestion and the technical junction assessments.'

Queue length data taken during the traffic survey together with a summary in table and also schematic format is attached in Appendix 1 at the rear of this note.

The observed lengths in vehicles were noted every five minutes by the survey company. The summary queue lengths compiled by us from this data are mean average PCUs to match the definition of queue in TRL's ARCADY method. Capacity models are based on geometrical measurements taken from Ordnance Survey and aerial photograph. Percentage arm capacity adjustments have been undertaken where necessary such that the output from the ARCADY base model shows similar results.

We believe this industry standard approach provides adequately representative models however there are two reasons the traffic conditions observed might differ from the modelling results which are worth noting before attempting to produce more 'accurate' models:

1 – Natural variance and definition of queue. The queues reported from ARCADY are mean average static queues over time segments. This does not include slow moving traffic approaching a junction or demonstrate the maximum observable number of stopped vehicles at any particular time or any particular day. It can be seen from the raw queue length data that as expected at peak times there is a significant variance in queue length. There would also be significant daily variance not able to be incorporated into the models.

2 – Congestion from downstream delays beyond the roundabouts may have been observed which is not a capacity failing of the roundabout itself and would not be appropriate to artificially throttle the performance of the roundabout to mimic this since alteration to that roundabout would not solve the problem.



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Nevertheless we believe the models represent the geometry and delay on the ground and produce a fair assessment of the likely increases in queue and delays due to development which are of course small in proportion to the small increase in traffic flow due to development.

'The A283 Angmering Bypass/Water Lane junction is also subject to congestion with traffic queuing (for example) from the traffic calming build-outs on Water Lane to the junction, causing the right-turn lane on the A283 to exceed capacity.'

We had not observed this scenario on the A280 having visited site several times during peak times and the queue lengths recorded in the traffic survey do not show this situation occurring but are aware the priority traffic calming on Water Lane causes a significant restriction and this may affect the ability of traffic on the A280 to enter Water Lane which would in turn affect route choice.

The capacity of the RHT lane is 10-11 vehicles. The traffic survey shows queues of up to 7 vehicles (average 4) PM peak, less on the AM peak. The greatest increase to the right turn into Water Lane due to development is one vehicle per two minutes during the PM peak hour and therefore it would be expected that no more than one additional vehicle could be observed at any time due to development.

The PICADY analysis confirms that for the flows on the A280 and turning movements associated with Water Lane the right hand turn lane is sufficient both without and with development flows. The blocking back effect of downstream traffic calming cannot be incorporated in the T junction modelling and is not caused by that junction.

Since the restriction is formed by the Water Lane traffic calming an alteration to the A280 junction would not release the restriction. The traffic calming could be altered or removed which would release the restriction but could increase the volume of through traffic using the village rather than the bypass. The small impact from the development proposals is not responsible for the overhaul or otherwise of the Angmering Village Traffic Calming although this is being looked at by WSCC and APC. It was acknowledged by us and WSCC during pre app consultation that small highway improvements were not going to be effective at solving the wider issues causing these local problems and the request was for financial contribution towards the schemes being tabled by the Joint Eastern Arun Area Committee.

'The junction of the A259 and Roundstone Lane appears to have a narrow exit arm from Roundstone Lane which reduces capacity on the arm. Further information should be provided on this aspect of the junction and whether alterations to the kerb line would be beneficial.'

Drawing 22067/110 which shows the existing kerb and white lining layout together with photographs of this location are attached in Appendix 2 at the rear of this note.

The entry arm onto the roundabout is two lane on its approach and modelling of this roundabout confirms that the existing highway geometry does not present any capacity issues.

The entry from the southern end of Roundstone Lane was specifically revisited following the first public consultation and concern from local people about large vehicles and a video survey was taken in addition to the turning count surveys previously commissioned. The video survey was undertaken over a weekday week 27 February 2012 to 2 March 2012. The

busiest day was Thursday and we had the traffic survey company compile a sped up version (middle 30 minutes of the peak hours played at 12 x speed = 2.5 minutes long) which we played at the second public exhibition to demonstrate there was no significant capacity problem at the southern end of Roundstone Lane.

The situation where a large vehicle straddles both entry lanes and restricts the ability of two lane entry only causes a momentary delay and it can be seen that the small queues clear very quickly. The proposed development is residential and would therefore not increase HGV flows. The existing two lane entry is sufficient for two cars abreast.

Given the lack of capacity problem and small traffic impact no highway improvement was offered with the planning application and we remain of the view that this location is not in need of junction capacity improvement due to development.

'Site access junction: There is concern that the proposed configuration of the junction does not relate well to the existing traffic calming on Roundstone Lane. The safety auditor comments:

Despite traffic calming features on Roundstone Lane it was noted by the Audit Team that many vehicles were proceeding at inappropriate speeds for this class and type of road.

This implies that the existing traffic calming is not effective and the proposed raised table at the site access junction does not appear to introduce a feature which would reduce speeds on Roundstone Lane. Paragraph 5.7.5 in the transport assessment does not appear to be consistent with the auditor's comment. Further information should be provided justifying the choice of junction configuration and indicating how it relates to and improves the effectiveness of the existing traffic calming.

Evidence should be provided of existing vehicle speeds on Roundstone Lane at or near the site access and how the proposed configuration of the junction would contribute to their reduction. This should form part of a signed design audit of the proposal, indicating which design standards have been used and justifying any departures from the standards used. The road safety auditor's opinion should be sought on the proposed design and whether it meets the concerns expressed in the road safety audit and takes account of the use of Roundstone Lane by buses. (Note that signatures are required for the road safety audit, designer's response and any further opinion from the road safety auditor.) The needs of pedestrians, cyclists and mobility-impaired people should be accounted for within the junction design.'

The Auditor noted his observation of vehicle speed on Roundstone Lane in the introduction, we had noticed the same during a site visit and interpret this to be due to the width of the speed cushions being narrow enough to straddle in a car without reducing speed once aligned. We commissioned a speed and volume survey in June 2012 which showed 85%ile speeds approximately at the posted speed limit in both directions. The speed survey attached recorded a mean average speed of 24mph and an 85%ile speed of 29mph northbound and a mean average speed of 27mph and an 85%ile speed of 32mph southbound adjacent to the existing priority buildout which quite obviously does less to restrict speed in the prioritised southerly direction.

We do not agree with the comment that raised tables do not introduce a feature which would reduce vehicle speeds. Flat topped humps and raised junctions are found to be very effective according to guidance within Local

Transport Note 1/07 March 2007: Traffic Calming. They have also been recently installed at the nearby Bramley Green estate and appear to be an acceptable form of traffic calming on bus routes which cater well for pedestrian crossings whilst raising awareness of the new T junction.

The road safety auditor's concern was the bypassing of the priority junction narrowing facilitated by the new bellmouth. His recommendation was to remove the buildout and this is achieved in the proposed raised junction which therefore meets the recommendation.

A design statement for the proposed raised junction and further Safety Audit of that specific proposal is undertaken and will be submitted separately.

'No capacity modelling appears to have been carried out on the proposed site access junction and this should be addressed.'

PICADY modelling has now been undertaken on the proposed site access based on an average of the five day peak hour flows taken from the June 2012 7 day ATC data with development turning movements added.

Modelling with the predicted development traffic identifies that there is no noticeable effect on traffic on Roundstone Lane. The effect is so minimal that it is clear that future year modelling would not demonstrate any capacity problems. Results are shown below.

Site Access - Roundstone Lane			
2013 Opening Year with Pre Travel Plan Development			
Weekday AM Peak			
	Queue (PCU)	Delay (min)	RFC
Site Access	0	0.11	0.19
Roundstone Lane (south)	0	0.10	0.03
Weekday PM Peak			
	Queue (PCU)	Delay (min)	RFC
Site Access	0	0.11	0.08
Roundstone Lane (south)	0	0.10	0.08

The PICADY output is attached in Appendix 3.

'The proposed retaining structures at the junction will require Approval in Principle before they can be constructed as part of a Section 278 highway agreement. While this is not required for any planning consent, the applicant should ensure that it is feasible to construct the structures within existing or proposed highway land.'

The applicant's land abuts highway land in this location and it is envisaged the retaining walls would be constructed and adopted under Section 38 / 278 Agreement under the Highways Act 1980.

A preliminary design for the entrance and retaining walls will be provided.

'Site sustainability: There is a network of roads and paths to the west of the site and there are public rights of way along the east and south sides of the site. The only bus service adjacent to the site is the 9 between Lancing & Littlehampton which passes along Roundstone Lane. Local amenities are said to be within a "short walk" of the site, though this is not defined in distance or time. It is not clear whether the proposed travel plan would be effective in mitigating any deficiencies in access to services. Further information should be provided on access to facilities and public transport and how it is proposed to improve access to more frequent bus services that the 9 and to Angmering railway station. Proposals to improve bus stops adjacent to the site should be considered. It is not clear how the public

rights of way adjacent to the site would be accessed and further details should be provided.'

Suggested small scale local transport infrastructure improvement proposals were forwarded to WSCC during pre application consultation and the advice given was that the Highway Authority would prefer financial contribution towards approved measures in the local infrastructure plan.

The number 9 bus stops outside the site boundary, there is little that could be done to improve access other than a high quality crossing of Roundstone Lane which we believe is achieved by the proposed raised junction. Potential improvements to the local bus stops to include shelters were offered at the pre planning stage and remain a possible improvement but were rejected in favor of financial contribution. This seemed appropriate but conflicts with the comments now made on the application.

The amenities within Angmering village centre are within approximately 1km of the development site. This is a 10 – 15 minute walk at normal walking speeds of around 80 metres per minute.

Plans and descriptions of the local amenities, key destinations and pedestrian routes, pedestrian and cyclist infrastructure, local bus stops and services and routes to the railway station were included in the Transport Assessment. There is a shared cycle footway and puffin crossing along the route to Angmering Railway Station between footways and carriageways along residential streets. There is no clear need to improve accessibility along this route.

The travel plan would not directly affect any shortfall in commercial public transport services but the increase in demand for the number 9 service will improve the commercial viability in itself. The travel plan is based on site specific advice from WSCC and includes a financial contribution towards the sustainable travel costs for each household.

The main desire lines are to the west and southwest. However, pedestrian footpaths will link the site to the existing footpath along the south boundary and to the northeast at the point of the existing gated field entrance. These will be non-vehicular entrances and allow for walking routes along the path adjacent to the A280 and footbridge over it leading to the countryside to the east of the site.

'Internal road layout: It would be helpful if a more detailed plan could be provided showing how provision will be made within the site for pedestrians, cyclists and mobility-impaired people. It is not clear from the refuse tracking layout (plan 4528:P90) whether footways or shared surfaces will be provided, nor whether access for emergency vehicles has been considered. Evidence that the Fire & Rescue service has been consulted should be provided.'

The architectural colour layout plan attached to the planning application shows footways adjacent to most carriageways and also indicates pedestrian crossing locations which would all include tactile paving as part of detailed design. There are small areas of shared surface cul-de-sacs.

Vehicle tracking analysis was included for the entrance and internal streets including large refuse vehicles (which by worst case includes fire and other emergency vehicles) which demonstrates the physical layout is appropriate which can be agreed in detail as part of a section 38 technical approval. The layout is designed to be in accordance with Part B of Building Regulations.

'Construction Management Plan: While a detailed Plan is not required at this stage, further details of the traffic management aspects of construction, including vehicle routing and parking, should be provided.'

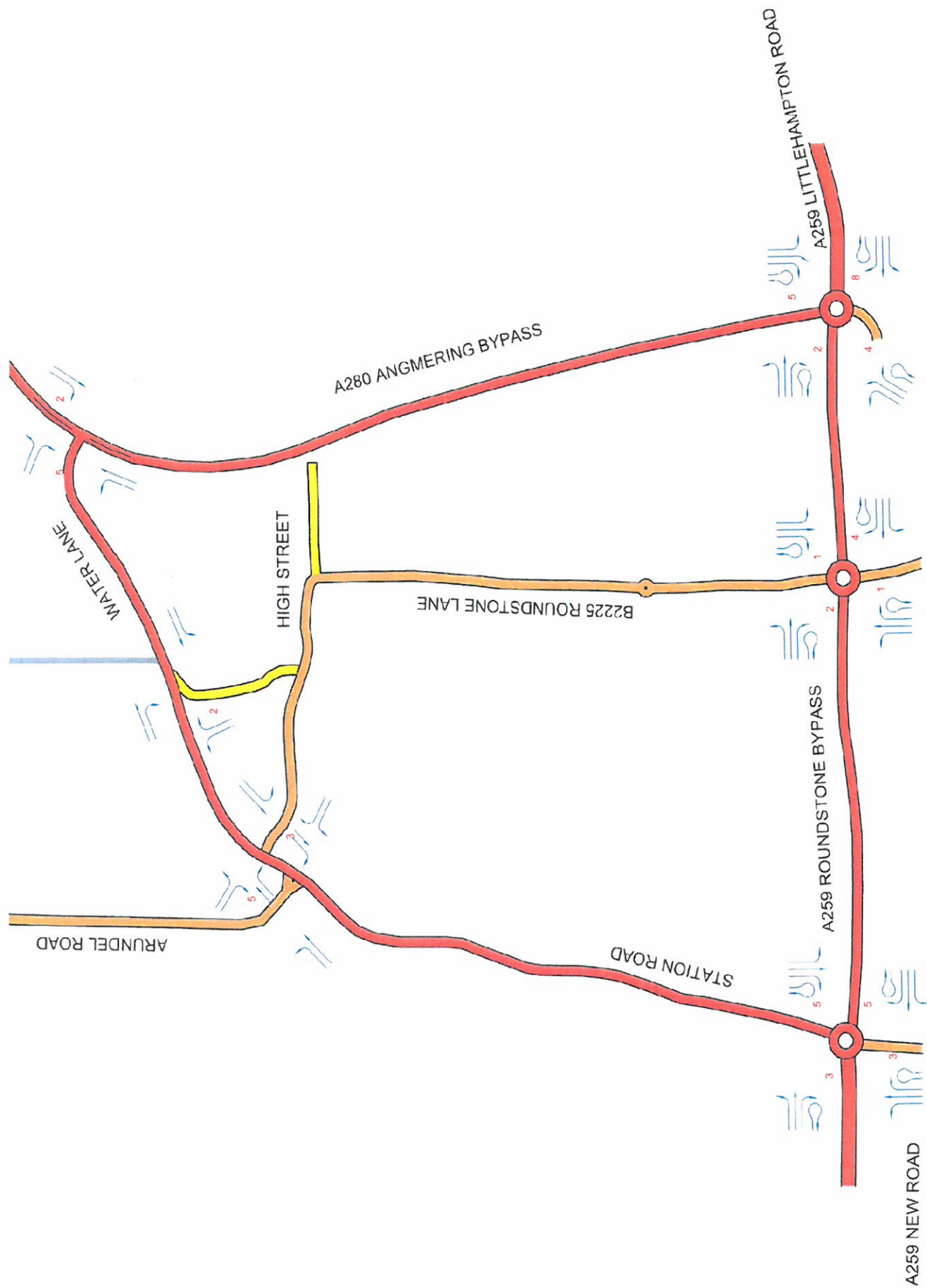
We envisage the key highway related components of a Construction Management Plan for this site would be:

The site entrance would be constructed prior to the onsite building works.

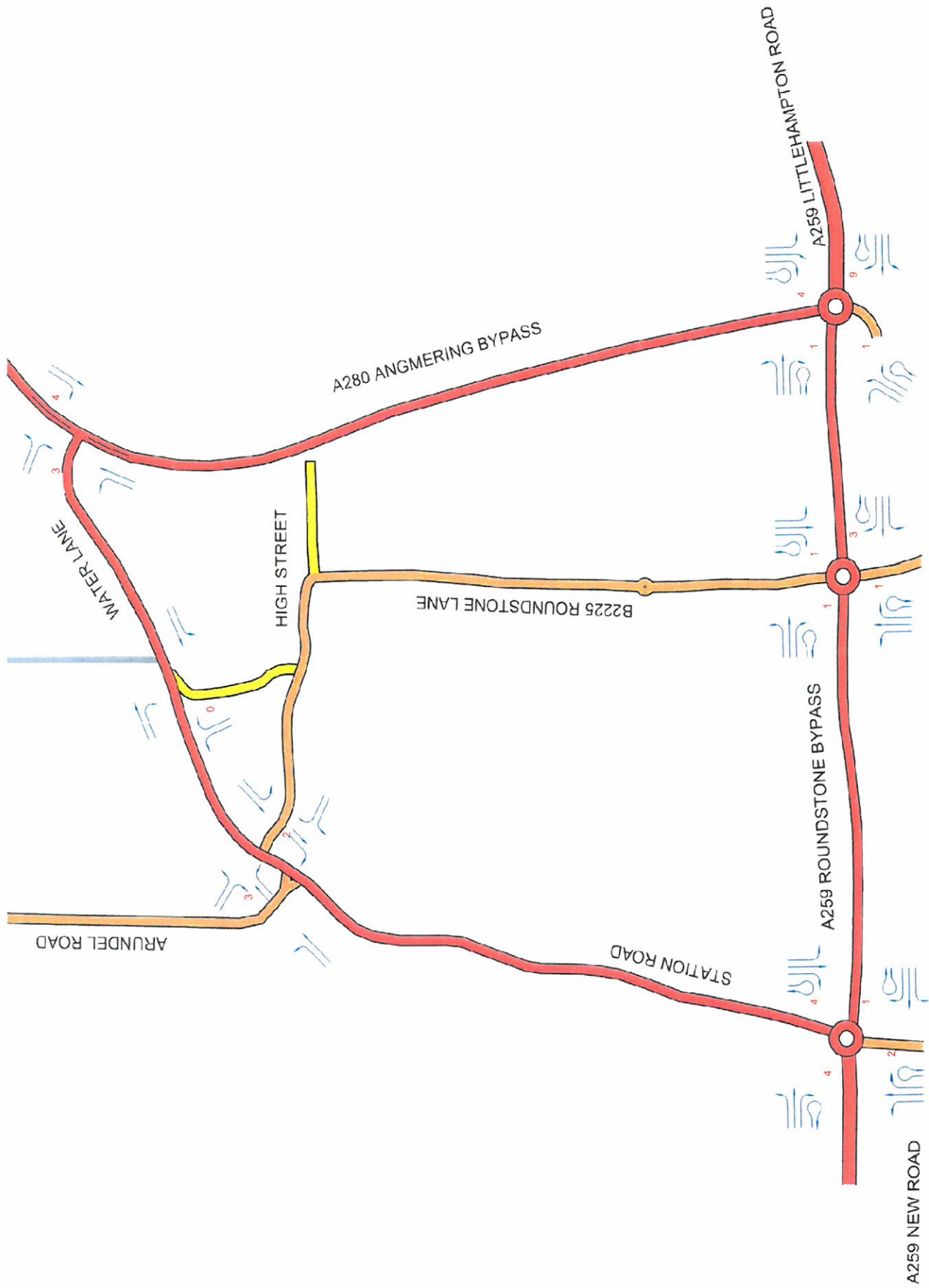
- Construction traffic and construction workers would park onsite so as not to affect the surrounding streets.
- Construction vehicles will approach the site from the A259 only and enter the site via Roundstone Lane not the byway accessed from High Street.
- Construction will be phased such that suitable onsite parking is available throughout the construction programme
- Construction traffic will be managed such that it does not arrive during peak hours or at antisocial times.

Appendix 1

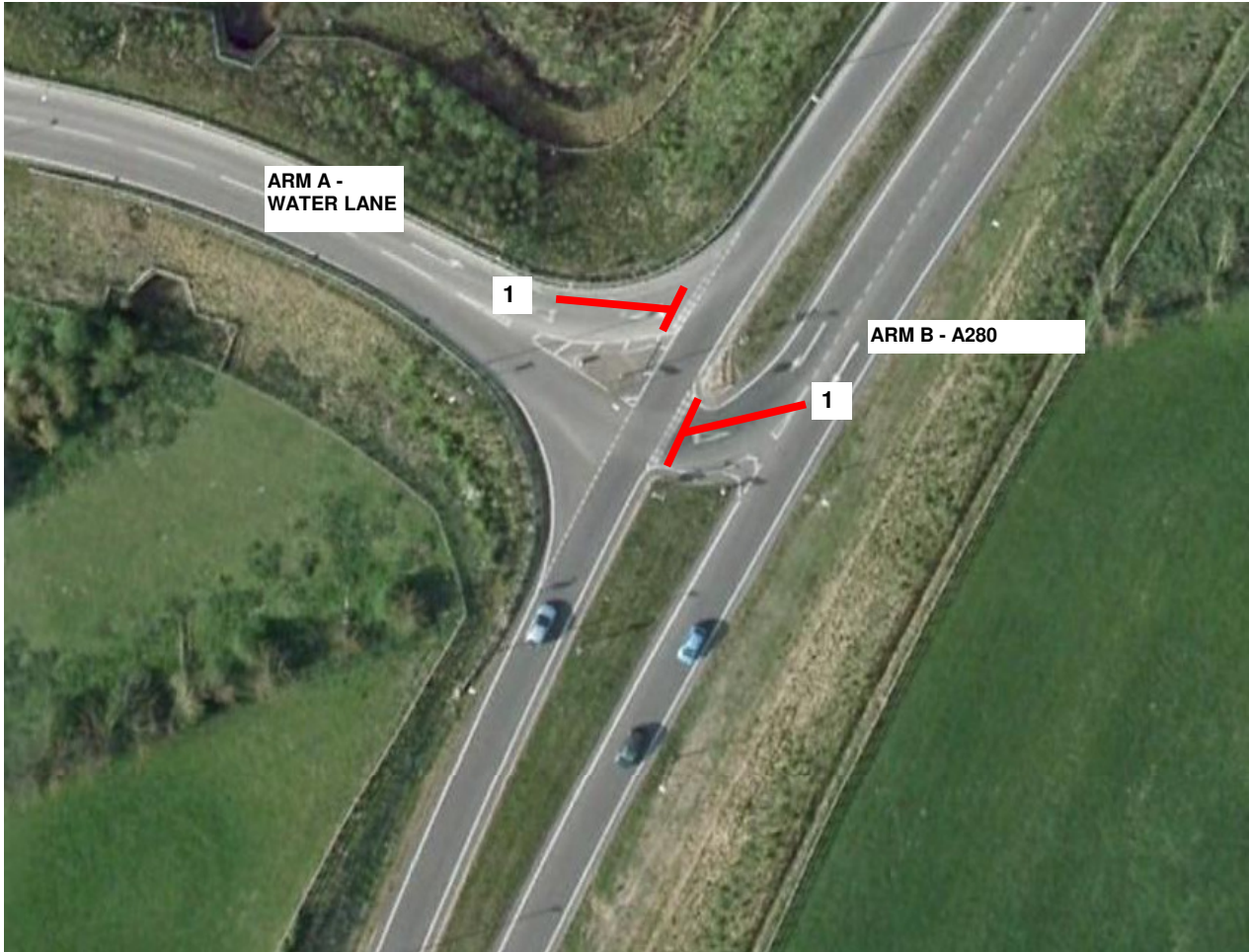
Traffic Survey Queue Length Data



2011 Observed Queue Lengths
AM Peak Hour



2011 Observed Queue Lengths
PM Peak Hour



	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 4 - ARM A (AM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

		No. Vehicles							PCU TOTAL	
		LANE 1								
		CARS	LGV	OGV1	OGV2	PSV	M/C	B/C		
Time	08:00	: 08:05	4	1	0	0	0	0	0	5
	08:05	: 08:10	6	1	0	0	0	0	0	7
	08:10	: 08:15	7	0	0	0	0	0	0	7
	08:15	: 08:20	5	2	0	0	0	0	0	7
	08:20	: 08:25	4	0	0	0	0	0	0	4
	08:25	: 08:30	7	0	0	0	0	0	0	7
	08:30	: 08:35	4	0	0	0	0	0	0	4
	08:35	: 08:40	5	1	0	0	0	0	0	6
	08:40	: 08:45	6	0	0	0	0	0	0	6
	08:45	: 08:50	5	0	0	0	0	0	0	5
08:50	: 08:55	3	0	0	0	0	0	0	3	
08:55	: 09:00	3	0	0	0	0	0	0	3	
TOTAL			59	5	0	0	0	0	0	64
AVG			4.92	0.42	0.00	0.00	0.00	0.00	0.00	5.33

	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 4 - ARM A (PM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

		No. Vehicles								PCU TOTAL
		LANE 1								
		CARS	LGV	OGV1	OGV2	PSV	M/C	B/C		
17:00	: 17:05	2	0	0	0	0	0	0	2	
17:05	: 17:10	2	0	0	0	0	0	0	2	
17:10	: 17:15	2	0	0	0	0	0	0	2	
17:15	: 17:20	4	0	0	0	0	0	0	4	
17:20	: 17:25	5	0	0	0	0	0	0	5	
17:25	: 17:30	3	0	0	0	0	0	0	3	
17:30	: 17:35	4	1	0	0	0	0	0	5	
17:35	: 17:40	3	0	0	0	0	0	0	3	
17:40	: 17:45	4	0	0	0	0	0	0	4	
17:45	: 17:50	2	0	0	0	0	0	0	2	
17:50	: 17:55	0	0	0	0	0	0	0	0	
17:55	: 18:00	6	0	0	0	0	0	0	6	
TOTAL		37	1	0	0	0	0	0	38	
AVG		3.08	0.08	0.00	0.00	0.00	0.00	0.00	3.17	

	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 4 - ARM B (AM PEAKS)		

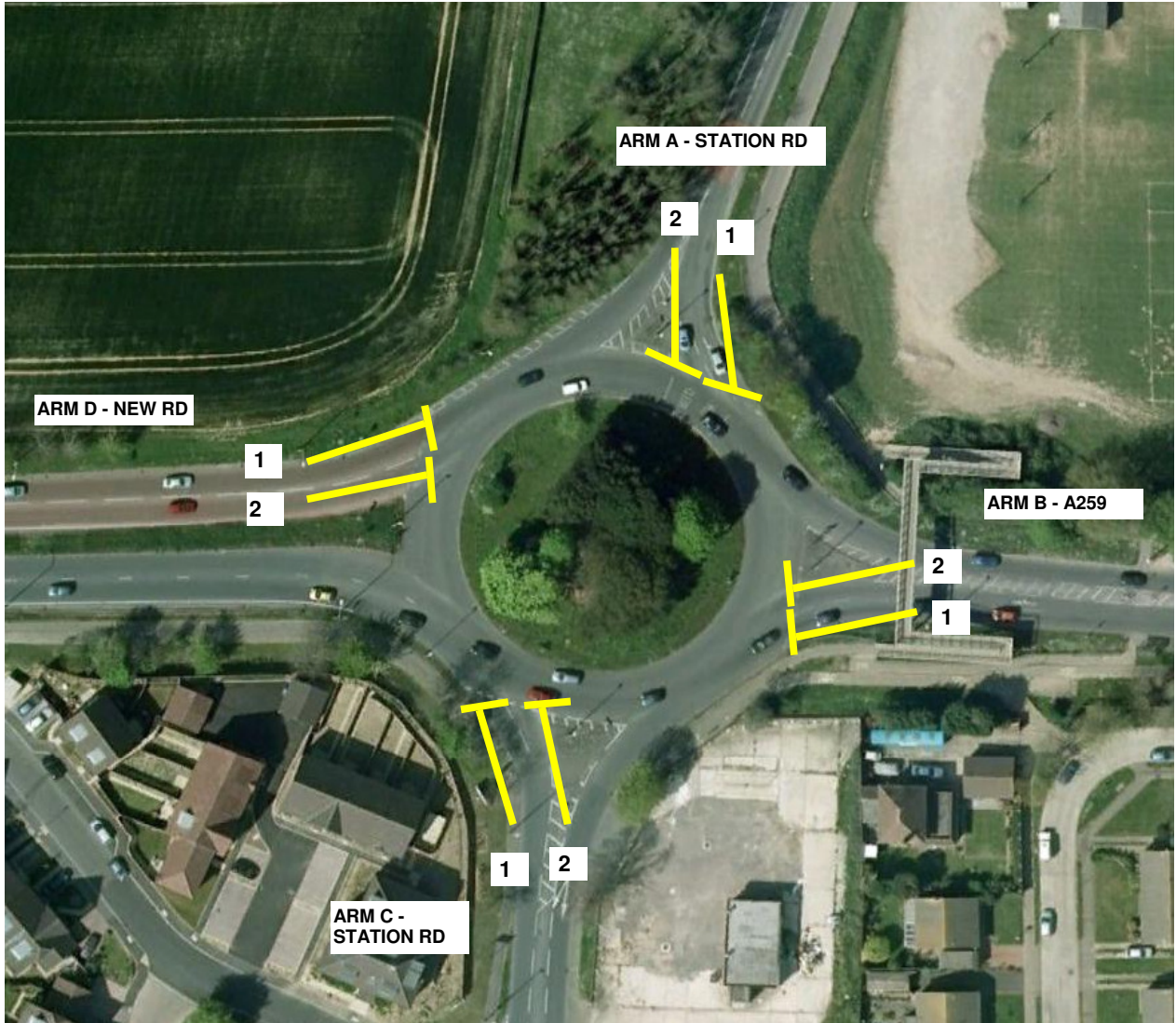
(LANE 1 IS NEARSIDE TO KERB)

		No. Vehicles							PCU TOTAL	
		LANE 1								
		CARS	LGV	OGV1	OGV2	PSV	M/C	B/C		
08:00	:	08:05	2	1	0	0	0	0	0	3
08:05	:	08:10	2	1	0	0	0	0	0	3
08:10	:	08:15	2	0	0	0	0	0	0	2
08:15	:	08:20	2	0	0	0	0	0	0	2
08:20	:	08:25	0	0	0	0	0	0	0	0
08:25	:	08:30	0	0	0	0	0	0	0	0
08:30	:	08:35	0	0	0	0	0	0	0	0
08:35	:	08:40	2	0	0	0	0	0	0	2
08:40	:	08:45	1	1	0	0	0	0	0	2
08:45	:	08:50	2	0	0	0	0	0	0	2
08:50	:	08:55	1	1	0	0	0	0	0	2
08:55	:	09:00	2	0	0	0	0	0	0	2
TOTAL			16	4	0	0	0	0	0	20
AVG			1.33	0.33	0.00	0.00	0.00	0.00	0.00	1.67

	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 4 - ARM B (PM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

		No. Vehicles								PCU TOTAL
		LANE 1								
		CARS	LGV	OGV1	OGV2	PSV	M/C	B/C		
17:00	:	17:05	4	1	0	0	0	0	0	5
17:05	:	17:10	5	0	0	0	0	0	0	5
17:10	:	17:15	2	2	0	0	0	0	0	4
17:15	:	17:20	3	0	0	0	0	0	0	3
17:20	:	17:25	7	0	0	0	0	0	0	7
17:25	:	17:30	3	0	0	0	0	0	0	3
17:30	:	17:35	0	0	0	0	0	0	0	0
17:35	:	17:40	3	1	0	0	0	0	0	4
17:40	:	17:45	3	0	0	0	0	0	0	3
17:45	:	17:50	3	0	0	0	0	0	0	3
17:50	:	17:55	5	0	0	0	0	0	0	5
17:55	:	18:00	5	1	0	0	0	0	0	6
TOTAL			43	5	0	0	0	0	0	48
AVG			3.58	0.42	0.00	0.00	0.00	0.00	0.00	4.00



 Quality Traffic Surveys	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 5 - ARM A (AM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

Time			No. Vehicles								PCU TOTAL			No. Vehicles								PCU TOTAL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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			CARS	LGV	OGV1	OGV2	PSV	M/C	B/C	CARS				LGV	OGV1	OGV2	PSV	M/C	B/C																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
08:00	:	08:05	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0</

 Quality Traffic Surveys	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 5 - ARM A (PM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

Time		No. Vehicles							PCU	
		LANE 1							TOTAL	TOTAL
		CARS	LGV	OGV1	OGV2	PSV	M/C	B/C		
17:00	: 17:05	2	0	0	0	0	0	0	2	4
17:05	: 17:10	4	0	0	0	0	0	0	4	2
17:10	: 17:15	6	0	0	0	0	0	0	6	0
17:15	: 17:20	4	0	0	0	0	0	0	4	1
17:20	: 17:25	8	0	0	0	0	0	0	8	3
17:25	: 17:30	2	0	0	0	0	0	0	2	1
17:30	: 17:35	3	0	0	0	0	0	0	3	2
17:35	: 17:40	4	1	0	0	0	0	0	5	3
17:40	: 17:45	9	2	0	0	0	0	0	11	1
17:45	: 17:50	0	0	0	0	0	0	0	0	0
17:50	: 17:55	1	0	0	0	0	0	0	1	1
17:55	: 18:00	0	0	0	0	0	0	0	0	1
TOTAL		43	3	0	0	0	0	0	46	19
AVG		3.58	0.25	0.00	0.00	0.00	0.00	0.00	3.83	1.58

 Quality Traffic Surveys	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 5 - ARM B (AM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

Time		No. Vehicles							PCU	
		LANE 1							TOTAL	B/C
		CARS	LGV	OGV1	OGV2	PSV	M/C	B/C		
08:00	: 08:05	2	0	0	0	0	0	0	2	0
08:05	: 08:10	4	0	0	0	0	0	0	4	0
08:10	: 08:15	3	0	0	0	0	0	0	3	0
08:15	: 08:20	6	0	0	0	0	0	0	6	0
08:20	: 08:25	5	0	0	0	0	0	0	5	0
08:25	: 08:30	4	1	0	0	0	0	0	5	0
08:30	: 08:35	7	0	0	0	0	0	0	7	0
08:35	: 08:40	5	0	0	0	0	0	0	5	0
08:40	: 08:45	6	0	0	0	0	0	0	6	0
08:45	: 08:50	4	0	0	0	0	0	0	4	0
08:50	: 08:55	3	1	0	0	0	0	0	4	0
08:55	: 09:00	3	0	0	0	0	0	0	3	0
TOTAL		52	2	0	0	0	0	0	54	0
AVG		4.33	0.17	0.00	0.00	0.00	0.00	0.00	4.50	0.00

 Quality Traffic Surveys	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 5 - ARM B (PM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

Time		No. Vehicles						PCU		No. Vehicles						PCU	
		LANE 1						TOTAL	B/C	LANE 1						TOTAL	B/C
		CARS	LGV	OGV1	OGV2	PSV	M/C			CARS	LGV	OGV1	OGV2	PSV	M/C		
17:00	: 17:05	6	1	0	0	0	0	7	0	2	0	0	0	0	0	2	0
17:05	: 17:10	6	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
17:10	: 17:15	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
17:15	: 17:20	3	0	0	0	0	0	3	0	1	0	0	0	0	0	1	0
17:20	: 17:25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:25	: 17:30	12	2	0	0	0	0	14	0	0	0	0	0	0	0	0	0
17:30	: 17:35	4	0	0	0	0	0	4	0	1	0	0	0	0	0	1	0
17:35	: 17:40	2	1	0	0	0	0	3	0	3	0	0	0	0	0	3	0
17:40	: 17:45	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
17:45	: 17:50	4	0	0	0	0	0	4	0	1	0	0	0	0	0	1	0
17:50	: 17:55	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
17:55	: 18:00	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
TOTAL		48	4	0	0	0	0	52	0	8	0	0	0	0	0	8	0
AVG		4.00	0.33	0.00	0.00	0.00	0.00	4.33	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.67	0.00

 Quality Traffic Surveys	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 5 - ARM C (AM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

Time		No. Vehicles							PCU TOTAL	No. Vehicles							PCU TOTAL
		LANE 1								LANE 1							
		CARS	LGV	OGV1	OGV2	PSV	M/C	B/C		CARS	LGV	OGV1	OGV2	PSV	M/C	B/C	
08:00	: 08:05	2	0	0	0	0	0	0	2	1	0	0	0	0	0	0	1
08:05	: 08:10	3	0	0	0	0	0	0	3	2	0	0	0	1	0	0	4
08:10	: 08:15	4	0	0	0	0	0	0	4	1	0	0	0	0	0	0	1
08:15	: 08:20	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	2
08:20	: 08:25	4	0	0	0	0	0	0	4	2	0	0	0	0	0	0	2
08:25	: 08:30	6	0	0	0	0	0	0	6	1	1	0	0	0	0	0	2
08:30	: 08:35	2	0	0	0	0	0	0	2	1	0	0	0	0	0	0	1
08:35	: 08:40	4	0	0	0	0	0	0	4	2	0	0	0	0	0	0	2
08:40	: 08:45	3	1	0	0	0	0	0	4	2	0	0	0	0	0	0	2
08:45	: 08:50	3	0	0	0	0	0	0	3	1	0	0	0	0	0	0	1
08:50	: 08:55	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
08:55	: 09:00	2	1	0	0	0	0	0	3	3	0	0	0	0	0	0	3
TOTAL		36	2	0	0	0	0	0	38	17	2	0	0	1	0	0	21
AVG		3.00	0.17	0.00	0.00	0.00	0.00	0.00	3.17	1.42	0.17	0.00	0.00	0.08	0.00	0.00	1.75

 Quality Traffic Surveys	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 5 - ARM C (PM PEAKS)		

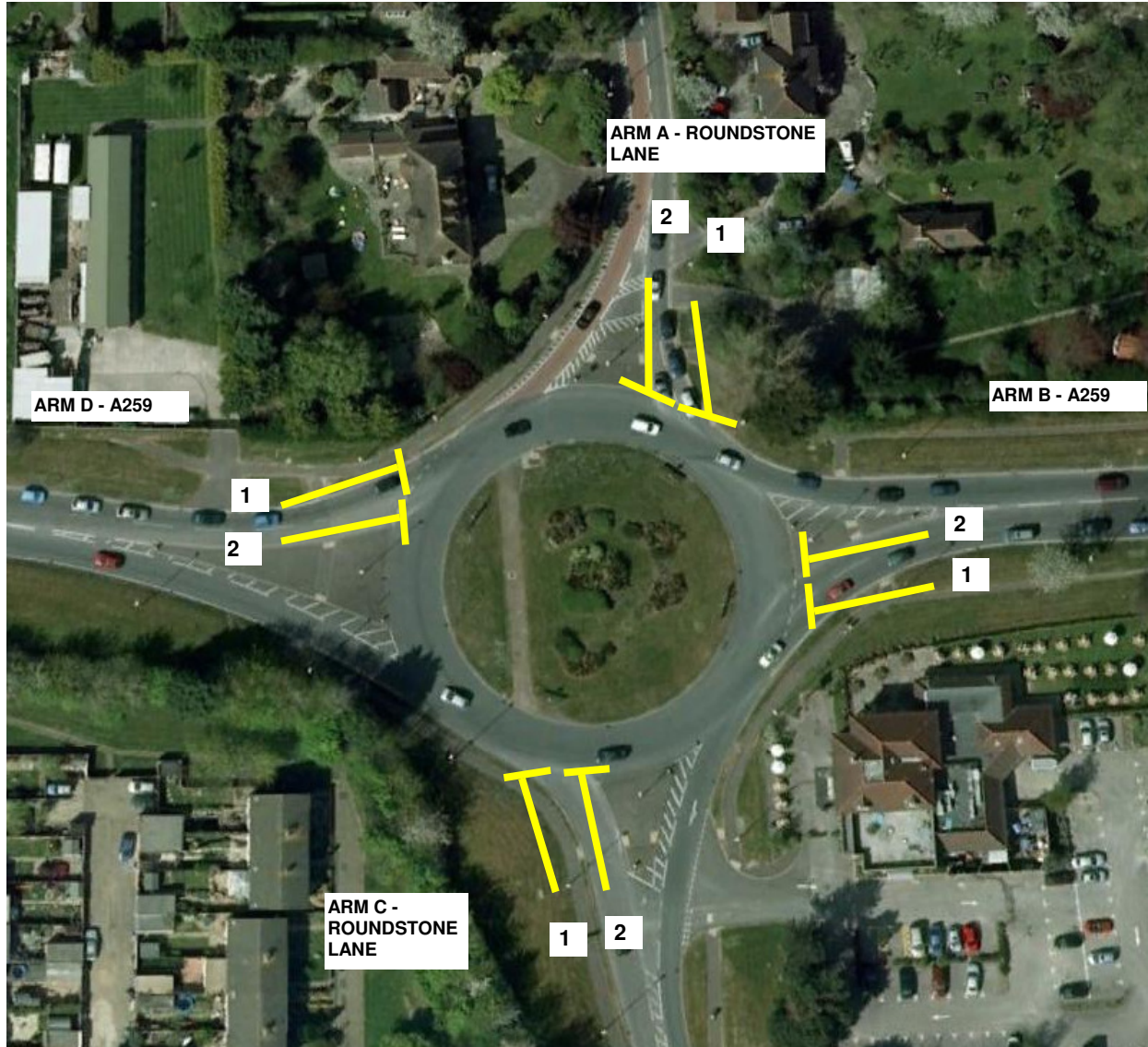
(LANE 1 IS NEARSIDE TO KERB)

Time		No. Vehicles								PCU TOTAL		No. Vehicles								PCU TOTAL	
		LANE 1										LANE 1									
		CARS	LGV	OGV1	OGV2	PSV	M/C	B/C	CARS			LGV	OGV1	OGV2	PSV	M/C	B/C				
17:00	:	17:05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
17:05	:	17:10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
17:10	:	17:15	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
17:15	:	17:20	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
17:20	:	17:25	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
17:25	:	17:30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
17:30	:	17:35	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
17:35	:	17:40	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3			
17:40	:	17:45	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
17:45	:	17:50	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
17:50	:	17:55	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
17:55	:	18:00	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
TOTAL			23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9			
AVG			1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75			

 Quality Traffic Surveys	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 5 - ARM D (PM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

Time		No. Vehicles								PCU TOTAL	No. Vehicles							PCU TOTAL
		LANE 1									LANE 1							
		CARS	LGV	OGV1	OGV2	PSV	M/C	B/C	CARS		LGV	OGV1	OGV2	PSV	M/C	B/C		
17:00	: 17:05	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
17:05	: 17:10	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
17:10	: 17:15	3	0	0	0	0	0	0	0	3	2	0	0	0	0	0	2	
17:15	: 17:20	2	0	0	0	0	0	0	0	2	1	0	0	0	0	0	1	
17:20	: 17:25	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
17:25	: 17:30	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
17:30	: 17:35	3	0	0	0	0	0	0	0	3	1	0	0	0	0	0	1	
17:35	: 17:40	6	0	0	0	0	0	0	0	6	2	0	0	0	0	0	2	
17:40	: 17:45	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	
17:45	: 17:50	4	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	
17:50	: 17:55	5	0	0	0	0	0	0	0	5	1	0	0	0	0	0	1	
17:55	: 18:00	7	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	
TOTAL		37	0	0	0	0	0	0	0	37	7	0	0	0	0	0	7	
AVG		3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.08	0.58	0.00	0.00	0.00	0.00	0.00	0.58	



 Quality Traffic Surveys	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 6 - ARM A (AM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

Time		No. Vehicles								PCU TOTAL	No. Vehicles						PCU TOTAL
		LANE 1									LANE 1						
		CARS	LGV	OGV1	OGV2	PSV	M/C	B/C	CARS		LGV	OGV1	OGV2	PSV	M/C	B/C	
08:00	: 08:05	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
08:05	: 08:10	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
08:10	: 08:15	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	
08:15	: 08:20	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	
08:20	: 08:25	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
08:25	: 08:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
08:30	: 08:35	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
08:35	: 08:40	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	
08:40	: 08:45	1	0	0	0	0	0	0	1	1	0	0	0	0	0	1	
08:45	: 08:50	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
08:50	: 08:55	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
08:55	: 09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL		10	1	0	0	0	0	0	11	3	0	0	0	0	0	3	
AVG		0.83	0.08	0.00	0.00	0.00	0.00	0.00	0.92	0.25	0.00	0.00	0.00	0.00	0.00	0.25	

 Quality Traffic Surveys	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 6 - ARM A (PM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

Time		No. Vehicles							PCU	
		LANE 1							TOTAL	TOTAL
		CARS	LGV	OGV1	OGV2	PSV	M/C	B/C		
17:00	: 17:05	1	0	0	0	0	0	0	1	1
17:05	: 17:10	0	0	0	0	0	0	0	0	0
17:10	: 17:15	2	0	0	0	0	0	0	2	1
17:15	: 17:20	1	0	0	0	0	0	0	1	0
17:20	: 17:25	0	0	0	0	0	0	0	0	0
17:25	: 17:30	0	0	0	0	0	0	0	0	0
17:30	: 17:35	1	0	0	0	0	0	0	1	1
17:35	: 17:40	3	1	0	0	0	0	0	4	0
17:40	: 17:45	0	0	0	0	0	0	0	0	0
17:45	: 17:50	0	0	0	0	0	0	0	0	0
17:50	: 17:55	0	0	0	0	0	0	0	0	0
17:55	: 18:00	0	0	0	0	0	0	0	0	0
TOTAL		8	1	0	0	0	0	0	9	3
AVG		0.67	0.08	0.00	0.00	0.00	0.00	0.00	0.75	0.25

 Quality Traffic Surveys	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 6 - ARM B (AM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

Time		No. Vehicles						PCU		No. Vehicles						PCU	
		LANE 1						TOTAL		LANE 1						TOTAL	
		CARS	LGV	OGV1	OGV2	PSV	M/C			CARS	LGV	OGV1	OGV2	PSV	M/C		
08:00	: 08:05	5	0	0	0	0	0	5		1	0	0	0	0	0	1	
08:05	: 08:10	4	0	0	0	0	0	4		0	0	0	0	0	0	0	
08:10	: 08:15	3	0	0	0	0	0	3		0	0	0	0	0	0	0	
08:15	: 08:20	5	0	0	0	0	0	5		2	0	0	0	0	0	2	
08:20	: 08:25	2	0	0	0	0	0	2		1	0	0	0	0	0	1	
08:25	: 08:30	3	0	0	0	0	0	3		1	0	0	0	0	0	1	
08:30	: 08:35	4	0	0	0	0	0	4		3	0	0	0	0	0	3	
08:35	: 08:40	5	0	0	0	0	0	5		1	0	0	0	0	0	1	
08:40	: 08:45	4	0	0	0	0	0	4		0	0	0	0	0	0	0	
08:45	: 08:50	1	1	0	0	0	0	2		0	0	0	0	0	0	0	
08:50	: 08:55	3	0	0	0	0	0	3		1	0	0	0	0	0	1	
08:55	: 09:00	2	0	0	0	0	0	2		0	0	0	0	0	0	0	
TOTAL		41	1	0	0	0	0	42		10	0	0	0	0	0	10	
AVG		3.42	0.08	0.00	0.00	0.00	0.00	3.50		0.83	0.00	0.00	0.00	0.00	0.00	0.83	

	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 6 - ARM B (PM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

Time		No. Vehicles							PCU	
		LANE 1							TOTAL	TOTAL
		CARS	LGV	OGV1	OGV2	PSV	M/C	B/C		
17:00	: 17:05	8	0	0	0	0	0	0	8	0
17:05	: 17:10	3	0	0	0	0	0	0	3	1
17:10	: 17:15	4	0	0	0	0	0	0	4	2
17:15	: 17:20	2	0	0	0	0	0	0	2	0
17:20	: 17:25	0	0	0	0	0	0	0	0	0
17:25	: 17:30	4	0	0	0	0	0	0	4	0
17:30	: 17:35	3	0	0	0	0	0	0	3	2
17:35	: 17:40	0	0	0	0	0	0	0	0	0
17:40	: 17:45	3	1	1	0	0	0	0	5.5	0
17:45	: 17:50	2	0	0	0	0	0	0	2	1
17:50	: 17:55	0	0	0	0	0	0	0	0	0
17:55	: 18:00	0	0	0	0	0	0	0	0	0
TOTAL		29	1	1	0	0	0	0	31.5	6
AVG		2.42	0.08	0.08	0.00	0.00	0.00	0.00	2.63	0.50

	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160	
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11	
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 6 - ARM C (AM PEAKS)			

(LANE 1 IS NEARSIDE TO KERB)

Time		No. Vehicles						PCU		No. Vehicles						PCU	
		LANE 1						TOTAL	B/C	LANE 1						TOTAL	B/C
		CARS	LGV	OGV1	OGV2	PSV	M/C			CARS	LGV	OGV1	OGV2	PSV	M/C		
08:00	: 08:05	2	0	0	0	0	0	2	0	1	0	0	0	0	0	1	0
08:05	: 08:10	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
08:10	: 08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	: 08:20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:20	: 08:25	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
08:25	: 08:30	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
08:30	: 08:35	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0
08:35	: 08:40	0	1	0	0	0	0	1	0	2	0	0	0	0	0	2	0
08:40	: 08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	: 08:50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:50	: 08:55	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0
08:55	: 09:00	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
TOTAL		9	1	0	0	0	0	10	0	5	0	0	0	0	0	5	0
AVG		0.75	0.08	0.00	0.00	0.00	0.00	0.83	0.00	0.42	0.00	0.00	0.00	0.00	0.00	0.42	0.00

 Quality Traffic Surveys	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 6 - ARM C (PM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

Time		No. Vehicles						PCU		No. Vehicles						PCU	
		LANE 1						TOTAL	B/C	LANE 1						TOTAL	B/C
		CARS	LGV	OGV1	OGV2	PSV	M/C			CARS	LGV	OGV1	OGV2	PSV	M/C		
17:00	: 17:05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:05	: 17:10	2	0	0	0	0	0	2	0	1	0	0	0	0	0	1	0
17:10	: 17:15	2	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0
17:15	: 17:20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:20	: 17:25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:25	: 17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	: 17:35	1	0	1	0	0	0	2.5	0	1	0	0	0	1	0	3	0
17:35	: 17:40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:40	: 17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	: 17:50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:50	: 17:55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:55	: 18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL		5	1	1	0	0	0	7.5	0	2	0	0	0	1	0	4	0
AVG		0.42	0.08	0.08	0.00	0.00	0.00	0.63	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.33	0.00

 Quality Traffic Surveys	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 6 - ARM D (AM PEAKS)		

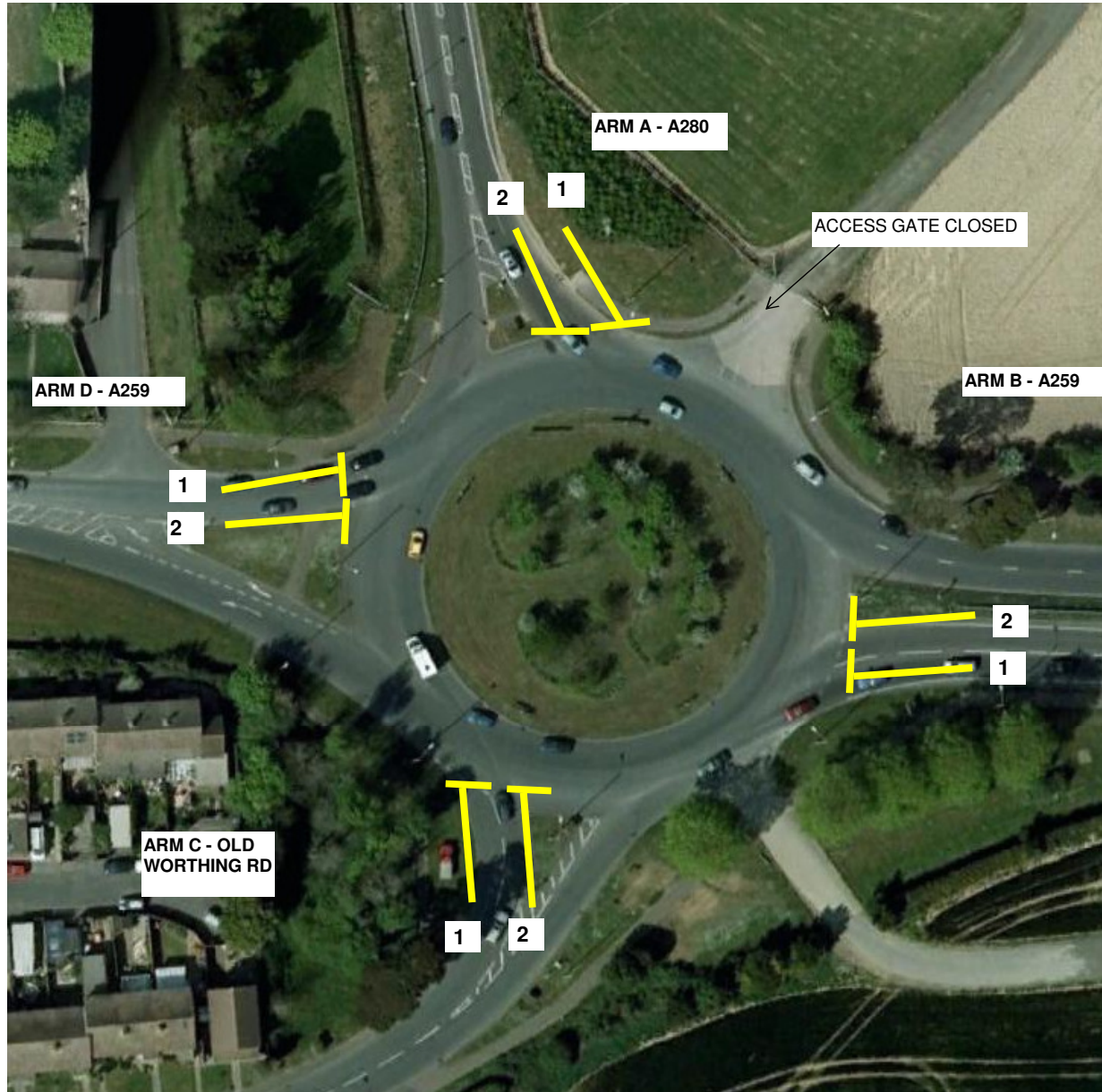
(LANE 1 IS NEARSIDE TO KERB)

Time		No. Vehicles								PCU TOTAL		No. Vehicles								PCU TOTAL	
		LANE 1										LANE 1									
		CARS	LGV	OGV1	OGV2	PSV	M/C	B/C	CARS			LGV	OGV1	OGV2	PSV	M/C	B/C				
08:00	: 08:05	3	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	1			
08:05	: 08:10	2	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2			
08:10	: 08:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1			
08:15	: 08:20	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2			
08:20	: 08:25	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0			
08:25	: 08:30	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0			
08:30	: 08:35	2	0	0	0	0	0	0	0	2	5	0	0	0	0	0	0	5			
08:35	: 08:40	1	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0			
08:40	: 08:45	2	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	1			
08:45	: 08:50	2	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	1			
08:50	: 08:55	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0			
08:55	: 09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
TOTAL		17	1	0	0	0	0	0	0	18	12	1	0	0	0	0	0	13			
AVG		1.42	0.08	0.00	0.00	0.00	0.00	0.00	0.00	1.50	1.00	0.08	0.00	0.00	0.00	0.00	0.00	1.08			

 Quality Traffic Surveys	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 6 - ARM D (PM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

Time		No. Vehicles						PCU		No. Vehicles						PCU	
		LANE 1						TOTAL	B/C	LANE 1						TOTAL	B/C
		CARS	LGV	OGV1	OGV2	PSV	M/C			CARS	LGV	OGV1	OGV2	PSV	M/C		
17:00	: 17:05	2	0	0	0	0	0	2	0	1	0	0	0	0	0	1	0
17:05	: 17:10	3	0	0	0	0	0	3	0	5	0	0	0	0	0	5	0
17:10	: 17:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
17:15	: 17:20	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
17:20	: 17:25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:25	: 17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	: 17:35	5	0	0	0	0	0	5	0	2	0	0	0	0	0	2	0
17:35	: 17:40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:40	: 17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	: 17:50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:50	: 17:55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:55	: 18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL		12	0	0	0	0	0	12	0	9	0	0	0	0	0	9	0
AVG		1.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.75	0.00



 Quality Traffic Surveys	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 7 - ARM A (PM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

Time		No. Vehicles								PCU TOTAL		No. Vehicles								PCU TOTAL	
		LANE 1										LANE 1									
		CARS	LGV	OGV1	OGV2	PSV	M/C	B/C	CARS			LGV	OGV1	OGV2	PSV	M/C	B/C				
17:00	: 17:05	2	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	2		
17:05	: 17:10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
17:10	: 17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
17:15	: 17:20	6	0	0	0	0	0	0	6	7	0	0	0	0	0	0	0	0	7		
17:20	: 17:25	2	0	0	0	0	0	0	2	5	0	0	0	0	0	0	0	0	5		
17:25	: 17:30	4	0	0	0	0	0	0	4	7	0	0	0	0	0	0	0	0	7		
17:30	: 17:35	3	0	0	0	0	0	0	3	6	0	0	0	0	0	0	0	0	6		
17:35	: 17:40	0	0	0	0	0	0	0	0	7	1	0	0	0	0	0	0	0	8		
17:40	: 17:45	1	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	0	5		
17:45	: 17:50	2	0	0	0	0	0	0	2	3	1	0	0	0	0	0	0	0	4		
17:50	: 17:55	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1		
17:55	: 18:00	1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	2		
TOTAL		22	0	0	0	0	0	0	22	45	2	0	0	0	0	0	0	0	47		
AVG		1.83	0.00	0.00	0.00	0.00	0.00	0.00	1.83	3.75	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.92		

 Quality Traffic Surveys	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 7 - ARM B (AM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

Time		No. Vehicles								PCU TOTAL	No. Vehicles							PCU TOTAL
		LANE 1									LANE 1							
		CARS	LGV	OGV1	OGV2	PSV	M/C	B/C	CARS		LGV	OGV1	OGV2	PSV	M/C	B/C		
08:00	: 08:05	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	
08:05	: 08:10	5	1	0	0	0	0	0	6	0	0	0	0	0	0	0	0	
08:10	: 08:15	6	0	0	0	0	0	0	6	1	0	0	0	0	0	0	1	
08:15	: 08:20	7	0	0	0	0	0	0	7	2	0	0	0	0	0	0	2	
08:20	: 08:25	8	0	0	0	0	0	0	8	1	0	0	0	0	0	0	1	
08:25	: 08:30	9	2	0	0	0	0	0	11	1	0	0	0	0	0	0	1	
08:30	: 08:35	8	0	0	0	0	0	0	8	0	1	0	0	0	0	0	1	
08:35	: 08:40	10	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	
08:40	: 08:45	10	1	0	0	0	0	0	11	0	0	0	0	0	0	0	0	
08:45	: 08:50	8	0	0	0	0	0	0	8	1	0	0	0	0	0	0	1	
08:50	: 08:55	7	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	
08:55	: 09:00	5	1	0	0	0	0	0	6	0	0	0	0	0	0	0	0	
TOTAL		86	5	0	0	0	0	0	91	6	1	0	0	0	0	0	7	
AVG		7.17	0.42	0.00	0.00	0.00	0.00	0.00	7.58	0.50	0.08	0.00	0.00	0.00	0.00	0.00	0.58	

 Quality Traffic Surveys	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 7 - ARM B (PM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

Time		No. Vehicles							PCU TOTAL	No. Vehicles							PCU TOTAL
		LANE 1								LANE 1							
		CARS	LGV	OGV1	OGV2	PSV	M/C	B/C		CARS	LGV	OGV1	OGV2	PSV	M/C	B/C	
17:00	: 17:05	5	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
17:05	: 17:10	3	0	0	0	0	0	0	3	1	0	1	0	0	0	0	2.5
17:10	: 17:15	8	1	0	0	0	0	0	9	1	0	0	0	0	0	0	1
17:15	: 17:20	17	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0
17:20	: 17:25	14	0	0	0	0	0	0	14	2	0	0	0	0	0	0	2
17:25	: 17:30	15	0	0	0	0	0	0	15	1	0	0	0	0	0	0	1
17:30	: 17:35	10	0	0	0	0	0	0	10	3	0	0	0	0	0	0	3
17:35	: 17:40	7	2	0	0	0	0	0	9	6	1	0	0	0	0	0	7
17:40	: 17:45	6	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0
17:45	: 17:50	3	0	0	0	0	0	0	3	2	0	0	0	0	0	0	2
17:50	: 17:55	10	3	0	0	0	0	0	13	0	0	0	0	0	0	0	0
17:55	: 18:00	5	0	0	0	0	0	0	5	1	1	0	0	0	0	0	2
TOTAL		103	6	0	0	0	0	0	109	17	2	1	0	0	0	0	20.5
AVG		8.58	0.50	0.00	0.00	0.00	0.00	0.00	9.08	1.42	0.17	0.08	0.00	0.00	0.00	0.00	1.71

 Quality Traffic Surveys	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 7 - ARM C (AM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

Time		No. Vehicles								PCU TOTAL		No. Vehicles								PCU TOTAL	
		LANE 1										LANE 1									
		CARS	LGV	OGV1	OGV2	PSV	M/C	B/C	CARS			LGV	OGV1	OGV2	PSV	M/C	B/C				
08:00	:	08:05	5	0	0	0	0	0	0	0	5	2	0	0	0	0	0	2			
08:05	:	08:10	3	0	0	0	0	0	0	0	3	1	0	0	0	0	0	1			
08:10	:	08:15	2	0	0	0	0	0	0	0	2	7	0	0	0	0	0	7			
08:15	:	08:20	5	0	0	0	0	0	0	0	5	10	0	0	0	0	0	10			
08:20	:	08:25	0	0	0	0	0	0	0	0	0	12	1	0	0	0	0	13			
08:25	:	08:30	1	0	0	0	0	0	0	0	1	5	0	0	0	0	0	5			
08:30	:	08:35	3	0	0	0	0	0	0	0	3	2	0	0	0	0	0	2			
08:35	:	08:40	2	0	0	0	0	0	0	0	2	3	0	0	0	1	0	5			
08:40	:	08:45	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6			
08:45	:	08:50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
08:50	:	08:55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
08:55	:	09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
TOTAL			21	0	0	0	0	0	0	0	21	48	1	0	0	1	0	51			
AVG			1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.75	4.00	0.08	0.00	0.00	0.08	0.00	4.25			

 Quality Traffic Surveys	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 7 - ARM C (PM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

Time			No. Vehicles								PCU TOTAL	No. Vehicles							PCU TOTAL	
			LANE 1									LANE 1								
			CARS	LGV	OGV1	OGV2	PSV	M/C	B/C	CARS		LGV	OGV1	OGV2	PSV	M/C	B/C			
17:00	:	17:05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
17:05	:	17:10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
17:10	:	17:15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
17:15	:	17:20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3		
17:20	:	17:25	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3		
17:25	:	17:30	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
17:30	:	17:35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
17:35	:	17:40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
17:40	:	17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
17:45	:	17:50	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
17:50	:	17:55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
17:55	:	18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
TOTAL			6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13		
AVG			0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08		

 Quality Traffic Surveys	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 7 - ARM D (AM PEAKS)		

(LANE 1 IS NEARSIDE TO KERB)

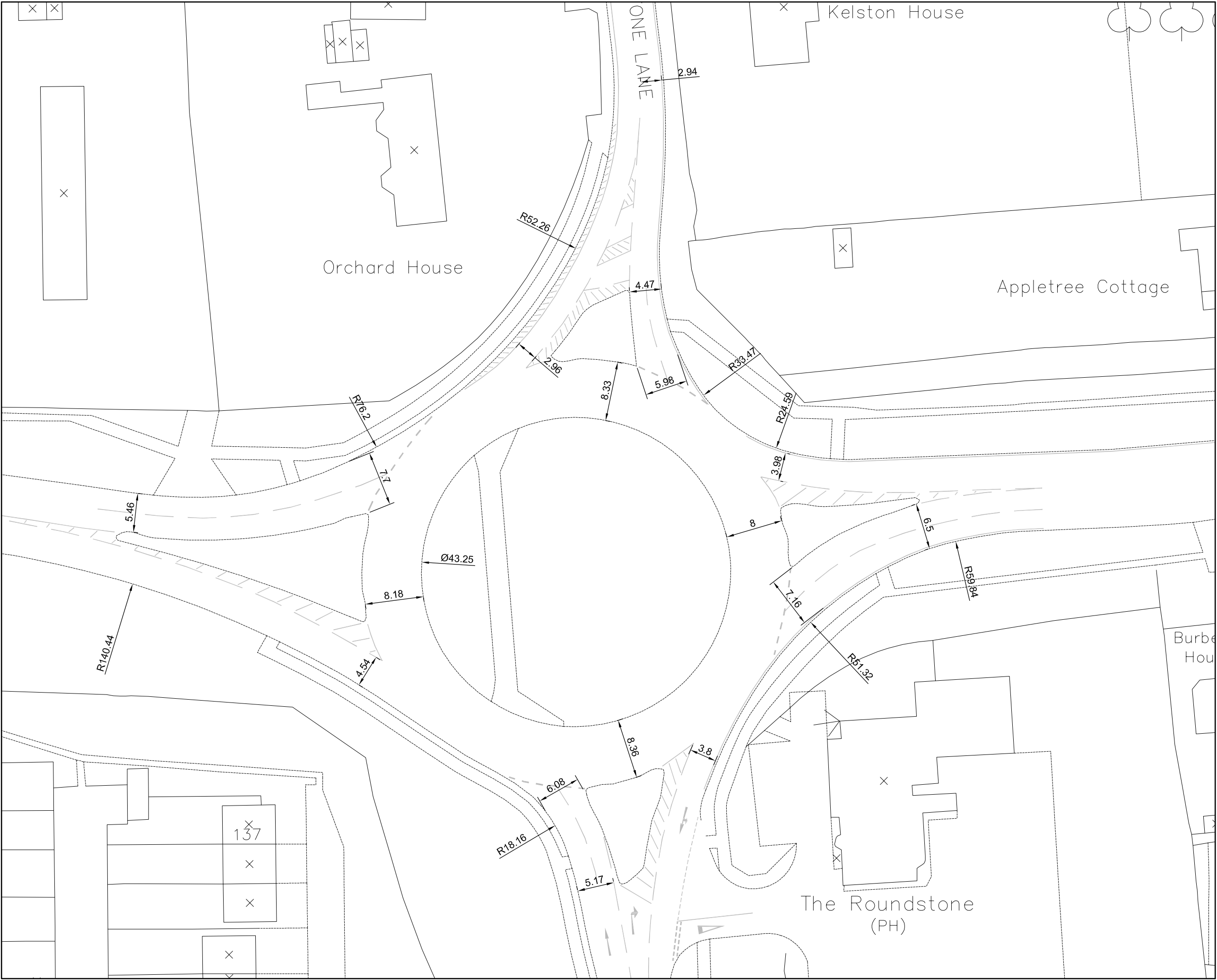
Time		No. Vehicles						PCU		No. Vehicles						PCU	
		LANE 1						TOTAL		LANE 1						TOTAL	
		CARS	LGV	OGV1	OGV2	PSV	M/C			CARS	LGV	OGV1	OGV2	PSV	M/C		
08:00	: 08:05	3	0	0	0	0	0	3		3	0	0	0	0	0	3	
08:05	: 08:10	0	0	0	0	0	0	0		1	0	0	0	0	0	1	
08:10	: 08:15	5	1	0	0	0	0	6		3	0	0	0	0	0	3	
08:15	: 08:20	0	0	0	0	0	0	0		4	0	0	0	0	0	4	
08:20	: 08:25	0	0	0	0	0	0	0		3	0	0	0	0	0	3	
08:25	: 08:30	2	0	0	0	0	0	2		2	0	0	0	0	0	2	
08:30	: 08:35	2	0	0	0	0	0	2		0	0	0	0	0	0	0	
08:35	: 08:40	2	0	0	0	0	0	2		2	0	0	0	0	0	2	
08:40	: 08:45	5	0	0	0	0	0	5		3	1	0	0	0	0	4	
08:45	: 08:50	0	0	0	0	0	0	0		0	0	0	0	0	0	0	
08:50	: 08:55	1	0	0	0	0	0	1		1	0	0	0	0	0	1	
08:55	: 09:00	1	0	0	0	0	0	1		2	0	0	0	0	0	2	
TOTAL		21	1	0	0	0	0	22		24	1	0	0	0	0	25	
AVG		1.75	0.08	0.00	0.00	0.00	0.00	1.83		2.00	0.08	0.00	0.00	0.00	0.00	2.08	

 Quality Traffic Surveys	CLIENT: CIVIL ENGINEERING PRACTICE		REFERENCE NUMBER: QTS160
	PROJECT DIRECTOR: DICKIE CUMBERWORTH		DATE: FRI 11TH NOV 11
	DESCRIPTION: ANGMERING - QUEUE LENGH DATA - SITE 7 - ARM D (PM PEAKS)		

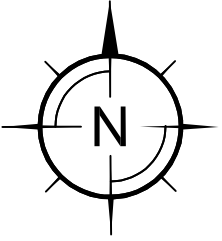
(LANE 1 IS NEARSIDE TO KERB)

Time		No. Vehicles							PCU	
		LANE 1							LANE 1	
		CARS	LGV	OGV1	OGV2	PSV	M/C	B/C	CARS	PCU TOTAL
17:00	: 17:05	1	0	0	0	0	0	0	1	1
17:05	: 17:10	2	0	0	0	0	0	0	2	2
17:10	: 17:15	0	0	0	0	0	0	0	0	0
17:15	: 17:20	2	1	0	0	0	0	0	3	3
17:20	: 17:25	1	0	0	0	0	0	0	1	1
17:25	: 17:30	2	0	0	0	0	0	0	2	2
17:30	: 17:35	0	0	0	0	0	0	0	0	0
17:35	: 17:40	0	0	0	0	0	0	0	0	0
17:40	: 17:45	1	0	0	0	0	0	0	1	1
17:45	: 17:50	0	0	0	0	0	0	0	0	0
17:50	: 17:55	1	0	0	0	0	0	0	1	1
17:55	: 18:00	0	0	0	0	0	0	0	0	0
TOTAL		10	1	0	0	0	0	0	11	11
AVG		0.83	0.08	0.00	0.00	0.00	0.00	0.00	0.92	0.92

Appendix 2
Roundstone Lane Roundabout Plan
and Photographs



NOTES:



REV	DATE	INT	DESCRIPTION	CHK
Issue Status				
PRELIMINARY				

11 Tungsten Building
George Street
Fishergate
Sussex
BN41 1RA
Tel: 01273 424424
Fax: 01273 424425
email: design@civil.co.uk



CLIENT		Barratt David Wilson Southampton	
PROJECT		Roundstone Lane Angmering	
TITLE		Roundstone Lane Roundabout Existing Layout	
DRAWN	DATE	PROJECT NO.	
A Davies	Nov 2012	22067	
ENGINEER	CHECKED	DRG. No.	REV.
A French		110	
SCALE 1:1250 @ A3			







Appendix 3

Site Access Junction PICADY Output

PICADY		
GUI Version: 5.1 AE Analysis Program Release: 5.0 (MAY 2010)		
© Copyright TRL Limited, 2010 Adapted from PICADY/3 which is Crown Copyright by permission of the controller of HMSO		
For sales and distribution information, program advice and maintenance, contact:		
TRL Limited Crowthorne House Nine Mile Ride Wokingham, Berks. RG40 3GA, UK		Tel: +44 (0)1344 770758 Fax: +44 (0)1344 770864 E-mail: software@trl.co.uk Web: www.trlsoftware.co.uk
The user of this computer program for the solution of an engineering problem is in no way relieved of their responsibility for the correctness of the solution		

Run Analysis

Parameter	Values
File Run	P:\..\Picady\Site Access - Roundstone Lane.vpi
Date Run	13 November 2012
Time Run	11:47:19
Driving Side	Drive On The Left

Arm Names and Flow Scaling Factors

Arm	Arm Name	Flow Scaling Factor (%)
Arm A	Roundstone Lane (north)	100
Arm B	Site Access	100
Arm C	Roundstone Lane (south)	100

Stream Labelling Convention

Stream A-B contains traffic going from A to B etc.

Geometric Data

Geometric Parameters

Parameter	Minor Arm B
Major Road Carriageway Width (m)	6.00
Major Road Kerbed Central Reserve Width (m)	0.00
Major Road Right Turning Lane Width (m)	2.20
Minor Road First Lane Width (m)	2.75
Minor Road Visibility To Right (m)	212
Minor Road Visibility To Left (m)	194
Major Road Right Turn Visibility (m)	200
Major Road Right Turn Blocks Traffic	Yes (if over 1 veh)

Slope and Intercept Values

Stream	Intercept for Stream	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	637.886	0.116	0.294	0.185	0.420
B-C	738.440	0.113	0.286	-	-
C-B	689.785	0.267	0.267	-	-

Note: Streams may be combined in which case capacity will be adjusted
These values do not allow for any site-specific corrections

Demand Data

Modelling Periods

Parameter	Period	Duration (min)	Segment Length (min)
First Modelling Period	07:45-09:15	90	15
Second Modelling Period	16:45-18:15	90	15

ODTAB Turning Counts

Demand Set: Roundstone Lane Site Access 2012 AM Post Development

Modelling Period: 07:45-09:15

From/To	Arm A	Arm B	Arm C
Arm A	0.0	13.0	149.0
Arm B	47.0	0.0	56.0
Arm C	212.0	18.0	0.0

Demand Set: Roundstone Lane Site Access 2012 PM Post Development

Modelling Period: 16:45-18:15

From/To	Arm A	Arm B	Arm C
Arm A	0.0	30.0	200.0
Arm B	21.0	0.0	24.0
Arm C	96.0	42.0	0.0

ODTAB Synthesised Flows

Demand Set: Roundstone Lane Site Access 2012 AM Post Development

Modelling Period: 07:45-09:15

Arm	Rising Time	Rising Flow (veh/min)	Peak Time	Peak Flow (veh/min)	Falling Time	Falling Flow (veh/min)
Arm A	08:00	2.025	08:30	3.038	09:00	2.025
Arm B	08:00	1.288	08:30	1.931	09:00	1.288
Arm C	08:00	2.875	08:30	4.313	09:00	2.875

Heavy Vehicles Percentages

Demand Set: Roundstone Lane Site Access 2012 AM Post Development

Modelling Period: 07:45-09:15

From/To	Arm A	Arm B	Arm C
Arm A	-	0.0	5.8
Arm B	0.0	-	0.0
Arm C	4.7	0.0	-

Demand Set: Roundstone Lane Site Access 2012 PM Post Development**Modelling Period:** 16:45-18:15

From/To	Arm A	Arm B	Arm C
Arm A	-	0.0	4.0
Arm B	0.0	-	0.0
Arm C	4.8	0.0	-

Queues & Delays

Demand Set: Roundstone Lane Site Access 2012 AM Post Development**Modelling Period:** 07:45-09:15

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
07:45-08:00	B-AC	1.29	10.55	0.123	-	0.00	0.14	-	2.0	0.11
	C-AB	0.23	10.92	0.021	-	0.00	0.02	-	0.3	0.09
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.16	-	-	-	-	-	-	-	-
	A-C	1.87	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
08:00-08:15	B-AC	1.54	10.36	0.149	-	0.14	0.17	-	2.6	0.11
	C-AB	0.27	10.81	0.025	-	0.02	0.03	-	0.4	0.09
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.19	-	-	-	-	-	-	-	-
	A-C	2.23	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
08:15-08:30	B-AC	1.89	10.11	0.187	-	0.17	0.23	-	3.3	0.12
	C-AB	0.33	10.66	0.031	-	0.03	0.03	-	0.5	0.10
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.24	-	-	-	-	-	-	-	-
	A-C	2.73	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:30- 08:45	B-AC	1.89	10.10	0.187	-	0.23	0.23	-	3.4	0.12
	C-AB	0.33	10.66	0.031	-	0.03	0.03	-	0.5	0.10
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.24	-	-	-	-	-	-	-	-
	A-C	2.73	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:45- 09:00	B-AC	1.54	10.36	0.149	-	0.23	0.18	-	2.7	0.11
	C-AB	0.27	10.81	0.025	-	0.03	0.03	-	0.4	0.09
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.19	-	-	-	-	-	-	-	-
	A-C	2.23	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
09:00- 09:15	B-AC	1.29	10.55	0.123	-	0.18	0.14	-	2.2	0.11
	C-AB	0.23	10.92	0.021	-	0.03	0.02	-	0.3	0.09
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.16	-	-	-	-	-	-	-	-
	A-C	1.87	-	-	-	-	-	-	-	-

Demand Set: Roundstone Lane Site Access 2012 PM Post Development

Modelling Period: 16:45-18:15

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
16:45- 17:00	B-AC	0.56	10.40	0.054	-	0.00	0.06	-	0.8	0.10
	C-AB	0.53	10.70	0.049	-	0.00	0.05	-	0.8	0.10
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.38	-	-	-	-	-	-	-	-
	A-C	2.51	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
17:00- 17:15	B-AC	0.67	10.19	0.066	-	0.06	0.07	-	1.0	0.11
	C-AB	0.63	10.54	0.060	-	0.05	0.06	-	1.0	0.10
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.45	-	-	-	-	-	-	-	-
	A-C	3.00	-	-	-	-	-	-	-	-
Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
17:15- 17:30	B-AC	0.83	9.90	0.083	-	0.07	0.09	-	1.3	0.11
	C-AB	0.77	10.33	0.075	-	0.06	0.08	-	1.2	0.10
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.55	-	-	-	-	-	-	-	-
	A-C	3.67	-	-	-	-	-	-	-	-
Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
17:30- 17:45	B-AC	0.83	9.90	0.083	-	0.09	0.09	-	1.4	0.11
	C-AB	0.77	10.33	0.075	-	0.08	0.08	-	1.2	0.10
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.55	-	-	-	-	-	-	-	-
	A-C	3.67	-	-	-	-	-	-	-	-
Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
17:45- 18:00	B-AC	0.67	10.19	0.066	-	0.09	0.07	-	1.1	0.11
	C-AB	0.63	10.54	0.060	-	0.08	0.06	-	1.0	0.10
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.45	-	-	-	-	-	-	-	-
	A-C	3.00	-	-	-	-	-	-	-	-
Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
18:00- 18:15	B-AC	0.56	10.40	0.054	-	0.07	0.06	-	0.9	0.10
	C-AB	0.53	10.70	0.049	-	0.06	0.05	-	0.8	0.10
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.38	-	-	-	-	-	-	-	-
	A-C	2.51	-	-	-	-	-	-	-	-

Entry capacities marked with an '(X)' are dominated by a pedestrian crossing in that time segment.
 In time segments marked with a '(B)', traffic leaving the junction may block back from a crossing so impairing normal operation of the junction.
 Delays marked with '##' could not be calculated.

Overall Queues & Delays

Queueing Delay Information Over Whole Period

Demand Set: Roundstone Lane Site Access 2012 AM Post Development
Modelling Period: 07:45-09:15

Stream	Total Demand (veh)	Total Demand (veh/h)	Queueing Delay (min)	Queueing Delay (min/veh)	Inclusive Delay (min)	Inclusive Delay (min/veh)
B-AC	141.8	94.5	16.2	0.1	16.2	0.1
C-AB	24.8	16.5	2.4	0.1	2.4	0.1
C-A	-	-	-	-	-	-
A-B	17.9	11.9	-	-	-	-
A-C	205.1	136.7	-	-	-	-
All	681.3	454.2	18.6	0.0	18.6	0.0

Demand Set: Roundstone Lane Site Access 2012 PM Post Development
Modelling Period: 16:45-18:15

Stream	Total Demand (veh)	Total Demand (veh/h)	Queueing Delay (min)	Queueing Delay (min/veh)	Inclusive Delay (min)	Inclusive Delay (min/veh)
B-AC	61.9	41.3	6.5	0.1	6.5	0.1
C-AB	57.8	38.5	5.9	0.1	5.9	0.1
C-A	-	-	-	-	-	-
A-B	41.3	27.5	-	-	-	-
A-C	275.3	183.5	-	-	-	-
All	568.5	379.0	12.4	0.0	12.4	0.0

Delay is that occurring only within the time period.
 Inclusive delay includes delay suffered by vehicles which are still queuing after the end of the time period.
 These will only be significantly different if there is a large queue remaining at the end of the time period.

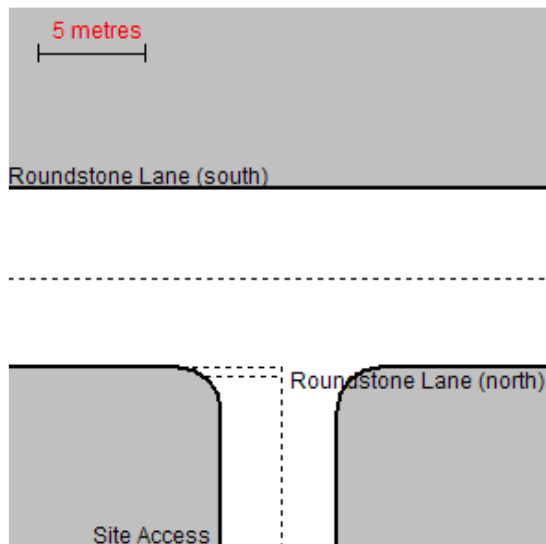
Run Information

Parameter	Values
Run Title	Roundstone Lane Site Access
Location	Roundstone Lane Angmering
Date	13 November 2012
Enumerator	steve.doughty [CIVIL25]
Job Number	22067
Status	TA
Client	-
Description	-

Errors and Warnings

Parameter	Values
Warning	No Errors Or Warnings

Junction Diagram



PICADY 5 Run Successful