

Proposed Quarry

Hatfield Aerodrome

**Transport Chapter – Response to Consultation by Opus
Brett Aggregates Limited**

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1.0 INTRODUCTION

1.1 Background

SLR Consulting Limited (SLR) was appointed by Brett Aggregates Limited (BAL) to prepare a planning application and associated Environmental Statement (ES) for a proposed quarry at the former Hatfield Aerodrome, Hatfield, Hertfordshire. Subsequent to the submission of the planning application (in January 2016) SLR has continued to support BAL by addressing comments raised during the formal consultation process.

This report provides SLR's formal response to the issues raised by Opus regarding the Transport Chapter presented in the ES. This report should be read alongside the Transport Chapter (Chapter 7) contained within the ES and the Transport Chapter Addendum dated August 2016. This report does not replace either document.

The Transport Chapter of the ES and considers the potential environmental effects related to the movement of vehicles associated with the operation of the proposed quarry.

The Transport Chapter Addendum provides further information relating to highways and transportation as requested by Hertfordshire County Council (HCC) acting as the local highways authority.

1.2 Purpose of this Report

This report seeks to clarify points raised by Opus on behalf of the local highways authority.

Also provided within this report is further information in response to a request made by a member of the public.

1.3 Summary of Proposals

As set out in the ES (Chapter 1 and Chapter 3) the proposals would involve the winning and working, together with processing for sale, of some 8Mt of sand and gravel over a period of around 30 years (based on an annual output of around 250,000tpa). The proposed development would also consist of processing facilities and a concrete batching. These would be located in the northern part of the application site.

Processed aggregates and concrete (together with the import of cement and inert fill materials) would be exported via a new access constructed onto the A1057 on the southern side of the quarry.

An internal road would connect a new site access from the A1057 to the processing facilities at the north of the quarry. This would run along the western boundary of the proposed quarry.

Processed aggregate would be exported from the site via HGVs of an appropriate size and nature, and said HGVs would be weighed on both ingress and egress of the site.

The quarry would be worked on a phased basis to allow for progressive restoration. As such, in addition to the export of aggregate/concrete restoration materials would also be imported to the application site.

The quarry would operate to the following hours:

- 0700 hours to 1800 hours Monday to Friday;

- 0700 hours to 1300 hours Saturdays; and
- No operations on Sundays or bank holidays save for emergency repairs.

The quarry would have a core staff of 6 employees. This would comprise a manager, a foreman, 2 loading shovel operatives, 1 dozer operative, 1 concrete batcher and 1 weighbridge operative.

The number of staff would increase to 10 during earthmoving works which would be undertaken on a campaign basis. This would be over a temporary period. For the purposes of any impact assessment a workforce of 10 has been assumed.

1.4 Information Request

1.4.1 Local Highways Authority Comments

Opus, transport consultants working on behalf of the Highway Authority made the following comments:

Trip generation

'Chapter 7 of the ES says there would be 18-two way movement in peak hours. Table 5-2 of the TA Addendum identifies 46 two way movements in peak hours. Opus advise this is a significant difference in PCU terms, which equates to either 36 or 92. Please explain the difference and which is correct'.

Data for Hatfield Road/ Access arrangement

'Capacity assessments – in respect of the site access (junction with Hatfield Road) - there is concern over potential queuing on Hatfield Road - a PICADY analysis is required using ATC data over a minimum ½ day period.

The inconsistencies with trip generation potentially mean the number of vehicles would be above the 30 threshold per hour. Therefore capacity assessment should be carried out for two other junctions (1) Albatross Way/Hatfield Road/Ellenbrook Lane (2) Mosquito Way/Hatfield Road. This is important given the 30 duration of the development'.

Data for Comet Way junction

'This junction is already problematic – any additional vehicles will impact its operation. Opus consider that this junction needs to be fully considered regardless of trip generation – as either 18 or 46 (as is our understanding) would have a detrimental impact. The data is already available via the Paramics model and could be run through ARCADY'.

Collision data

'The data is only up to 2014 and should be updated. There was a fatal accident in 2010 involving a pedestrian –although the accident is outside of the 5 year consideration period it is something to consider'.

Summary

'The ATC information for Hatfield Road shows 22 HGVs in the AM peak and 15 HGVs in the PM peak, the proposal would increase the daily number from 390 to 564 (nearly double) as a result of the proposed development. Taken together with the 250 HGV trips from Cemex

Hatfield Quarry the proposal would result in a significant increase in HGV traffic on Hatfield Road.

It is essential that (a) the trip generation numbers are clarified and (b) that a capacity assessment in the form of a PICADY is carried out for the access arrangements. When the trip generation and PICADY assessment is available Opus can advise HCC if the other junctions need to be considered further.

With regards to third party concerns regarding cumulative impact – referring to future impact of all background growth – a definitive answer on whether the proposed development would represent a tipping point cannot be provided without the evidence to support it’.

1.4.2 Third Party Comments

The following details a request made by a member of the public:

‘Chapter 7 of the Environmental Statement dated January 2016 shows that the A1057 (Hatfield Road) is a busy road, with a recorded two-way average weekday traffic flow of 15,420 vehicles (of all sizes) during the period 25th April 2015 and 1st May 2015 (paragraph 7.70).

However, no account was made within this chapter of any predicted traffic growth, as paragraph 7.150 states that: “...it would only serve to reduce the traffic impact.” This has been carried forward into the ‘Transport Chapter Addendum’ dated August 2016, which in my opinion is a flawed approach, as the Department for Transport (DfT) in March 2015 published a document titled: ‘Road Traffic Forecasts 2015’ which analyses forecasts into predicted traffic growth.

The DfT document states in paragraph 15 that between the years 2010 and 2040 (within the estimated lifetime of the proposed quarry), traffic growth is expected to range from 12% to 51% on ‘other principal roads.’ The A1057 being an ‘A’ road can therefore be assumed to be classed as a ‘other principal road’, which means that if the lower end of this range is used, a 12% increase in traffic growth on the 2015 two-way average weekday traffic flow of 15,420 would result in an extra 1,850 vehicles per day, totalling an average weekday flow of 17,270 vehicles. If the worst case scenario is applied of 51%, there would be an extra 7,864 vehicles totalling an average weekday flow of 23,284 vehicles.

However, table 5-3 in the August 2016 Transport Chapter Addendum appears to have shown the average weekday traffic flow in a different format by displaying the data in PCUs (where a car is 1 PCU and a HGV is 2 PCUs). As the proposal anticipates an average weekday traffic movement of 174 HGVs and 20 other vehicles (totalling 194) this has increased the figure to 368 (174 x 2 + 20). The table also states that the proposed number of PCUs that will be generated from the neighbouring Cemex operated Hatfield Quarry in relation to their recent restoration scheme for land within their site at Cut Field is 200. This is incorrect, as condition 21 for this particular proposal (application ref: 5/1240-14), which was given a resolution to grant permission on 26th May 2016, is for a total of 250 lorry movements. Vehicles from this established site will use the A1507 past the proposed quarry entrance near Notcutts Garden Centre to gain access to the A1(M).

There is the potential therefore that there will be an increase in 444 vehicles per average weekday using this particular section of the A1057 (250 lorry movements for the approved restoration scheme at the Cemex run Hatfield Quarry and 194 vehicle movements of which 174 are proposed to be HGVs for the proposal at Hatfield Aerodrome). With the possible forecast in traffic growth to range anywhere from 12% to 51% on ‘other principal roads’, this

proposal along with the approved 250 lorry movements that have been approved for the neighbouring Cemex proposal, results in a substantial increase in traffic generation, which I consider to be totally unacceptable for years to come'.

2.0 TRAFFIC FORECAST CLARIFICATION

2.1 HCC Highways Request

Opus, on behalf of the highway authority, made the following request:

‘Chapter 7 of the ES says there would be 18-two way movement in peak hours. Table 5-2 of the TA Addendum identifies 46 two way movements in peak hours. Opus advise this is a significant difference in PCU terms, which equates to either 36 or 92. Please explain the difference and which is correct’.

2.2 Traffic Forecast Clarification

Table 7-5 of the ES Chapter 7 provides a breakdown of the HGV traffic generation. It concludes that there would be up to:

- 87 HGV loads generated by the site per day; or
- 174 HGV movements (in and out) daily.

On the basis of a ten hour day, this would equate to:

- 9 HGVs in and 9 HGVs out per hour;
- 18 HGV movements;
- 1 HGV movement generated by the site every 3.3 minutes; or
- 36 PCUs per hour along the A1057 (based on HGVs).

With the 10 staff car trips, assuming all ten employees drive and travel during the network peak period (for robustness), this adds up to 46 PCUs during each peak period.

3.0 ACCESS JUNCTION

3.1 HCC Highways Request

Opus, on behalf of the highway authority, made the following request:

‘Capacity assessments – in respect of the site access (junction with Hatfield Road) - there is concern over potential queuing on Hatfield Road - a PICADY analysis is required using ATC data over a minimum ½ day period.

The inconsistencies with trip generation potentially mean the number of vehicles would be above the 30 threshold per hour. Therefore capacity assessment should be carried out for two other junctions (1) Albatross Way/Hatfield Road/Ellenbrook Lane (2) Mosquito Way/Hatfield Road. This is important given the 30 duration of the development’.

3.2 Junction Capacity Assessment

A junction capacity analysis has been undertaken based on the planned dimensions of the proposed site access in order to further demonstrate that the junction will operate within capacity and not result in any unnecessary congestion and delay.

3.3 Access Design

The access junction design process, which included a Stage 1 Road Safety Audit, determined a priority junction arrangement with a ghost right turn lane. This amended design was included within the Transport Addendum. The site access design is depicted within Figure 1.

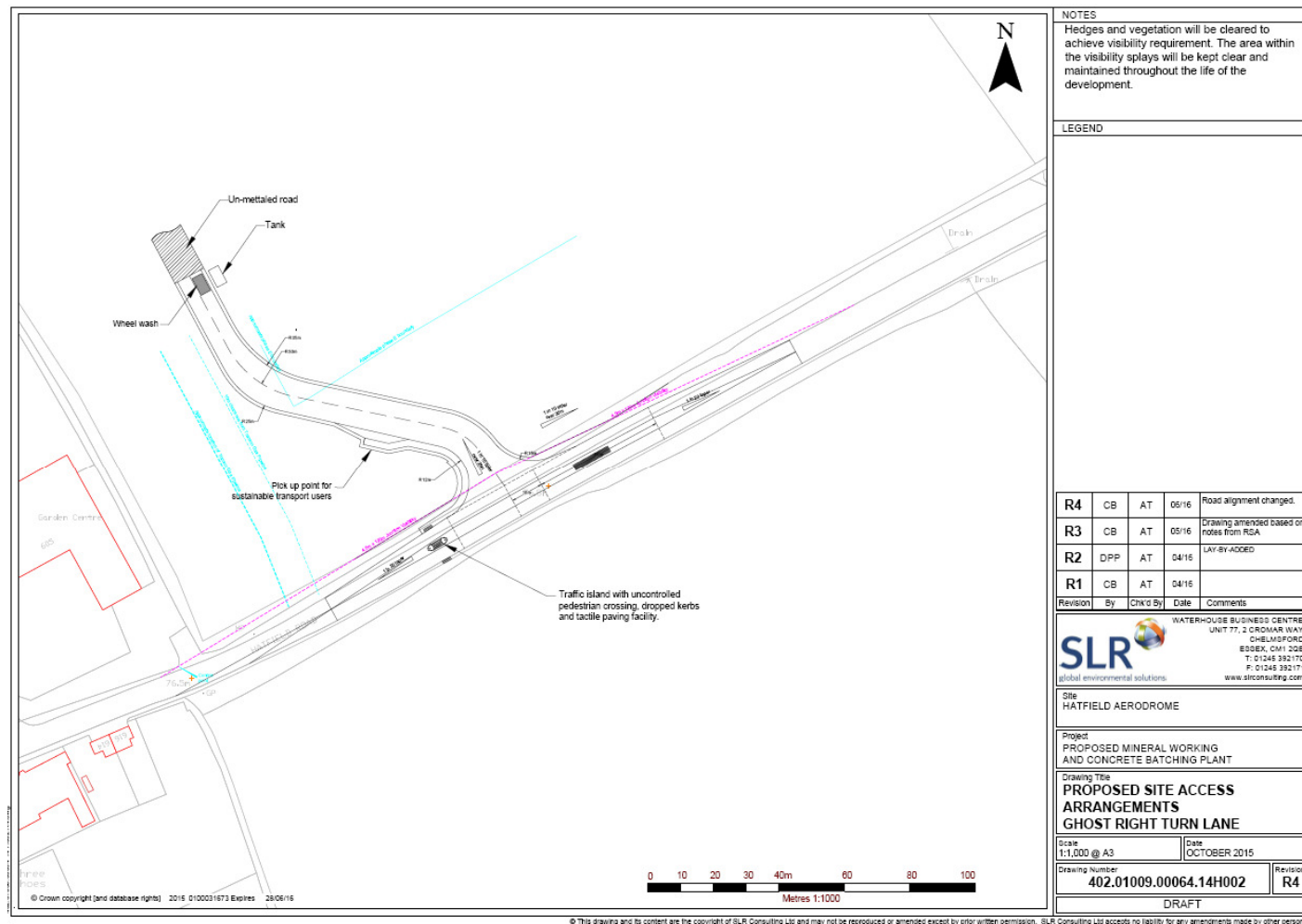


Figure 1
Initial Site Access Junction Design

The geometric parameters of the junction have been measured and used to inform the junction capacity analysis.

3.4 Traffic Data

Background traffic data for the A1057 has been taken from the two-way traffic flow recorded by the Automatic Traffic Count (ATC) undertaken between 25th April 2015 and 1st May 2015.

The traffic forecast has then been applied to create proposed traffic scenarios during the Weekday AM, Weekday PM and Saturday network peak periods.

Table 3-1
A1001 Comet Way Traffic Data Summary

Direction	Eastbound		Westbound	
	Total	HGV	Total	HGV
AM Peak (0800-0900Hrs)	479	22	620	33
PM Peak (1700-1800Hrs)	572	15	639	22
Saturday Peak (1200-1300Hrs)	549	18	725	13

3.4.1 Proposed Assessment Years and Traffic Growth

A 2023 horizon year has been assessed which assumes a 2018 opening year + 5 years.

In order to calculate future levels of background traffic for a 2023 horizon year scenario it is necessary to forecast traffic growth using TEMPRO (v7.0) data and the National Traffic Model forecast in line with the latest DfT guidance and detailed within the TEMPRO guidance note: WEBTAG unit 3.15.2 – released in April 2009.

Growth factors have been extracted from TEMPRO (v7.0) for both an average weekday (AM & PM peaks), and a Saturday peak period. Factors relating to national growth (Great Britain) and local growth for St Albans were obtained. These growth factors were then normalised using figures obtained from the National Traffic Model 2009 (NTM). The calculated traffic growth factors proposed are shown within Table 3-2:

Table 3-2
Traffic Growth Rate Summary

Period	2015-2023
Weekday AM Peak	1.0910
Weekday PM Peak	1.0985
Saturday Peak	1.0996

Forecasted traffic growth is likely to be robust in the face of the real-term rising costs of motoring. Therefore, the assessment will provide a rigorous allowance of traffic growth that is also likely to take account of strategic future developments.

Nevertheless, an allowance for cumulative traffic impact has also been included within the assessment.

3.5 Junction Modelling Scenario

The following traffic scenario for the weekday AM peak and PM peak periods, and the Saturday peak period, has been considered during the junction capacity assessment:

- 2022 + Proposed Development

The proposed traffic flow diagram is shown at Figure 2 which reflects the '2022 + Proposed Development' scenario.

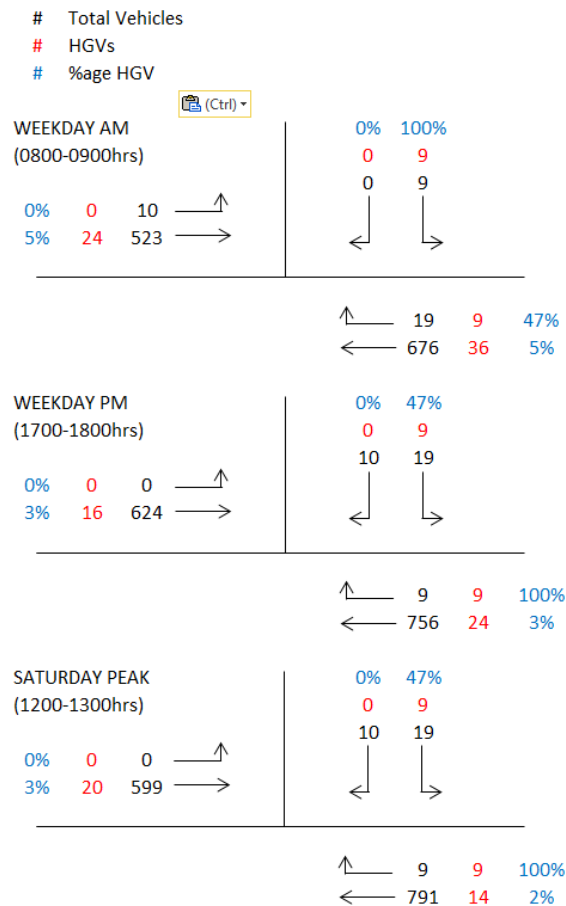


Figure 2
Traffic Flow Diagrams: 2022 + Proposed Development

3.6 PICADY Analysis

The operation of the proposed access junction has been assessed using the PICADY facet of the software Junction 9. The traffic analysis software predicts capacities, queue lengths and delays at non-signalised priority junctions.

The geometric parameters of the junction and the recorded and the established weekday and Saturday peak period traffic flows have been input into the software. Within a junction model, the time periods assessed are divided into a number of 15-minute segments in order to simulate the likely arrival pattern of traffic more effectively. The results returned in the models are the Ratio of Flows to Capacity (RFC) and predicted queue (Q) in each time segment.

The maximum RFC value for each movement is likely to be observed over the central 15 - 30 minute period of the hour under consideration. RFC values between 0.00 and 0.85 are generally accepted as representing stable operating conditions; values between 0.85 and 1 represent variable operating conditions (i.e. possible queues building up at the junction during the period under consideration and increases in vehicle delay moving through the junction). RFC values in excess of 1 represent overloaded conditions (that is, congested conditions).

A summary of the analysis results are provided within Table 3-3. Full PICADY output data is included within Appendix A of this report.

The arms of the junction are represented within the table as follows:

- Arm A is the A1057 Hatfield Road (W);
- Arm B is the proposed Site Access; and
- Arm C is the A1057 Hatfield Road (E).

Table 3-3
Proposed Access Junction PICADY Output Summary – 2022 Proposed

	Arm	Weekday AM Peak 08:00 - 09:00		Weekday PM Peak 17:00 - 18:00		Saturday Peak 12:00 - 13:00	
		RFC	Max Q (veh)	RFC	Max Q (veh)	RFC	Max Q (veh)
2022	B - C	0.01	0	0.03	<1	0.03	<1
	B - A	0.00	0	0.04	0.0	0.04	0
	C - B	0.03	<1	0.02	0.0	0.02	0

The above PICADY summary table demonstrates that the junction operates comfortably within its theoretical capacity with no queuing or delay.

3.7 Junction Sensitivity Test

In the interests of a robust assessment, the junction capacity has also been tested in terms of a hypothetical scenario whereby all development traffic volumes have been multiplied by a factor of ten.

The proposed traffic flow diagram is shown at Figure 3 which reflects the '2022 + Proposed Development Sensitivity Test' scenario. The complete set of traffic flow diagrams is provided at Appendix A.

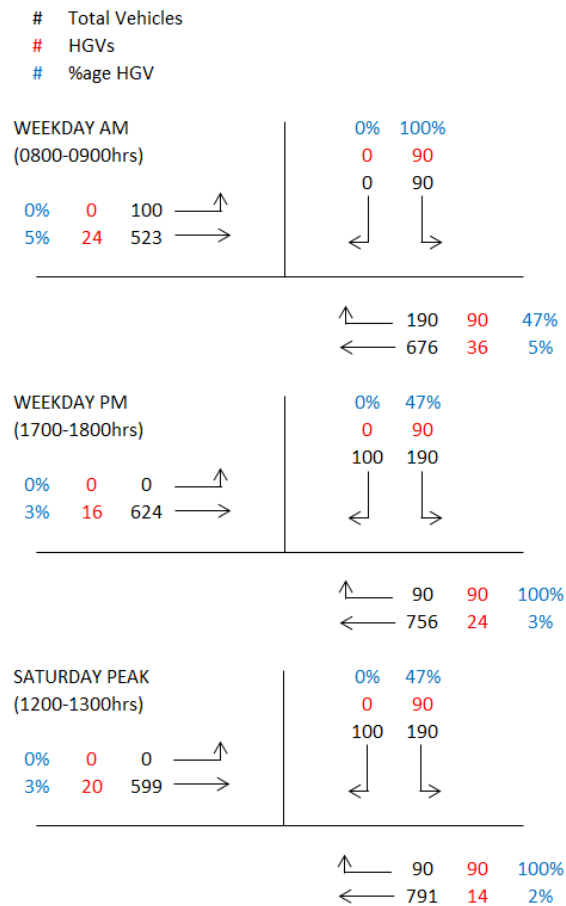


Figure 3
Traffic Flow Diagrams: 2022 + Proposed Development Sensitivity Test

Table 3-4 summarises the PICADY results for the proposed access junction when subject to the 2022 traffic conditions, coupled with the forecasted figures for traffic generated by the proposed development when multiplied by a factor of ten. The figures represent the highest values recorded for each given movement across the course of the study, and as such represent a worst case scenario.

Table 3-4
Proposed Access Junction PICADY Output Summary Sensitivity Test

	Arm	Weekday AM Peak 08:00 - 09:00		Weekday PM Peak 16:00 - 17:00		Saturday Peak 12:00 - 13:00	
		RFC		RFC		RFC	
		Max Q (veh)		Max Q (veh)		Max Q (veh)	
2022	B - C	0.15	<1	0.39	<1	0.39	<1
	B - A	0.00	0	0.39	<1	0.39	<1
	C - B	0.36	<1	0.17	<1	0.17	<1

The above PICADY summary table demonstrates that the junction continues operate comfortably within its theoretical capacity in a scenario whereby all development traffic values have been multiplied by a factor of ten. Again, no queuing is forecast during any of the scenarios considered.

This further demonstrates the acceptability of the access junction operation and the minor impact of the proposal traffic on the local highway network.

3.8 Conclusion

The above has demonstrated that the junction would operate well within its theoretical capacity.

It is considered that an analysis over a half day period is unnecessary as the assessment undertaken is based on the worst case traffic levels at network peaks. The sensitivity test further emphasises that the junction would not result in any queue or delays.

Following the design process, which included a Stage 1 Road Safety Audit, and the above junction capacity analysis, it has been sufficiently demonstrated that the proposed access junction would operate without any highway safety or capacity issues.

4.0 A1001 COMET WAY JUNCTION

4.1 HCC Highways Request

Opus, on behalf of the highway authority, made the following request:

'This junction is already problematic – any additional vehicles will impact its operation. Opus consider that this junction needs to be fully considered regardless of trip generation – as either 18 or 46 (as is our understanding) would have a detrimental impact. The data is already available via the Paramics model and could be run through ARCADY'.

4.2 SLR Response

SLR has made attempts at obtaining various forms of traffic data and accessing Paramics models without success.

On requesting data the need for an assessment was also questioned by staff at HCC Highways who recognised the probable low impact of the proposals in terms network capacity and operation.

However, the data received from HCC was considered sufficient in order to demonstrate that the proposals would not result in a material impact on the operation of A1001 Comet Way or the junctions within its proximity. The A1001 Comet Way links the A1057 with Junction 3 of the A1(M) and would therefore be a reflection of the impact of the local junctions.

The Transport Addendum produced by SLR (August 2016) demonstrated at Section 5 that the proposed traffic would result in an increase in the level of two-way traffic movement of 0.01%, based on daily and peak period impact.

This robust assessment also assumed that 100% of site traffic routed via the A1001 Comet Way south whereas in reality traffic would disperse throughout the local junctions.

The level of impact determined is considered to be well within the normal fluctuation in daily traffic, which the ATC undertaken has demonstrated is approximately 5% with a variation of 1,343 vehicles.

The proposals would result in an average of 1 HGV movement generated by the site every 3.3 minutes. Based on experience working on a range of junction assessments SLR recognises that this would not have a perceptible impact on the operation of any of the local junctions.

5.0 COLLISION DATA

5.1 HCC Highways Request

Opus, on behalf of the highway authority, made the following request:

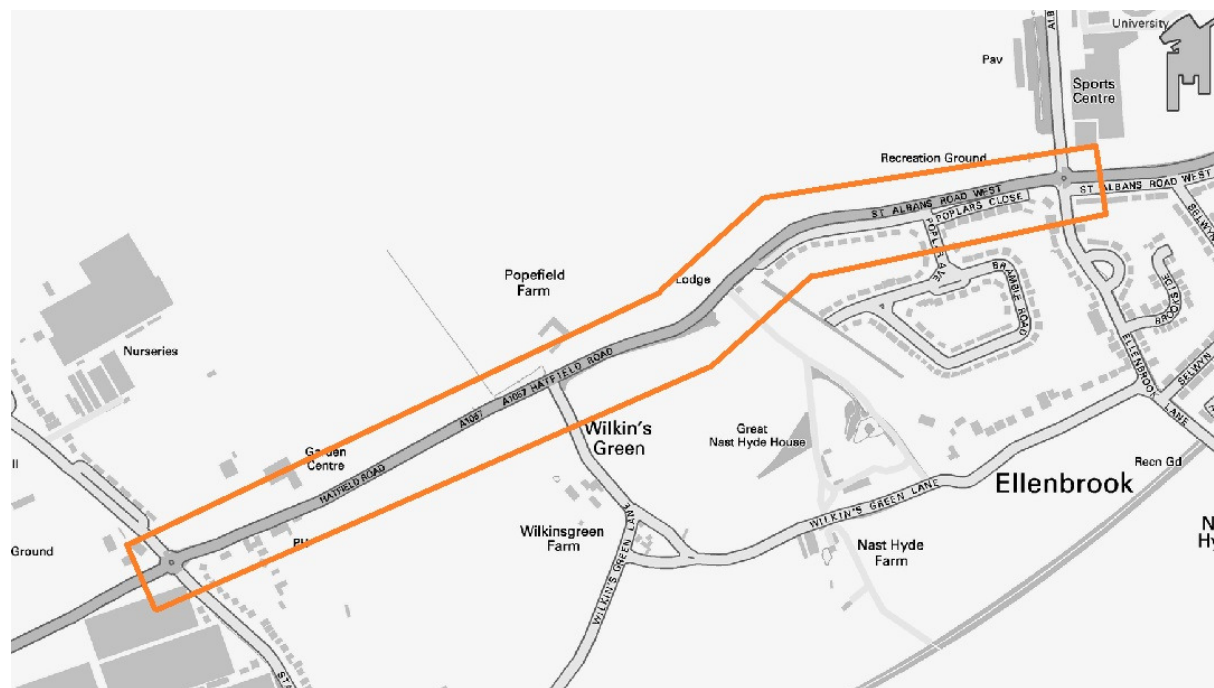
'The data is only up to 2014 and should be updated. There was a fatal accident in 2010 involving a pedestrian –although the accident is outside of the 5 year consideration period it is something to consider'.

5.2 Accident Data Update

The accident data used within the ES Transport Chapter included the most up to date data available from HCC available at the time.

Following this request, pdated details of recorded road traffic incidents were requested from HCC for the period beginning 1st January 2014 and ending 31st May 2016. This is the most recent data available at the time of writing this report and overlaps the period.

The specified study area comprised approximately 1.4km of the A1057 Hatfield Road/St Albans Road West, between the roundabout junctions with Station Road to the west and Ellenbrook Lane to the east. The diagram presented below at Figure 4 clearly defines the extents of the surveyed area.



* Based on OS Freemapping

Figure 4
Extents of Surveyed Area

The data was forwarded by email in a report format providing details of each recorded incident. Details include: the time, date, and location of the incident; general conditions at the time/location of the incident; and categorisation of any resultant casualty by severity, as defined below.

Casualty Severity Definitions:

- **fatal** (a crash resulting in a death);
- **serious** (detention in hospital; includes paralysis, fractures and severe lacerations);
- **slight** (includes whiplash, sprains and minor lacerations).

A total of fourteen road traffic incidents were recorded as occurring within the study area and specified time frame. Of those fourteen, twelve resulted in injuries categorised as slight, and two resulted in injuries categorised as serious. No incident resulted in a fatality.

5.3 Detailed Incident Consideration

The detailed data for each incident have been summarised, and are presented below. The data has been arranged within this report in the same order in which they were received.

The data received did not include incident descriptions or suggested contributory factors, as such the course of events for each incident has been extrapolated using the incident coordinates, data pertaining to the movements of the vehicles involved, and the recorded collision points of the vehicles.

Conclusions have been drawn based on the data available and previous experience in collision data analysis.

1. **Grid Reference:** E: 519534 N: 207653 **Casualties:** 1, Serious; 1, Slight.

Date: 12/05/2016

Time: 20:46

Road Surface: Dry.

Weather Conditions: Fine.

Lighting: Dark: Street lights present.

Location: A1057 Hatfield Road/Station Road roundabout junction.

Vehicle/Manoeuvre: 1: Car; Moving from SE to NW; Going ahead other.
2: M/C <125cc; Moving from NE to SW; Going ahead other.

Inferred Course of Events: Vehicle 1 enters roundabout from Station Road (south) failing to give way to Vehicle 2, causing Vehicle 2 to collide with Vehicle 1's off-side.

2. **Grid Reference:** E: 519530 N: 207650 **Casualties:** 1, Slight.

Date: 01/05/2016

Time: 12:00

Road Surface: Dry.

Weather Conditions: Fine.

Lighting: Daylight.

Location: A1057 Hatfield Road/Station Road roundabout junction.

Vehicle/Manoeuvre: 1: Car; Moving from E to W; Going ahead other.
2: M/C <125cc; Moving from S to W; Turning left.

Inferred Course of Events: Vehicle 2 enters roundabout from Station Road (south) failing to give way to Vehicle 1, causing collision.

3. **Grid Reference:** E: 520807 N: 208245 **Casualties:** 1, Slight.

Date: 06/12/2015

Time: 18:10

Road Surface: Wet.

Weather Conditions: Rain.

Lighting: Dark: Street lights present.

Location: Albatross Way, approximately 20 metres north of the St Albans Road West/Ellenbrook Lane roundabout junction.

Vehicle/Manoeuvre: 1: PSV; Moving from N to S; Overtaking.
2: Car; Moving from N to S; Waiting.

Inferred Course of Events: Vehicle 1 overtakes a stationary vehicle, and fails to see/stop in time to avoid rear end collision with Vehicle 2 which is slowing down/waiting to enter roundabout.

4. **Grid Reference:** E: 520817 N: 208211

Casualties: 1, Slight.

Date: 01/11/2015

Time: 09:50

Road Surface: Dry.

Weather Conditions: Fine.

Lighting: Daylight.

Location: St Albans Road West/Ellenbrook Lane roundabout junction.

Vehicle/Manoeuvre: 1: LGV; Moving from N to S; Going ahead other.
2: Pedal Cycle; Moving from E to W; Going ahead other.

Inferred Course of Events: Vehicle 2 enters roundabout failing to give way to Vehicle 1 resulting in collision.

5. **Grid Reference:** E: 520359 N: 208093

Casualties: 1, Slight.

Date: 28/09/2015

Time: 09:15

Road Surface: Dry.

Weather Conditions: Fine.

Lighting: Daylight.

Location: A1057 St Albans Road West, at junction with Great Nast Hyde.

Vehicle/Manoeuvre: 1: Car; Moving from SW to NE; Going ahead other.
2: Car; Moving from SE to NW; Waiting right turn.
3: Car; Moving from SW to NE; Waiting right turn.

Inferred Course of Events: Vehicle 2 emerges from junction without looking, Vehicle 3 collides with Vehicle 2's near side, Vehicle 1 collides with rear of Vehicle 3.

6. **Grid Reference:** E: 519501 N: 207647

Casualties: 1, Slight.

Date: 26/06/2015

Time: 17:24

Road Surface: Dry.

Weather Conditions: Fine.

Lighting: Daylight.

Location: A1057 Hatfield Road approximately 20 metres west of Hatfield Road/Station Road roundabout junction.

Vehicle/Manoeuvre: 1: Car; Moving from NE to NW; Turning right.
2: Pedal Cycle; Moving from SW to NE; Going ahead other.

Inferred Course of Events: Vehicle 2 enters roundabout failing to give way to Vehicle 1 resulting in collision.

7. **Grid Reference:** E: 519553 N: 207632

Casualties: 2, Slight.

Date: 22/05/2015

Time: 01:10

Road Surface: Dry.

Weather Conditions: Fine.

Lighting: Dark: Street lights present.

Location: Station Road, approximately 20 metres south of A1057 Hatfield Road/Station Road roundabout junction.

Vehicle/Manoeuvre: 1: Car; Moving from SE to NW; Stopping.
2: Pedal Cycle; Moving from SE to NW; Stopping.

Inferred Course of Events: Events unclear, no reported collision took place.

8. **Grid Reference:** E: 520248 N: 207993

Casualties: 1, Slight.

Date: 09/02/2015

Time: 13:10

Road Surface: Dry.

Weather Conditions: Fine.

Lighting: Daylight.

Location: A1057 St Albans Road West, 220 metres northeast of junction with Wilkins Green Lane.

Vehicle/Manoeuvre: 1: Car; Moving from SW to NE; Left-hand bend.
2: PSV; Moving from NE to SW; Right-hand bend.

Inferred Course of Events: Events unclear. Impact on offside of both vehicles, each travelling in opposing directions, suggests one vehicle strayed into oncoming lane while negotiating bend.

9. **Grid Reference:** E: 519519 N: 207658

Casualties: 1, Slight.

Date: 01/01/2015

Time: 02:30

Road Surface: Dry.

Weather Conditions: Fine.

Lighting: Dark: Street lights present.

Location: A1057 Hatfield Road/Station Road roundabout junction.

Vehicle/Manoeuvre: 1: Car; Moving from SW to NE; Stopping.

Inferred Course of Events: Events unclear. No other vehicles involved, potentially an emergency stop at roundabout junction resulting in minor whiplash. No collision or secondary injured party.

10. **Grid Reference:** E: 519636 N: 207710

Casualties: 1, Slight.

Date: 03/11/2014

Time: 06:47

Road Surface: Wet.

Weather Conditions: Rain.

Lighting: Daylight: Street lights present.

Location: A1057 Hatfield Road approximately 100 metres east of Hatfield Road/Station Road roundabout junction.

Vehicle/Manoeuvre: 1: Car; Moving from W to E; Going ahead other.

Inferred Course of Events: Driver loses control of Vehicle 1, skids, and collides with street furniture.

11. **Grid Reference:** E: 520817 N: 208211

Casualties: 1, Slight.

Date: 17/10/2014

Time: 13:40

Road Surface: Dry.

Weather Conditions: Fine.

Lighting: Daylight: Street lights present.

Location: St Albans Road West/Ellenbrook Lane roundabout junction.

Vehicle/Manoeuvre: 1: Car; Moving from E to W; Starting.
2: Pedal Cycle; Moving from N to S; Going ahead other.

Inferred Course of Events: Vehicle 1 enters roundabout failing to give way to Vehicle 2 resulting in collision.

12. **Grid Reference:** E: 519542 N: 207662

Casualties: 1, Slight.

Date: 05/10/2014

Time: 14:50

Road Surface: Dry.

Weather Conditions: Fine.

Lighting: Daylight: Street lights present.

Location: A1057 Hatfield Road/Station Road roundabout junction.

Vehicle/Manoeuvre: 1: Car; Moving from NE to SW; Starting.
2: Pedal Cycle; Moving from NW to SE; Going ahead other.

Inferred Course of Events: Vehicle 1 enters roundabout failing to give way to Vehicle 2 resulting in collision.

13. **Grid Reference:** E: 520800 N: 208275

Casualties: 1, Serious.

Date: 14/05/2014

Time: 15:45

Road Surface: Dry.

Weather Conditions: Fine.

Lighting: Daylight: Street lights present.

Location: Albatross Way, approximately 50 metres north of the St Albans Road West/Ellenbrook Lane roundabout junction.

Vehicle/Manoeuvre: 1: PSV; Moving from S to N; Overtaking.
2: Car; Stationary; Parked.

Inferred Course of Events: Vehicle 1 overtakes parked Vehicle 2. Pedestrian steps from in front of Vehicle 2 into path of Vehicle 1.

14. **Grid Reference:** E: 519541 N: 207661

Casualties: 1, Slight.

Date: 21/02/2014

Time: 08:00

Road Surface: Dry.

Weather Conditions: Fine.

Lighting: Daylight: Street lights present.

Location: A1057 Hatfield Road/Station Road roundabout junction.

Vehicle/Manoeuvre: 1: Car; Moving from NE to SW; Going ahead other.
2: Car; Moving from NW to SE; Turning right.
3: Car; Moving from SE to NW; Waiting.

Inferred Course of Events: Vehicle 1 enters roundabout failing to give way to Vehicle 2, causing collision. Vehicle 3 collides with Vehicles 1 & 2.

5.3.1 Incident Summary

Common Causation Factors

The data received from Hertfordshire County Council lacked both incident descriptions and causation factors, which are typically interpreted and recorded at the scene of the incident by the attending officer, or reporting officer. Without these data fields, causation factors are subject to interpretation, and also prone to misinterpretation.

As such, while the most likely course of events has been inferred from the information available, causation factors have not been assumed.

Serious Incidents

Two incidents occurred within the study area and time frame which resulted in injuries categorised as 'Serious', incidents 1 & 13.

Incident 1

Incident 1 occurred during May of 2016 at approximately 20:46hrs, taking place at the A1057 Hatfield Road/Station Road roundabout junction. Analysis of the available data pertaining to the incident suggests that a car entered a roundabout without giving way to a motorcycle, 125cc or less, already traversing the roundabout, causing a collision.

The driver of the car was a 68 year old male, the rider of the motorcycle was a 19 year old male. It is unclear from the available information the exact cause of the incident. It is possible the car driver did not see the motorcyclist and pulled out in front of him; however it is also possible the motorcyclist lacked experience, and it is unclear as to whether either vehicle was travelling in excess of speed limits.

Despite the relative lack of information, it is not considered that the incident is likely to have occurred as a result of anything other than driver error, and further, a highway deficiency is considered to be an unlikely cause.

Incident 13

Incident 13 occurred during May of 2014 at approximately 15:45hrs, taking place at Albatross Way, approximately 50 metres north of the St Albans Road West/Ellenbrook Lane roundabout junction. Analysis of the available data pertaining to the incident suggests that a car overtook a parked vehicle, and at the same juncture a pedestrian stepped into the vehicles path.

This variety of incident is difficult to attribute to anything other than the failure of a pedestrian to properly negotiate the crossing of the carriageway. A poor highway design may well affect the path of a vehicle, but it is reasonable to expect a pedestrian to adopt the appropriate caution when crossing a carriageway.

As such, it is not considered that this incident occurred as a result of anything other than lack of appropriate caution taken by a pedestrian, and a highway deficiency is considered to be an unlikely cause.

Fatal Incidents

No incident occurring within the study area and specified time frame resulted in fatality.

5.4 Highlighted Fatal Incident During 2010

The fatal incident referred to by Opus was included within the ES Transport Chapter, which concluded that the incident was most likely as a result of actions of the pedestrian rather than a poor highway layout.

However, in light of the request this incident has been reviewed again using more recent information sourced from the website www.crashmap.co.uk.

The incident occurred on the A1057 Hatfield Road just to the east of the Garden Centre at 01:55 in the morning on October 31st 2010. The report indicates that it involved a single vehicle and a single pedestrian. The pedestrian was stationary in the centre of the carriageway.

Whilst the report does not clarify, and being mindful of the sensitivities of a fatal incident, the circumstances suggest that the tragedy was likely to be as a result of the actions of the pedestrian and not a deficient highway design. The pedestrian could have been potentially under the influence of alcohol or drugs based on the timings and unusual behaviour. The incident report is also included within Appendix B of this report.

5.5 Conclusion

Following a thorough review of the data provided by Hertfordshire County Council including a detailed examination of each incident on an individual basis, it has been concluded that no incident occurring within the identified study area between 1st January 2014 and 31st May 2016 may be attributed to a highway deficiency of any kind, and that all recorded incidents are likely attributable to driver/rider error.

Furthermore, it is considered that fourteen incidents in 29 months across a study area of more than a kilometre, is a relatively low rate of occurrence and is not indicative of a highway safety issue in the vicinity.

It is also noteworthy that 85% of recorded incidents were categorised as 'Slight' in severity, and none of the recorded incidents resulted in fatality.

As such, it is the conclusion of SLR that no highway deficiency exists within relevant proximity of the application site entrance or surrounding highway infrastructure that may now or in the future pose a detrimental effect upon highway safety in the vicinity.

6.0 OTHER THIRD PARTY COMMENTS

The following request has been made by a member of the public, focusing on the cumulative impact of the proposals and other local developments:

6.1 Traffic Growth

6.1.1 Traffic Growth Query

'Chapter 7 of the Environmental Statement dated January 2016 shows that the A1057 (Hatfield Road) is a busy road, with a recorded two-way average weekday traffic flow of 15,420 vehicles (of all sizes) during the period 25th April 2015 and 1st May 2015 (paragraph 7.70).

However, no account was made within this chapter of any predicted traffic growth, as paragraph 7.150 states that: "...it would only serve to reduce the traffic impact." This has been carried forward into the 'Transport Chapter Addendum' dated August 2016, which in my opinion is a flawed approach, as the Department for Transport (DfT) in March 2015 published a document titled: 'Road Traffic Forecasts 2015' which analyses forecasts into predicted traffic growth.

The DfT document states in paragraph 15 that between the years 2010 and 2040 (within the estimated lifetime of the proposed quarry), traffic growth is expected to range from 12% to 51% on 'other principal roads.' The A1057 being an 'A' road can therefore be assumed to be classed as a 'other principal road', which means that if the lower end of this range is used, a 12% increase in traffic growth on the 2015 two-way average weekday traffic flow of 15,420 would result in an extra 1,850 vehicles per day, totalling an average weekday flow of 17,270 vehicles. If the worst case scenario is applied of 51%, there would be an extra 7,864 vehicles totalling an average weekday flow of 23,284 vehicles'.

6.1.2 Response

It is reasoned that the applicant would not be expected to consider the operation of junctions on the wider local highway network when subject to 2040 traffic conditions; this would take into account over two decades of predicted local development and the local highway conditions are likely to change significantly during this time.

SLR has assessed the impacts of the proposals on the basis of the existing baseline traffic conditions and committed development/imminent development at the time that the ES written. For the purposes of the link capacity assessment, a standard exercise with which to quantify the likely highway impacts, the baseline was not growthed using the existing lower baseline as this would present a more robust assessment.

The link capacity assessment undertaken within the Transport Addendum at Chapter 5 has demonstrated that the that the proposed traffic would result in an increase in the level of two-way traffic movement of 0.01% on Comet Way, based on daily and peak period impact. The A1001 Comet Way links the A1057 with Junction 3 of the A1(M) and would therefore be a reflection of the impact of the local junctions. This robust assessment also assumed that 100% of site traffic routed via the A1001 Comet Way whereas in reality traffic would disperse throughout the local junctions.

The junction capacity assessment undertaken at Chapter 3 of this report has also demonstrated that the access junction will operate without any queuing of delay.

The proposals will result in an average of 1 HGV movement generated by the site every 3.3 minutes. Based on experience working on a range of junction assessments SLR recognises that this would not have a perceptible impact on the operation of any of the local junctions.

6.2 Hatfield Quarry

6.2.1 Hatfield Quarry Query

'...table 5-3 in the August 2016 Transport Chapter Addendum appears to have shown the average weekday traffic flow in a different format by displaying the data in PCUs (where a car is 1 PCU and a HGV is 2 PCUs). As the proposal anticipates an average weekday traffic movement of 174 HGVs and 20 other vehicles (totalling 194) this has increased the figure to 368 (174 x 2 + 20).

The table also states that the proposed number of PCUs that will be generated from the neighbouring Cemex operated Hatfield Quarry in relation to their recent restoration scheme for land within their site at Cut Field is 200. This is incorrect, as condition 21 for this particular proposal (application ref: 5/1240-14), which was given a resolution to grant permission on 26th May 2016, is for a total of 250 lorry movements. Vehicles from this established site will use the A1507 past the proposed quarry entrance near Notcutts Garden Centre to gain access to the A1(M).

There is the potential therefore that there will be an increase in 444 vehicles per average weekday using this particular section of the A1057 (250 lorry movements for the approved restoration scheme at the Cemex run Hatfield Quarry and 194 vehicle movements of which 174 are proposed to be HGVs for the proposal at Hatfield Aerodrome).

With the possible forecast in traffic growth to range anywhere from 12% to 51% on 'other principal roads', this proposal along with the approved 250 lorry movements that have been approved for the neighbouring Cemex proposal, results in a substantial increase in traffic generation, which I consider to be totally unacceptable for years to come'.

6.2.2 Response

The current operations at Hatfield Quarry include extraction and processing of sand and gravel, ready-mix concrete operation, and a sand bagging operation. This is due to be completed in 2020 when the current planning permission ceases to authorise mineral extraction.

The current application, which is a revised restoration scheme, is awaiting decision but has been recommended for approval. The proposal would result in additional HGVs for a further 4 years until 2024. The relatively short extension together with the limited number of vehicles associated with the infilling operation would be well below historical levels generated by the quarry.

The application proposes an average of 72 two-way HGV movements per day, although the Transport Assessment supporting the application has used the figure of 100 two-way movements per day for robustness. The quarry has a limit of 250 daily HGV movements (125 in/ 125 out).

The Automatic Traffic Count (ATC) undertaken between 25th April 2015 and 1st May 2015 includes traffic generated by the existing Hatfield Quarry. Therefore not all of the proposed traffic will be new to the network. An allowance was made within the assessment undertaken by SLR for the proposed element.

Furthermore, it is worth noting that the existing operation of the Hatfield Quarry will come to an end in 2020. The likely cross-over between the proposed Hatfield Aerodrome application and the existing Hatfield Quarry operation will therefore be circa two years (based on a 2018 opening), during this time there is also likely to be a ramping up and ramping down of operations resulting in a lower level of operational HGV movements.

6.3 Conclusion

The NPPF at paragraph 32 states that:

‘Developments should only be prevented or refused on transport grounds where the residual cumulative impacts are severe’.

The location of a proposed facility of this type is considered suitable with good links to the principal and trunk road network. The site will be served directly off the A1057 Hatfield Road. This is classified as an A road, a principal route where its function is to facilitate the movement of traffic through the region. There are also good links to the A1(M) and M25 Motorways via routes designed to accommodate all vehicle types.

It is therefore considered that the residual cumulative impact of the current proposed developments will not be severe and should be deemed acceptable in traffic and transport terms.

Moreover, the proposed quarry at Hatfield Aerodrome has been allocated for many years, including the current Minerals Local Plan; this is set out in Chapter 4 of the ES.

7.0 SUMMARY AND CONCLUSIONS

This report should be read with reference to the Transport Chapter (Chapter 7) contained within the submitted Environmental Statement (ES) and a Transport Chapter Addendum dated August 2016 produced by SLR. This report does not replace either document, but seeks to clarify points raised by Opus (on behalf of HCC Highways) and a member of the public as part of the consultation process.

The Transport Chapter of the ES and the Transport Chapter Addendum consider the potential environmental effects related to the movement of vehicles associated with the operation of the proposed quarry.

The proposed traffic forecast has been clarified as up to 87 HGV loads generated by the proposed site per day or 174 HGV movements (in and out) daily.

A junction capacity analysis has been undertaken which demonstrates that the proposed access junction would operate comfortably within its operational capacity. Sensitivity testing has also been undertaken in order to determine unequivocally that the junction will operate without causing any queuing or delay.

On the basis of the capacity assessment undertaken and the junction design process which included a Stage 1 Road Safety Audit, it is therefore concluded that the proposed access design is acceptable in terms of operational capacity and highway safety.

The NPPF at paragraph 32 states that:

'Developments should only be prevented or refused on transport grounds where the residual cumulative impacts are severe'.

The location of a proposed facility of this type is considered suitable with good links to the principal and trunk road network. The site will be served directly off the A1057 Hatfield Road. This is classified as an A road, a principal route where its function is to facilitate the movement of traffic through the region. There are also good links to the A1(M) and M25 Motorways via routes designed to accommodate all vehicle types.

It is therefore considered that the residual cumulative impact of the current proposed developments will not be severe.

For the above reasons, the proposed development of the site accords with the national and local planning policies and is considered to be acceptable in traffic and transport terms.

8.0 CLOSURE

This report has been prepared by SLR Consulting Limited with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of Brett; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

Appendix A
PICADY Output Data

Junctions 9												
PICADY 9 - Priority Intersection Module												
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2016												
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk												
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution												

Filename: 160922_402.01009.0064_Hatfield Aerodrome_J9 Report.j9

Path: T:\New

Projects\01009_Brett_Group\402.01009.00064_Hatfield_Aerodrome\Tech\T&T\Input\PICADY\Junctions_9

Report generation date: 27/09/2016 16:59:36

»2022 + Dev, Weekday AM Peak

»2022 + Dev, Weekday PM Peak

»2022 + Dev, Saturday Peak

Summary of junction performance

	Weekday AM Peak				Weekday PM Peak				Saturday Peak			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2022 + Dev												
Stream B-C	0.0	10.67	0.01	B	0.1	9.14	0.03	A	0.1	9.04	0.03	A
Stream B-A	0.0	0.00	0.00	A	0.0	11.99	0.04	B	0.0	11.96	0.04	B
Stream C-B	0.1	9.11	0.03	A	0.0	12.65	0.02	B	0.0	12.51	0.02	B

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	15/09/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SLR\Cheslrstaff
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin
<div></div>							

The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 + Dev	Weekday AM Peak	ONE HOUR	07:45	09:15	15
D2	2022 + Dev	Weekday PM Peak	ONE HOUR	16:45	18:15	15
D3	2022 + Dev	Saturday Peak	ONE HOUR	11:45	13:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 + Dev, Weekday AM Peak

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hatfield Road	T-Junction	Two-way	0.22	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A1057 West		Major
B	Proposed Access Road		Minor
C	A1057 East		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	10.76		✓	3.50	119.0		-

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	8.47	5.52	5.00	4.60	✓	3.00	122	119

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	508.571	0.073	0.186	0.117	0.265
1	B-C	833.188	0.101	0.256	-	-
1	C-B	734.135	0.226	0.226	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 + Dev	Weekday AM Peak	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	533.00	100.000
B		✓	9.00	100.000
C		✓	695.00	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A	B	C
	A	0.00	10.00	523.00
	B	0.00	0.00	9.00
	C	676.00	19.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A	B	C
	A	0	0	5
	B	0	0	100
	C	5	47	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	10.67	0.0	B
B-A	0.00	0.00	0.0	A
C-A				
C-B	0.03	9.11	0.1	A
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	6.78	731.65	0.009	6.70	0.0	9.930	A
B-A	0.00	371.71	0.000	0.00	0.0	0.000	A
C-A	508.93			508.93			
C-B	14.30	643.65	0.022	14.17	0.0	8.405	A
A-B	7.53			7.53			
A-C	393.74			393.74			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	8.09	711.95	0.011	8.07	0.0	10.228	B
B-A	0.00	345.11	0.000	0.00	0.0	0.000	A
C-A	607.71			607.71			
C-B	17.08	626.08	0.027	17.05	0.0	8.689	A
A-B	8.99			8.99			
A-C	470.17			470.17			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	9.91	684.70	0.014	9.88	0.0	10.669	B
B-A	0.00	308.37	0.000	0.00	0.0	0.000	A
C-A	744.29			744.29			
C-B	20.92	601.80	0.035	20.87	0.1	9.109	A
A-B	11.01			11.01			
A-C	575.83			575.83			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	9.91	684.70	0.014	9.91	0.0	10.669	B
B-A	0.00	308.36	0.000	0.00	0.0	0.000	A
C-A	744.29			744.29			
C-B	20.92	601.80	0.035	20.92	0.1	9.109	A
A-B	11.01			11.01			
A-C	575.83			575.83			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	8.09	711.95	0.011	8.11	0.0	10.229	B
B-A	0.00	345.09	0.000	0.00	0.0	0.000	A
C-A	607.71			607.71			
C-B	17.08	626.08	0.027	17.12	0.0	8.692	A
A-B	8.99			8.99			
A-C	470.17			470.17			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	6.78	731.65	0.009	6.79	0.0	9.932	A
B-A	0.00	371.66	0.000	0.00	0.0	0.000	A
C-A	508.93			508.93			
C-B	14.30	643.65	0.022	14.34	0.0	8.409	A
A-B	7.53			7.53			
A-C	393.74			393.74			

2022 + Dev, Weekday PM Peak

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hatfield Road	T-Junction	Two-way	0.29	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022 + Dev	Weekday PM Peak	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	624.00	100.000
B		✓	29.00	100.000
C		✓	765.00	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0.00	0.00	624.00
	B	10.00	0.00	19.00
	C	756.00	9.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	3
	B	0	0	47
	C	3	100	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.03	9.14	0.1	A
B-A	0.04	11.99	0.0	B
C-A				
C-B	0.02	12.65	0.0	B
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	14.30	653.59	0.022	14.17	0.0	8.273	A
B-A	7.53	390.84	0.019	7.45	0.0	9.386	A
C-A	569.16			569.16			
C-B	6.78	628.20	0.011	6.69	0.0	11.583	B
A-B	0.00			0.00			
A-C	469.78			469.78			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	17.08	631.19	0.027	17.05	0.0	8.617	A
B-A	8.99	357.44	0.025	8.97	0.0	10.331	B
C-A	679.63			679.63			
C-B	8.09	607.64	0.013	8.07	0.0	12.008	B
A-B	0.00			0.00			
A-C	560.96			560.96			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	20.92	600.07	0.035	20.87	0.1	9.137	A
B-A	11.01	311.26	0.035	10.97	0.0	11.986	B
C-A	832.37			832.37			
C-B	9.91	579.21	0.017	9.88	0.0	12.646	B
A-B	0.00			0.00			
A-C	687.04			687.04			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	20.92	599.99	0.035	20.92	0.1	9.138	A
B-A	11.01	311.29	0.035	11.01	0.0	11.988	B
C-A	832.37			832.37			
C-B	9.91	579.21	0.017	9.91	0.0	12.646	B
A-B	0.00			0.00			
A-C	687.04			687.04			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	17.08	631.05	0.027	17.13	0.0	8.622	A
B-A	8.99	357.49	0.025	9.03	0.0	10.333	B
C-A	679.63			679.63			
C-B	8.09	607.64	0.013	8.12	0.0	12.009	B
A-B	0.00			0.00			
A-C	560.96			560.96			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	14.30	653.45	0.022	14.34	0.0	8.280	A
B-A	7.53	390.87	0.019	7.55	0.0	9.393	A
C-A	569.16			569.16			
C-B	6.78	628.20	0.011	6.80	0.0	11.588	B
A-B	0.00			0.00			
A-C	469.78			469.78			

2022 + Dev, Saturday Peak

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hatfield Road	T-Junction	Two-way	0.28	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2022 + Dev	Saturday Peak	ONE HOUR	11:45	13:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	599.00	100.000
B		✓	29.00	100.000
C		✓	800.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A	B	C
	A	0.00	0.00	599.00
	B	10.00	0.00	19.00
	C	791.00	9.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A	B	C
	A	0	0	3
	B	0	0	47
	C	2	100	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.03	9.04	0.1	A
B-A	0.04	11.96	0.0	B
C-A				
C-B	0.02	12.51	0.0	B
A-B				
A-C				

Main Results for each time segment

11:45 - 12:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	14.30	658.01	0.022	14.17	0.0	8.216	A
B-A	7.53	391.30	0.019	7.45	0.0	9.375	A
C-A	595.51			595.51			
C-B	6.78	632.44	0.011	6.69	0.0	11.504	B
A-B	0.00			0.00			
A-C	450.96			450.96			

12:00 - 12:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	17.08	636.46	0.027	17.05	0.0	8.543	A
B-A	8.99	357.99	0.025	8.97	0.0	10.314	B
C-A	711.09			711.09			
C-B	8.09	612.70	0.013	8.07	0.0	11.907	B
A-B	0.00			0.00			
A-C	538.49			538.49			

12:15 - 12:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	20.92	606.51	0.034	20.87	0.1	9.036	A
B-A	11.01	311.94	0.035	10.97	0.0	11.960	B
C-A	870.91			870.91			
C-B	9.91	585.41	0.017	9.88	0.0	12.510	B
A-B	0.00			0.00			
A-C	659.51			659.51			

12:30 - 12:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	20.92	606.43	0.035	20.92	0.1	9.037	A
B-A	11.01	311.96	0.035	11.01	0.0	11.961	B
C-A	870.91			870.91			
C-B	9.91	585.41	0.017	9.91	0.0	12.510	B
A-B	0.00			0.00			
A-C	659.51			659.51			

12:45 - 13:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	17.08	636.31	0.027	17.13	0.0	8.546	A
B-A	8.99	358.05	0.025	9.03	0.0	10.315	B
C-A	711.09			711.09			
C-B	8.09	612.70	0.013	8.12	0.0	11.911	B
A-B	0.00			0.00			
A-C	538.49			538.49			

13:00 - 13:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	14.30	657.87	0.022	14.34	0.0	8.225	A
B-A	7.53	391.33	0.019	7.55	0.0	9.380	A
C-A	595.51			595.51			
C-B	6.78	632.44	0.011	6.80	0.0	11.507	B
A-B	0.00			0.00			
A-C	450.96			450.96			

<h1>Junctions 9</h1>
PICADY 9 - Priority Intersection Module
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2016
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Filename: 160922_402.01009.0064_Hatfield Aerodrome_J9 Report_Sensitivity.j9
Path: T:\New
 Projects\01009_Brett_Group\402.01009.00064_Hatfield_Aerodrome\Tech\T&T\Input\PICADY\Junctions_9
Report generation date: 27/09/2016 17:06:14

- »2022 + Dev, Weekday AM Peak
- »2022 + Dev, Weekday PM Peak
- »2022 + Dev, Saturday Peak

Summary of junction performance

	Weekday AM Peak				Weekday PM Peak				Saturday Peak			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2022 + Dev											
Stream B-C	0.3	12.51	0.15	B	0.9	16.21	0.39	C	0.9	15.91	0.39	C
Stream B-A	0.0	0.00	0.00	A	0.6	21.20	0.39	C	0.6	21.09	0.39	C
Stream C-B	0.8	14.28	0.36	B	0.4	14.99	0.17	B	0.4	14.80	0.17	B

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

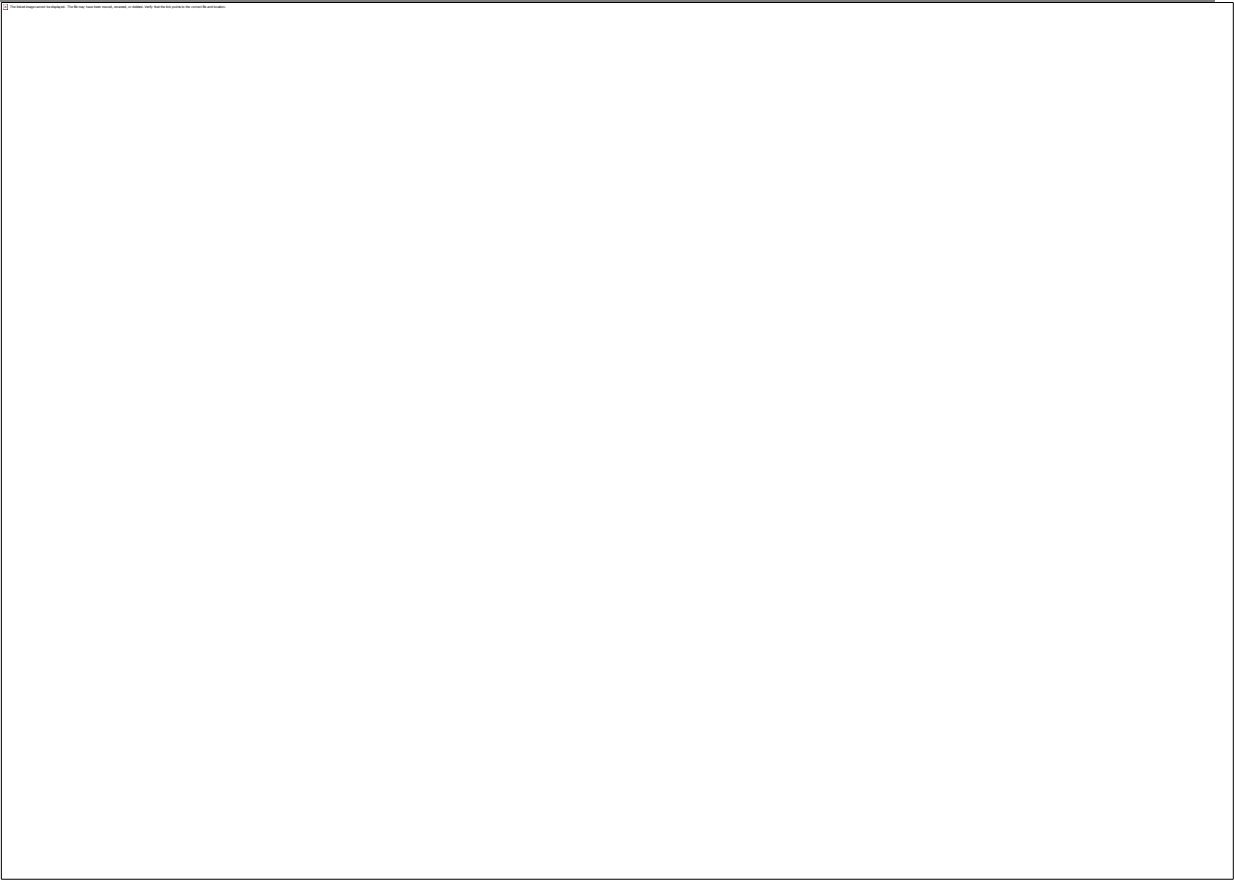
File summary

File Description

Title	(untitled)
Location	
Site number	
Date	15/09/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SLR\Cheslrstaff
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 + Dev	Weekday AM Peak	ONE HOUR	07:45	09:15	15
D2	2022 + Dev	Weekday PM Peak	ONE HOUR	16:45	18:15	15
D3	2022 + Dev	Saturday Peak	ONE HOUR	11:45	13:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 + Dev, Weekday AM Peak

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hatfield Road	T-Junction	Two-way	2.43	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A1057 West		Major
B	Proposed Access Road		Minor
C	A1057 East		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	10.76		✓	3.50	119.0		-

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	8.47	5.52	5.00	4.60	✓	3.00	122	119

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	508.571	0.073	0.186	0.117	0.265
1	B-C	833.188	0.101	0.256	-	-
1	C-B	734.135	0.226	0.226	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 + Dev	Weekday AM Peak	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	623.00	100.000
B		✓	90.00	100.000
C		✓	866.00	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A	B	C
	A	0.00	100.00	523.00
	B	0.00	0.00	90.00
	C	676.00	190.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A	B	C
	A	0	0	5
	B	0	0	100
	C	5	47	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.15	12.51	0.3	B
B-A	0.00	0.00	0.0	A
C-A				
C-B	0.36	14.28	0.8	B
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	67.76	724.79	0.093	66.94	0.2	10.932	B
B-A	0.00	332.60	0.000	0.00	0.0	0.000	A
C-A	508.93			508.93			
C-B	143.04	628.37	0.228	141.34	0.4	10.828	B
A-B	75.29			75.29			
A-C	393.74			393.74			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	80.91	703.76	0.115	80.70	0.3	11.552	B
B-A	0.00	297.99	0.000	0.00	0.0	0.000	A
C-A	607.71			607.71			
C-B	170.81	607.84	0.281	170.25	0.6	12.077	B
A-B	89.90			89.90			
A-C	470.17			470.17			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	99.09	674.67	0.147	98.76	0.3	12.492	B
B-A	0.00	250.62	0.000	0.00	0.0	0.000	A
C-A	744.29			744.29			
C-B	209.19	579.45	0.361	208.21	0.8	14.216	B
A-B	110.10			110.10			
A-C	575.83			575.83			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	99.09	674.67	0.147	99.08	0.3	12.508	B
B-A	0.00	250.35	0.000	0.00	0.0	0.000	A
C-A	744.29			744.29			
C-B	209.19	579.45	0.361	209.16	0.8	14.284	B
A-B	110.10			110.10			
A-C	575.83			575.83			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	80.91	703.76	0.115	81.22	0.3	11.570	B
B-A	0.00	297.57	0.000	0.00	0.0	0.000	A
C-A	607.71			607.71			
C-B	170.81	607.84	0.281	171.75	0.6	12.163	B
A-B	89.90			89.90			
A-C	470.17			470.17			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	67.76	724.79	0.093	67.97	0.2	10.967	B
B-A	0.00	331.98	0.000	0.00	0.0	0.000	A
C-A	508.93			508.93			
C-B	143.04	628.37	0.228	143.62	0.4	10.929	B
A-B	75.29			75.29			
A-C	393.74			393.74			

2022 + Dev, Weekday PM Peak

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hatfield Road	T-Junction	Two-way	3.72	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022 + Dev	Weekday PM Peak	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	624.00	100.000
B		✓	290.00	100.000
C		✓	846.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A	B	C
	A	0.00	0.00	624.00
	B	100.00	0.00	190.00
	C	756.00	90.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A	B	C
	A	0	0	3
	B	0	0	47
	C	3	100	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.39	16.21	0.9	C
B-A	0.39	21.20	0.6	C
C-A				
C-B	0.17	14.99	0.4	B
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	143.04	622.79	0.230	141.32	0.4	10.949	B
B-A	75.29	372.22	0.202	74.29	0.2	12.045	B
C-A	569.16			569.16			
C-B	67.76	628.20	0.108	66.80	0.2	12.803	B
A-B	0.00			0.00			
A-C	469.78			469.78			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	170.81	589.78	0.290	170.18	0.6	12.593	B
B-A	89.90	334.07	0.269	89.45	0.4	14.687	B
C-A	679.63			679.63			
C-B	80.91	607.64	0.133	80.65	0.3	13.655	B
A-B	0.00			0.00			
A-C	560.96			560.96			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	209.19	536.57	0.390	207.89	0.9	16.035	C
B-A	110.10	279.93	0.393	109.04	0.6	20.934	C
C-A	832.37			832.37			
C-B	99.09	579.21	0.171	98.68	0.4	14.969	B
A-B	0.00			0.00			
A-C	687.04			687.04			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	209.19	535.52	0.391	209.14	0.9	16.207	C
B-A	110.10	279.72	0.394	110.06	0.6	21.202	C
C-A	832.37			832.37			
C-B	99.09	579.21	0.171	99.08	0.4	14.995	B
A-B	0.00			0.00			
A-C	687.04			687.04			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	170.81	588.68	0.290	172.07	0.6	12.742	B
B-A	89.90	333.91	0.269	90.94	0.4	14.880	B
C-A	679.63			679.63			
C-B	80.91	607.64	0.133	81.29	0.3	13.688	B
A-B	0.00			0.00			
A-C	560.96			560.96			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	143.04	621.93	0.230	143.71	0.4	11.081	B
B-A	75.29	371.87	0.202	75.76	0.3	12.176	B
C-A	569.16			569.16			
C-B	67.76	628.20	0.108	68.02	0.2	12.861	B
A-B	0.00			0.00			
A-C	469.78			469.78			

2022 + Dev, Saturday Peak

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hatfield Road	T-Junction	Two-way	3.65	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2022 + Dev	Saturday Peak	ONE HOUR	11:45	13:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	599.00	100.000
B		✓	290.00	100.000
C		✓	881.00	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0.00	0.00	599.00
	B	100.00	0.00	190.00
	C	791.00	90.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	3
	B	0	0	47
	C	2	100	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.39	15.91	0.9	C
B-A	0.39	21.09	0.6	C
C-A				
C-B	0.17	14.80	0.4	B
A-B				
A-C				

Main Results for each time segment

11:45 - 12:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	143.04	627.05	0.228	141.33	0.4	10.858	B
B-A	75.29	372.70	0.202	74.29	0.2	12.025	B
C-A	595.51			595.51			
C-B	67.76	632.44	0.107	66.81	0.2	12.709	B
A-B	0.00			0.00			
A-C	450.96			450.96			

12:00 - 12:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	170.81	594.80	0.287	170.19	0.6	12.444	B
B-A	89.90	334.68	0.269	89.46	0.4	14.654	B
C-A	711.09			711.09			
C-B	80.91	612.70	0.132	80.66	0.3	13.525	B
A-B	0.00			0.00			
A-C	538.49			538.49			

12:15 - 12:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	209.19	542.59	0.386	207.93	0.9	15.751	C
B-A	110.10	280.79	0.392	109.05	0.6	20.833	C
C-A	870.91			870.91			
C-B	99.09	585.41	0.169	98.69	0.4	14.780	B
A-B	0.00			0.00			
A-C	659.51			659.51			

12:30 - 12:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	209.19	541.54	0.386	209.14	0.9	15.913	C
B-A	110.10	280.59	0.392	110.06	0.6	21.094	C
C-A	870.91			870.91			
C-B	99.09	585.41	0.169	99.08	0.4	14.804	B
A-B	0.00			0.00			
A-C	659.51			659.51			

12:45 - 13:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	170.81	593.69	0.288	172.03	0.6	12.586	B
B-A	89.90	334.52	0.269	90.93	0.4	14.839	B
C-A	711.09			711.09			
C-B	80.91	612.70	0.132	81.29	0.3	13.560	B
A-B	0.00			0.00			
A-C	538.49			538.49			

13:00 - 13:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	143.04	626.17	0.228	143.69	0.4	10.985	B
B-A	75.29	372.36	0.202	75.76	0.3	12.158	B
C-A	595.51			595.51			
C-B	67.76	632.44	0.107	68.02	0.2	12.764	B
A-B	0.00			0.00			
A-C	450.96			450.96			

Appendix B
Accident Data

A1057 Hatfield Road Smallford

Legend

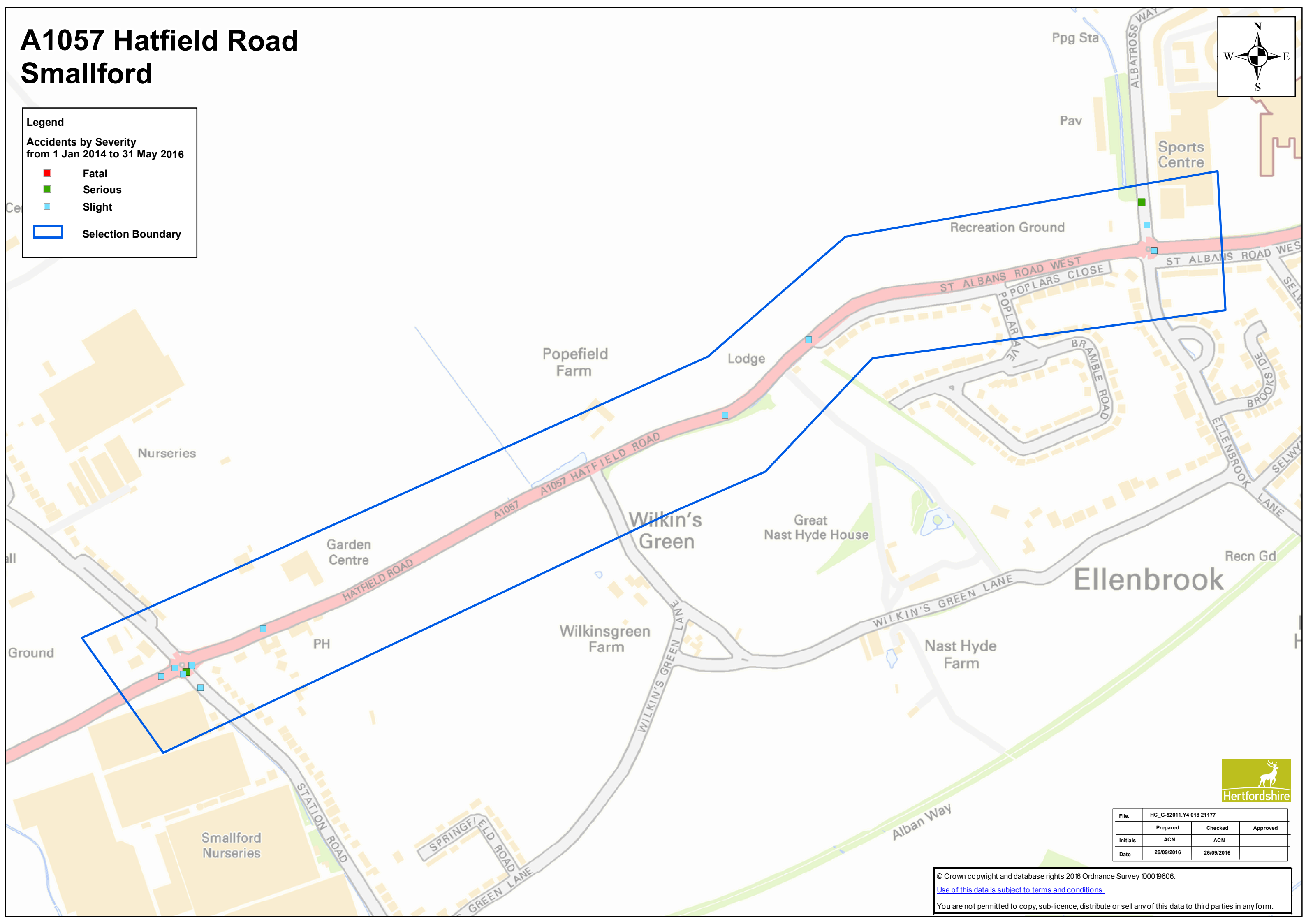
Accidents by Severity
from 1 Jan 2014 to 31 May 2016

Fatal

Serious

Slight

Selection Boundary



File.	HC_G-52011.Y4 018 21177		
	Prepared	Checked	Approved
Initials	ACN	ACN	
Date	26/09/2016	26/09/2016	

Full Non Confidential Accident Report

Date Produced: 26-Sep-16

Set Name (if saved) : 21177

Set Total : 14

Accident Details:

Acc Ref:	2016-410066193	1st / 2nd Rd:	A1057/5 C61/20	Jun Detail:	R/bout	Weather:	Fine	Num Cas:	2
Day of Week:	Thu	Parish:		Jun Control:	Giveway	Light:	Darklit	Num Peds:	0
Date:	12/05/2016 20:46:00	District:	StAlbs	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	2
Acc Severity:	Serious	Speed Limit:	40mph	C/way Hazard:	None	C/way Type:	R/bout	Ped Xing:	Npernox
A1057 Smallford Rbt St Albans J/w C161 Station Road								On Site:	Yes
Easting:	519534	Northing:	207653						

Casualty Details

Acc Ref:	2016-410066193	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	1	Cas Age:	68	PSV Passenger:	No	Road User Class:	Car Users	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Unknown	School Pupil:		Ped Work on Rd:	Notped
Acc Ref:	2016-410066193	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Serious	Ped Movement:	Notped
Veh Ref:	2	Cas Age:	19	PSV Passenger:	No	Road User Class:	Motorcyclists	Ped Location:	Notped
Cas Ref:	2	Cas Gender:	Male	Seat Belt:	Notapp	School Pupil:		Ped Work on Rd:	Notped

Vehicle Details

Acc Ref:	146006	Manoeuvre:	Ahead	Skidding:	None	Impact Point:	Offside	Driver Breath Test:	Negati	Driver Age:	68
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	Se	Hit and Run:	Nothtrun		
Veh Type:	Car	Junction:	Middle	Object off Cway	None	To:	Nw	Driver Gender:	Male		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Unknown	Driver Severity:	Slight		
Acc Ref:		Manoeuvre:	Ahead	Skidding:	None	Impact Point:	Front	Driver Breath Test:	Ntprov	Driver Age:	19
Veh Ref:	2	Location:	Carw	Object in Cway:	None	From:	Ne	Hit and Run:	Nothtrun		
Veh Type:	Mc<=125	Junction:	Middle	Object off Cway	None	To:	Sw	Driver Gender:	Male		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Unknown	Driver Severity:	Serious		

Set Name (if saved) : 21177

Page 1 of 15

Accident Details:

Acc Ref:	2016-410070241	1st / 2nd Rd:	A1057/5 C61/20	Jun Detail:	R/bout	Weather:	Fine	Num Cas:	1
Day of Week:	Sun	Parish:		Jun Control:	Giveway	Light:	Day	Num Peds:	0
Date:	01/05/2016 12:00:00	District:	StAlbs	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	2
Acc Severity:	Slight	Speed Limit:	40mph	C/way Hazard:	None	C/way Type:	R/bout	Ped Xing:	Nperzebx
A1057 Hatfield Road Smallford On Smallford Rbt J/w C61 Station Road								On Site:	Yes
Easting:	519530	Northing:	207650						

Casualty Details

Acc Ref:	2016-410070241	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	2	Cas Age:	18	PSV Passenger:	No	Road User Class:	Motorcyclists	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Notapp	School Pupil:		Ped Work on Rd:	Notped

Vehicle Details

Acc Ref:	146047	Manoeuvre:	Ahead	Skidding:	None	Impact Point:	Front	Driver Breath Test:	Notreq	Driver Age:	59
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	E	Hit and Run:	Nothtrun		
Veh Type:	Car	Junction:	Middle	Object off Cway	None	To:	W	Driver Gender:	Male		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Other	Driver Severity:	None		
Acc Ref:		Manoeuvre:	Turnleft	Skidding:	None	Impact Point:	Front	Driver Breath Test:	Notreq	Driver Age:	18
Veh Ref:	2	Location:	Carw	Object in Cway:	None	From:	S	Hit and Run:	Nothtrun		
Veh Type:	Mc<=125	Junction:	Er/about	Object off Cway	None	To:	W	Driver Gender:	Male		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Other	Driver Severity:	Slight		

Accident Details:

Acc Ref:	2015-4100B0819	1st / 2nd Rd:	0U1717/ A1057/8	Jun Detail:	T	Weather:	Rain	Num Cas:	1
Day of Week:	Sun	Parish:		Jun Control:	Giveway	Light:	Darklit	Num Peds:	0
Date:	06/12/2015 18:10:00	District:	WelHat	Spec Conditions:	None	Road Surface:	Wet	Num Vehicles:	2
Acc Severity:	Slight	Speed Limit:	30mph	C/way Hazard:	None	C/way Type:	Single	Ped Xing:	Npercnr
U1717 Mosquito Way Hatfield Approx 20m North Rbt J/w A1057 St Albans Road West								On Site:	Yes
Easting:	520807	Northing:	208245						

Casualty Details

Acc Ref:	2015-4100B0819	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	2	Cas Age:	59	PSV Passenger:	No	Road User Class:	Car Users	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Unknown	School Pupil:		Ped Work on Rd:	Notped

Vehicle Details

Acc Ref:	144970	Manoeuvre:	Otakesta	Skidding:	None	Impact Point:	Front	Driver Breath Test:	Negati	Driver Age:	67
Veh Ref:	1	Location:	Carw	Object in Cway:	Kerb	From:	N	Hit and Run:	Nothtrun		
Veh Type:	Psv	Junction:	Approach	Object off Cway	None	To:	S	Driver Gender:	Male		
Foreign Veh:		Towing:	None	velcwy	No	J Purpose:	Work	Driver Severity:	None		
Acc Ref:		Manoeuvre:	Waitahea	Skidding:	None	Impact Point:	Back	Driver Breath Test:	Negati	Driver Age:	59
Veh Ref:	2	Location:	Carw	Object in Cway:	Kerb	From:	N	Hit and Run:	Nothtrun		
Veh Type:	Car	Junction:	Approach	Object off Cway	None	To:	S	Driver Gender:	Male		
Foreign Veh:		Towing:	None	velcwy	Nearside	J Purpose:	Other	Driver Severity:	Slight		

Accident Details:

Acc Ref:	2015-4100B0697	1st / 2nd Rd:	A1057/7 A1057/8	Jun Detail:	R/bout	Weather:	Fine	Num Cas:	1
Day of Week:	Sun	Parish:		Jun Control:	Giveway	Light:	Day	Num Peds:	0
Date:	01/11/2015 09:50:00	District:	WelHat	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	2
Acc Severity:	Slight	Speed Limit:	40mph	C/way Hazard:	None	C/way Type:	R/bout	Ped Xing:	Npernox
A1057 St Albans Road West, Hatfield Rbt J/w U1717 Mosquito Way								On Site:	Yes
Easting:	520817	Northing:	208211						

Casualty Details

Acc Ref:	2015-4100B0697	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	2	Cas Age:	18	PSV Passenger:	No	Road User Class:	Cyclists	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Notapp	School Pupil:		Ped Work on Rd:	Notped

Vehicle Details

Acc Ref:	145257	Manoeuvre:	Ahead	Skidding:	None	Impact Point:	Front	Driver Breath Test:	Notreq	Driver Age:	40
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	N	Hit and Run:	Nothtrun		
Veh Type:	Gdlwtght	Junction:	Middle	Object off Cway	None	To:	S	Driver Gender:	Male		
Foreign Veh:		Towing:	None	velcwy	No	J Purpose:	Unknown	Driver Severity:	None		
Acc Ref:		Manoeuvre:	Ahead	Skidding:	None	Impact Point:	Front	Driver Breath Test:	Notapp	Driver Age:	18
Veh Ref:	2	Location:	Carw	Object in Cway:	None	From:	E	Hit and Run:	Nothtrun		
Veh Type:	Bicycle	Junction:	Middle	Object off Cway	None	To:	W	Driver Gender:	Male		
Foreign Veh:		Towing:	None	velcwy	No	J Purpose:	Unknown	Driver Severity:	Slight		

Accident Details:

Acc Ref:	2015-4100B0592	1st / 2nd Rd:	A1057/7 0U617/1	Jun Detail:	T	Weather:	Fine	Num Cas:	1
Day of Week:	Mon	Parish:	Hatfield	Jun Control:	Giveway	Light:	Day	Num Peds:	0
Date:	28/09/2015 09:15:00	District:	WelHat	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	3
Acc Severity:	Slight	Speed Limit:	40mph	C/way Hazard:	None	C/way Type:	Single	Ped Xing:	Npernox
A1057 St Albans Road West Hatfield O/s No 403 & At J/w U617 St Albans Road West Service Road								On Site:	Yes
Easting:	520359	Northing:	208093						

Casualty Details

Acc Ref:	2015-4100B0592	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	3	Cas Age:	60	PSV Passenger:	No	Road User Class:	Car Users	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Unknown	School Pupil:		Ped Work on Rd:	Notped

Vehicle Details

Acc Ref:	144423	Manoeuvre:	Ahead	Skidding:	None	Impact Point:	Front	Driver Breath Test:	Negati	Driver Age:	40
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	Sw	Hit and Run:	Nothtrun		
Veh Type:	Car	Junction:	Approach	Object off Cway	None	To:	Ne	Driver Gender:	Male		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Tofrowrk	Driver Severity:	None		
Acc Ref:		Manoeuvre:	Waitrigh	Skidding:	None	Impact Point:	Nearside	Driver Breath Test:	Notreq	Driver Age:	26
Veh Ref:	2	Location:	Carw	Object in Cway:	None	From:	Se	Hit and Run:	Nothtrun		
Veh Type:	Car	Junction:	Approach	Object off Cway	None	To:	Nw	Driver Gender:	Male		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Tofrowrk	Driver Severity:	None		
Acc Ref:		Manoeuvre:	Waitrigh	Skidding:	None	Impact Point:	Back	Driver Breath Test:	Notreq	Driver Age:	60
Veh Ref:	3	Location:	Carw	Object in Cway:	None	From:	Sw	Hit and Run:	Nothtrun		
Veh Type:	Car	Junction:	Approach	Object off Cway	None	To:	Ne	Driver Gender:	Male		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Tofrowrk	Driver Severity:	Slight		

Accident Details:

Acc Ref:	2015-4100F0413	1st / 2nd Rd:	A1057/4 A1057/5	Jun Detail:	R/bout	Weather:	Fine	Num Cas:	1
Day of Week:	Fri	Parish:	Colney H	Jun Control:	Giveway	Light:	Day	Num Peds:	0
Date:	26/06/2015 17:24:00	District:	StAlbs	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	2
Acc Severity:	Slight	Speed Limit:	40mph	C/way Hazard:	None	C/way Type:	Single	Ped Xing:	Npernox
A1057 Hatfield Road St Albans At Entrance To Busy Bees Nursery & Approx 20 Sw J/w A1057 Smallford Rbt								On Site:	No
Easting:	519501	Northing:	207647						

Casualty Details

Acc Ref:	2015-4100F0413	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	2	Cas Age:	24	PSV Passenger:	No	Road User Class:	Cyclists	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Notapp	School Pupil:		Ped Work on Rd:	Notped

Vehicle Details

Acc Ref:	143693	Manoeuvre:	Turnrigh	Skidding:	None	Impact Point:	Front	Driver Breath Test:	Notcon	Driver Age:	61
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	Ne	Hit and Run:	Nothtrun		
Veh Type:	Car	Junction:	Lmain	Object off Cway	None	To:	Nw	Driver Gender:	Female		
Foreign Veh:		Towing:	None	velcwy	No	J Purpose:	Other	Driver Severity:	None		
Acc Ref:		Manoeuvre:	Ahead	Skidding:	None	Impact Point:	Front	Driver Breath Test:	Notapp	Driver Age:	24
Veh Ref:	2	Location:	Carw	Object in Cway:	None	From:	Sw	Hit and Run:	Nothtrun		
Veh Type:	Bicycle	Junction:	Middle	Object off Cway	None	To:	Ne	Driver Gender:	Male		
Foreign Veh:		Towing:	None	velcwy	No	J Purpose:	Unknown	Driver Severity:	Slight		

Accident Details:

Acc Ref:	2015-4100F0335	1st / 2nd Rd:	C61/20	NONE	Jun Detail:	Notjunct	Weather:	Fine	Num Cas:	2
Day of Week:	Fri	Parish:	Colney H		Jun Control:	Notjunct	Light:	Darklit	Num Peds:	0
Date:	22/05/2015 01:10:00	District:	StAlbs		Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	2
Acc Severity:	Slight	Speed Limit:	30mph		C/way Hazard:	None	C/way Type:	Single	Ped Xing:	Npernox
C61 Station Road Smallford Exact Location Not Given Gridded Approx 30m Se J/w A157 Smallford Rbt									On Site:	No
Easting:	519553	Northing:	207632							

Casualty Details

Acc Ref:	2015-4100F0335	Cas Class:	Passenge	Car Passenger:	Rearseat	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	1	Cas Age:	53	PSV Passenger:	No	Road User Class:	Car Users	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Notworn	School Pupil:		Ped Work on Rd:	Notped
Acc Ref:	2015-4100F0335	Cas Class:	Passenge	Car Passenger:	Rearseat	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	1	Cas Age:	22	PSV Passenger:	No	Road User Class:	Car Users	Ped Location:	Notped
Cas Ref:	2	Cas Gender:	Female	Seat Belt:	Notworn	School Pupil:		Ped Work on Rd:	Notped

Vehicle Details

Acc Ref:	143561	Manoeuvre:	Stopping	Skidding:	None	Impact Point:	None	Driver Breath Test:	Notcon	Driver Age:	50
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	Se	Hit and Run:	Nothtrun		
Veh Type:	Taxi	Junction:	Notjunct	Object off Cway	None	To:	Nw	Driver Gender:	Male		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Unknown	Driver Severity:	None		
Acc Ref:		Manoeuvre:	Stopping	Skidding:	None	Impact Point:	None	Driver Breath Test:	Notapp	Driver Age:	
Veh Ref:	2	Location:	Carw	Object in Cway:	None	From:	Se	Hit and Run:	Nothtrun		
Veh Type:	Bicycle	Junction:	Notjunct	Object off Cway	None	To:	Nw	Driver Gender:	Unknown		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Unknown	Driver Severity:	None		

Accident Details:

Acc Ref:	2015-4100B0202	1st / 2nd Rd:	A1057/6 NONE	Jun Detail:	Notjunct	Weather:	Fine	Num Cas:	1
Day of Week:	Mon	Parish:	Hatfield	Jun Control:	Notjunct	Light:	Daynone	Num Peds:	0
Date:	09/02/2015 13:10:00	District:	WelHat	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	2
Acc Severity:	Slight	Speed Limit:	40mph	C/way Hazard:	None	C/way Type:	Dual	Ped Xing:	Npernox
A1057 St Albans Road West Hatfield Approx 190m Ne J/w U876 Wilkins Green Lane								On Site:	Yes
Easting:	520248	Northing:	207993						

Casualty Details

Acc Ref:	2015-4100B0202	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	1	Cas Age:	23	PSV Passenger:	No	Road User Class:	Car Users	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Unknown	School Pupil:	Other	Ped Work on Rd:	

Vehicle Details

Acc Ref:	142967	Manoeuvre:	Leftbend	Skidding:	None	Impact Point:	Offside	Driver Breath Test:	Negati	Driver Age:	23
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	Sw	Hit and Run:	Nothtrun		
Veh Type:	Car+3whl	Junction:	Notjunct	Object off Cway	Inditch	To:	Ne	Driver Gender:	Male		
Foreign Veh:	Notfrv	Towing;	None	velcwy	Nearside	J Purpose:	Other	Driver Severity:	Slight		
Acc Ref:		Manoeuvre:	Rightben	Skidding:	None	Impact Point:	Offside	Driver Breath Test:	Negati	Driver Age:	45
Veh Ref:	2	Location:	Carw	Object in Cway:	None	From:	Ne	Hit and Run:	Nothtrun		
Veh Type:	Psv	Junction:	Notjunct	Object off Cway	None	To:	Sw	Driver Gender:	Male		
Foreign Veh:	Notfrv	Towing;	None	velcwy	No	J Purpose:	Work	Driver Severity:	None		

Accident Details:

Acc Ref:	2015-4100F0007	1st / 2nd Rd:	A1057/4 A1057/5	Jun Detail:	R/bout	Weather:	Fine	Num Cas:	1
Day of Week:	Thu	Parish:	Colneyhe	Jun Control:	Gwy/unct	Light:	Darklit	Num Peds:	0
Date:	01/01/2015 02:30:00	District:	StAlbs	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	1
Acc Severity:	Slight	Speed Limit:	40mph	C/way Hazard:	None	C/way Type:	Single	Ped Xing:	Npercntr
A1057 Hatfield Road Smallford J/w A1057 Smallford Rbt								On Site:	No-otc
Easting:	519519	Northing:	207658						

Casualty Details

Acc Ref:	2015-4100F0007	Cas Class:	Passenge	Car Passenger:	Rearseat	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	1	Cas Age:	20	PSV Passenger:	No	Road User Class:	Car Users	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	No	School Pupil:	Other	Ped Work on Rd:	

Vehicle Details

Acc Ref:	142785	Manoeuvre:	Stopping	Skidding:	None	Impact Point:	None	Driver Breath Test:	Notreq	Driver Age:	43
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	Sw	Hit and Run:	Nothtrun		
Veh Type:	Taxi	Junction:	Approach	Object off Cway	None	To:	Ne	Driver Gender:	Male		
Foreign Veh:	Notfrv	Towing:	None	velcwy	No	J Purpose:	Other	Driver Severity:	None		

Accident Details:

Acc Ref:	2014-4100B0718	1st / 2nd Rd:	A1057/6	Jun Detail:	Notjunct	Weather:	Rain	Num Cas:	1
Day of Week:	Mon	Parish:	Colneyhe	Jun Control:	Notjunct	Light:	Daystlts	Num Peds:	0
Date:	03/11/2014 06:47:00	District:	StAlbs	Spec Conditions:	None	Road Surface:	Wet	Num Vehicles:	1
Acc Severity:	Slight	Speed Limit:	40mph	C/way Hazard:	None	C/way Type:	Single	Ped Xing:	Npernox
A1057 Hatfield Road Colney Heath Opposite Shell Garage & Approx 110m Ne J/wa1057 Smallford Rbt								On Site:	Yes
Easting:	519636	Northing:	207710						

Casualty Details

Acc Ref:	2014-4100B0718	Cas Class:	Passenge	Car Passenger:	Frontsea	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	1	Cas Age:	53	PSV Passenger:	No	Road User Class:	Car Users	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Yes	School Pupil:	Other	Ped Work on Rd:	

Vehicle Details

Acc Ref:	142170	Manoeuvre:	Ahead	Skidding:	Skidded	Impact Point:	Front	Driver Breath Test:	Negati	Driver Age:	53
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	W	Hit and Run:	Nothtrun		
Veh Type:	Car+3whl	Junction:	Notjunct	Object off Cway	Pole	To:	E	Driver Gender:	Male		
Foreign Veh:	Notfrv	Towing:	None	velcwy	Nearside	J Purpose:	Tofrowrk	Driver Severity:	None		

Accident Details:

Acc Ref:	2014-4100B0679	1st / 2nd Rd:	A1057/7 A1057/8	Jun Detail:	R/bout	Weather:	Fine	Num Cas:	1
Day of Week:	Fri	Parish:	Hatfield	Jun Control:	Gwy/unct	Light:	Daystlts	Num Peds:	0
Date:	17/10/2014 13:40:00	District:	WelHat	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	2
Acc Severity:	Slight	Speed Limit:	40mph	C/way Hazard:	None	C/way Type:	R/bout	Ped Xing:	Npernox
A1057 Ellenbrook Lane Rbt Hatfield J/w A1057 St Albans Road West								On Site:	Yes
Eastings:	520817	Northing:	208211						

Casualty Details

Acc Ref:	2014-4100B0679	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	2	Cas Age:	19	PSV Passenger:	No	Road User Class:	Cyclists	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Notapp	School Pupil:	Other	Ped Work on Rd:	

Vehicle Details

Acc Ref:	141953	Manoeuvre:	Starting	Skidding:	None	Impact Point:	Offside	Driver Breath Test:	Notreq	Driver Age:	83
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	E	Hit and Run:	Nothtrun		
Veh Type:	Car+3whl	Junction:	Er/about	Object off Cway	None	To:	W	Driver Gender:	Female		
Foreign Veh:	Notfrv	Towing:	None	velcwy	No	J Purpose:	Other	Driver Severity:	None		
Acc Ref:		Manoeuvre:	Ahead	Skidding:	None	Impact Point:	Front	Driver Breath Test:	Notapp	Driver Age:	19
Veh Ref:	2	Location:	Carw	Object in Cway:	None	From:	N	Hit and Run:	Nothtrun		
Veh Type:	Bicycle	Junction:	Middle	Object off Cway	None	To:	S	Driver Gender:	Male		
Foreign Veh:	Notfrv	Towing:	None	velcwy	No	J Purpose:	Other	Driver Severity:	Slight		

Accident Details:

Acc Ref:	2014-4100F0631	1st / 2nd Rd:	A1057/5 A1057/6	Jun Detail:	R/bout	Weather:	Fine	Num Cas:	1
Day of Week:	Sun	Parish:	Colneyhe	Jun Control:	Gwy/unct	Light:	Daystlts	Num Peds:	0
Date:	05/10/2014 14:50:00	District:	StAlbs	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	2
Acc Severity:	Slight	Speed Limit:	40mph	C/way Hazard:	None	C/way Type:	R/bout	Ped Xing:	Nperzebx
A1057 Smallford Rbt St Albans J/w A1057 Hatfield Road								On Site:	Yes
Easting:	519542	Northing:	207662						

Casualty Details

Acc Ref:	2014-4100F0631	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	2	Cas Age:	37	PSV Passenger:	No	Road User Class:	Cyclists	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Notapp	School Pupil:	Other	Ped Work on Rd:	

Vehicle Details

Acc Ref:	141981	Manoeuvre:	Starting	Skidding:	None	Impact Point:	Front	Driver Breath Test:	Notreq	Driver Age:	44
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	Ne	Hit and Run:	Nothtrun		
Veh Type:	Car+3whl	Junction:	Er/about	Object off Cway	None	To:	Sw	Driver Gender:	Male		
Foreign Veh:	Notfrv	Towing:	None	velcwy	No	J Purpose:	Work	Driver Severity:	None		
Acc Ref:		Manoeuvre:	Ahead	Skidding:	None	Impact Point:	Nearside	Driver Breath Test:	Notapp	Driver Age:	37
Veh Ref:	2	Location:	Carw	Object in Cway:	None	From:	Nw	Hit and Run:	Nothtrun		
Veh Type:	Bicycle	Junction:	Middle	Object off Cway	None	To:	Se	Driver Gender:	Male		
Foreign Veh:	Notfrv	Towing:	None	velcwy	No	J Purpose:	Work	Driver Severity:	Slight		

Accident Details:

Acc Ref:	2014-4100B0284	1st / 2nd Rd:	U1717/1	Jun Detail:	Notjunct	Weather:	Fine	Num Cas:	1
Day of Week:	Wed	Parish:	Hatfield	Jun Control:	Notjunct	Light:	Daystlts	Num Peds:	1
Date:	14/05/2014 15:45:00	District:	WelHat	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	2
Acc Severity:	Serious	Speed Limit:	30mph	C/way Hazard:	None	C/way Type:	Single	Ped Xing:	Npercnr
U1717 Albatross Way Hatfield Approx 62m North J/w A1057 St Albans Road West								On Site:	Yes
Easting:	520800	Northing:	208275						

Casualty Details

Acc Ref:	2014-4100B0284	Cas Class:	Pedestri	Car Passenger:	Ped	Cas Severity:	Serious	Ped Movement:	Xnrside
Veh Ref:	1	Cas Age:	16	PSV Passenger:	Ped	Road User Class:	Pedestrians	Ped Location:	Elsewher
Cas Ref:	1	Cas Gender:	Female	Seat Belt:	Notapp	School Pupil:	Toorfrom	Ped Work on Rd:	No

Vehicle Details

Acc Ref:	140941	Manoeuvre:	Otakesta	Skidding:	None	Impact Point:	Front	Driver Breath Test:	Negati	Driver Age:	40
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	S	Hit and Run:	Nothtrun		
Veh Type:	Psv	Junction:	Notjunct	Object off Cway	None	To:	N	Driver Gender:	Male		
Foreign Veh:	Notfrv	Towing:	None	velcwy	No	J Purpose:	Work	Driver Severity:	None		
Acc Ref:		Manoeuvre:	Parked	Skidding:	None	Impact Point:	None	Driver Breath Test:	Negati	Driver Age:	60
Veh Ref:	2	Location:	Carw	Object in Cway:	None	From:	Still	Hit and Run:	Nothtrun		
Veh Type:	Car+3whl	Junction:	Notjunct	Object off Cway	None	To:	Still	Driver Gender:	Male		
Foreign Veh:	Notfrv	Towing:	None	velcwy	No	J Purpose:	Work	Driver Severity:	None		

Accident Details:

Acc Ref:	2014-4100F0144	1st / 2nd Rd:	A1057/5 C61/20	Jun Detail:	R/bout	Weather:	Fine	Num Cas:	1
Day of Week:	Fri	Parish:	Colneyhe	Jun Control:	Gwy/unct	Light:	Daystlts	Num Peds:	0
Date:	21/02/2014 08:00:00	District:	StAlbs	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	3
Acc Severity:	Slight	Speed Limit:	40mph	C/way Hazard:	None	C/way Type:	R/bout	Ped Xing:	Npercnr
A1057 Hatfield Road St Albans Rbt J/w C61 Station Road								On Site:	Yes
Easting:	519541	Northing:	207661						

Casualty Details

Acc Ref:	2014-4100F0144	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	2	Cas Age:	47	PSV Passenger:	No	Road User Class:	Car Users	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Female	Seat Belt:	Unknown	School Pupil:	Other	Ped Work on Rd:	

Vehicle Details

Acc Ref:	140387	Manoeuvre:	Ahead	Skidding:	None	Impact Point:	Front	Driver Breath Test:	Negati	Driver Age:	80
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	Ne	Hit and Run:	Nothtrun		
Veh Type:	Car+3whl	Junction:	Er/about	Object off Cway	None	To:	Sw	Driver Gender:	Male		
Foreign Veh:	Notfrv	Towing;	None	velcwy	No	J Purpose:	Other	Driver Severity:	None		
Acc Ref:		Manoeuvre:	Turnrigh	Skidding:	None	Impact Point:	Offside	Driver Breath Test:	Negati	Driver Age:	47
Veh Ref:	2	Location:	Carw	Object in Cway:	None	From:	Nw	Hit and Run:	Nothtrun		
Veh Type:	Car+3whl	Junction:	Middle	Object off Cway	None	To:	Se	Driver Gender:	Female		
Foreign Veh:	Notfrv	Towing;	None	velcwy	No	J Purpose:	Other	Driver Severity:	Slight		
Acc Ref:		Manoeuvre:	Waitahea	Skidding:	None	Impact Point:	Front	Driver Breath Test:	Negati	Driver Age:	42
Veh Ref:	3	Location:	Carw	Object in Cway:	None	From:	Se	Hit and Run:	Nothtrun		
Veh Type:	Car+3whl	Junction:	Approach	Object off Cway	None	To:	Nw	Driver Gender:	Male		
Foreign Veh:	Notfrv	Towing;	None	velcwy	No	J Purpose:	Work	Driver Severity:	None		

Crash Report including Vehicle and Casualty Information



Crash Date:	Sunday, October 31, 2010	Time of Crash:	1:55:00 AM	Crash Reference:	20104100F0780
Highest Injury Severity:	Fatal	Number of Vehicles:	1	Number of Casualties:	2
Highway Authority:	Hertfordshire			OS Grid Reference:	519770 207760
Local Authority:	St. Albans District (B)				
Road Number:	A1057	Road Type:	Single carriageway		
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	40	Junction Control:	Unknown		
Light Conditions:	Darkness: street lights present but unlit				
Carriageway Hazards:	None				
Junction Detail:	Not at or within 20 metres of junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Taxi/Private hire car	7	Male	36 - 45	Vehicle proceeding normally along the carriageway, not on a bend	Front	Journey as part of work	None	None

For more information about the data please visit: <http://www.crashmap.com/home/aboutthedata> and <http://www.crashmap.com/home/definitions>



Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Fatal	Pedestrian	Male	26 - 35	In centre of carriageway, not on refuge, central island or central reservation	In carriageway, stationary - not crossing (standing or playing)
1	2	Slight	Driver or rider	Male	36 - 45	Unknown or other	Unknown or other

For more information about the data please visit: <http://www.crashmap.com/home/aboutthedata> and <http://www.crashmap.com/home/definitions>

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Industry



Infrastructure



Mining & Minerals



Oil & Gas



Planning & Development



Renewable & Low Carbon



Waste Management