



Potential M4(2) dwellings

- Affordable 3 & 4 bed
- 2D - Bayberry
- 3E - Fir
- 2BF

Existing retained tree canopies

Existing retained tree RPZ

Proposed attenuation basin (surrounding bunds included)

Existing hedgerows

Appendix B

REPORT N° 70013258-RSA

LAND AT WESTERGATE

STAGE 1 ROAD SAFETY AUDIT DESIGNERS
RESPONSE

PUBLIC

APRIL 2017

LAND AT WESTERGATE

STAGE 1 ROAD SAFETY AUDIT DESIGNERS RESPONSE

Cala Homes

Type of document (version)
Public

Project no: 70013258
Date: April 2017

~
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QUALITY MANAGEMENT

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Date	April 2017			
Prepared by	Chris Williams			
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APPENDICES

A P P E N D I X A ROAD SAFETY AUDIT

1

DESIGNERS RESPONSE

1.1 INTRODUCTION

1.1.1 This document provides a designer's response to a Stage 1 Road Safety Audit carried out by Ted Smith Traffic Safety Consultants on behalf of Cala Homes in January 2017. The audit was completed on the proposed signalised site access junction at the existing A29 / Meadow Way junction, as shown on Drawing 3258/GA/004 Revision C. This junction will be used to access a development of 350 residential dwellings on land east of the A29.

1.1.2 For a full overview of the proposals, this document should be read in conjunction with the Transport Assessment completed for the site.

1.2 DESIGNERS RESPONSE

1.2.1 The table below provides extracts from the Stage 1 Road Safety Audit and a Designer's Response in italics to the right of each item raised.

Table 1.1 - RSA Issues Raised and Designer's Response

REF.	COMMENT	DESIGNERS RESPONSE
3.3.1	Location: (A) A29 Westergate Street, south of the junction with Meadow Way and the new access road. Summary: Risk of inadequate forward visibility of stop-line for waiting vehicles and/ or waiting pedestrians. Recommendation: The proposed junction design may need to be revisited with a view to investigating scope for shifting the northbound stop line and corresponding signal poles a few more metres furthers southwards of the currently shown position which may also provide safer scope for large vehicles turning sharp left manoeuvre from the new site access road. A high level off-side secondary signal head may also need to be included. The yellow box markings indicated for the southbound traffic flow may also need to be extended to also include the northbound through flows. It is further recommended that high friction surfacing should also be incorporated on the northbound approach for sufficient length to mitigate the potential northbound vehicle queuing and risk of failure to perceive the red lights associated with the signalised junction and pedestrian crossing facility.	<i>It has not been possible to relocate the A29 northbound stop-line further southwards due to the need to maintain junction inter-visibility between stop-lines. While full inter-visibility as measured in DMRB is not possible the current arrangement allows visibility between the A29 northbound and site access stop-line, which includes the extent of access road pedestrian crossing. Moving the A29 northbound stop-line further south would remove visibility between stop-lines.</i> <i>The ability to relocate the northbound stop-line further south is also limited by the residential property located on the south eastern corner of the junction, whereby such a modification would obstruct the visibility between the A29 northbound and site access road stop-line.</i> <i>The option of relocating the access road stop-line slightly westwards (to extend the limits of the junction inter-visibility further southwards on the A29 northbound) has been explored but this is not possible due to proximity of the pedestrian crossing on the access road to the A29 southbound lane.</i> <i>High friction surfacing will be incorporated into detailed design stages of the proposed junction.</i>

REF.	COMMENT	DESIGNERS RESPONSE
3.5.1	Location: (B) A29 Westergate Street, at the approaches to the new signalised junction. Summary: Risk of failure to perceive new junction control ahead. Recommendation: The proposed signing works should also include appropriate temporary warning signs to TSRGD Diagram 7014 for a slightly longer period of say six months to alert visiting drivers to the new signalised junction.	<i>It is agreed that temporary warning signs should be erected but timescales will need to be agreed with WSCC as part of the technical approval process.</i> <i>The junction design also includes provision of signage to Diagrams 543, 572, 584.1 of TSRGD to warn drivers on the A29 northbound of the traffic signal junction. This should help non-local drivers identify the junction ahead.</i>

Appendix A

ROAD SAFETY AUDIT

**“A29 WESTERGATE STREET/MEADOW WAY”
WESTERGATE, WEST SUSSEX**

PROPOSED S278 SIGNALISED JUNCTION

**Road Safety Audit
Stage 1 - Preliminary Design**

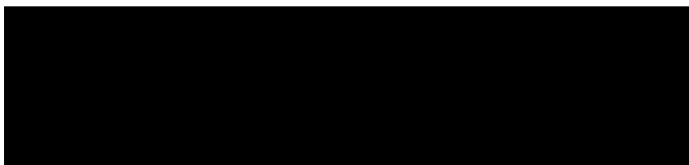
January 2017

Report Ref: 1703

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1 INTRODUCTION

- 1.1 This report describes the results of a Stage 1 Preliminary Design Road Safety Audit of the proposed S278 Amended Signalised Access Junction Highway Works at the A29 Westergate Street at its existing junction with Meadow Way, north of Bognor Regis, West Sussex and proposed new access road into new Residential Development at the east side of the A29. The Road Safety Audit was carried out at the request of WSP UK, Regus House, Southampton International Business Park, George Curl Way, Southampton, Hampshire, SO18 2RZ, on behalf of Cala Homes.
- 1.2 The proposed works examined within this Stage 1 Audit of the Amended Design, consist of constructing a new access junction linking the A29 with the new Development Site that will serve up to approximately 350 dwellings and control of vehicular movements to and from Meadow Way. The traffic signals would also provide new controlled pedestrian crossing facilities around the junction.
- 1.3 Initially the access will serve 350 units (Detailed planning application for 101 dwellings and outline permission will be sought for the remaining 249 dwellings). However, in the longer term the signalised junction will form part of the proposed Barnham / Eastergate / Westergate Strategic Development Site involving approximately 2000 new dwellings east of the current Development Site and re-routing the A29, including closing the A29 at the Woodgate level crossing and bypassing it through the larger site.
- 1.4 The Road Safety Audit Team membership comprised as follows:
- | | |
|--|---------------------------|
| Ted Smith, CoC | Traffic Safety Consultant |
| Martin Brownsey, BSc, DipEM, MCIHT, CoC
Director, MB Projects Ltd | Highways Consultancy |
- Each member specialises in Highway Safety and Traffic Engineering and have operated independently of the design team responsible for the scheme and have had no involvement with the design of the proposals.
- 1.5 This Audit was carried out in the offices of the Team Members during January 2017, comprising of an examination of the drawings and documents listed in Appendix A and in accordance with the Audit Brief and instructions dated 13th October 2016 and 9th and 17th January 2017 from WSP. Since an inspection of the site was jointly carried out on the morning of Monday 25th November 2013 in connection with an earlier Design, during which time light to moderate traffic flows were observed and generally considered to be travelling at speeds within the low to middle range between 30mph and 40mph, a further site inspection was considered unnecessary at present. Whereas at that time a few pedestrians were also seen using the existing footways, no cyclists were seen in the near vicinity of proposed works.

- 1.6 The terms of reference of the Road Safety Audit are as described in HD 19/15 (DMRB Volume 5: Section 2, Part 2) and the incorporated categories of checklists, as appropriate. The Road Safety Audit Team has examined and reported only on the road safety implications of this scheme as presented in the drawings and documents listed in the Appendix to this report, and has not examined or verified compliance of the design with any other criteria or standard.
- 1.7 The object of this Audit is to identify any existing road safety related problems that may be exacerbated or any new problems that may be introduced by the proposals.
- 1.8 Whereas details of any recorded injury accidents were not provided, a search of 'Crashmap' data system identified that within the five year period 1st January 2011 to 31st December 2015, one injury accident classified as 'Slight' is shown to have occurred in December 2013, some distance north of the junction with Meadow Way. A further three injury accidents were shown to have occurred south of Meadow Way, close to the junction with Elmcroft Place, in which one of those events was classified as Serious involving one vehicle during April 2015, whilst the other two were classified as Slight, one involving two vehicles during May 2011 and the other during June 2015 also with two vehicles. Consequently, there would not appear to be any existing problems that might be exacerbated by the proposals.
- 1.9 Details of predicted traffic flows were provided for this Audit, together with description of proposed traffic signal operations that were incorporated into the provided Extract of the Transport Assessment document.
- 1.10 Regarding Departures from Standards, notation on the Design Drawing indicates that "TD50/04 relating to allowance for Exceptions to Standards at traffic signalised at existing junctions within urban areas". Consequently, "Agreement from the Highway Authority would need to be sought for a Departure from Standard".
- 1.11 Any problems and recommendations identified in this report are considered of sufficient importance to warrant attention and where feasible, each are uniquely referenced on the Key Plans attached at Appendix B.

** ** *

2 ITEMS RAISED AT THE PREVIOUS STAGE 1 ROAD SAFETY AUDIT

- 2.1 A previous Road Safety Audit Report on the proposed S278 Highway Works was available for this amended Stage 1 Road Safety Audit.
- 2.2 The Road Safety related items raised at paragraphs A3.1 and A5.2 of that previous Stage 1 Report appear resolved in the Amended Design. However, items previously raised at paragraphs A3.2 and A5.1 appear to partially remain problems and are referred to again in this current Road Safety Audit Report.

** ** ** ** ** ** **

3 ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT.

3.1 GENERAL

3.1.1 No road safety related items are identified in this category at this Stage 1.

3.2 LOCAL ALIGNMENT

3.2.1 No road safety related items are identified in this category at this Stage 1.

3.3 JUNCTIONS

3.3.1 **PROBLEM** *(Drawing ref: 3258/GA/004 Rev C & /ATR/003 Rev B)*

Location: (A) A29 Westergate Street, south of the junction with Meadow Way and the new access road.

Summary: Risk of inadequate forward visibility of stop line, waiting vehicle(s) and/or waiting pedestrians.

The proposed forward visibility distances indicated on the Design Drawings are shown as below Standard and will require a Departure to be sought. Whereas the current proposals for northbound drivers forward visibility of the offside primary signal head is shown as 59m and notation included that it accords with MfS SSD for a speed of 37mph, (which during the site inspection was generally observed as such passing speeds), the nearside primary signal head is shown to only be 37m. Whilst it appears that since the earlier Stage 1 some changes to the northbound stop line position may have been carried out, northbound drivers forward visibility of a vehicle waiting at the stop line or of any pedestrians waiting at the west side to cross the A29 carriageway or in the process stepping off the footway, may still be hidden from clear view. It also appears likely that the offside signal head may at times be hidden from view by passing southbound buses and other high sided vehicles.

It is also understood from the Designer that “the junction would serve approximately 350 dwellings and operate within capacity when assessed up to 2017. Queuing on the A29 reached 18 vehicles in the Northbound direction and 14 vehicles in the southbound direction in the AM peak and 11 vehicles in the Northbound direction and 21 vehicles in the Southbound direction in the PM peak”. Consequently, concern arises that risk of northbound tail-end shunt conflicts at this junction may be higher than other signalised junctions, especially when large numbers of vehicles previously queuing at the level crossing are released when gates are opened and also congestion may result, or danger arise if northbound vehicles unexpectedly swerve into the bellmouth of Meadow Way when passing stationary right turning traffic, as indicated on the Swept Path Analysis Drawing.

RECOMMENDATION

The proposed junction design may need to be revisited with a view to investigating scope for shifting the northbound stop line and corresponding signal poles a few more metres further southwards of the currently shown position, which may also provide safer scope for large vehicles turning sharp left manoeuvre from the new site access road. A high level off-side secondary signal head may also need to be included.

The yellow box markings indicated for the southbound traffic flow may also need to be extended to also include the northbound through flows.

It is further recommended that high friction surfacing should also be incorporated on the northbound approach for sufficient length to mitigate the potential northbound vehicle queuing and risk of failure to perceive the red lights associated with the signalised junction and pedestrian crossing facility.

3.4 NON MOTOR VEHICLE PROVISIONS

3.4.1 No road safety related items are identified in this category at this Stage 1.

3.5 SIGNS, ROAD MARKINGS AND STREET LIGHTING

3.5.1 **PROBLEM** *(Drawing ref: 3258/GA/004 Rev C)*

Location: (B) A29 Westergate Street, at the approaches to the new signalised junction.

Summary: Risk of failure to perceive new junction control ahead.

The proposed new signalised junction may not be perceived by some drivers, particularly those who may be non-local or visiting tourists using this annual holiday route.

RECOMMENDATION

The proposed signing works should also include appropriate temporary warning signs to TSRGD Diagram 7014 for a slightly longer period of say six months to alert visiting drivers to the new signalised junction.

** ** No further road safety related items are identified at this Stage 1. ** **

4 AUDIT TEAM STATEMENT

- 4.1 We certify that this Road Safety Audit has been carried out in accordance with HD 19/15.

ROAD SAFETY AUDIT TEAM LEADER

Ted Smith CoC
Traffic Safety Consultant
1a The Parade
East Wittering
Chichester
West Sussex
PO20 8BN

Signed

Date

23rd January 2017

ROAD SAFETY AUDIT TEAM MEMBER

Martin Brownsey BSc, DipEM, MCIHT, CoC
Director
MB Projects Ltd
Highways Consultancy
Farthings
Grants Lane
Oxted
Surrey
RH8 0RH

Signed

Date

23rd January 2017

APPENDIX A

LIST OF DOCUMENTS EXAMINED

Drawing No	Date	Scale	Description
3258/GA/04 Rev C	09/11/2016	1:250 @ A1	Site Access General Arrangement Option 3
3258/ATR/003 Rev B	13/01/2017	1:250 @ A1	Site Access A29 Northbound Swept Path Analysis
3258/ATR/010 Rev A	09/11/2017	1:250 @ A1	Site Access – Option 3 Swept Path Analysis for Bus, Articulated HGV, Large Refuse Truck and Car
Sketch Diagram----	--	--	AM & PM Peak Hour Traffic Flows
Report	30/11/2013	--	Stage 1 Road Safety Audit Report of a previous Design. (No Designers Response available)
Search of Crashmap	--	--	Recorded Injury Accident Plot 01/01/2011 to 31/12/2015
Report	January 2017	--	Extract of Section 4 (Development Proposal) from Transport Assessment Includes description of how the access junction and traffic signals will operate.
Email	13/10/2016, 09/01/2017 & 17/01/2017	--	Audit Brief Amended Design Drawings and Instructions (WSP)
**	**	**	**
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APPENDIX B

KEY PLAN

Copy of Drawing numbered 3258/GA/004 Rev C

SUBMISSION TO WEST SUSSEX COUNTY COUNCIL FOR DEPARTURES FROM STANDARD

Project Name	Land at Westergate, West Sussex
Applicant Organisation	WSP
Applicant Ref	70013258
Highway Authority Ref	As above
Applicant Contact Details	
Date Submitted	01/12/2022

1) PROJECT DETAILS

A	Description	Proposed S278 traffic signal site access junction at the existing A29 / Meadow Way junction and proposed new access road into residential development east of the A29. The junction will serve up to 400 dwellings
B	Location	As above
C	Road Category	
D	Road Type	S2
E	Design Speed	35mph (85th Percentile Speed) (determined by Traffic Signs Manual Chapter 6)
F	Speed Limit	30mph
G	Traffic Flows	AAWT 13,567 Two-way
H	NMU Flows	

2) DEPARTURE DETAILS

A	Discipline	Road Geometry
	Type	Forward visibility (SSD) on northbound approach to traffic signals
B	Relevant Standard(s)	The recommended visibility distances are shown in Table 2-1 in Chapter 6 of the Traffic Signs Manual. As the 85 th Percentile Speed is between 30-35mph a forward visibility of 51m is required. Junction visibility, DMRB CD 123 Geometric design of at-grade priority and signal-controlled junctions Section 7, paragraph 7.3, 7.31 and 7.32 Manual for Streets Table 7 and Para 7.5.3
	Clause	
C	Difference Between Standard(s) and proposed design	The Traffic Signs Manual recommended visibility distance of 51m is not achievable. The achievable forward visibility is limited by the lefthand bend on the approach to the junction. Forward visibility to the nearside primary signal is 37m, equivalent to a speed of 27mph.
D	Reason for Departure (overview)	Existing residential boundary fences on western side of A29.
E	Associated Project Departures	N/A
F	Other Options Considered	

3) JUSTIFICATION (POTENTIAL POSITIVE AND NEGATIVE IMPACTS)

A	Safety	Limited visibility of queuing traffic and primary signal heads in northbound direction may lead to rear-shunt accidents. Existing Safety issue associated with visibility to and from the A29 northbound carriageway at the junction with Meadow Way, although signalised junction will increase amount of stationary traffic at this location. Provision of controlled pedestrian crossings on all approaches will improve safety for pedestrians. An ATC undertaken on the A29 in March 2022, showed a seven-day average speed of 27.9mph and 85th percentile speed of 32.2mph northbound, which corresponds to sight stopping distance of 39m and 47m respectively (based on Manual for Streets 2 guidance) The achievable SSD of 49m to the offside primary signal head is greater than this.
B	Congestion/ Delay	
C	Environmental / sustainability	Provision of pedestrian crossings on all approaches encourages walking trips to / from the site
D	Capital and whole life cost/value	Can be delivered within land owned by WSCC or developer.
E	Accessibility	
F	Integration	
G	Structural	
H	Network resilience & Maintenance	

4) COMPENSATORY MEASURES

A	Included Measures	Installation of signs to Diagram 543 and Diagram 584 (TSRGD) to be provided on A29 northbound approach to signals. This is recommended in Chapter 6 of Traffic Signs Manual for junctions where the visibility to the signal heads is less than 80m. The use of coloured high surfacing will be reviewed during detailed design Offside primary signal head to be provided facilitating 68m SSD and additional warning of queueing vehicles. MOVA control to effectively manage queues as efficiently as possible reducing queue length Junction could be configured to rest on Main Road green to further minimise vehicle stops
B	Rejected Options	

5) DESIGN ORGANISATIONS CONCLUDING REMARKS

Given the constrained location of the junction and the existing sub-standard visibility on the A29 northbound approach, it is considered that the benefits of providing the junction outweigh the potential risks, provided that the compensatory measures discussed above are installed. The ATC undertaken on the A29 in March 2022 showed that a seven-day average

speed of 27.9mph northbound and an 85th percentile speed of 32.2mph northbound, which corresponds to sight stopping distances of 39m and 47m respectively (based on Manual for Streets guidance) which can be achieved.

6) ATTACHMENTS AND OTHER INFORMATION

A	List of Attachments	3258-GA-004-F
B	Consultations	
C	Other Information	

7) DECISION – (HIGHWAY AUTHORITY USE ONLY)

NAME 1			
ROLE			
SIGNED		DATE	
NAME 2			
ROLE			
SIGNED		DATE	
MARK ONE BOX:	1- APPROVED ☐	2-APPROVED WITH COMMENTS ☐	3- REJECTED ☐
COMMENTS			

SUBMISSION TO WEST SUSSEX COUNTY COUNCIL FOR DEPARTURES FROM STANDARD

Project Name	Land at Westergate, West Sussex
Applicant Organisation	WSP
Applicant Ref	70013258
Highway Authority Ref	As above
Applicant Contact Details	
Date Submitted	27/10/2022

1) PROJECT DETAILS

A	Description	Proposed S278 traffic signal site access junction at the existing A29 / Meadow Way junction and proposed new access road into residential development east of the A29. The junction will serve up to 400 dwellings
B	Location	As above
C	Road Category	
D	Road Type	S2
E	Design Speed	35mph (85th Percentile Speed) (determined by Chapter 6 of the Traffic Signs Manual)
F	Speed Limit	30mph
G	Traffic Flows	AAWT 13,567 Two-way
H	NMU Flows	

2) DEPARTURE DETAILS

A	Discipline	Road Geometry
	Type	Intervisibility between junction stop lines
B	Relevant Standard(s)	Junction intervisibility zone, Traffic Signs Manual Chapter 6
	Clause	
C	Difference Between Standard(s) and proposed design	The standard requires visibility from a line 2.5m behind each stop line to a line 2.5m behind the adjacent stop lines. Between the southern A29 arm, Meadow Way and the eastern junction arm there are obstructions blocking this intervisibility.
D	Reason for Departure (overview)	Existing residential boundary fences, hedges and telecommunications mast on A29. Proposed controlled pedestrian crossings at junction require stoplines to be set back further than a standard crossroads configuration.
E	Associated Project Departures	N/A
F	Other Options Considered	Location of stop-lines located further forward to improve intervisibility. This however leads to confusing tactile paving layouts for adjacent crossings on south western site of the junction.

3) JUSTIFICATION (POTENTIAL POSITIVE AND NEGATIVE IMPACTS)

A	Safety	Obstructed intervisibility will mean vehicles turning cannot see some potential hazards from the stationary waiting location, such as crossing pedestrians or stopped cars. Vehicles turning south from the eastern arm will be most affected. Controlled pedestrian crossings will reduce chance of pedestrians crossing road in conflict with vehicles. Proposed signal staging configured so pedestrian stage operates following main road or Meadow Way to minimise potential conflict with the hedges, fences and telecommunications mast between site access and pedestrian crossing on southern arm.
B	Congestion/ Delay	
C	Environmental / sustainability	Provision of pedestrian crossings on all approaches encourages walking trips to / from the site.
D	Capital and whole life cost/value	Can be delivered within land owned by WSCC or developer.
E	Accessibility	
F	Integration	
G	Structural	
H	Network resilience & Maintenance	

4) COMPENSATORY MEASURES

A	Included Measures	Yellow box junction marking provided to assist with precautionary approach by west bound vehicles. All red extending detector loops to be considered during detailed design to ensure junction is clear before allowing movements with poor intervisibility. MOVA detection will facilitate precise stage change operation thereby reducing possibility of vehicles running amber lights and conflicting with pedestrian movements.
B	Rejected Options	

5) DESIGN ORGANISATIONS CONCLUDING REMARKS

Given the constrained location of the junction it is considered that the benefits of providing the junction and pedestrian crossings outweigh the potential risks, especially if the compensatory measures discussed above are implemented.

6) ATTACHMENTS AND OTHER INFORMATION

A	List of Attachments	3258/GA/004 Rev F
B	Consultations	
C	Other Information	

7) DECISION – (HIGHWAY AUTHORITY USE ONLY)

NAME 1			
ROLE			
SIGNED		DATE	
NAME 2			
ROLE			
SIGNED		DATE	
MARK ONE BOX:	1- APPROVED ☐	2-APPROVED WITH COMMENTS ☐	3- REJECTED ☐
COMMENTS			

SUBMISSION TO WEST SUSSEX COUNTY COUNCIL FOR DEPARTURES FROM STANDARD

Project Name	Land at Westergate, West Sussex
Applicant Organisation	WSP
Applicant Ref	70013258
Highway Authority Ref	As above
Applicant Contact Details	
Date Submitted	01/12/2022

1) PROJECT DETAILS

A	Description	Proposed S278 traffic signal site access junction at the existing A29 / Meadow Way junction and proposed new access road into residential development east of the A29. The junction will serve up to 400 dwellings
B	Location	As above
C	Road Category	
D	Road Type	S2
E	Design Speed	35mph (85th Percentile Speed) (determined by Traffic Signs Manual Chapter 6)
F	Speed Limit	30mph
G	Traffic Flows	AAWT 13,567 Two-way
H	NMU Flows	

2) DEPARTURE DETAILS

A	Discipline	Road Geometry
	Type	Forward visibility (SSD) to the back of queuing traffic on northbound approach to traffic signals
B	Relevant Standard(s)	The recommended visibility distances are shown in Table 2-1 in Chapter 6 in the Traffic Signs Manual, as the 85 th Percentile Speed is 35mph a forward visibility of 51m is required. Junction visibility, DMRB CD 123 Geometric design of at-grade priority and signal-controlled junctions Section 7, paragraph 7.3, 7.31 and 7.32 Manual for Streets Table 7 and Para 7.5.3
	Clause	
C	Difference Between Standard(s) and proposed design	The Traffic Signs Manual Recommend visibility distance of 51m is not achievable. The achievable forward visibility is limited by the lefthand bend on the approach to the junction. This limits the visibility in the immediate approach to the junction, and to the back of queues shorter than 5 cars, to 49m. The back of any queue longer than 5 cars will be visible for 90m. An ATC undertaken on the A29 in March 2022, the results showed a seven-day average speed of 27.9mph and 85th percentile speed of 32mph northbound, which corresponds to sight stopping distance of 39m and 47m respectively (based on Manual for Streets 2 guidance) The achievable SSD of 49m is greater than this.
D	Reason for Departure (overview)	Existing residential boundary fences on western side of A29.
E	Associated Project Departures	N/A

F	Other Options Considered	
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3) JUSTIFICATION (POTENTIAL POSITIVE AND NEGATIVE IMPACTS)

A	Safety	Limited visibility of queuing traffic and primary signal heads in northbound direction may lead to rear-shunt accidents. Existing Safety issue associated with visibility to and from the A29 northbound carriageway at the junction with Meadow Way, although signalised junction will increase amount of stationary traffic at this location. Provision of controlled pedestrian crossings on all approaches will improve safety for pedestrians.
B	Congestion/ Delay	
C	Environmental / sustainability	Provision of pedestrian crossings on all approaches encourages walking trips to / from the site
D	Capital and whole life cost/value	Can be delivered within land owned by WSCC or developer.
E	Accessibility	
F	Integration	
G	Structural	
H	Network resilience & Maintenance	

4) COMPENSATORY MEASURES

A	Included Measures	Installation of signs to Diagram 543 and Diagram 584 (TSRGD) to be provided on A29 northbound approach to signals. This is recommended in Chapter 6 of Traffic Signs Manual for junctions where the visibility to the signal heads is less than 80m. The use of coloured high surfacing will be reviewed during detailed design Offside primary signal head to be provided facilitating 68m SSD and additional warning of queueing vehicles. MOVA control to effectively manage queues as efficiently as possible reducing queue length Junction could be configured to rest on Main Road green to further minimise vehicle stops
B	Rejected Options	

5) DESIGN ORGANISATIONS CONCLUDING REMARKS

Given the constrained location of the junction and the existing sub-standard visibility on the A29 northbound approach, it is considered that the benefits of providing the junction outweigh the potential risks, provided that the compensatory measures discussed above are installed. The ATC undertaken on the A29 in March 2022 showed that a seven-day average speed of 27.9mph northbound and an 85th percentile speed of 32mph northbound, which

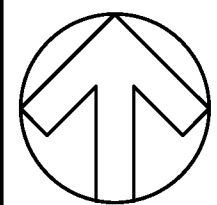
corresponds to sight stopping distances of 39m and 47m respectively (based on Manual for Streets guidance) which can be achieved.

6) ATTACHMENTS AND OTHER INFORMATION

A	List of Attachments	3258-GA-004-F 3258-SK-017-B
B	Consultations	
C	Other Information	

7) DECISION – (HIGHWAY AUTHORITY USE ONLY)

NAME 1			
ROLE			
SIGNED		DATE	
NAME 2			
ROLE			
SIGNED		DATE	
MARK ONE BOX:	1- APPROVED ☐	2-APPROVED WITH COMMENTS ☐	3- REJECTED ☐
COMMENTS			



FOR CONTINUATION REFER TO INSET A

FORWARD VISIBILITY (SSD) TO NEARSIDE PRIMARY SIGNAL HEAD 51m (DEPENDENT ON CONFIRMATION OF HIGHWAY BOUNDARY AT BACK OF FOOTWAY - SEE BELOW)

WSCC RECORDS INDICATE HIGHWAY BOUNDARY WITHIN FOOTWAY. IT IS ASSUMED THAT WSCC HIGHWAY BOUNDARY IS ACTUALLY AT BACK OF FOOTWAY. TO BE CONFIRMED WITH WSCC

FORWARD VISIBILITY (SSD) TO OFFSIDE PRIMARY SIGNAL HEAD, OVER 51m ACHIEVABLE

SPEED SURVEY LOCATION
85TH PERCENTILE SPEED:
NORTHBOUND 32.2mph, SOUTHBOUND 34.6mph
AVERAGE SPEED:
NORTHBOUND 27.9mph, SOUTHBOUND 30.2mph

FOR DRAINAGE DETAIL
SEE INSET B

EXISTING CROWN LINE DATA TO BE ADDED TO TOPOGRAPHICAL SURVEY AHEAD OF DETAILED DESIGN

JUNCTION INTERVISIBILITY ZONE (TRAFFIC SIGNS MANUAL CHAPTER 6)

COLE & COLE TOPOGRAPHICAL SURVEY TO BE EXTENDED INTO MEADOW WAY AHEAD OF DETAILED DESIGN

TREE TO BE REMOVED AND REPLACED WITH ANOTHER IN NEAR VICINITY (PRECISE LOCATION UNSPECIFIED)

LOCAL OBSTRUCTION OF INTERVISIBILITY ZONE

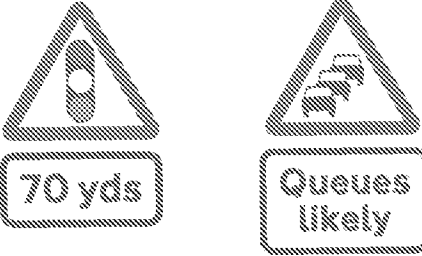
FORWARD VISIBILITY (SSD) TO NEARSIDE PRIMARY SIGNAL HEAD APPROX. 37m

COLE & COLE TOPOGRAPHICAL SURVEY TO BE EXTENDED TO INCLUDE HIGHWAY BOUNDARY & VERGE. INFORMATION CURRENTLY BASED ON PREVIOUS SURVEY ALIGNED TO CORRECT CO-ORDINATES

THE RECOMMENDED VISIBILITY DISTANCES OF 51m IS OUTLINED IN TRAFFIC SIGNS MANUAL CHAPTER 6 TO PRIMARY SIGNAL HEAD NOT ACHIEVABLE DUE TO PRESENCE OF EXISTING HOUSING

FORWARD VISIBILITY (SSD) TO OFFSIDE PRIMARY SIGNAL HEAD APPROX. 68m

SIGNS TO DIAG. 543, DIAG. 572 AND DIAG. 584.1 TO BE PROVIDED ON APPROACH WITH REDUCED DESIRABLE MINIMUM SSD. EXACT LOCATIONS TO BE CONFIRMED



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F	02/12/2022	PM	DRAWING UPDATED	CW	CW
E	02/02/2017	MFB	REDLINE UPDATED	CW	CW
D	19/11/2016	FL	PROPOSED QUEUE DETECTION LOOP ADDED	MFB	LRB
C	09/11/2016	SL	CHANGED TREES TO BE RETAINED TO REMOVE	MFB	LRB
B	21/10/2016	MFB	NOTES AMENDED	LRB	LRB
A	17/10/2016	PM	FIRST ISSUE	LRB	LRB
REV	DATE	BY	DESCRIPTION	CHK	APD
DRAWING STATUS					
FOR INFORMATION ONLY					

WSP **PARSONS BRINCKERHOFF**

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www.wspgroup.com www.pbworld.com

CLIENT: CALA HOMES

PROJECT: LAND AT WESTERGATE

ARCHITECT: OSP ARCHITECTURE

TITLE: SITE ACCESS GENERAL ARRANGEMENT

SCALE @ A1: 1:250

CAD FILE: 3258-GA-004.DWG

PROJECT NO: 70013258

DRAWING NO: 3258/GA/004

REV: F

DESIGN-DRAWN: MFB

DATE: December 2022

© WSP Group Ltd

DO NOT SCALE

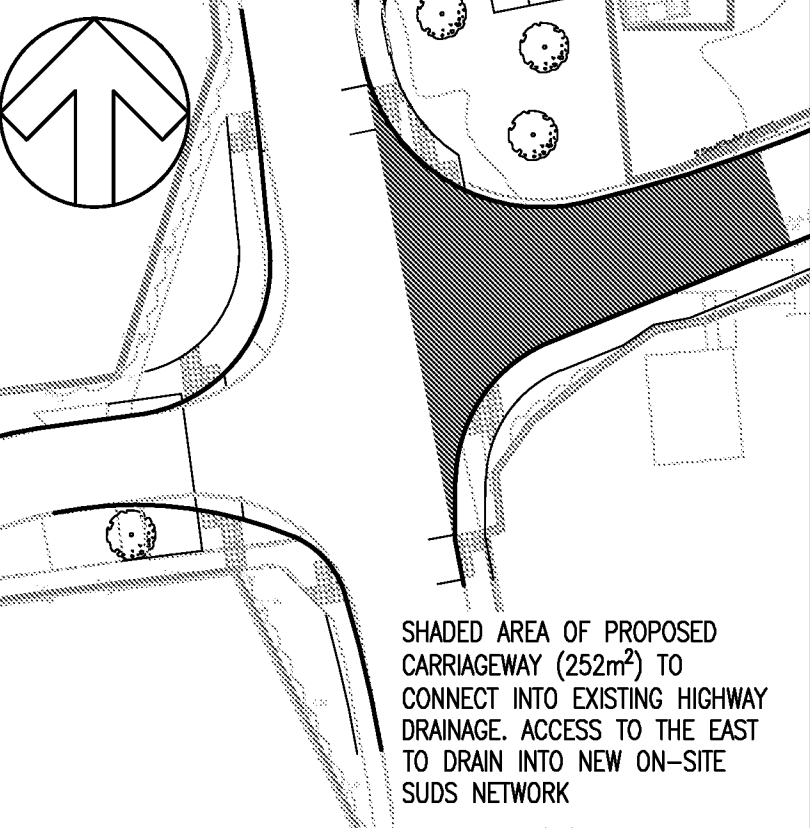
NOTES

- DESIGN GUIDANCE IS TAKEN FROM TRAFFIC SIGNS MANUAL CHAPTER 6 ON THE BASIS THAT THE A29 HAS A SPEED LIMIT OF BELOW 40MPH. BASED ON TRAFFIC SURVEYS COMPLETED IN MARCH 2022 THE RECOMMENDED SIGHT STOPPING DISTANCE FOR THE A29 IS 51M, TAKING ACCOUNT OF 85TH PERCENTILE SPEEDS OF 32-35MPH.
- WE HAVE NOT SOUGHT TO BECOME AWARE OF ANY INFORMATION RELATED TO HAZARDS THAT MIGHT AFFECT THE CONSTRUCTION OR MAINTENANCE OF THIS PROJECT. UNDER THE CDM REGULATIONS ANY DESIGNERS WHO PROGRESS THESE PROPOSALS FURTHER WILL NEED TO RECONSIDER THE DESIGN BASED UPON ANY INFORMATION WHICH SUBSEQUENTLY BECOMES AVAILABLE.
- THIS DESIGN IS BASED ON THE COLE & COLE TOPOGRAPHICAL SURVEY DATED JANUARY 2016 AND THE ADP ARCHITECTS MASTERPLAN DATED NOVEMBER 2012.
- THE 2016 TOPOGRAPHICAL SURVEY COORDINATE SYSTEM HAS BEEN USED; THE ADP MASTERPLAN WAS MOVED AND ALIGNED TO MATCH BASED ON THE PROPOSED HOUSE LOCATIONS AND THE SURVEYED HOUSE CONSTRUCTION OUTLINES.
- ALL LAND BOUNDARY INFORMATION IS INDICATIVE AND TO BE CONFIRMED BY ALL RELEVANT PARTIES.

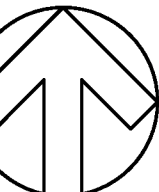
KEY

- HIGHWAY BOUNDARY (BASED ON TOPOGRAPHIC SURVEY (COLE & COLE, JANUARY 2016) AND WSCC HIGHWAY BOUNDARY INFORMATION (RECEIVED 29/06/2016))
- OBSTRUCTION TO VISIBILITY ALONG HIGHWAY BOUNDARY (E.G. UNTRIMMED HEDGEROWS)
- RED LINE BOUNDARY (FROM OSP SITE LAYOUT PLAN RECEIVED 02/02/2017)
- SUB-SALE BOUNDARY (BASED ON .dwg FILE OF DRAWING 'B1 SUB-SALE PLAN 1' RECEIVED FROM CALA HOMES ON 07/03/2016). BOUNDARY IS OUTSIDE EDGE OF GREEN DASHED LINE WHEN SHOWN AT 0.5m WIDTH
- LAND IN OWNERSHIP OF MR N PINE (BASED ON DRAWING SHOWING ORANGE BOUNDARY RECEIVED FROM CALA HOMES ON 23/06/2016)
- JUNCTION INTERVISIBILITY ZONE
- VISIBILITY SPLAY (AS SHOWN)
- FORWARD VISIBILITY TO SIGNAL
- SPEED SURVEY LOCATION
- SIGNAL HEAD
- TACTILE PAVING (BUFF)
- TACTILE PAVING (RED)
- EXISTING TREE CANOPIES (BASED ON BOSKY TREES SURVEY DATED 22/06/2016)
- TREES TO BE REMOVED
- TREES TO BE RETAINED
- ROOT PROTECTION AREAS
- PEDESTRIAN BOLLARD

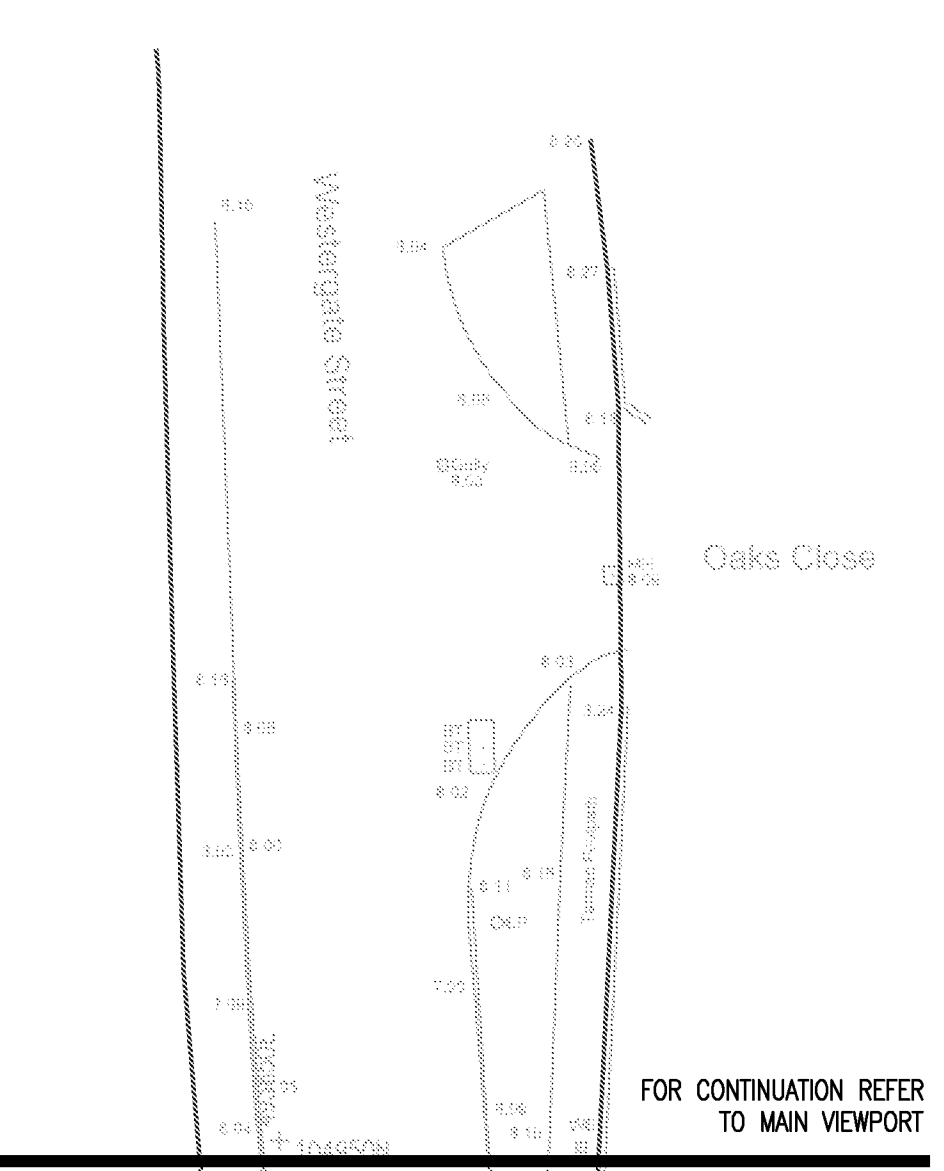
INSET B



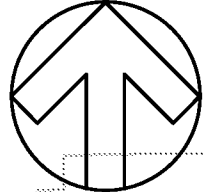
SCALE 1:500



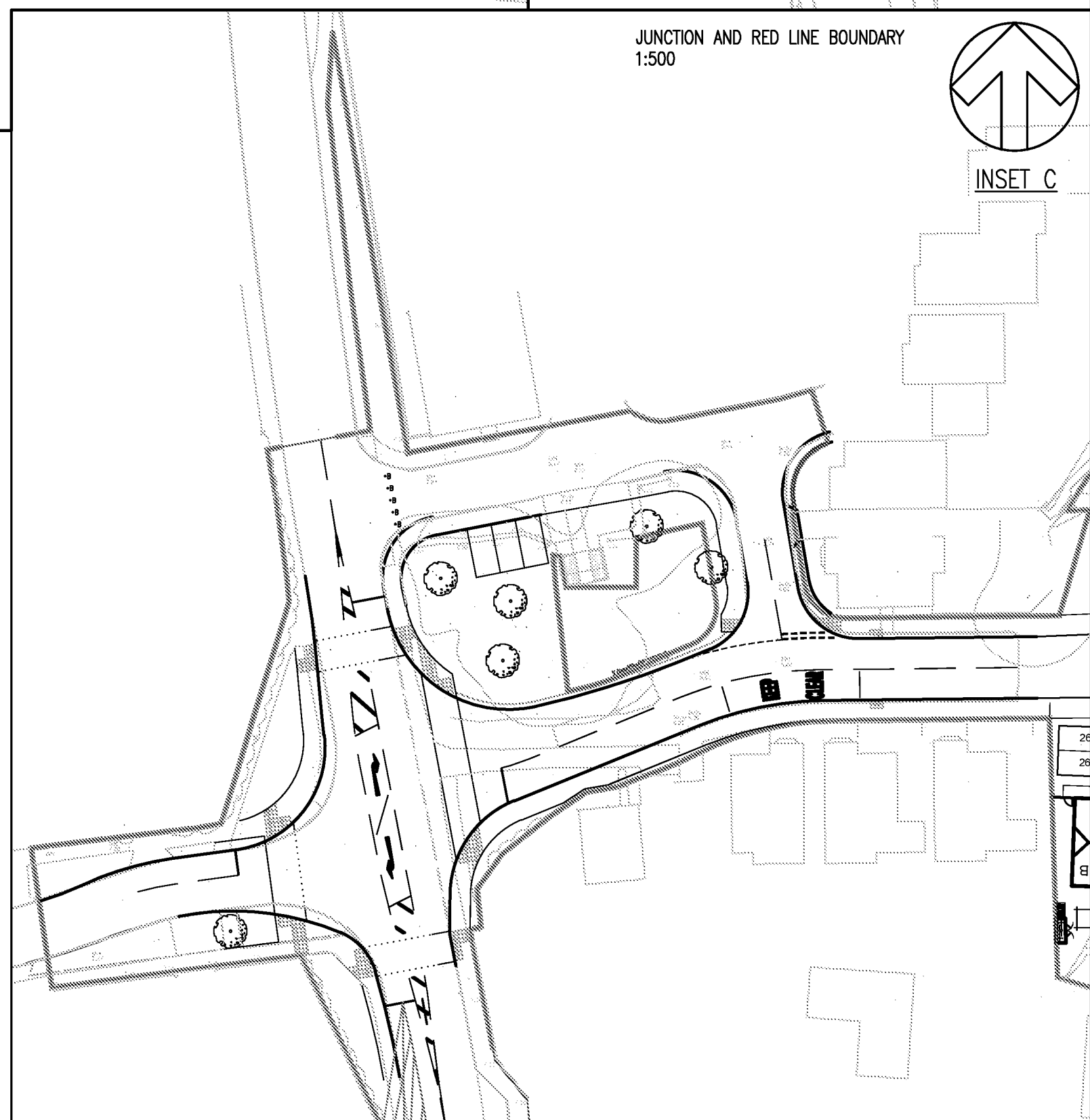
INSET A



FOR CONTINUATION REFER TO MAIN VIEWPORT



INSET C



JUNCTION AND RED LINE BOUNDARY 1:500

SCALE @ A1: 1:250	CHECKED: LRB	APPROVED: LRB
CAD FILE: 3258-GA-004.DWG	DESIGN-DRAWN: MFB	DATE: December 2022
PROJECT NO: 70013258	DRAWING NO: 3258/GA/004	REV: F

Appendix C

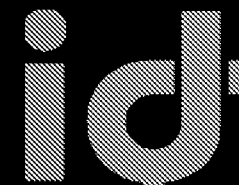
Crashmap Screenshot

2017 to 2021 data for all casualties and all vehicle types.

Source: www.crashmap.co.uk 02/12/22



Appendix D



Intelligent Data Collection Limited Westergate

Client: WSP
Project Number: ID06295
Site Number: Site 1
Week Commencing: 28/02/2022
Road Name: A29 Westergate Street
Survey Type: ATC
Direction AB **Flow from** Pine Close (S) **to** Oaks Close (N)
Direction BA **Flow from** Oaks Close (N) **to** Pine Close (S)

Revision	Rev A			
Date	11.03.2022			
Prepared by	Harveer Dole			
Signature				
Checked by	Luke Martin			
Signature				
Project Director	Paul O'Neill			
Signature				
Project Number	ID06295			
File Ref	ID06295 Westergate - ATC Site 1			

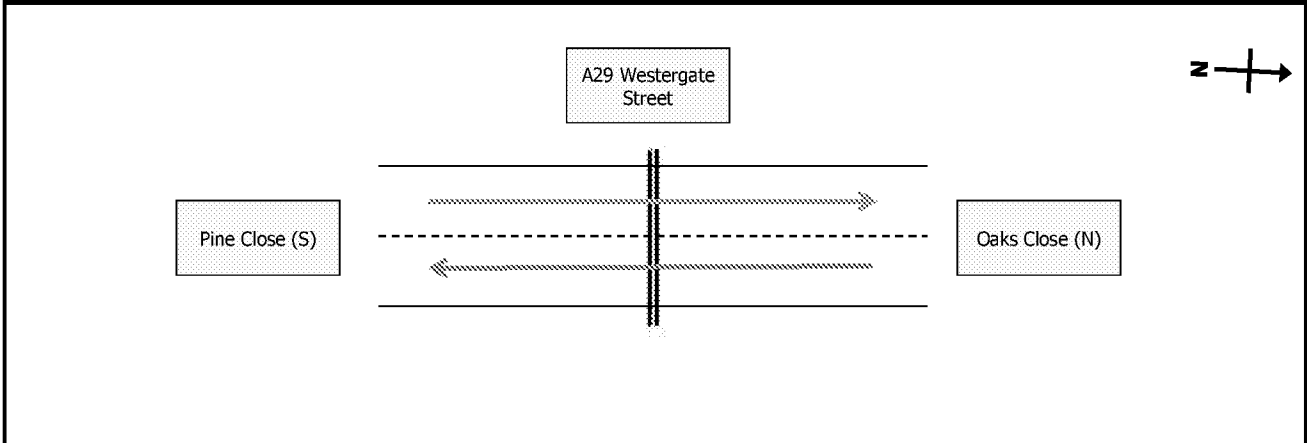
[illegible]

Intelligent Data Collection Limited

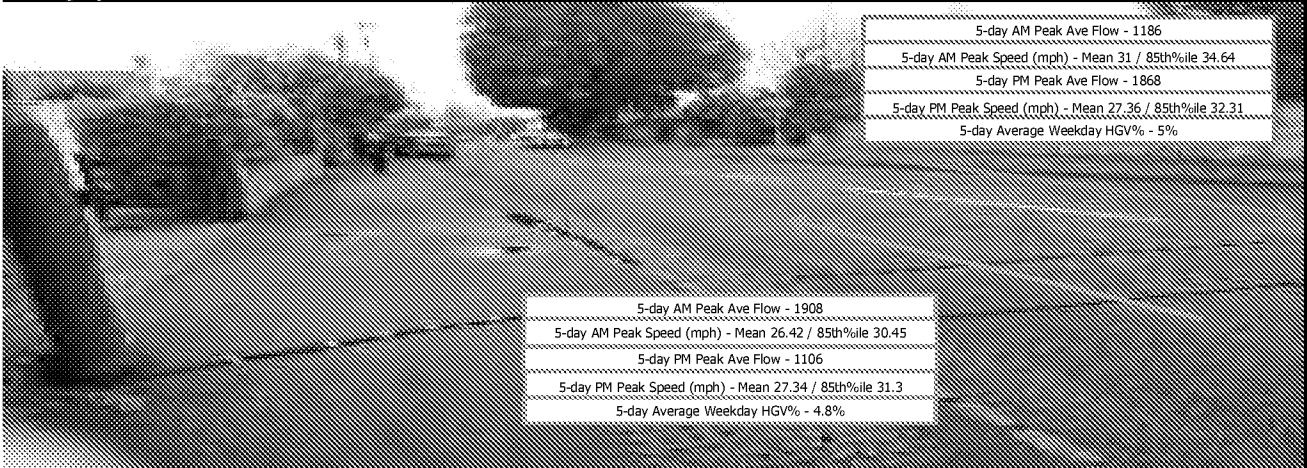


Road Name	A29 Westergate Street		
Direction AB	Pine Close (S)	to:	Oaks Close (N)
Direction BA	Oaks Close (N)	to:	Pine Close (S)
Site Co-Ordinates	ATC Start Date	ATC Finish Date	PSL
50.836367, -0.668506	01/03/2022	09/03/2022	30
Link to location on Google Maps			
Click Here			

Location Plan



Photograph Record



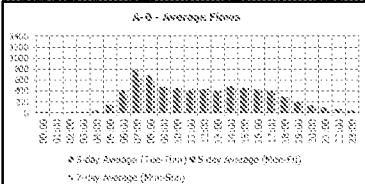
Comments

The minimum speed threshold to include vehicles in the reports is 5mph. Unclassified vehicles are excluded.

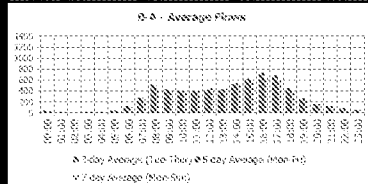
Prepared by	Harveer Dole	Checked by	Luke Martin	Project Director	Paul O'Neill
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Flow Reporting

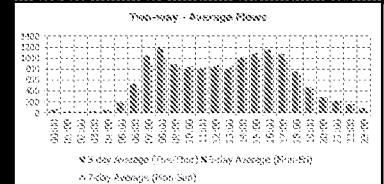
A-B Hourly Summary Data			
Time Interval	3-day Average (Tue-Thur)	5-day Average (Mon-Fri)	7-day Average (Mon-Sun)
00:00	14	14	20
01:00	8	7	8
02:00	6	7	9
03:00	18	18	18
04:00	35	36	33
05:00	147	145	121
06:00	412	409	333
07:00	778	770	621
08:00	881	868	666
09:00	455	470	450
10:00	411	446	445
11:00	404	417	433
12:00	420	421	439
13:00	391	401	427
14:00	476	478	464
15:00	452	457	444
16:00	435	425	408
17:00	384	386	361
18:00	289	286	285
19:00	206	207	204
20:00	127	131	126
21:00	94	95	90
22:00	67	69	66
23:00	34	37	36
0700-1000	1917	1908	1639
1600-1900	1717	1705	1684



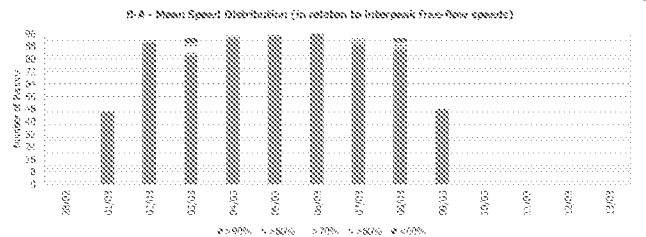
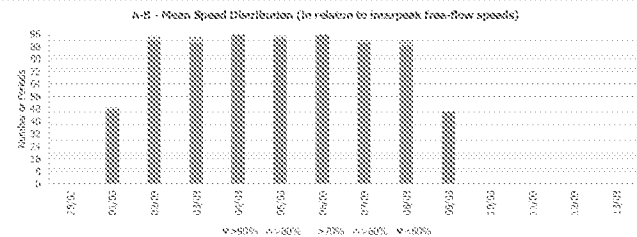
B-A Hourly Summary Data			
Time Interval	3-day Average (Tue-Thur)	5-day Average (Mon-Fri)	7-day Average (Mon-Sun)
00:00	34	31	36
01:00	11	11	15
02:00	6	6	8
03:00	12	11	12
04:00	17	17	15
05:00	35	39	35
06:00	115	114	98
07:00	289	275	231
08:00	512	468	423
09:00	418	414	392
10:00	388	387	397
11:00	389	402	424
12:00	410	421	451
13:00	405	424	434
14:00	522	538	522
15:00	611	634	577
16:00	1250	1230	1090
17:00	882	880	860
18:00	442	452	496
19:00	263	256	237
20:00	153	157	153
21:00	122	124	119
22:00	85	86	83
23:00	50	49	50
0700-1000	1199	1186	1047
1600-1900	1854	1866	1836



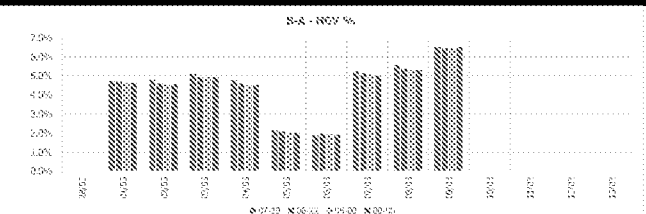
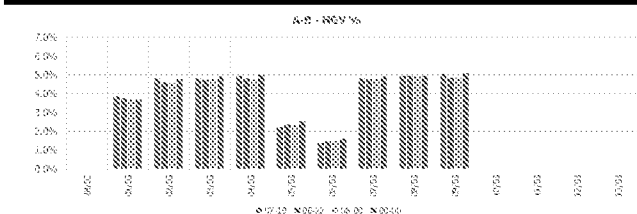
Two-Way Hourly Summary Data			
Time Interval	3-day Average (Tue-Thur)	5-day Average (Mon-Fri)	7-day Average (Mon-Sun)
00:00	48	46	57
01:00	19	18	23
02:00	12	13	17
03:00	30	29	30
04:00	53	53	48
05:00	182	183	156
06:00	528	527	431
07:00	1039	1045	852
08:00	1193	1165	951
09:00	884	884	843
10:00	799	832	841
11:00	793	819	856
12:00	830	842	889
13:00	796	825	861
14:00	998	1016	986
15:00	1063	1091	1021
16:00	1250	1230	1090
17:00	882	880	860
18:00	446	456	493
19:00	266	259	241
20:00	153	159	153
21:00	116	119	119
22:00	84	85	83
23:00	84	85	87
0700-1000	3115	3094	2685
1600-1900	2571	2574	2686



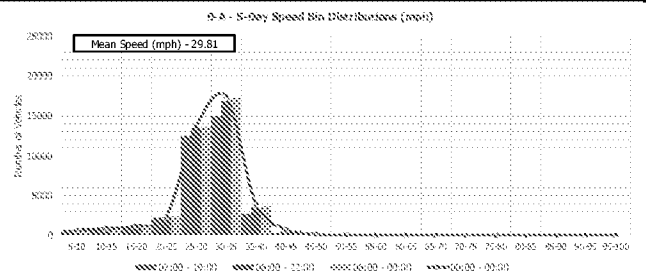
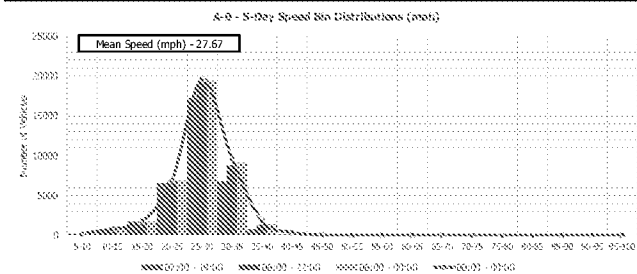
Mean Speed Distributions



HGV%



Speed Bin Distributions



Intelligent Data Collection Limited

Period Commencing: 28/02/2022

Road Name: A29 Westergate Street

Flow from : Pine Close (S)

Vehicle Classification: All Vehicles

to: Oaks Close (N)

Prepared by: Harveer Dole

Checked by: Luke Martin



Hour Starting	Monday 28/02/2022	Tuesday 01/03/2022	Wednesday 02/03/2022	Thursday 03/03/2022	Friday 04/03/2022	Saturday 05/03/2022	Sunday 06/03/2022	Monday 07/03/2022	Tuesday 08/03/2022	Wednesday 09/03/2022	Thursday 10/03/2022	Friday 11/03/2022	Saturday 12/03/2022	Sunday 13/03/2022	3-day Average (Tue-Thur)	5-day Average (Mon-Fri)	7-day Average (Mon-Sun)
00:00	*	*	18	12	19	30	46	10	10	17	*	*	*	*	14	14	20
01:00	*	*	11	12	7	10	13	4	5	4	*	*	*	*	8	7	8
02:00	*	*	5	5	14	15	18	3	6	7	*	*	*	*	6	7	9
03:00	*	*	22	13	18	15	19	18	14	23	*	*	*	*	18	18	18
04:00	*	*	29	36	40	20	24	33	39	40	*	*	*	*	36	36	33
05:00	*	*	163	145	137	62	38	142	133	147	*	*	*	*	147	145	121
06:00	*	*	426	407	381	143	64	426	399	416	*	*	*	*	412	409	333
07:00	*	*	747	724	752	207	137	752	758	753	*	*	*	*	738	738	821
08:00	*	*	720	656	616	327	210	665	679	669	*	*	*	*	681	668	568
09:00	*	*	450	452	502	457	328	456	474	486	*	*	*	*	466	470	450
10:00	*	*	385	381	463	473	409	397	402	402	*	*	*	*	411	446	445
11:00	*	*	404	394	460	455	506	426	384	424	*	*	*	*	404	417	433
12:00	*	400	435	423	461	484	480	382	423	*	*	*	*	*	420	421	439
13:00	*	367	389	397	421	474	420	412	412	*	*	*	*	*	391	401	427
14:00	*	355	462	447	381	407	437	463	501	*	*	*	*	*	378	378	363
15:00	*	457	352	430	482	394	413	454	454	*	*	*	*	*	452	457	444
16:00	*	438	431	328	328	328	328	328	328	*	*	*	*	*	333	333	328
17:00	*	416	411	361	365	336	242	365	389	*	*	*	*	*	394	385	361
18:00	*	302	290	274	335	309	187	258	331	*	*	*	*	*	299	298	286
19:00	*	176	212	223	234	199	189	184	212	*	*	*	*	*	206	207	204
20:00	*	129	117	134	143	112	109	139	126	*	*	*	*	*	127	131	126
21:00	*	89	85	97	109	96	50	86	106	*	*	*	*	*	94	95	90
22:00	*	66	61	82	86	79	36	60	59	*	*	*	*	*	67	69	66
23:00	*	26	37	34	57	42	26	30	37	*	*	*	*	*	34	37	36
Summary Data															Summary Data		
0700-1900	0	2886	5601	5464	5806	4708	4216	5641	5670	2734	0	0	0	0	5589	5634	5341
0600-2200	0	3280	6441	6325	6673	5258	4628	6476	6513	3150	0	0	0	0	6427	6476	6093
0600-0000	0	3372	6539	6441	6816	5379	4690	6566	6609	3150	0	0	0	0	6528	6582	6195
0000-0000	0	3372	6787	6664	7051	5531	4848	6776	6816	3388	0	0	0	0	6757	6809	6404
0700-1000	0	0	1917	1912	1870	991	672	1911	1939	1898	0	0	0	0	1917	1908	1639
1600-1900	0	1167	1142	1000	1148	1010	761	1018	1160	0	0	0	0	0	1117	1106	1051
Peak Hour Analysis															Peak Hour Analysis		
07:00-10:00	0	0	55	50	55	50	55	50	55	50	0	0	0	0	55	55	50
18:00-19:00	0	453	487	481	511	511	511	511	511	454	0	0	0	0	473	473	454
19:00-20:00	0	438	441	365	365	336	242	365	389	331	0	0	0	0	423	423	404

Note: Peak Hour Analysis calculates and then highlights the highest flow within the period listed

Intelligent Data Collection Limited

Period Commencing: 28/02/2022

Road Name: A29 Westergate Street

Flow from : Oaks Close (N)

Vehicle Classification: All Vehicles

to: Pine Close (S)

Prepared by: Harveer Dole

Checked by: Luke Martin



Hour Starting	Monday 28/02/2022	Tuesday 01/03/2022	Wednesday 02/03/2022	Thursday 03/03/2022	Friday 04/03/2022	Saturday 05/03/2022	Sunday 06/03/2022	Monday 07/03/2022	Tuesday 08/03/2022	Wednesday 09/03/2022	Thursday 10/03/2022	Friday 11/03/2022	Saturday 12/03/2022	Sunday 13/03/2022	3-day Average (Tue-Thur)	5-day Average (Mon-Fri)	7-day Average (Mon-Sun)
00:00	*	*	39	34	36	54	50	16	32	30	*	*	*	*	34	31	36
01:00	*	*	16	10	12	20	32	11	9	8	*	*	*	*	11	11	15
02:00	*	*	7	5	10	11	13	3	5	6	*	*	*	*	6	6	8
03:00	*	*	14	9	10	11	24	7	11	13	*	*	*	*	12	11	12
04:00	*	*	13	19	15	11	9	17	19	16	*	*	*	*	17	17	15
05:00	*	*	28	30	42	27	24	51	37	44	*	*	*	*	35	39	35
06:00	*	*	105	111	113	55	43	108	120	127	*	*	*	*	116	114	98
07:00	*	*	280	282	303	143	59	268	254	260	*	*	*	*	269	275	231
08:00	*	*	423	526	472	284	114	499	513	505	*	*	*	*	512	498	413
09:00	*	*	410	397	394	337	257	417	440	426	*	*	*	*	418	414	392
10:00	*	*	402	382	406	461	392	362	379	388	*	*	*	*	388	387	397
11:00	*	*	381	382	429	522	454	427	381	412	*	*	*	*	389	402	424
12:00	*	414	369	417	458	533	537	429	440	*	*	*	*	*	410	421	451
13:00	*	430	388	404	473	459	471	450	397	*	*	*	*	*	405	424	434
14:00	*	484	540	540	583	491	452	558	524	*	*	*	*	*	522	538	522
15:00	*	535	587	623	623	565	451	364	533	533	*	*	*	*	533	533	522
16:00	*	533	538	522	538	463	26	564	512	*	*	*	*	*	522	522	532
17:00	*	676	701	645	682	386	258	708	706	*	*	*	*	*	682	686	595
18:00	*	425	438	461	483	301	229	441	462	*	*	*	*	*	447	452	405
19:00	*	218	267	276	277	190	172	245	250	*	*	*	*	*	253	256	237
20:00	*	154	161	144	183	156	126	148	154	*	*	*	*	*	153	157	153
21:00	*	112	114	128	137	121	89	117	133	*	*	*	*	*	122	124	119
22:00	*	88	97	90	109	84	68	65	65	*	*	*	*	*	85	86	83
23:00	*	55	44	42	52	74	38	38	60	*	*	*	*	*	50	49	50
Summary Data															Summary Data		
0700-1900	0	3736	5699	5795	6166	4830	3894	5883	5888	1989	0	0	0	0	5777	5859	5485
0600-2200	0	4220	6346	6454	6876	5352	4324	6501	6545	2116	0	0	0	0	6420	6510	6092
0600-0000	0	4363	6487	6586	7037	5510	4430	6604	6670	2116	0	0	0	0	6556	6644	6225
0000-0000	0	4363	6604	6693	7162	5644	4582	6709	6783	2233	0	0	0	0	6669	6758	6347
0700-1000	0	0	1163	1239	1169	824	430	1154	1204	1189	0	0	0	0	1199	1186	1047
1600-1900	0	1813	1869	1806	1883	1089	784	1909	1927	0	0	0	0	0	1854	1868	1635
Peak Hour Analysis															Peak Hour Analysis		
07:00-10:00	0	0	373	375	380	387	387	385	510	383	0	0	0	0	383	382	383
10:00-13:00	0	134	527	613	715	513	413	613	635	413	0	0	0	0	613	614	577
13:00-16:00	0	133	539	603	713	512	387	769	759	39	0	0	0	0	733	733	635

Note: Peak Hour Analysis calculates and then highlights the highest flow within the period listed

Intelligent Data Collection Limited

Period Commencing: 28/02/2022
 Road Name: A29 Westergate Street
 Flow from : Two-way Total
 Vehicle Classification: All Vehicles

Prepared by: Harveer Dole
 Checked by: Luke Martin



Hour Starting	Monday 28/02/2022	Tuesday 01/03/2022	Wednesday 02/03/2022	Thursday 03/03/2022	Friday 04/03/2022	Saturday 05/03/2022	Sunday 06/03/2022	Monday 07/03/2022	Tuesday 08/03/2022	Wednesday 09/03/2022	Thursday 10/03/2022	Friday 11/03/2022	Saturday 12/03/2022	Sunday 13/03/2022	3-day Average (Tue-Thur)	5-day Average (Mon-Fri)	7-day Average (Mon-Sun)
00:00	*	*	57	46	55	84	96	26	42	47	*	*	*	*	48	46	57
01:00	*	*	27	22	19	30	45	15	14	12	*	*	*	*	19	18	23
02:00	*	*	12	10	24	26	31	6	11	13	*	*	*	*	12	13	17
03:00	*	*	36	22	28	26	43	25	25	36	*	*	*	*	30	29	30
04:00	*	*	42	55	55	31	33	50	58	56	*	*	*	*	53	53	48
05:00	*	*	191	175	179	89	62	193	170	191	*	*	*	*	182	183	156
06:00	*	*	531	518	494	198	107	534	519	543	*	*	*	*	528	523	431
07:00	*	*	1027	1086	1055	350	196	1058	1040	1003	*	*	*	*	1039	1045	852
08:00	*	*	1183	1218	1188	611	324	1134	1168	1172	*	*	*	*	1193	1185	983
09:00	*	*	860	849	896	854	823	873	914	912	*	*	*	*	884	884	843
10:00	*	*	787	843	869	934	801	929	776	790	*	*	*	*	799	832	841
11:00	*	*	785	776	889	977	960	853	765	845	*	*	*	*	793	819	856
12:00	*	814	804	840	919	1032	1027	811	863	*	*	*	*	*	830	842	889
13:00	*	797	777	801	894	933	1009	870	809	*	*	*	*	*	796	825	861
14:00	*	979	1002	987	1084	898	889	1021	1025	*	*	*	*	*	998	1016	986
15:00	*	1012	1024	1055	1047	845	777	1048	1040	*	*	*	*	*	1063	1081	1023
16:00	*	1183	1178	1202	1182	652	358	1182	1182	*	*	*	*	*	1149	1153	1038
17:00	*	1092	1112	1006	1047	722	500	1073	1095	*	*	*	*	*	1076	1071	956
18:00	*	727	728	735	818	610	416	699	793	*	*	*	*	*	746	750	691
19:00	*	394	479	499	511	389	361	429	462	*	*	*	*	*	459	462	441
20:00	*	283	278	278	326	268	235	287	280	*	*	*	*	*	280	289	279
21:00	*	201	199	225	246	217	139	203	239	*	*	*	*	*	216	219	209
22:00	*	154	158	172	195	163	104	125	124	*	*	*	*	*	152	155	149
23:00	*	81	81	76	109	116	64	68	97	*	*	*	*	*	84	85	87
Summary Data															Summary Data		
0700-1900	0	6622	11300	11259	11972	9538	8110	11524	11558	4723	0	0	0	0	11366	11493	10826
0600-2200	0	7500	12787	12779	13549	10610	8952	12977	13058	5266	0	0	0	0	12848	12986	12185
0600-0000	0	7735	13026	13027	13853	10889	9120	13170	13279	5266	0	0	0	0	13083	13226	12421
0000-0000	0	7735	13391	13357	14213	11175	9430	13485	13599	5621	0	0	0	0	13426	13567	12751
0700-1000	0	0	3080	3151	3039	1815	1102	3065	3143	3087	0	0	0	0	3115	3094	2685
1600-1900	0	2980	3011	2806	3031	2099	1545	2927	3087	0	0	0	0	0	2971	2974	2686
Peak Hour Analysis															Peak Hour Analysis		
07:00-10:00	0	0	1183	1218	1188	611	324	1134	1168	1172	0	0	0	0	1193	1185	983
10:00-13:00	0	1182	1184	1182	1147	1017	1067	1048	1095	1092	0	0	0	0	1181	1181	1181
13:00-16:00	0	1183	1178	1202	1182	652	358	1182	1182	1182	0	0	0	0	1149	1153	1038

Note: Peak Hour Analysis calculates and then highlights the highest flow within the period listed

Intelligent Data Collection Limited

Client: WSP
 Project Number: ID06295
 Site Number: Site 1
 Flow from: Pine Close (S) to: Oaks Close (N)



5-day Summary

Time	Speeds (Mph)																			Mean	99th %ile
	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	90-95	95-100		
00:00	0	0	0	3	17	31	19	11	3	2	0	0	0	0	0	0	0	0	0	34.81	-
01:00	0	0	0	1	9	17	12	4	0	0	0	0	0	0	0	0	0	0	0	33.89	-
02:00	0	0	0	0	7	20	8	2	2	1	0	0	0	0	0	0	0	0	0	35.76	-
03:00	0	0	0	3	11	32	32	21	8	1	0	0	0	0	0	0	0	0	0	36.27	45.40
04:00	0	1	0	2	19	36	82	48	4	4	1	0	0	0	0	0	0	0	0	37.04	41.84
05:00	0	1	4	6	149	372	233	70	25	7	0	0	0	0	0	0	0	0	0	34.43	39.88
06:00	1	8	15	135	942	995	302	43	8	3	3	0	0	0	0	0	0	0	0	31.19	35.21
07:00	35	200	349	993	2162	796	77	9	1	0	0	0	0	0	0	0	0	0	0	26.32	30.38
08:00	78	131	251	1070	1918	491	58	5	0	0	3	0	0	0	0	0	0	0	0	25.56	29.78
09:00	9	47	148	447	1429	558	71	11	0	0	0	0	0	0	0	0	0	0	0	27.38	31.19
10:00	20	53	96	496	1359	574	69	4	1	3	0	0	0	0	0	0	0	0	0	27.33	31.08
11:00	7	43	68	504	1387	505	49	9	1	0	0	0	0	0	0	0	0	0	0	27.32	30.81
12:00	9	55	176	517	1393	506	75	6	0	0	0	0	0	0	0	0	0	0	0	26.88	31.03
13:00	8	22	43	301	1286	656	80	5	1	1	0	0	0	0	0	0	0	3	0	28.38	31.95
14:00	2	31	106	416	1556	696	57	5	0	0	0	0	0	0	0	0	0	0	0	27.90	31.47
15:00	12	51	151	600	1385	495	44	3	3	0	0	0	0	0	0	0	0	0	0	26.76	30.74
16:00	8	72	131	505	1319	454	44	4	1	0	0	0	0	0	0	0	0	0	0	26.67	30.51
17:00	5	71	140	459	1085	474	64	8	1	0	0	0	0	0	0	0	0	0	0	26.86	31.09
18:00	1	15	42	231	934	468	86	10	1	1	0	0	1	0	0	0	0	0	0	28.50	32.31
19:00	1	6	9	90	591	438	78	21	7	0	0	0	0	0	0	0	0	0	0	29.99	33.51
20:00	2	8	9	60	288	320	85	12	3	1	0	0	0	0	0	0	0	0	0	30.30	34.70
21:00	0	0	1	26	184	273	67	15	5	1	0	0	0	0	0	0	0	0	0	31.54	35.88
22:00	0	1	1	5	123	170	84	19	7	4	0	0	0	0	0	0	0	0	0	32.77	38.23
23:00	0	1	0	5	61	99	36	13	4	2	0	0	0	0	0	0	0	0	0	32.98	40.75
07:00 - 19:00	194	791	1701	6339	17213	6773	774	79	10	5	3	0	1	0	0	0	0	3	0	26.89	31.03
06:00 - 22:00	198	813	1735	6850	19219	8799	1306	170	33	10	6	0	1	0	0	0	0	3	0	27.37	31.57
06:00 - 00:00	198	815	1736	6860	19402	8808	1426	202	44	16	6	0	1	0	0	0	0	3	0	27.43	31.67
00:00 - 00:00	198	817	1740	6875	19614	8996	1812	358	86	31	7	0	1	0	0	0	0	3	0	27.67	32.01

7-day Summary

Time	Speeds (Mph)																			Mean	99th %ile
	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	90-95	95-100		
00:00	0	0	0	6	41	67	28	14	4	2	0	0	0	0	0	0	0	0	0	34.17	35.00
01:00	0	0	0	1	12	20	24	8	1	0	0	0	0	0	0	0	0	0	0	34.82	-
02:00	0	1	0	2	16	26	16	5	6	1	0	0	0	0	0	0	0	0	0	35.02	-
03:00	0	0	0	4	13	38	45	28	10	3	1	0	0	0	0	0	0	0	0	36.51	45.40
04:00	0	1	0	2	20	67	100	61	5	4	1	0	0	0	0	0	0	0	0	37.16	41.61
05:00	0	2	4	6	15	55	414	267	82	29	8	0	0	0	0	0	0	0	0	34.67	40.07
06:00	1	8	16	137	1014	1077	343	48	10	5	3	0	0	0	0	0	0	0	0	31.54	35.89
07:00	35	202	351	1010	2274	932	141	20	1	0	0	0	0	0	0	0	0	0	0	27.61	31.90
08:00	78	136	264	1097	2200	662	92	10	0	0	3	0	0	0	0	0	0	0	0	26.53	30.63
09:00	11	55	194	535	1866	875	94	12	0	0	0	0	0	0	0	0	0	0	0	27.70	31.38
10:00	23	78	125	617	1947	777	81	5	1	3	0	0	0	0	0	0	0	0	0	27.39	31.13
11:00	7	64	120	673	1868	717	73	11	1	0	0	0	0	0	0	0	0	0	0	27.99	30.91
12:00	11	63	230	671	1928	715	93	8	0	2	0	0	0	0	0	0	0	0	0	27.01	31.03
13:00	11	41	84	438	1833	893	105	7	2	1	0	0	0	0	0	0	0	0	3	28.21	31.82
14:00	2	35	124	563	2038	873	69	8	0	1	0	0	0	0	0	0	0	0	0	27.83	31.31
15:00	15	94	162	708	1795	749	60	4	3	0	1	0	0	0	0	0	0	0	0	27.16	30.99
16:00	10	77	148	580	1665	673	71	9	1	1	0	0	0	0	0	0	0	0	0	27.14	30.98
17:00	5	72	147	539	1386	633	90	11	1	1	0	0	0	0	0	0	0	0	0	27.35	31.40
18:00	1	16	47	270	1160	660	116	12	1	2	0	0	1	0	0	0	0	0	0	28.83	32.60
19:00	1	6	11	119	768	572	115	29	8	0	0	0	0	0	0	0	0	0	0	29.95	33.74
20:00	2	8	13	76	345	421	114	23	6	1	0	0	0	0	0	0	0	0	0	30.63	35.23
21:00	0	0	2	32	218	344	93	20	7	1	1	0	0	0	0	0	0	0	0	31.74	36.46
22:00	0	1	2	7	166	218	100	23	8	4	0	0	0	0	0	0	0	0	0	32.33	37.98
23:00	0	1	2	9	90	121	46	14	4	2	0	0	0	0	0	0	0	0	0	32.73	39.38
07:00 - 19:00	209	893	1956	7701	21860	9159	1085	117	11	11	4	0	1	0	0	0	0	3	0	27.17	31.21
06:00 - 22:00	213	915	1968	8065	24205	11573	1750	237	42	18	8	0	1	0	0	0	0	3	0	27.62	31.72
06:00 - 00:00	213	917	2002	8081	24461	11912	1896	274	54	24	8	0	1	0	0	0	0	3	0	27.68	31.82
00:00 - 00:00	213	921	2006	8102	24718	12544	2376	472	109	42	10	0	1	0	0	0	0	3	0	27.91	32.16

Intelligent Data Collection Limited

Client: WSP
 Project Number: ID06295
 Site Number: Site 1
 Flow from: Oaks Close (N) to: Pine Close (S)



5-day Summary

Time	Speeds (Mph)																			Mean	99th %ile
	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	90-95	95-100		
00:00	0	0	1	1	22	61	53	30	11	6	2	0	0	0	0	0	0	0	0	36.65	41.88
01:00	0	0	0	0	8	26	16	11	5	0	0	0	0	0	0	0	0	0	0	35.89	-
02:00	0	0	0	0	3	15	7	10	0	1	0	0	0	0	0	0	0	0	0	36.84	-
03:00	0	1	0	1	8	35	12	9	1	0	1	0	0	0	0	0	0	0	0	34.35	-
04:00	0	0	0	0	6	19	33	28	9	3	1	0	0	0	0	0	0	0	0	39.38	-
05:00	0	0	4	1	27	78	75	38	6	0	0	0	0	0	0	0	0	0	3	36.31	49.61
06:00	2	5	3	6	105	318	190	43	10	2	0	0	0	0	0	0	0	0	0	33.84	38.64
07:00	5	15	16	51	355	910	246	41	8	0	0	0	0	0	0	0	0	0	0	31.98	35.93
08:00	9	29	67	173	1181	1327	177	21	3	0	0	0	0	0	0	0	0	0	0	29.77	33.32
09:00	6	6	14	69	755	1329	276	28	1	0	0	0	0	0	0	0	0	0	0	31.25	34.66
10:00	4	1	22	119	813	1157	171	21	6	5	0	0	0	0	0	0	0	0	0	30.63	33.85
11:00	1	6	13	93	1018	1173	196	21	2	0	0	0	0	0	0	0	0	0	0	30.52	33.61
12:00	0	6	7	117	1069	1248	246	32	4	0	0	0	0	0	0	0	0	0	0	30.68	34.00
13:00	7	3	11	72	845	1301	266	22	7	5	0	0	0	0	0	0	3	0	0	31.26	34.55
14:00	8	15	46	105	1151	1562	309	30	1	2	0	0	0	0	0	0	0	0	0	30.79	34.34
15:00	170	158	189	293	1386	1397	191	14	3	1	0	0	0	0	0	0	0	0	0	27.74	32.66
16:00	287	373	464	529	1550	1016	142	14	3	1	0	0	0	0	0	0	0	0	0	24.67	30.39
17:00	180	225	270	494	1383	1331	218	24	1	0	2	0	0	0	0	0	0	0	0	26.75	32.18
18:00	3	14	23	129	1008	1232	262	33	6	0	0	0	0	0	0	0	0	0	0	30.66	34.35
19:00	1	1	3	52	440	752	235	45	4	0	0	0	0	0	0	0	0	0	0	31.86	35.80
20:00	1	1	3	19	223	447	184	55	7	3	1	0	0	0	0	0	0	0	0	32.82	37.41
21:00	0	1	0	9	187	322	159	49	8	4	0	2	0	0	0	0	0	0	0	33.53	38.40
22:00	0	5	2	8	77	229	128	52	9	3	1	0	0	0	0	0	0	0	0	34.03	39.41
23:00	0	1	1	1	35	124	72	33	12	9	3	0	0	0	0	0	0	0	0	35.72	42.95
07:00 - 19:00	690	851	1142	2234	12514	14983	2700	301	45	14	2	0	0	0	0	0	3	0	0	29.26	33.69
06:00 - 22:00	694	859	1151	2320	13469	16822	3468	493	74	23	3	2	0	0	0	0	3	0	0	29.60	34.04
06:00 - 00:00	694	865	1154	2329	13581	17175	3658	578	95	35	7	2	0	0	0	0	3	0	0	29.69	34.17
00:00 - 00:00	694	866	1159	2332	13655	17405	3864	704	127	45	11	2	0	0	0	0	3	0	3	29.81	34.30

7-day Summary

Time	Speeds (Mph)																			Mean	99th %ile
	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	90-95	95-100		
00:00	0	0	2	2	32	109	77	46	15	6	2	0	0	0	0	0	0	0	0	36.20	40.50
01:00	0	0	0	0	10	41	36	21	9	1	0	0	0	0	0	0	0	0	0	36.28	-
02:00	0	0	0	1	5	25	14	14	0	1	0	0	0	0	0	0	0	0	0	36.76	-
03:00	0	1	0	1	11	44	21	14	4	1	1	0	1	0	0	0	0	0	0	35.29	-
04:00	0	0	0	0	7	31	37	30	10	3	1	0	0	0	0	0	0	0	0	38.72	-
05:00	0	0	4	1	30	96	93	46	7	2	0	1	0	0	0	0	0	0	3	36.29	49.61
06:00	2	5	3	6	113	357	227	53	14	2	0	0	0	0	0	0	0	0	0	34.22	39.08
07:00	7	21	18	54	378	995	305	57	11	2	1	0	0	0	0	0	0	0	0	32.45	36.78
08:00	10	30	68	176	1269	1531	288	37	4	1	0	1	0	0	0	0	0	0	0	30.51	34.24
09:00	7	7	18	81	939	1674	371	39	2	0	0	0	0	0	0	0	0	0	0	31.43	34.92
10:00	6	1	31	176	1103	1556	282	32	7	5	0	0	0	0	0	3	0	0	0	30.70	34.00
11:00	2	36	30	119	1378	1611	283	34	6	0	0	0	0	0	0	0	0	0	0	30.44	33.74
12:00	1	9	14	155	1442	1786	360	37	5	0	0	0	0	0	0	0	0	0	0	30.73	34.04
13:00	11	3	17	86	1184	1769	353	32	9	5	0	0	0	0	0	0	3	0	0	31.22	34.53
14:00	8	16	49	127	1456	2052	414	46	1	3	0	0	0	0	0	0	0	0	0	30.91	34.43
15:00	171	158	192	315	1567	1889	292	26	6	1	0	0	0	0	0	0	0	0	0	28.76	33.24
16:00	288	373	466	539	1745	1382	251	28	4	2	0	0	0	0	0	0	0	0	0	26.49	31.63
17:00	182	227	276	492	1566	1654	317	41	3	1	2	0	1	0	0	0	0	0	0	28.06	33.04
18:00	3	14	23	144	1154	1510	346	39	7	0	0	0	0	0	0	0	0	0	0	30.94	34.59
19:00	1	1	3	60	545	915	303	59	6	1	0	1	0	0	0	0	0	0	0	32.04	36.18
20:00	1	1	4	26	283	573	259	65	8	5	1	0	0	0	0	0	0	0	0	32.90	37.42
21:00	0	1	1	10	215	437	206	61	13	5	0	2	0	0	0	0	0	0	0	33.61	38.48
22:00	0	5	3	12	106	296	164	61	14	3	2	0	0	0	0	0	0	0	0	33.96	39.46
23:00	0	1	2	1	51	169	101	49	15	10	3	0	1	0	0	0	0	0	0	35.71	42.10
07:00 - 19:00	696	895	1202	2464	15181	19409	3802	448	65	20	3	1	1	0	0	3	3	0	0	29.73	33.98
06:00 - 22:00	700	903	1213	2366	16337	21691	4797	686	106	33	4	4	1	0	0	3	3	0	0	30.03	34.33
06:00 - 00:00	700	909	1218	2579	16494	22156	5062	796	135	46	9	4	2	0	0	3	3	0	0	30.12	34.44
00:00 - 00:00	700	910	1224	2584	16599	22502	5340	967	180	60	13	5	3	0	0	3	3	0	3	30.24	34.59

Intelligent Data Collection Limited

Client: WSP
Project Number: ID06295
Site Number: Site 1
Flow from: Two-way Total



5-day Summary

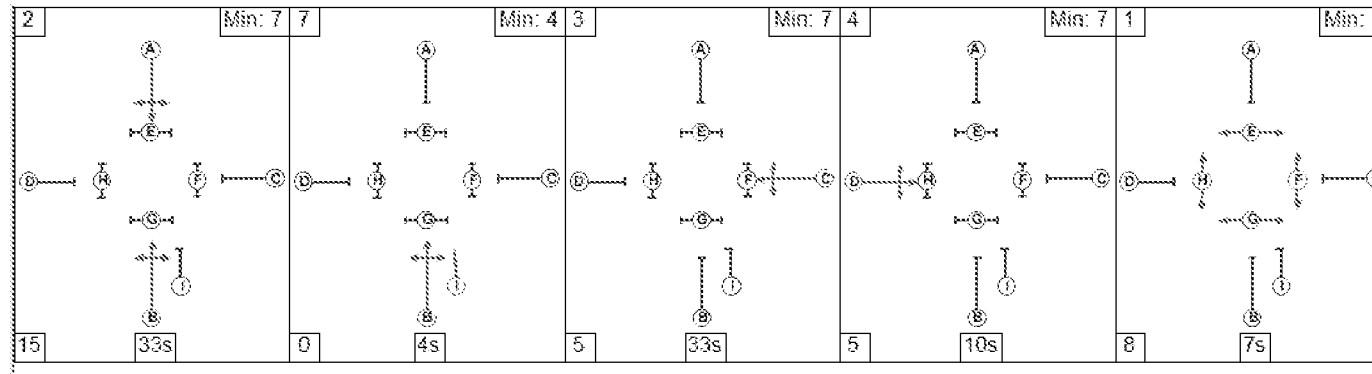
Time	Speeds (Mph)																		Mean	99th %ile	
	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	90-95			95-100
00:00	0	0	1	4	39	92	72	41	14	8	2	0	0	0	0	0	0	0	0	35.73	41.88
01:00	0	0	0	1	17	43	28	15	5	0	0	0	0	0	0	0	0	0	0	35.02	-
02:00	0	0	0	0	10	35	15	12	2	2	0	0	0	0	0	0	0	0	0	36.01	-
03:00	0	1	0	4	19	63	44	30	9	1	1	0	0	0	0	0	0	0	0	35.41	45.40
04:00	0	1	0	2	25	75	115	76	13	7	2	0	0	0	0	0	0	0	0	38.21	41.84
05:00	0	1	8	7	176	450	308	108	31	7	0	0	0	0	0	0	0	0	3	35.37	41.88
06:00	3	13	18	141	1047	1313	492	86	18	5	3	0	0	0	0	0	0	0	0	32.51	36.90
07:00	40	215	365	1044	2517	1706	323	50	9	0	0	0	0	0	0	0	0	0	0	29.15	33.15
08:00	87	160	318	1243	3099	1818	235	26	3	0	3	0	0	0	0	0	0	0	0	27.66	31.55
09:00	15	53	162	516	2184	1987	347	39	1	0	0	0	0	0	0	0	0	0	0	29.32	32.93
10:00	24	54	118	615	2172	1731	240	25	7	8	0	0	0	0	0	0	0	0	0	28.98	32.46
11:00	8	49	91	597	2405	1678	245	30	3	0	0	0	0	0	0	0	0	0	0	28.92	32.21
12:00	9	61	183	634	2462	1754	321	38	4	0	0	0	0	0	0	0	0	0	0	28.78	32.51
13:00	15	25	54	373	2131	1957	346	27	8	6	0	0	0	0	0	0	3	3	0	29.82	33.25
14:00	10	46	152	521	2707	2258	366	35	1	2	0	0	0	0	0	0	0	0	0	29.35	32.90
15:00	182	209	340	893	2771	1892	235	17	6	1	0	0	0	0	0	0	0	0	0	27.25	31.70
16:00	295	445	595	1034	2869	1470	186	19	4	1	0	0	0	0	0	0	0	0	0	25.67	30.45
17:00	185	296	410	943	2468	1805	282	32	2	0	2	0	0	0	0	0	0	0	0	26.81	31.64
18:00	4	29	65	360	1942	1700	348	43	7	1	0	0	1	0	0	0	0	0	0	29.58	33.33
19:00	2	7	12	142	1031	1190	313	66	11	0	0	0	0	0	0	0	0	0	0	30.88	34.66
20:00	3	9	12	79	511	767	269	67	10	4	1	0	0	0	0	0	0	0	0	31.56	36.06
21:00	0	1	1	35	371	595	226	64	13	5	0	2	0	0	0	0	0	0	0	32.53	37.17
22:00	0	6	3	13	200	399	212	71	16	7	1	0	0	0	0	0	0	0	0	33.40	38.88
23:00	0	2	1	6	96	223	108	46	16	11	3	0	0	0	0	0	0	0	0	34.35	42.03
07:00 - 19:00	874	1642	2943	8773	29727	21756	3474	380	55	19	5	0	1	0	0	0	3	3	0	28.07	32.36
06:00 - 22:00	882	1672	2886	9170	32687	25621	4774	663	107	33	9	2	1	0	0	0	3	3	1	28.49	32.81
06:00 - 00:00	882	1680	2890	9189	32983	26243	5294	780	139	51	13	2	1	0	0	0	3	3	0	28.56	32.92
00:00 - 00:00	882	1683	2899	9207	33269	27001	5676	1062	213	76	18	2	1	0	0	0	3	3	3	28.74	33.16

7-day Summary

Time	Speeds (Mph)																			Mean	99th %ile	
	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	90-95	95-100			
00:00	0	0	2	8	73	176	105	60	19	8	2	0	0	0	0	0	0	0	0	35.19	39.94	
01:00	0	0	0	1	22	61	60	29	10	1	0	0	0	0	0	0	0	0	0	35.65	-	
02:00	0	1	0	3	21	51	30	19	6	2	0	0	0	0	0	0	0	0	0	35.72	-	
03:00	0	1	0	5	24	82	66	42	14	4	2	0	1	0	0	0	0	0	0	35.96	45.40	
04:00	0	1	0	2	27	98	137	91	15	7	2	0	0	0	0	0	0	0	0	37.93	41.61	
05:00	0	2	8	7	185	510	360	128	36	10	0	1	0	0	0	0	0	0	0	35.48	41.75	
06:00	3	13	19	143	1127	1434	570	101	24	7	3	0	0	0	0	0	0	0	0	32.88	37.38	
07:00	42	223	369	1064	2652	1927	446	77	12	2	1	0	0	0	0	0	0	0	0	30.03	34.30	
08:00	88	166	332	1273	3469	2193	330	47	4	1	3	1	0	0	0	0	0	0	0	28.52	32.44	
09:00	18	62	172	616	2805	2549	465	51	2	0	0	0	0	0	0	0	0	0	0	29.57	33.15	
10:00	29	79	156	793	2950	2333	333	37	8	8	0	0	0	0	0	0	0	0	0	29.04	32.57	
11:00	9	100	150	792	3246	2328	356	45	7	0	0	0	0	0	0	0	0	0	0	28.86	32.32	
12:00	12	72	244	826	3370	2501	453	45	5	2	0	0	0	0	0	0	0	0	0	28.87	32.54	
13:00	22	44	101	524	3017	2662	458	39	11	6	0	0	0	0	0	0	0	3	3	0	29.72	33.17
14:00	10	51	173	690	3494	2925	483	54	1	4	0	0	0	0	0	0	0	0	0	29.37	32.87	
15:00	186	212	354	1023	3362	2638	352	30	9	1	1	0	0	0	0	0	0	0	0	27.96	32.12	
16:00	298	450	614	1119	3410	2055	322	37	5	3	0	0	0	0	0	0	0	0	0	26.81	31.30	
17:00	187	299	423	1031	2952	2287	407	52	4	2	2	0	0	1	0	0	0	0	0	27.70	32.22	
18:00	4	30	70	414	2314	2170	462	51	8	2	0	0	1	0	0	0	0	0	0	29.88	33.60	
19:00	2	7	14	179	1313	1487	418	88	14	1	0	1	0	0	0	0	0	0	0	31.00	34.96	
20:00	3	9	17	102	628	994	373	88	14	6	1	0	0	0	0	0	0	0	0	31.77	36.32	
21:00	0	1	3	42	433	781	299	81	20	6	1	2	0	0	0	0	0	0	0	32.68	37.51	
22:00	0	6	5	19	272	514	264	84	22	7	2	0	0	0	0	0	0	0	0	33.14	38.81	
23:00	0	2	4	10	141	290	147	63	19	12	3	0	1	0	0	0	0	0	0	34.22	41.14	
07:00 - 19:00	905	1788	3158	10165	37041	28568	4887	565	76	31	7	1	2	0	0	0	3	3	3	28.45	32.59	
06:00 - 22:00	913	1818	3211	10631	40542	33264	6547	923	148	51	12	4	2	0	0	0	3	3	3	28.83	33.03	
06:00 - 00:00	913	1826	3220	10660	40955	34068	6958	1070	189	70	17	4	3	0	0	0	3	3	3	28.90	33.13	
00:00 - 00:00	913	1831	3230	10686	41307	35046	7716	1439	289	102	23	5	4	0	0	0	3	3	3	29.08	33.37	

Appendix E

120 second cycle with Microprocessor Optimised Vehicle Activation (MOVA)



Appendix F