ACT Government
Transport Canberra and City Services

FREEDOM OF INFORMATION COVERSHEET

The following information is provided pursuant to section 28 of the *Freedom of Information Act 2016*.

FOI reference: 21-114

Information to be published	Status
1. Access application	Published
2. Decision notice and schedule	Published
3. Documents	Published
4. Additional information identified	n/a
5. Fees	waived
6. Processing time (in working days)	31 days
7. Decision made by Ombudsman	n/a
8. Additional information identified by Ombudsman	n/a
9. Decision made by ACAT	n/a
10. Additional information identified by ACAT	n/a

From: Leonard, Matt on behalf of CMTEDD FOI
To: TCCS_FreedomOfInformation
Subject: FW: Freedom of Information request 2021-306
Date: Tuesday, 9 November 2021 9:15:40 AM

Good morning team,

As discussed, please see the request below and confirm that you accept full transfer.

Regards

Matt Leonard |Senior Freedom of Information Coordinator | Information Access Team
Ph: 02 6207 3417
Corporate | Chief Minister, Treasury and Economic Development Directorate | ACT Government
Level 5, 220 London Circuit, Canberra City | GPO Box 158 Canberra ACT 2601 | www.act.gov.au

From: no-reply@act.gov.au <no-reply@act.gov.au>
Sent: Monday, 8 November 2021 2:48 PM
To: CMTEDD FOI <CMTEDDFOI@act.gov.au>
Subject: Freedom of Information request

Please find online enquiry details below. Please ensure this enquiry is responded to within fourteen working days.

Your details

All fields are optional, however an email address OR full postal address must be provided for us to process your request. An email address and telephone contact number will assist us to contact you quickly if we need to discuss your request.

Title:	[redacted]
First Name:	[redacted]
Last Name:	[redacted]
Business/Organisation:	None
Address:	[redacted]
Suburb:	[redacted]
Postcode:	[redacted]
State/Territory:	[redacted]
Phone/mobile:	[redacted]
Email address:	[redacted]

Request for information

(Please provide as much detail as possible, for example subject matter and relevant dates, and also provide details of documents that you are not interested in.)

Under the Freedom of Information Act 2016 I want to access the following document/s	A copy of the traffic management plan or report that identifies Bugden Avenue as a priority for road safety improvements and upgrades between January 2009 and December 2020. The plan or report must outline the rationale for the road safety and traffic calming measures installed for Bugden Avenue, such as reduction of speed from 60km per hour to 50km per hour in some areas, speed humps and lane marking. I'm also seeking the traffic survey report for Bugden Avenue that provides evidence of the traffic volume, speed data, crash history and

(*required field):	surrounding land use to provide the evidence base for the traffic calming measures on Bugden Ave. I'm seeking a report or information of the community consultation that occurred in regard to any road safety upgrades to the suburbs of Fadden either as part of the traffic management plan or not between the years 2009 and 2020.
I do not want to access the following documents in relation to my request::	

Thank you.
Freedom of Information Coordinator

ACT Government
Transport Canberra and City Services

[redacted]

Dear [redacted]

Freedom of information request: Reference 21-114

I refer to your application received by Transport Canberra and City Services (TCCS) by way of transfer from the Chief Minister, Treasury and Economic Development Directorate on 9 November 2021, in which you sought access to the following information under the *Freedom of Information Act 2016* (the FOI Act):

1. A copy of the traffic management plan or report that identifies Bugden Avenue as a priority for road safety improvements and upgrades between January 2009 and December 2020.
2. The plan or report must outline the rationale for the road safety and traffic calming measures installed for Bugden Avenue, such as reduction of speed from 60km per hour to 50km per hour in some areas, speed humps and lane marking.
3. The traffic survey report for Bugden Avenue that provides evidence of the traffic volume, speed data, crash history and surrounding land use to provide the evidence base for the traffic calming measures on Bugden Ave.
4. A report or information of the community consultation that occurred in regard to any road safety upgrades to the suburbs of Fadden either as part of the traffic management plan or not between the years 2009 and 2020.

Timeframes
TCCS was required to provide you with a decision by 7 December 2021. I thank you for agreeing to an extension of 24 December 2021.

Authority
I am an Information Officer appointed by the Director-General under section 18 of the Act to deal with access applications made under Part 5 of the Act.

Decision on access
Transport Canberra and City Services has identified 25 documents (257 pages) as relevant to your request. I have found that some of the information within these documents is, on balance, contrary to the public interest to disclose. As such, I have decided to provide you with:

- full access to 24 documents; and
- partial access to 1 document.

My decision is detailed further in the following statement of reasons. I have included a schedule of the documents at Attachment A. The documents are enclosed at Attachment B with deletions applied to information which is contrary to the public interest to disclose.

I also provide the web address to two media releases that reference the Macarthur/Fadden/Gowrie consultation in 2013 for reference:

https://www.cmtedd.act.gov.au/open_government/inform/act_government_media_releases/rattenbury/2013/have_your_say_on_street_improvements_for_tuggeranong,_weston_creek_and_holt

https://www.cmtedd.act.gov.au/open_government/inform/act_government_media_releases/tamsd/2013/july/results-of-traffic-study-consultation-in-weston-creek-and-tuggeranong

Statement of Reasons
In making my decision on disclosing government information, I must identify all relevant factors in schedule 2 of the FOI Act and determine, on balance, where the public interest lies.

In reaching my access decision, I have considered the FOI Act in general which favours disclosure of information unless it is found to be contrary to the public interest. I have also identified the following factors as relevant to the information identified as in scope of your request:

Factors favouring disclosure (Schedule 2.1)

- Section 2.1 (a)(i) - promote open discussion of public affairs and enhance the government's accountability;
- Section 2.1 (a)(iv) - ensure effective oversight of expenditure of public funds; and
- Section 2.1 (a)(viii) reveal the reason for a government decision and any background or contextual information that informed the decision.

Factors favouring non-disclosure (Schedule 2.2)

- Section 2.2 (a)(ii) – prejudice the protection of an individual's right to privacy or any other right under the *Human Rights Act 2004.*

I find that it is in the public interest to release most of this information. However, I have found some information within the relevant documents to be contrary to the public interest to disclose.

In reviewing the information in scope of your application, the personal information of a third party was identified. Deletions have been applied to information where it would prejudice the protection of an individual's right to privacy or any other right under the *Human Rights Act 2004*.

Factors in favour of release can still be met while protecting the personal information of these individuals. The protection of this information outweighs disclosure in this instance.

Charges
I have decided to waive the fees as the number of pages exceeding the fee-free threshold is marginal.

Online publishing – disclosure log
Under section 28 of the Act, TCCS maintains an online record of access applications called a disclosure log. Your original access application, my decision and documents will be published in the TCCS disclosure log from 3 days after the date of this decision.

Your personal contact details will not be published. You may view the TCCS' disclosure log at http://www.tccs.act.gov.au/about-us/freedom_of_information.

Ombudsman review
My decision on your access request is a reviewable decision as identified in Schedule 3 of the Act. You have the right to seek an Ombudsman review of this outcome under section 73 of the Act within 20 working days from the day that my decision is published in TCCS' disclosure log or a longer period allowed by the Ombudsman.

If you wish to request a review of my decision, you may write to the Ombudsman at:

The ACT Ombudsman
GPO Box 442
CANBERRA ACT 2601
Via email: actfoi@ombudsman.gov.au

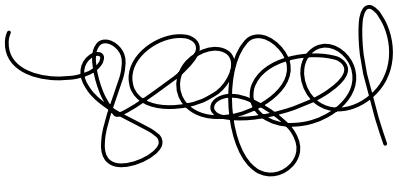
ACT Civil and Administrative Tribunal (ACAT) review
Under section 84 of the Act, if a decision is made under section 82 on an Ombudsman review, you may apply to the ACAT for review of the Ombudsman decision.

Further information may be obtained from ACAT at:

ACT Civil and Administrative Tribunal
Level 4, 1 Moore Street
GPO Box 370
CANBERRA CITY ACT 2601
Telephone: (02) 6207 1740
www.acat.act.gov.au

If you have any queries concerning the directorate's processing of your request, or would like further information, please contact the TCCS FOI team on (02) 6207 2987 or email to tccs.foi@act.gov.au.

Yours sincerely



Meghan Oldfield
Information Officer

22 December 2021

FREEDOM OF INFORMATION REQUEST SCHEDULE

Please be aware that under the *Freedom of Information Act 2016*, some of the information provided to you will be released to the public through the ACT Government's Open Access Scheme. The Open Access release status column of the table below indicates what documents are intended for release online through open access.

Personal information or business affairs information will not be made available under this policy. If you think the content of your request would contain such information, please inform the contact officer immediately.

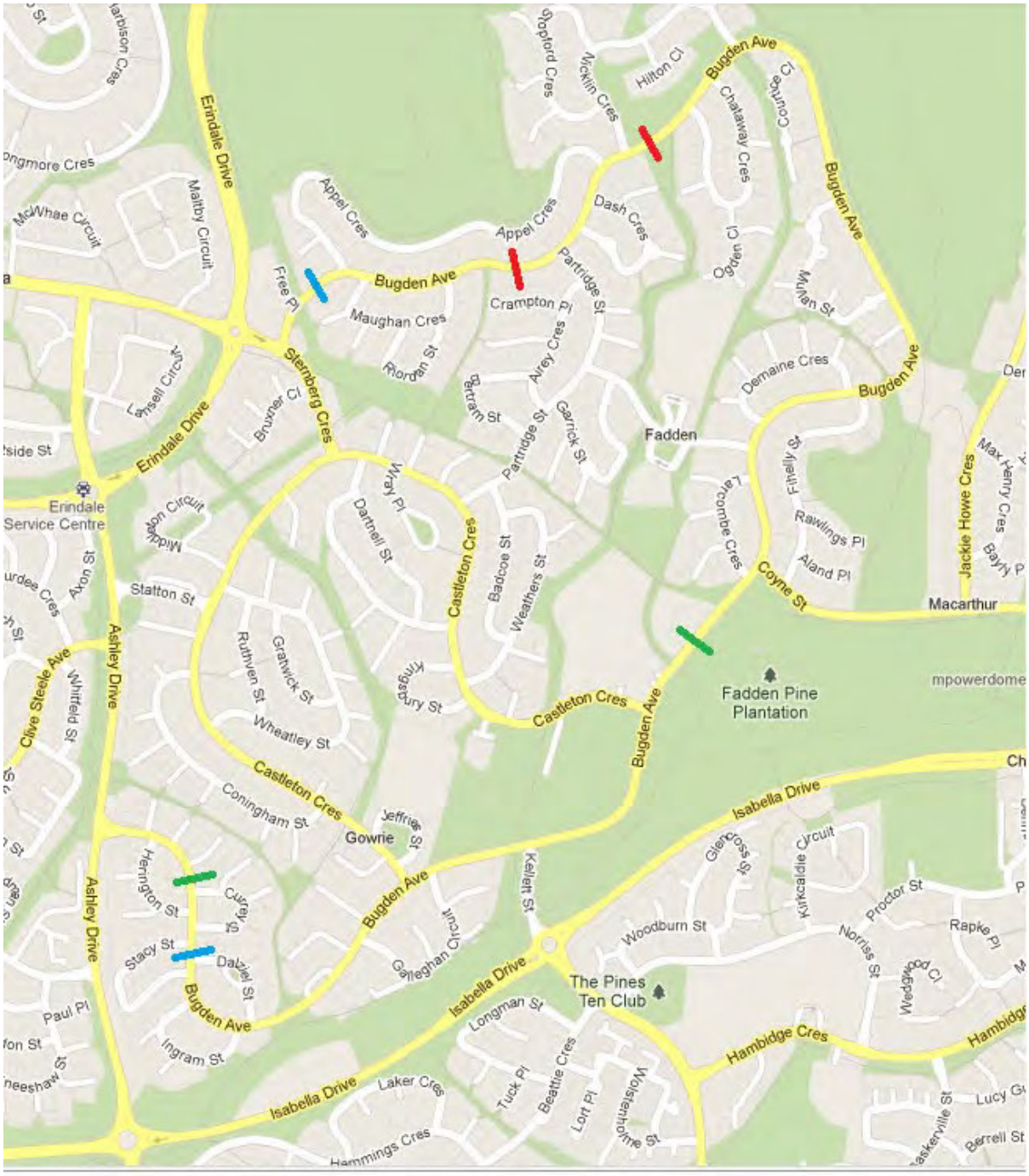
Information about what is published on open access is available online at: https://www.tccs.act.gov.au/about-us/freedom_of_information/disclosure-log

File number	WHAT ARE THE PARAMETERS OF THE REQUEST
FOI – 21-114	**Bugden Avenue**

Ref No	No of Folios	Description	Date	Status	Reason for non-release or deferral	Open Access release status
1	**1**	2007, 2010, 2012 traffic survey	Undated	Full access	Not applicable	Documents to be published
2	**2**	20100708 - Concept plan -Bugden Avenue- July 2010	8 July 2010	Full access	Not applicable	
3	**3-12**	20120801 - Function Brief - TMS-RSI-1213-01 LATM Study	1 August 2012	Full access	Not applicable	
4	**13-25**	20121101 - Evaluation Report - Bugden	1 November 2012	Full access	Not applicable	
5	**26-27**	20121101 - Traffic Control Device - at Nov 2012	1 November 2012	Full access	Not applicable	
6	**28-29**	20121102 - Newsletter #1 Coyne St_2nov1	2 November 2011	Full access	Not applicable	
7	**30-31**	20121102 - Stage 1 Consultation-Survey #1 Coyne St_2 nov12	2 November 2012	Full access	Not applicable	
8	**32-33**	20121114 - Stage 1 Consultation - Newsletter 1 - Final revised	14 November 2012	Full access	Not applicable	

9	**34**	20121114 - Stage 1 Consultation - Newsletter 1 - Final revised	14 November 2012	Full access	Not applicable	
10	**35-38**	20121117 - Stage 1 Consultation - Coyne - Community noticeboard	17 November 2012	Full access	Not applicable	
11	**39-40**	20130106 - Stage 3 Consultation- Web Text - MacarthurFaddengowrie	6 January 2013	Full access	Not applicable	
12	**41**	20130301 - Stage 2 Consultation - Newsletter #2_MacarthurFadde	1 March 2013	Full access	Not applicable	
13	**42-45**	20130301 - Stage 2 Consultation - Web content - MacarthurFad	1 March 2013	Full access	Not applicable	
14	**46-47**	20130301 - Stage 2 Consultation - Webpage	1 March 2013	Full access	Not applicable	
15	**49-51**	20130301- Stage 2 Consultation - Survey #2_MacarthurFaddenGow	1 March 2013	Full access	Not applicable	
16	**52**	20130312 - Stage 1 consultation - feedback	12 March 2013	Full access	Not applicable	
17	**53**	20130327 - Stage 2 Consultation - Impacts to TCD - Macarthur_Faddn_Gowrie	27 March 2013	Full access	Not applicable	
18	**54**	20130412 - Stage 2 Consultation - Community Notice Board text -	12 April 2013	Full access	Not applicable	
19	**55-83**	20130422 - Stage 2 Consultation Report_	22 April 2013	Full access	Not applicable	
20	**84-85**	20130601 - Staget 3 Consultation - Newsletter #3 Macarthur Fadd	1 June 2013	Full access	Not applicable	
21	**86**	20140501 - MacarthurFaddenGowrie - Crash data	1 May 2014	Full access	Not applicable	

22	**87**	20140501 - MacarthurFaddenGowrie - Speed and volume	1 May 2014	Full access	Not applicable	
23	**88-230**	20140501 - Residental Improvement Study - Marcarthur, Fadden, Gowrie - 144 pages	1 May 2014	Full access	Not applicable	
24	**231-249**	20140501 - Residential Improvement Study - Marcarthur, Fadden, Gowie	1 May 2014	Full access	Not applicable	
25	**250-257**	20161026 -Community Path Request - Bugden Avenue Fadden	26 October 2016	Partial access	Information Privacy Act 2014 Schedule 2, Section 2.2 (a)(ii) Prejudice the Protection of an Individual's Right to Privacy	


Erindale Drive
Bugden Ave
Appel Cres
Crampton Pl
Maughan Cres
Sternberg Cres
Castleton Cres
Fadden
Fadden Pine Plantation
Erindale Service Centre
Macarthur
Coyne St
Ashley Drive
Isabella Drive
Gowrie
The Pines Ten Club
Hambidge Cres
Woodburn St
Longman St
Wheatley St
Coningham St
Stratton St
Demaine Cres
Rawlings Pl
Aland Pl
Jackie Howe Cres
mpowerdome
2007 speed data
2010 speed data
2012 speed data

NOTE THAT THE EXISTING LINEMARKING DOES NOT LEGALLY PERMIT PARKING FOR STANDARD SIZE CARS

EXISTING BUS STOP PEG

ERECT RS-20(R)

ERECT RS-20(L)

ERECT R4-1A(50)

ERECT W6-3B

CONSTRUCT CONCRETE BLISTER ISLANDS TO PREVENT CORNER CUTTING AND REDUCE EXPOSED PEDESTRIAN CROSSING DISTANCE

2.0m MARKED SHOULDER PROVIDES AREA FOR RESIDENT PARKING AND IMPROVES SIGHT DISTANCE FOR RESIDENTS EXITING DRIVEWAYS ON INSIDE OF BENDS. NOTE THAT THE EXISTING LINEMARKING DOES NOT LEGALLY PERMIT PARKING FOR STANDARD SIZE CARS

TRIM EXISTING VEGETATION TO IMPROVE SIGHT DISTANCE

CONSTRUCT CONCRETE BLISTER ISLANDS

MATCH LINE A-A

MAUGHAN CR

BUGDEN AV

PARTRIDGE ST

STOPPED BUSES ALSO STOP CARS THEREBY REDUCING TRAFFIC SPEEDS AND CREATE GAPS IN TRAFFIC FLOWS

3.7m SHARED CYCLE/TRAFFIC LANES

ERECT GS-HS(S)

DASH CR

APPEL CR

NICKLIN CR

CONSTRUCT CONCRETE BLISTER ISLANDS TO PREVENT CORNER CUTTING THEREBY LIMITING SPEEDS

CONSTRUCT CONCRETE BLISTER ISLAND

NOTE THAT THE EXISTING LINEMARKING DOES NOT LEGALLY PERMIT PARKING FOR STANDARD SIZE CARS

REFUGE ISLAND

ERECT R4-1A(50)

ERECT R4-1A(50KM/H) SIGN 80m EAST OF EXISTING REFUGE ISLAND

LEGEND

- ERADICATE LINEMARKING
- EXISTING LINEMARKING
- APPLY NEW LINEMARKING

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE – LATEST DATE INDICATES DRAWING STATUS

Conceptual Design: 11/03/10	Consultation Plan: 8/07/10	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--

Scale

0m 10m 20m 30m

SCALE: A1 1:500, A3 1:1000

Design Agent

Consulting Engineers

Designed by	MG
Drawn by	BvA
Checked by	MG
Approved by	PF

Client

Project Officer: Fred Ihegle
Project Number: TBA

Project

BUGDEN AVENUE, FADDEN TRAFFIC CALMING IMPROVEMENTS

Drawing Title

CONSULTATION PLAN

Scale	Date	Dwg. No.	Sheet	Revision
AS SHOWN	8/07/10	MNW 09032	100	0

DRAFT

300mm ON A1 ORIGINAL

ACT Government
Territory and Municipal Services

FUNCTIONAL BRIEF

RESIDENTIAL STREET IMPROVEMENTS PROGRAM

INVESTIGATIONS for TRAFFIC MANAGEMENT IMPROVEMENTS on

CLIFT CRESCENT / HEAGNEY CRESCENT / HAMBIDGE CRESCENT / COYNE STREET / STREETON DRIVE

TRAFFIC MANAGEMENT AND SAFETY
ROADS ACT

Functional Brief No: TMS-RSI-1213-01

August 2012

Contents

1. Introduction 3
2. Project Background 3
3. Objectives 3
4. Streets 4
5. Scope 4
6. Community Consultation/Participation: 6
7. Reference Materials 6
8. Standards 7
9. Timing 7
10. Funding 7
11. Consultation 7
12. Liaison and Reporting 7
13. Communication 8
14. Evaluation Criteria 8
15. Contract Conditions 9
Attachment A 10

1. Introduction

Roads ACT is a part of the Roads and Public Transport Division of the Territory and Municipal Services Directorate and manages all ACT road, bridge, cyclepath, pedestrian, traffic signal, street lighting and stormwater assets to ensure a safe, efficient and effective built urban environment for the people of the ACT.

Traffic Management and Safety (TMS), a section within Roads ACT, is responsible for managing the use of the Territory's road and bridge assets to ensure these assets are safe, efficient and meet the needs of the community. TMS also manages statutory/regulatory approvals, traffic management, road safety engineering programs, compensation claims, FOI requests, the co-ordination of traffic arrangements for major events and the development and delivery of part of Roads ACT's Capital Works program.

This Project Brief outlines general requirements which are specific to this project and fall under Residential Street Improvements in the Capital Upgrades Program. This brief covers three separate studies, and although the methodology is expected to be the same for all three studies, the extent of consultation, survey and analysis will be different. The consultant is therefore required to prepare separate details for these matters and their associated resource requirements and resultant fees.

A separate fee for each study is expected together with an hourly rate for suggested personal for any additional work that may eventuate during the course of the sudies.

2. Project Background

The residents of Clift Crescent, Heagney Crescent, Hambidge Crescent, Coyne Street and Streeton Drive and other road users have written to Ministers, members of the Legislative Assembly and Roads ACT regarding their concerns about traffic volumes, speeding and other road safety and amenity issues on these streets.

Roads ACT has developed the Traffic Warrant System (TWS) to prioritise collector roads for investigation to identify the need for traffic management measures. The above streets rank relatively highly in both the 2009 and the draft 2012 TWS.

On 2 May 2012 a motion was passed in the ACT Legislative Assembly calling on the ACT Government to consult and initiate traffic calming measures on Coyne Street and Clift Crescent.

3. Objectives

a) To identify and assess the traffic safety and amenity issues in each study area, with particular emphasis on the traffic conditions on the nominated streets.

b) To consider and develop options which would mitigate/improve these issues.

c) To evaluate these options in terms of their expected technical effectiveness and economic performance.

d) To consult with the community throughout the process.

e) To identify an agreed solution for each study area and prepare designs.

f) To recommend a program of works within the available capital works funding.

4. Streets/Study Areas

The following are the nominated streets and study areas:

Street	Suburb/s	From	To	Study Area
Clift Cr	Richardson	Ashley Dr	Johnson Dr	1
Heagney Cr	Richardson, Gilmore, Chisholm	Clift Cr	Hambidge Cr	1
Hambidge Cr	Gilmore, Chisholm	Goldstein Cr	Isabella Dr	1
Coyne St	Fadden, Macarthur	Isabella Dr	Bugden Av	2
Streeton Dr	Stirling, Rivett, Chapman	Hindmarsh Dr	Namatjira Dr	3

5. Scope

Part A – What are the issues?

1.1. Identify the study area boundary. Note: the study area is to include other roads that may be impacted by options proposed for the nominated street/s.

1.2. Develop a community consultation plan for each study area to engage with residents of the study area and the wider community to identify their issues and concerns with the nominated street/s.

1.3. Undertake community and key stakeholder consultation in accordance with the consultation plan.

1.4. Identify the traffic management issues on the nominated streets by analysing:

- available traffic data (volume, speed and accident statistics);
- complaints received by Roads ACT; and
- feedback obtained from the community consultation.

Part B - What are the solutions?

1.5. Determine the objectives for a traffic management scheme for each nominated street and study area to address the issues identified in Part A. Objectives may include, amongst others:

- To reduce the volume of traffic on the nominated street/s.
- To reduce the 85th percentile speed on the nominated street/s.
- To reduce the total number of crashes or specific crash types over a 5 year period.

1.6. Undertake additional data collection/studies, if necessary, to verify or assist with the investigation of the issues identified in Part A.

1.7. Develop traffic management options to achieve the objectives. These options should not:

- Transfer problems to other residential streets. Displaced traffic should preferably be diverted onto arterial roads, but if necessary it may be diverted onto other collector roads that have the capacity to absorb the increased traffic.
- Adversely impact on ACTION bus services.

1.8. Undertake a Design Options Study (DS) and develop options for each street/study area. Each option should include:

- A concept plan.
- The expected outcomes i.e. reduced traffic volumes or safer speeds (nominate expected values).
- The advantages and disadvantages.
- Cost estimate.
- Cost/benefit analysis for each option.

1.9. Prepare a table to document the relative effectiveness of each device to achieve a specified outcome and the advantages and disadvantages of each device (refer to section 7 of Austroads Guide to Traffic Management Part 8: Local Area Traffic Management).

Part C – What is the preferred option?

1.10. Undertake community and key stakeholder consultation to obtain comment on the options for each street/study area. It is expected that the community consultation will include :

- A public information session in each study area;
- Unattended displays at the nearest major shopping centre and public library for each study area;
- An online survey through Time to Talk;
- Information on TAMS website; and
- A mail out survey to all households and businesses in each study area.

1.11. For each study area analyse the community and key stakeholder feedback and recommend a scheme for implementation. Obtain Roads ACT's endorsement of the recommended option for each street/study area.

1.12. Prepare Preliminary Sketch Plans (PSP) for the endorsed option. The PSP shall include a staged implementation plan for each study area based upon an annual budget of $225,000.

1.13. Undertake a cost/benefit analysis for each recommended option.

1.14. Prepare the PSP report and circulate the report to key stakeholders for comment.

1.15. Prepare the Final Sketch Plan Report after receiving comments from Roads ACT and key stakeholders.

1.16. Inform the community and the key stakeholders through the Time to Talk and TAMS websites as well as media releases.

6. Community Consultation/Participation:

The response to this brief should include a detailed program for effective community consultation. This could include public meetings, public displays and letter-box drops of information, leaflets, questionnaires, use of TAMS website etc. It is anticipated that the community consultation will be undertaken for the following purposes:

- To determine the community's concerns regarding traffic conditions in the study area.
- To inform the community of the results of the analysis of their concerns and of relevant traffic data as well as options available to address the concerns raised and issues identified.
- To inform the community of the preferred scheme/s and the priorities for implementation.

The consultation must be undertaken in such a way as to avoid the unnecessary raising of community expectations, by closely linking possible outcomes with financial costs and likely future ACT Government budget outcomes.

It should be noted that TMS will manage the community consultation process, including the public meetings. The consultant will:

- Prepare and distribute surveys, leaflets and public display materials.
- Analyse all responses to surveys.
- Prepare presentation material for displays and public meetings.
- Arrange venues for displays and public meetings.
- Assist TMS in making presentations at public meetings.

7. Reference Materials

- Traffic and crash data can be obtained from TMS by contacting Marian Jancewicz on 6207 6820 or marian.jancewicz@act.gov.au. Traffic volume and speed data may not be available for all potentially affected streets. For such cases, it will be the consultant's responsibility to identify additional data for collection by Roads ACT. If necessary and agreed by Roads ACT, the consultant may arrange to collect required data to meet the time requirements of the project and provide separate billing for the costs.
- All existing traffic data is to be assessed for currency and relevance prior to designing any additional surveys. The adjacent arterial road network is also to be included in this analysis.
- Snezana Dimitrovska (6207 6570 or snezana.dimitrovska@act.gov.au) may be contacted to obtain copies of any investigations that TMS may have commissioned within the identified study areas and to determine if TMS has programmed relevant works in the study area and consider these works for inclusion in this project.
- Roads ACT's 2012 Traffic Warrant System. An electronic copy of the database will be provided by the project officer to the consultant.

- Austroads suite of Guides.

8. Standards

- Territory and Municipal Services Design Standards for Urban Infrastructure.
- Territory and Municipal Services Standard Specification for Urban Infrastructure.
- Territory and Municipal Services Ref 08 Requirements for Works as Executed Quality Records Issue 1 Revision 0.

The Territory and Municipal Services Design Standards reference other standards and guidelines.

9. Timing

The following milestone dates apply to this project:

- Proposal submission to Roads ACT's project officer – 4pm Thursday 6 September 2012.

- Evaluation of proposal and acceptance – 30 September 2012
- PSP Report – 30 April 2013
- FSP Report and final invoice – 30 May 2013

10.Funding

The project will be funded from Roads ACT's Capital Upgrades program.

11.Consultation

The key stakeholders for this project are:

- Traffic Management and Safety Section of Roads ACT.
- Relevant Community Councils.
- Pedal Power
- NRMA Motoring and Services – Ron Collins
- Motorcycle Riders Association
- ACTION – Tony Halls, Field Operations Manager (South) 6207 7557

12.Liaison and Reporting

The Roads ACT Project Manager is Rifaat Shoukrallah and the Project Officer is John Taylor who can be contacted on 6207 6616 or by email at john.taylor@act.gov.au. The Project Officer shall be kept informed regularly during all phases of the project. Any enquiries related to the project should be directed to the Roads ACT Project Officer.

The consultant shall provide the Project Officer with a billing schedule at the earliest opportunity. The schedule will be the agreed billing schedule between the consultant and Roads ACT.

The consultant shall provide the Project Officer with a monthly progress report on the physical and financial status of the project. The report can be submitted by email and it should be provided by the end of the third week of each month. The report shall report on the actual versus agreed projected cash flow.

13.Communication

Roads ACT will be responsible for providing responses to all correspondence and requests that are directly related to the project. The consultant shall provide the Project Officer with assistance and information when requested within the timeframe nominated by the Project Officer.

Roads ACT will be responsible for arranging all media activities including public displays and consultations. The consultant shall provide information and supporting material and arrange the booking of venues.

14.Evaluation Criteria

The purpose of the evaluation criteria is to select a consultant or consultants from the list of consultants on the Advice to Roads ACT Panel Contract 2011.16172.110.

Submissions addressing the criteria will be assessed using the following evaluation criteria and scoring scale. The weighted scoring method will be used to assist in the ranking of offers.

Criteria	**Weight**
1. Past performance on relevant projects (proven history of delivery on time and to budget based on 3 most recent similar projects)	**4**
2. Relevant experience of the firm (based on 3 most recent similar projects, including referee contacts details).	**4**
3. Technical skills of the proposed team (people, roles, capabilities and relevant experience)	**6**
4. Methodology, appreciation of the task and timing (how the project is to be tackled with due consideration given to likelihood of achieving proposed program)	**6**

The following numerical scoring scale will be used to evaluate each criterion:

Rating	Description	Score
Excellent	Exceeds requirements in all ways, with very little or no risk	10
Very Good	Meets requirements in all ways, exceeds it in some, little risk involved.	8-9
Good	Meets the requirement and is workable, acceptable risk	6-7
Marginal	Nearly meets requirement, workable but may be deficient or limited in some areas, some element of risk.	4-5
Poor	Offer is difficult to assess against criteria, high risk	1-3
Non-compliant	Tenderer has either stated non-compliance, demonstrated non-compliance or there is insufficient information to assess.	0

Pricing will be taken into account and the selection of the preferred tenderer will be based on the ACT Government Purchasing Principle of achieving value for money.

Information to be submitted with study proposal:

Proposals submitted must include the following information and follow this structure where possible:

1- Details of recorded past performance on three (3) most recent similar projects (a maximum of three (3) pages will be acceptable).
2- Details of relevant experience of the firm on three (3) most recent similar projects (a maximum of three (3) pages will be acceptable).
3- Details of the technical skills of the proposed team must include the identity, role and capability of the project manager, team members and any sub-consultants.
4- Details of methodology in steps against the scope and general approach to satisfy the specific requirements of the brief.
5- Details of capacity to undertake the work for all members of the proposed team.
6- Details of fees. A lump sum fee for each study area is required as well as hourly rates for the study team in case additional tasks are requested during the course of these studies. Additional traffic surveys, if required, should be separately costed.

15.Contract Conditions

The contract conditions shall be those of the Consultancy Advice to Roads ACT – Panel Contract 2011.16172.110.

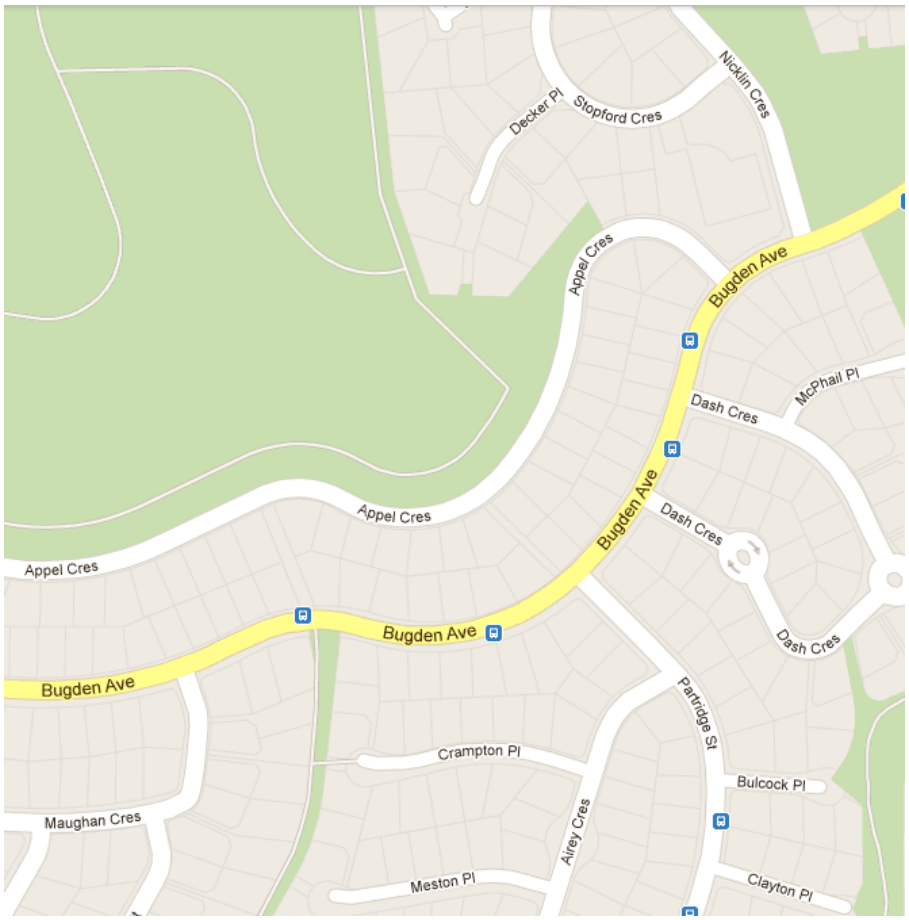
Attachment A

Extract from the draft 2012 Traffic Warrant System

Street	Road Class	Speed Limit (km/hr)	Road Length (km)	Verge Width (m)	Traffic data year	85th %ile Speed (km/hr)	24hr Weekday Traffic Vol. (vpd)	Heavy Vehicles (%)	No. of Fatalities	No. of Injuries	No. of Property Damage	Activity Generators			Speed points	24hr Traffic Vol. Points	PH Vol points	Fat. Points	Inj. Points	P.D. Points	Total crash points	Total crash + rate points	Adj. Crash points	HV points	Activity Generator points			Activity Generator Total Points	Weighted Total Points Score	Verge Width % Reduction	Final Total Points Score	2000 Rank	2004 Rank	2006 Rank	2009 Rank	2012 Rank
Hambidge Cr	Maj C	60	1.7	5	2011	62.5	6,109	3	0	0	18	4	5	6	0	21	0	0	0	7	7	6	6	0	12	10	10	30	139	0	139	67	13	4	3	15
Heagney Cr	Maj C	60	3.6	6	2012	66.6	6,309	2	0	7	42	1	2	4	6	21	0	0	5	17	22	14	14	0	0	1	12	13	128	0.07	119	6	10	10	13	30
Streeton Dr	Maj C	60	2.3	8	2011	69.2	6,565	3	0	1	23	1	2	4	6	21	0	0	1	9	10	7	7	0	0	1	12	13	114	0.07	106			11	17	42
Clift Cr	Maj C	60	2.3	5	2012	66.0	4,048	4	1	7	40	1	2	6	6	9	0	2	5	16	23	17	17	0	0	1	10	11	98	0	98	62	26	28	73	54
Coyne St	Maj C	60	1.1	6	2012	67.4	6,263	3	0	2	39	1	1	2	6	21	0	0	2	15	17	16	16	0	0	0	1	1	102	0.07	95	40	51	84	36	59

Note
Accident statistics for period 1/1/2006 to 31/12/2010

ACT Government
Territory and Municipal Services



TRAFFIC MANAGEMENT AND SAFETY
ROADS ACT

RESIDENTIAL STREET IMPROVEMENTS

BUGDEN AVENUE TRAFFIC CALMING SCHEME EVALUATION

NOVEMBER 2012

TABLE OF CONTENTS

TABLE OF CONTENTS ii

1 INTRODUCTION 3

2 OBJECTIVES 6

3 SCHEME DETAILS 6

4 TECHNICAL EVALUATION 8

4.1 TRAFFIC SPEEDS 8

Table 4.1.1 Weekday Traffic Speeds 8

Table 4.1.2 Weekend Traffic Speeds 8

4.2 TRAFFIC VOLUMES 8

Table 4.2.1 Average Traffic Volumes 8

4.3 TRAFFIC CRASHES 9

Table 4.3.1 Traffic Crashes - before and after 9

5 SUMMARY AND CONCLUSIONS 10

APPENDIX A: CONCEPT PLAN 11

1 INTRODUCTION

The Traffic Management and Safety (TMS) Section of Roads ACT, in the Territory and Municipal Services Directorate (TAMSD), is responsible for monitoring and managing the safety and operating conditions of the existing road network in the ACT. TMS is also responsible for evaluating the effectiveness of traffic management measures, including those directed at enhancing the amenity of residential areas.

In 2000 TMS completed a traffic management study for Gowrie and Fadden, and Stage 1 of the recommended traffic calming scheme was implemented in 2003 at a number of locations along Bugden Avenue between Sternberg Crescent and Maughan Crescent (east). This treatment is shown in Figure 1.1.

Since that time, requests for additional measures on other sections of Bugden Avenue have periodically been received by TMS, and in 2009 the section of Bugden Avenue between Maughan Crescent (east) and Nicklin Crescent (south) was investigated in response to residents' complaints about speeding and concerns about safety when entering and exiting their driveways.

This investigation concluded that in order to reduce travelling speeds on this section of Bugden Avenue, the width of the traffic lanes should be reduced. The recommendation was reviewed by an independent consultant who presented various options to achieve this end. The consultant also developed a concept plan for the preferred option which included moving the road centre line, the installation of concrete kerb blisters and the reduction of the speed limit to 50km/h. A copy of the concept plan is presented in Appendix A.

In November 2010, all residences along Bugden Avenue were informed of the proposed traffic calming measures by letterbox drop and were invited to submit feedback. Only one response was received, and the respondent was generally supportive of the proposed calming measures but suggested the use of concrete median islands instead of the proposed kerb blisters. The suggestion was not preferred because of the narrow width of the road.

The traffic calming scheme was implemented in November 2011.

To enable the technical evaluation of this treatment, traffic surveys were undertaken on Bugden Avenue between Maughan Crescent (east) and Chataway Crescent (south) in February 2012 (3 months after the implementation) and in September 2012 (10 months after the implementation). The locations of these traffic surveys are shown in Figure 1.2.

This report presents the outcomes of this evaluation.

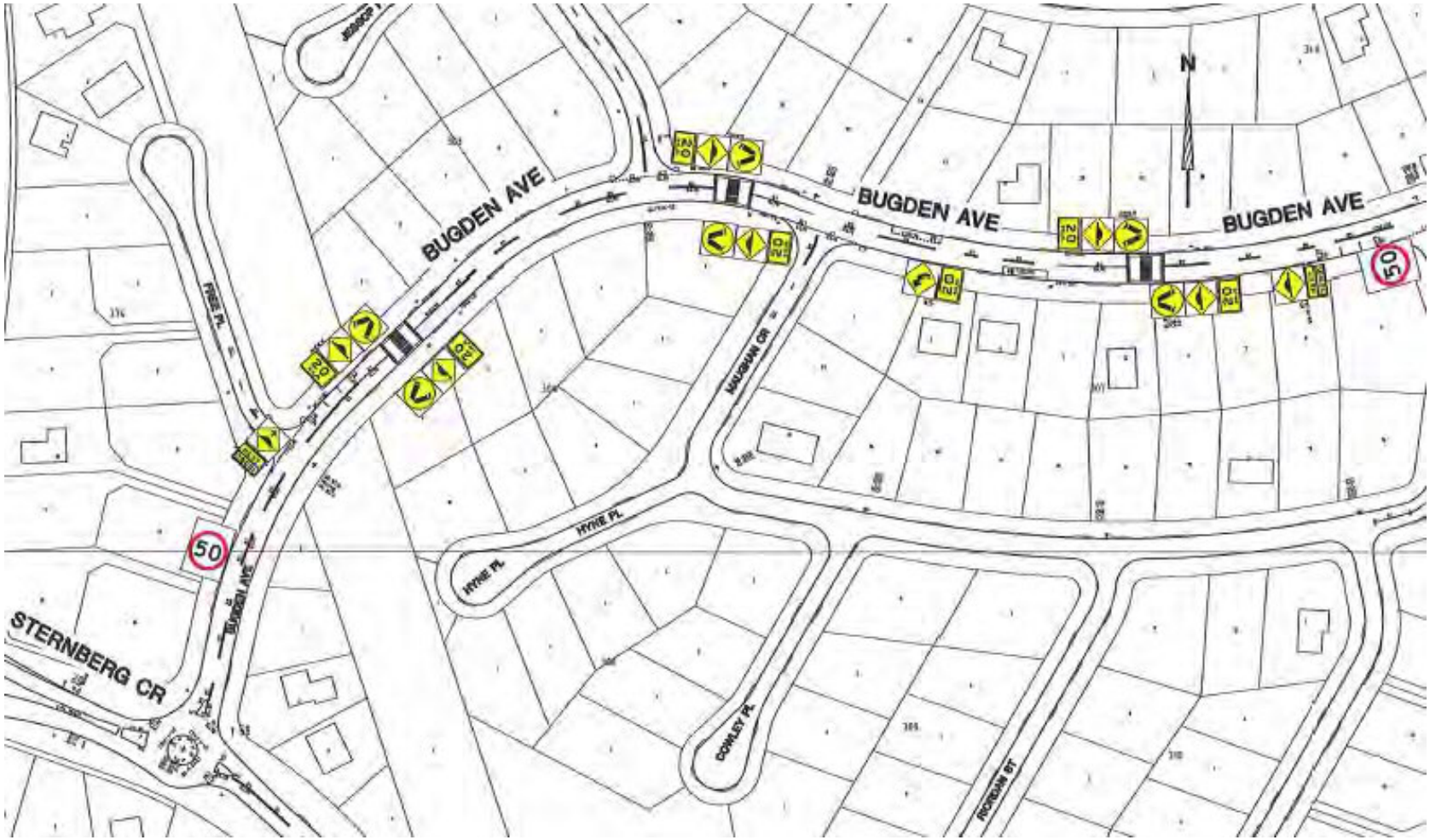


Figure 1.1: Traffic calming scheme implemented on Bugden Avenue in 2003 (Stage 1).

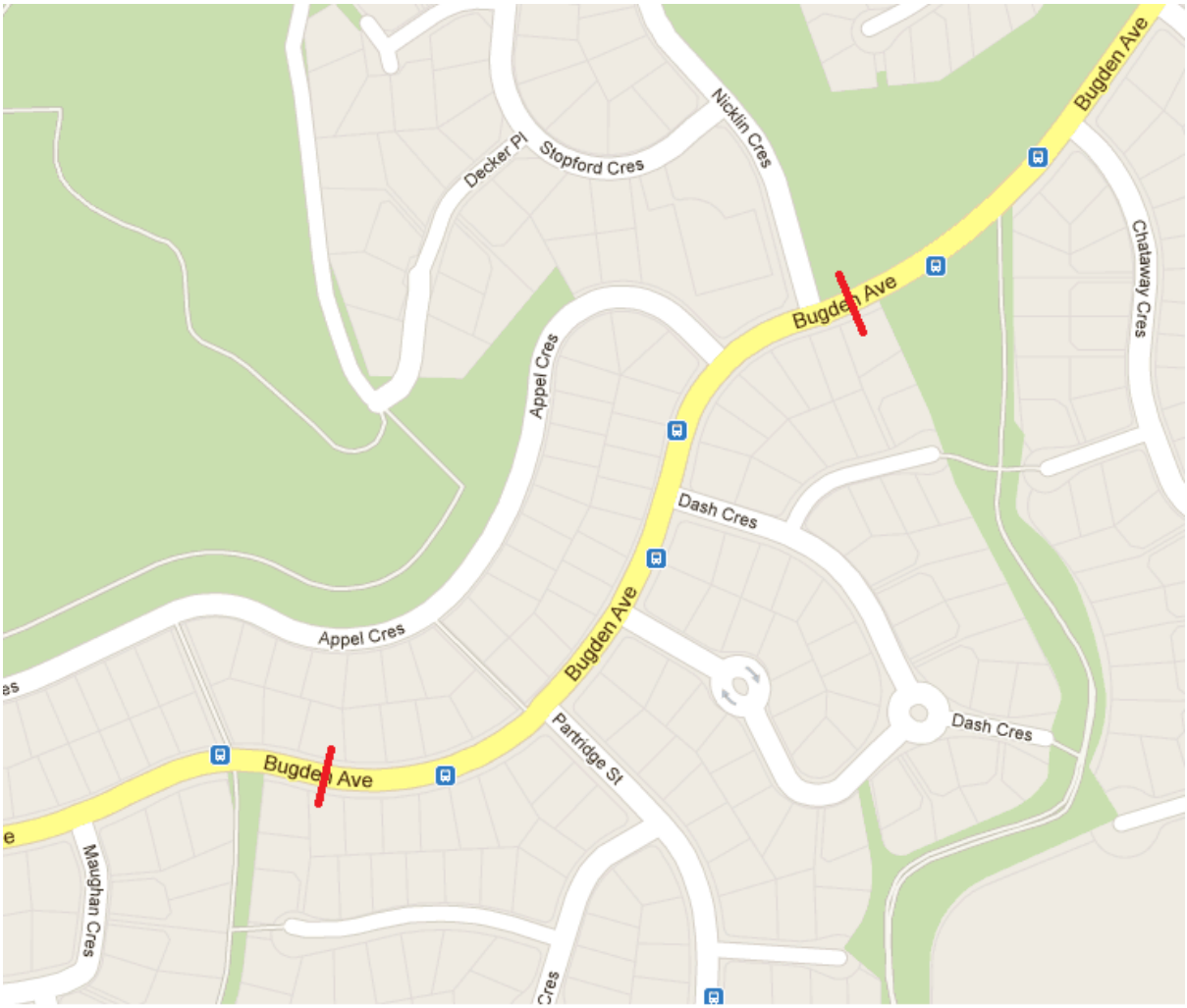


Figure 1.2: Traffic Survey locations on Bugden Avenue

2 OBJECTIVES

The objectives of the traffic calming scheme on Bugden Avenue between Maughan Crescent (east) and Nicklin Crescent (south) were to:

- Reduce travel speeds on this section of Bugden Avenue.
- Improve road safety on Bugden Avenue.

The objectives of this evaluation are to:

- Determine if the travelling speeds were reduced on the street.
- Determine whether road safety was improved on the street.

3 SCHEME DETAILS

The traffic calming measures implemented on Bugden Avenue - the new road centre line and the installation of concrete kerb blisters between Maughan Crescent (east) and Nicklin Crescent (south) and the reduction of speed limit to 50km/h between Maughan Crescent (east) and Chataway Crescent (south) - is shown in Figure 3.1.

The construction cost of this project was $105,000.

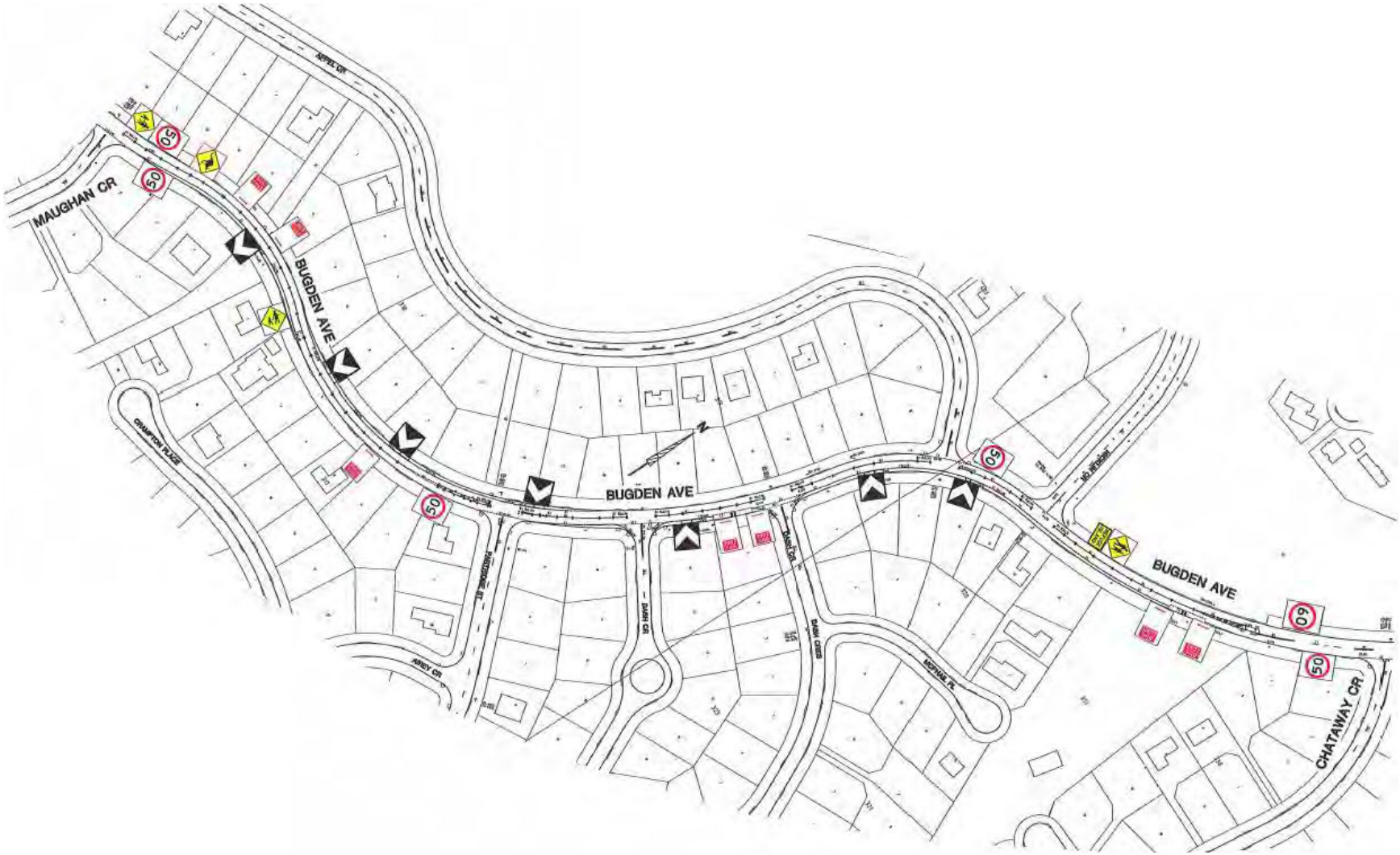


Figure 3.1: Traffic calming measures on Bugden Avenue between Maughan Crescent (east) and Nicklin Crescent (south).

4 TECHNICAL EVALUATION

4.1 TRAFFIC SPEEDS

TMS undertook 24 hour / 7 day tube counts at 2 locations on Bugden Avenue between Maughan Crescent (east) and Chataway Crescent (south) in February 2012 and September 2012. Tables 4.1.1 and 4.1.2 present traffic speeds (in km/hr) measured after the implementation of the traffic calming measures. The speed limit on this section of Bugden Avenue is 50km/h.

Table 4.1.1 Weekday Traffic Speeds

MAP REF No.	SITE DESCRIPTION	Towards	FEBRUARY 2012		SEPTEMBER 2012	
			Average Speed	85%ile Speed	Average Speed	85%ile Speed
1	**Bugden Avenue**	Maughan Cr	51.2	57.8	51.9	58.0
	(Maughan - Partridge)	Partridge St	49.9	56.4	50.7	57.2
2	**Bugden Avenue**	Chataway St	54.4	61.8	52.5	60.1
	(Chataway - Nicklin)	Nicklin Cr	59.0	64.0	56.7	65.2

Table 4.1.2 Weekend Traffic Speeds

MAP REF No.	SITE DESCRIPTION	Towards	FEBRUARY 2012		SEPTEMBER 2012	
			Average Speed	85%ile Speed	Average Speed	85%ile Speed
1	**Bugden Avenue**	Maughan Cr	52.8	59.0	52.7	58.5
	(Maughan - Partridge)	Partridge St	54.9	57.5	51.0	57.5
2	**Bugden Avenue**	Chataway St	54.4	61.0	53.1	60.5
	(Chataway - Nicklin)	Nicklin Cr	56.6	64.0	57.2	65.1

The speed survey results indicate that there is still a degree of speeding along this section of Bugden Avenue, with recorded average speeds in excess of 50 km/h and recorded 85%ile speeds ranging between 56 km/h and 65 km/h.

4.2 TRAFFIC VOLUMES

Table 4.2.1 provides the details of traffic volumes (vehicles per day) on Bugden Avenue between Maughan Crescent (east) and Chataway Crescent (south) measured after the implementation of the traffic calming measures.

Table 4.2.1 Average Traffic Volumes

MAP REF No.	SITE DESCRIPTION	TOWARDS	FEBRUARY 2012		SEPTEMBER 2012	
			Weekday	Weekend	Weekday	Weekend
1	**Bugden Avenue**	Maughan Cr	2368	1612	2170	1603
	(Maughan - Partridge)	Partridge St	1730	1497	1605	1478
2	**Bugden Avenue**	Chataway St	883	880	828	820
	(Chataway - Nicklin)	Nicklin Cr	1012	887	746	721

The traffic volumes on this section of Bugden Avenue (a major collector road) are within the environmental capacity and acceptable limit of 6000 vehicles per day for this type of road (*p14, Residential Subdivision Development Code, 2 October 2009*).

4.3 TRAFFIC CRASHES

Table 4.3.1 provides the details of crashes reported on Bugden Avenue between Maughan Crescent (east) and Nicklin Crescent (south) 10 months before (January 2011 – October 2011) and 10 months after (December 2011 – September 2012) the implementation of the traffic calming measures. The construction period (November 2011) is excluded from this analysis since it is not a typical representation of usual conditions. The table also shows the five-year crash history used in the investigation.

Table 4.3.1 Traffic Crashes - before and after

LOCATION	TYPE	5 YEAR CRASH DATA (2006 – 2010)	BEFORE (Jan 2011– Oct 2011)	AFTER (Dec 2011 – Sept 2012)	% CHANGE IN CRASHES
Bugden Avenue between Maughan Cr (east) and Nicklin Cr (south)	Midblocks	8	2	2	0
	Intersections	2	1	1	0

Crash records indicate that there have been no reductions in crashes in the 'after' period. However, care should be exercised in interpreting the above figures given the short evaluation period.

For a more representative evaluation of safety impacts, crash records of a longer period (at least two to three years) for the 'before' and 'after' periods would be required.

5 SUMMARY AND CONCLUSIONS

In 2009 TMS investigated Bugden Avenue between Maughan Crescent (east) and Nicklin Crescent (south) in response to residents' complaints about speeding and concerns about safety when entering and exiting their driveways. As a result, traffic calming measures were implemented on this section of road in November 2011 to reduce speeds and improve safe access to residential properties.

The objectives of the traffic calming scheme on Bugden Avenue between Maughan Crescent (east) and Nicklin Crescent (south) were to:

- Reduce travel speeds on this section of Bugden Avenue.
- Improve road safety on Bugden Avenue.

The objectives of this evaluation are to:

- Determine if the travelling speeds were reduced on the street.
- Determine whether road safety was improved on the street.

The results of the evaluation indicate the following:

- The average travelling speeds exceed the posted speed limit of 50 km/h, and recorded 85%ile speeds are in excess of 60 km/h.
- The traffic volumes are within the acceptable limits for this type of street.
- Crash records indicate that there have been no reductions in crashes in the 'after' period.

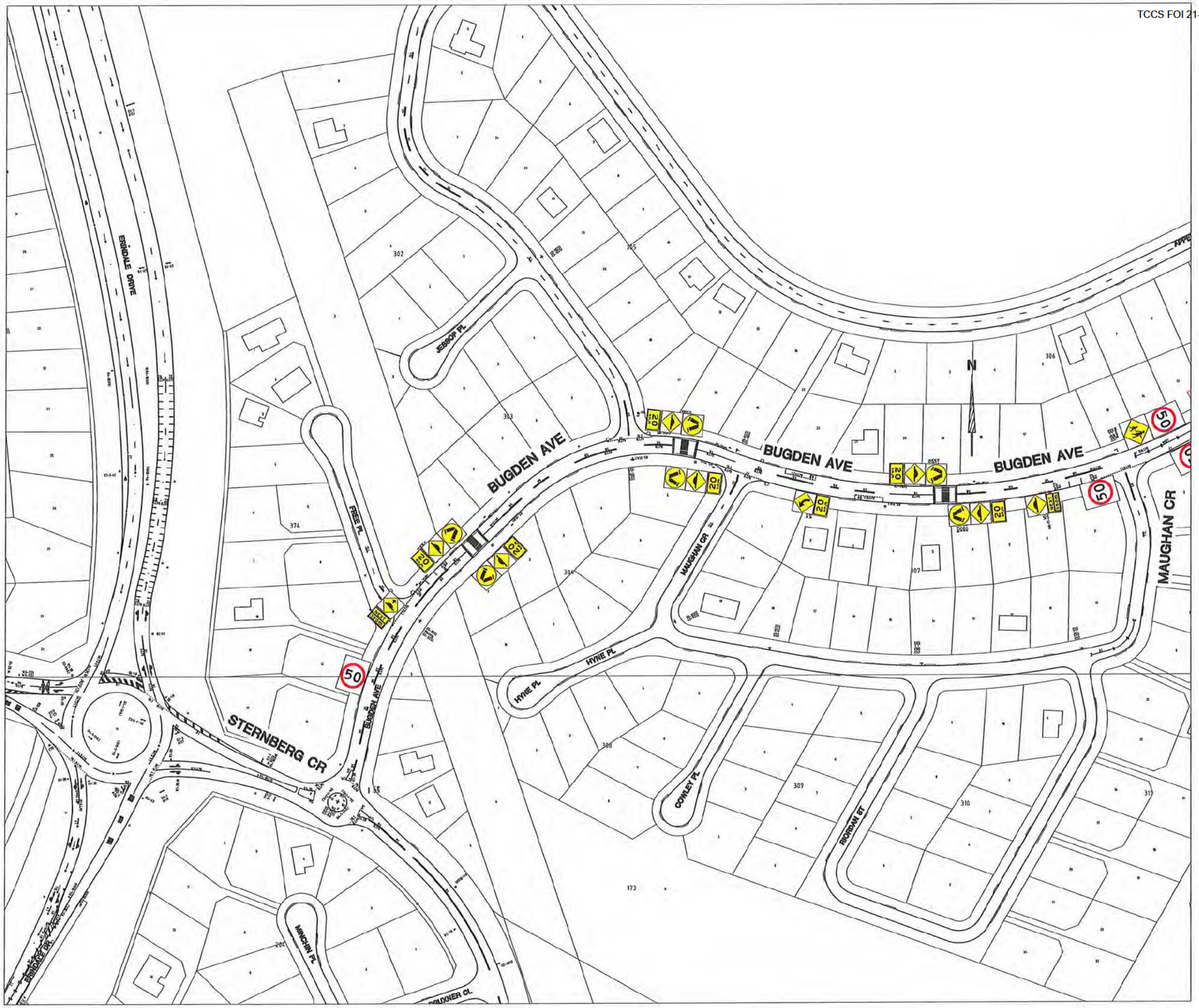
The original speed limit along this road section was 60 km/h, and it is possible that average travelling speeds used to be in excess of this limit. However, due to the absence of survey data on this section of Bugden Avenue prior to the implementation of this traffic calming scheme, it is hard to determine if the scheme has been effective in reducing travelling speeds.

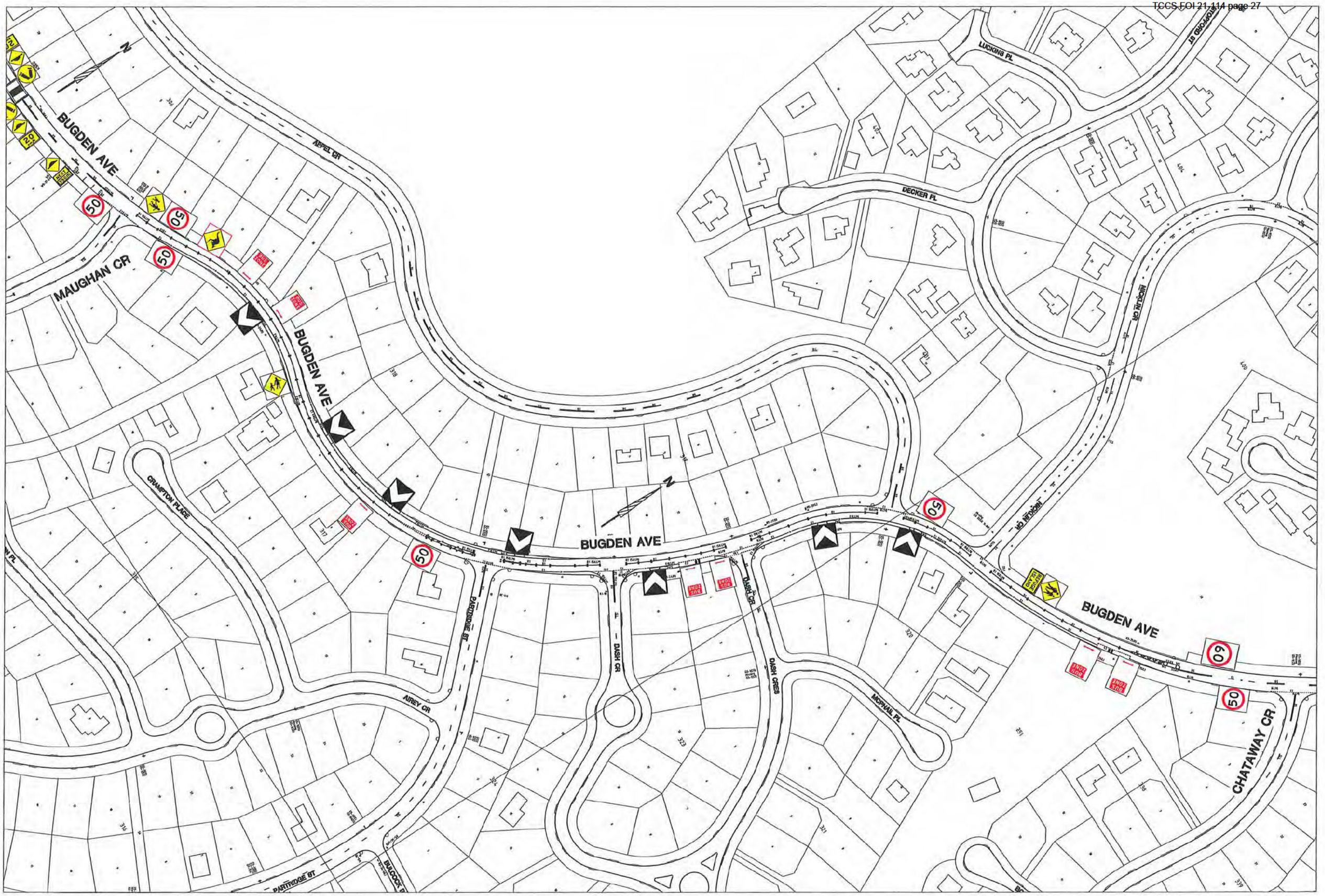
Traffic conditions should continue to be monitored along this road section to determine whether any future action is required.

Analysis of crash records show that the scheme has not reduced crashes in the 'after' period. However, for a more representative evaluation of safety impacts, crash records of a longer period (at least two to three years) for the 'before' and 'after' periods should be analysed.

APPENDIX A:
CONCEPT PLAN


NOTE THAT THE EXISTING LINEMARKING DOES NOT LEGALLY PERMIT PARKING FOR STANDARD SIZE CARS
EXISTING BUS STOP PEG
318
CONSTRUCT CONCRETE BLISTER ISLANDS TO PREVENT CORNER CUTTING AND REDUCE EXPOSED PEDESTRIAN CROSSING DISTANCE
2.0m MARKED SHOULDER PROVIDES AREA FOR RESIDENT PARKING AND IMPROVES SIGHT DISTANCE FOR RESIDENTS EXITING DRIVEWAYS ON INSIDE OF BENDS. NOTE THAT THE EXISTING LINEMARKING DOES NOT LEGALLY PERMIT PARKING FOR STANDARD SIZE CARS
TRIM EXISTING VEGETATION TO IMPROVE SIGHT DISTANCE
CONSTRUCT CONCRETE BLISTER ISLANDS
MAUGHAN CR
BUGDEN AV
PARTRIDGE ST
MATCH LINE A-A
STOPPED BUSES ALSO STOP CARS THEREBY REDUCING TRAFFIC SPEEDS AND CREATE GAPS IN TRAFFIC FLOWS
3.7m SHARED CYCLE/TRAFFIC LANES
DASH CR
APPEL CR
NICKLIN CR
CONSTRUCT CONCRETE BLISTER ISLAND
CONSTRUCT CONCRETE BLISTER ISLANDS TO PREVENT CORNER CUTTING THEREBY LIMITING SPEEDS
320
LEGEND
ERADICATE LINEMARKING
EXISTING LINEMARKING
APPLY NEW LINEMARKING
AMENDMENTS
AMENDMENT
APPROVAL
DATE
DRAWING STAGE – LATEST DATE INDICATES DRAWING STATUS
Scale
0m 10m 20m 30m
SCALE: A1 1:500, A3 1:1000
Design Agent
Consulting Engineers
Designed by MG
Drawn by BvA
Checked by MG
Approved by PF
Client
Project Officer: Fred Engle
Project Number: TBA
Project
BUGDEN AVENUE, FADDEN TRAFFIC CALMING IMPROVEMENTS
Drawing Title
CONSULTATION PLAN
Scale AS SHOWN
Date 8/07/10
Dwg. No. MNW 09032
Sheet 100
Revision 0
DRAFT


ERINDALE DRIVE
JESSOP PL
BUGDEN AVE
BUGDEN AVE
BUGDEN AVE
FREE PL
STERNBERG CR
SUGDEN AVE
MAUGHAN CR
MAUGHAN CR
HYNE PL
HYNE PL
COWLEY PL
RIORDAN ST
MINCHIN PL
BOULTONER CL
50
50
50
N
302
305
306
313
374
334
307
308
309
310
311
173
204


BUGDEN AVE
MAUGHAN CR
APPEL CR
BUGDEN AVE
LUCKINS PL
DECKER PL
MACQUAIL CR
CRAMPTON PLACE
PARTRIDGE ST
DASH CR
DASH CRES
MOSHAIL PL
BUGDEN AVE
CHATAWAY CR
AIREY CR
PARTRIDGE ST
50
60

ACT Government
Territory and Municipal Services

RESIDENTIAL STREET IMPROVEMENT STUDY

Macarthur, Fadden and Gowrie

Newsletter N° 1

Dear Resident

In May 2012 the ACT Legislative Assembly passed a motion relating to local traffic issues. Following concerns raised by local residents, the Territory and Municipal Services Directorate - Roads ACT has commissioned a study of local traffic safety and traffic management initiatives in:

- **Coyne Street** between Bugden St and Isabella Drive

Brown Consulting and Purdon Associates have been engaged by Roads ACT to undertake this study and will be preparing background analysis of local traffic conditions and accident statistics. This research will be used to inform the overall street improvement study and will be available to the public.

The **specific objectives** of the study are:

a) To identify and assess the **traffic safety and amenity issues** with emphasis on the traffic conditions in the nominated streets.

b) To consider and develop **options** which would mitigate/improve these issues.

c) To **evaluate these options** in terms of their expected technical effectiveness and economic performance.

d) To identify an **agreed solution** for the study area and prepare designs.

e) To recommend a **program of works** for implementation in future capital works programs.

f) To **consult with the community** throughout the process.

Over the next six months, Roads ACT will hold a range of public consultations in your area to capture comments on local traffic issues and give you the opportunity to comment on proposed street improvements. The consultations will be undertaken in three stages:

Stage 1: Information gathering

- Household survey
- A drop-in public information session at the Gowrie Primary School, on Tuesday 27 November 2012 from 4:30-7:30pm, to present traffic survey results and discuss local issues.
- A shop-front display at Chisholm Shops and Tuggeranong libraries for a period of six weeks in November – December 2012.

Stage 2: Developing Solutions

- Household survey
- A drop-in public information session to summarise findings and present a range of viable options will be organized mid February 2013.
- A shop-front display at Chisholm Shops for a period of six weeks in February – March 2013.

Stage 3: Reporting on findings

- Household Newsletter.
- A public exhibition of the agreed solutions for a period of six weeks in April – May 2013.

This Newsletter contains a **household survey** which is distributed to each residence and business in the study area. We would appreciate you completing the survey to assist with a better understanding of community concerns about local traffic issues in your suburb. The results of this survey will also help our project team consider options for improvements to local traffic management and safety.

Alternatively you can complete the same survey on-line at ACT Government's Time-to-Talk website **http://timetotalk.act.gov.au/**.

Information about the time and venue of the public display sessions will be provided in the **Canberra Times "Community Notice Board"** as well as **http://timetotalk.act.gov.au/.**

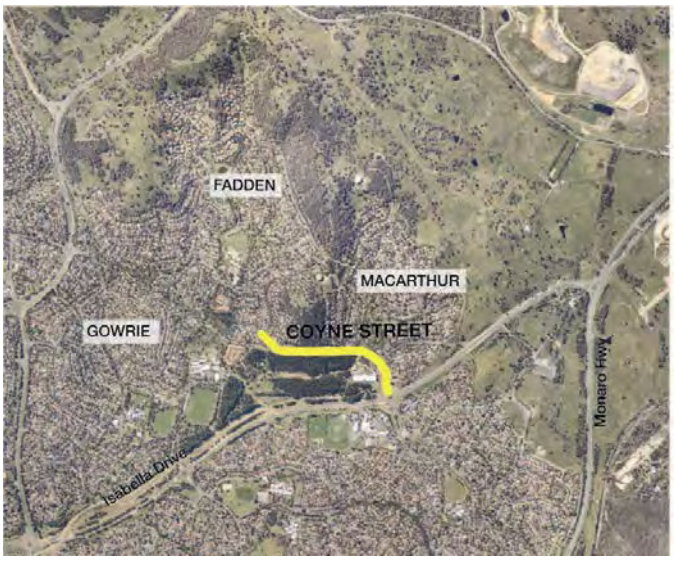
You can view the Roads ACT website **http://timetotalk.act.gov.au/** and comment online, or contact Purdons at: purdons@purdon.com.au or Fax 6248 8347 or 3/9 McKay St Turner ACT 2612.

For further information please call Roads ACT on (13 22 81) quoting the project title.

We look forward to your interest and active involvement in this project.

Rifaat Shoukrallah
Senior Manager
Traffic Management & Safety
Roads ACT

Project study area and nominated streets



ACT Government
Territory and Municipal Services

RESIDENTIAL STREET IMPROVEMENT STUDY

Coyne Street – Macarthur, Fadden & Gowrie

Household Survey

Dear Resident

Over recent years, TaMS (Roads ACT) has received complaints from residents in Chisholm, Gilmore and Richardson about traffic behavior and the unsafe nature of some local streets, and there was a motion passed in the ACT Legislative Assembly during 2012 on local traffic issues.

As a result, Roads ACT has commissioned Brown Consulting Pty Ltd and Purdon Associates Pty Ltd to study local traffic conditions with a view to improving the safety and amenity in the following street:

- **Coyne Street, between Bugden St and Isabella Dr**

We would appreciate your assistance to complete this short survey as a household (including your children and elderly parents).

PLEASE RESPOND TO THE FOLLOWING QUESTIONS BY EITHER CIRCLING YOUR ANSWER OR PLACING A TICK IN THE RELEVANT BOX

1. **Write your full address**.....

2. **Mark all age groups in your household** 1-8yrs 9-16yrs 17-25yrs 26-65yrs 66+yrs

3. **How many cars in your household?** None 1 car 2 cars 3+ cars

4. **Are there road safety issues in your local area which need to be addressed?**

   ☐ Yes ☐ No ☐ Unsure

5. **What types of traffic problems do you encounter in your local street and in other streets where you walk, drive, cycle or where your children go to school or play?** (Tick *one or more boxes*)

☐ 1.Speeding vehicles	☐ 7.Poor visibility for drivers
☐ 2.Cars travel on wrong side of road	☐ 8.Too much traffic in peak hours / all day
☐ 3.Dangerous intersection	☐ 9.Accident spot
☐ 4.Dangerous school crossing	☐ 10.“Rat running”
☐ 5.Trucks	☐ 11.Too much traffic noise / pollution etc
☐ 6.Parked out by cars	☐ 12.Other – see Question 6 below

6. **Do you have any other local traffic problems not specified above?**

.....

.....

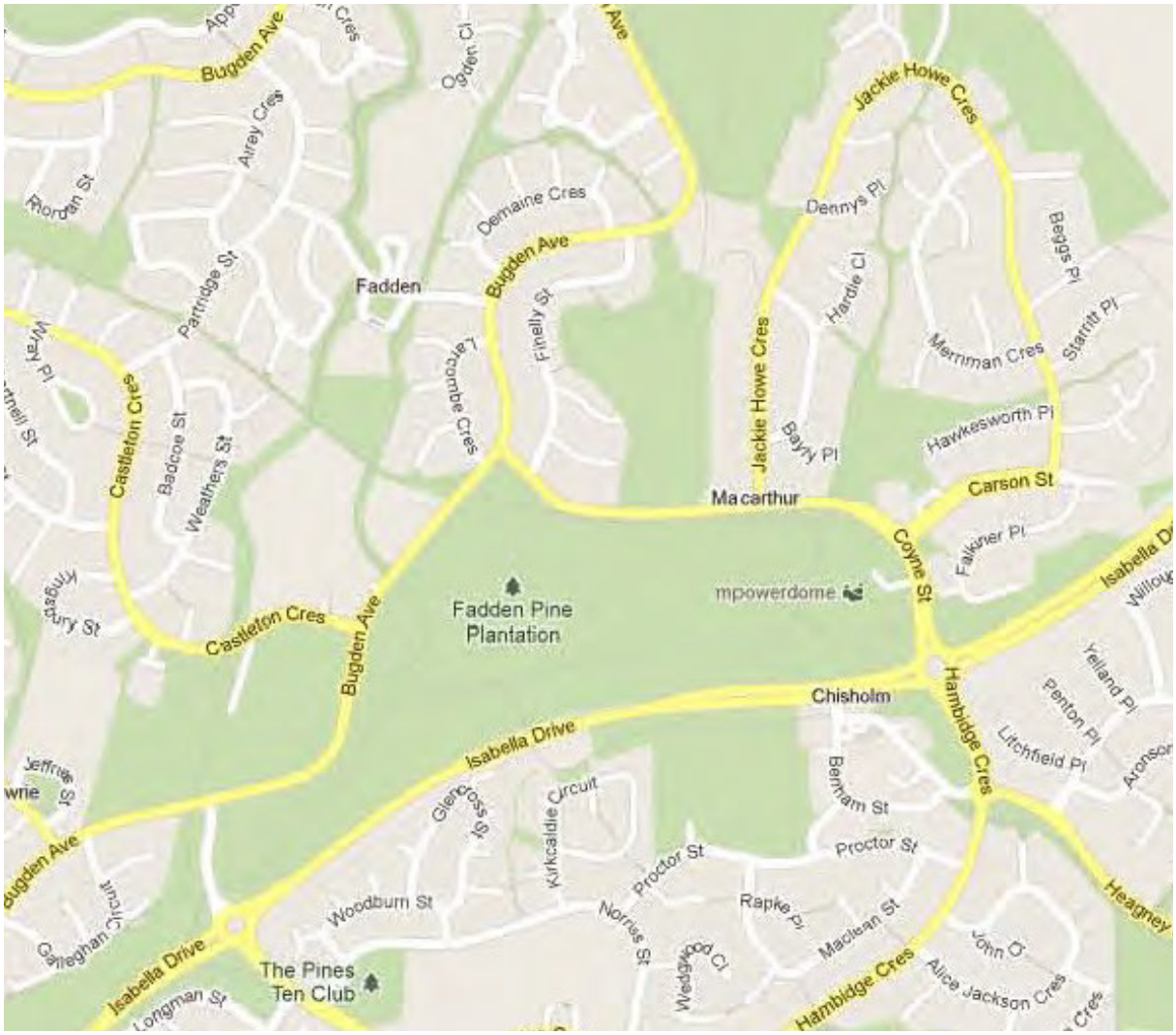
.....

PLEASE COMPLETE SURVEY OVER PAGE ➔

PLEASE RETURN THIS COMPLETED QUESTIONNAIRE BY FRIDAY 21 DECEMBER 2012

Email (purdons@purdon.com.au) **Fax** (02 6248 8347) **Mail** (in Reply Paid Envelope Provided)

7. **On the map below, mark a numbers corresponding to the location of a traffic related problem you identified in Questions 5 and 6.**



8. **Of the problems you described, which one do you believe requires the most immediate attention?**

.....

9. **Any further comments.**

.....

.....

.....

.....

.....

THANK YOU FOR YOUR COOPERATION

PLEASE RETURN THIS COMPLETED QUESTIONNAIRE BY FRIDAY 21 DECEMBER 2012

Email (purdons@purdon.com.au) **Fax** (02 6248 8347) **Mail** (in Reply Paid Envelope Provided)

ACT Government
Territory and Municipal Services

RESIDENTIAL STREET IMPROVEMENT STUDY

Macarthur, Fadden and Gowrie

Newsletter N° 1

In May 2012 the ACT Legislative Assembly passed a motion relating to local traffic issues. Following concerns raised by local residents, the Territory and Municipal Services Directorate - Roads ACT has commissioned a study of local traffic safety and traffic management initiatives on **Coyne Street** between Bugden Street and Isabella Drive.

Brown Consulting and Purdon Associates have been engaged by Roads ACT to undertake this study and will be preparing background analysis of local traffic conditions and accident statistics. This research will be used to inform the overall street improvement study and will be available to the public.

The **specific objectives** of the study are:

a) To identify and assess the **traffic safety and amenity issues** with emphasis on the traffic conditions in the nominated streets.

b) To consider and develop **options** which would mitigate/improve these issues.

c) To **evaluate these options** in terms of their expected technical effectiveness and economic performance.

d) To identify an **agreed solution** for the study area and prepare designs.

e) To recommend a **program of works** for implementation in future capital works programs.

f) To **consult with the community** throughout the process.

Over the next six months, Roads ACT will hold a range of public consultations in your area to capture comments on local traffic issues and give you the opportunity to comment on proposed street improvements. The consultations will be undertaken in three stages:

Stage 1: Information gathering

- Household survey.
- A drop-in public information session at the Gowrie Primary School, on Tuesday 27 November 2012 from 4:30-7:30pm, to present traffic survey results and discuss local issues.
- A shop-front display at Chisholm Shops and Tuggeranong libraries for a period of six weeks in November – December 2012.

Stage 2: Developing solutions

- Household survey.
- A drop-in public information session to summarise findings and present a range of viable options will be organized mid February 2013.
- A shop-front display at Chisholm Shops for a period of six weeks in February – March 2013.

Stage 3: Reporting on findings

- Household newsletter.
- Public exhibition of the agreed solutions for a period of six weeks in April – May 2013.

This Newsletter contains a **household survey** which is distributed to each residence and business in the study area. We would appreciate you completing the survey to assist with a better understanding of community concerns about local traffic issues in your suburb. The results of this survey will also help our project team consider options for improvements to local traffic management and safety.

Alternatively you can complete the same survey on-line at ACT Government's Time to Talk website **www.timetotalk.act.gov.au.**

Information about the time and venue of the public display sessions will be provided in the **Canberra Times "Community Notice Board"** as well as **www.timetotalk.act.gov.au.**

Comments may be sent to:

- Email: purdons@purdon.com.au
- Fax: 6248 8347
- Postal address: 3/9 McKay St Turner ACT 2612

For further information please call Roads ACT on 13 22 81 quoting the project title.

Project study area and nominated streets

DRAFT 09 Nov 12

Canberra Times - **Community Noticeboard**

Saturday 17 November 2012

Residential street improvement study for Macarthur, Fadden and Gowrie

The ACT Government has commenced a study into local traffic conditions in Macarthur, Fadden and Gowrie with particular emphasis on Coyne Street between Bugden Avenue and Isabella Drive.

A community drop-in consultation session will be held on Tuesday 27 November 2012 to seek feedback on traffic issues and potential solutions.

WHEN: 4.30 pm to 7.30 pm, Tuesday 27 November 2012
WHERE: Gowrie Primary School, Jefferies Street, Gowrie

A community survey is also available on **www.timetotalk.act.gov.au** or from the Tuggeranong and Erindale library or Tuggeranong Canberra Connect shopfront.

Consultation closes 5 pm Friday 21 December 2012.

A range of traffic improvement options will be prepared using information from the consultation. These options will be displayed for public comment early in 2013.

For more information please contact Canberra Connect on 13 22 81.

Macarthur, Fadden and Gowrie –

Update – June 2013

Roads ACT has now completed a study of the traffic conditions in Macarthur, Fadden and Gowrie. The aim of this project was to identify community concerns, develop options to improve traffic conditions and recommend a program of works.

The study involved a technical analysis of traffic speed, volume and crash data along Coyne Street and its surrounding streets. Consultation with the local community was an important part of the study.

A traffic management scheme has now been finalised to improve traffic conditions on this road.

Project background

The residents of Coyne Street and other road users have written to Ministers, members of the Legislative Assembly and Roads ACT regarding their concerns about traffic volumes, speeding and other road safety and amenity issues on these streets.

Roads ACT has developed the Traffic Warrant System (TWS) to identify the need for traffic management and road safety measures on residential streets. This system takes into consideration the total traffic volume, traffic speed, crash history and land use of each street to provide a ranking. Coyne Street ranked relatively high on the 2009 TWS.

On 2 May 2012 a motion was passed in the ACT Legislative Assembly calling on the ACT Government to consult and initiate traffic calming measures on Coyne Street.

Stage 1 Community consultation/feedback

In November/December 2012, Roads ACT collected feedback about issues of concern from residents of Macarthur, Fadden and Gowrie and the wider community.

The feedback received included 389 hardcopy survey responses and 33 online submissions. 10 people also attended an information session at the Gowrie Primary School on 27 November 2012.

Key concerns raised by the community included speeding, dangerous intersections, driveway safety and “rat running” through the suburbs.

The concerns identified as requiring immediate solutions were speeding, traffic safety and excessive traffic volumes.

Results of technical analysis of traffic data

The technical analysis of traffic data showed that 85th percentile speeds* are above the speed limit on Coyne Street (near Carson Street), Bugden Avenue (near Partridge Street and Bramston Street) and Castleton Crescent (near Partridge Street).

Traffic volumes on Sternberg Crescent, Kellett Street and Coyne Street (near Bugden Avenue and Carson Street) also exceed the desirable limits for the road environment.

*(*the speed at which 85% of the surveyed traffic is travelling at or below.)*

Proposed traffic management treatments

A traffic management scheme was developed to improve traffic conditions on Coyne Street as well as issues on surrounding streets identified during the analysis of traffic data and from community feedback.

The objectives of this scheme were to:

- reduce travelling speeds
- improve safety at intersections
- reduce traffic volumes
- discourage 'rat-running'.

The technical principles behind this scheme were:

- In order to reduce speeds all-day every day (24/7), it is necessary to place physical devices on the road so that motorists must slow down.
- These devices must be spaced evenly along the road to achieve the desired travel speed at, or below, the posted/default speed limit.
- Different devices serve different purposes, have different levels of effectiveness, and vary in construction cost. However, the aim of all these devices is to reduce speeding and encourage through-traffic to use the surrounding arterial roads.
- Slower speeds and devices which create safer crossing opportunities for pedestrians would also help to improve the safety and amenity of residents.

To view the proposed traffic management scheme View a PDF of the concept plan (PDF - 960KB, **please note:** *this map contains elements which cannot be made accessible. If you are experiencing difficulty accessing the information in this map please contact 13 22 81 to request a hard copy*) and summarised below.

To view a summary of the proposed treatments View a summary of the proposed treatments

STREET	MAIN ISSUES OF CONCERN	PROPOSED DEVICES

COYNE STREET	- Traffic crashes - Traffic speed - Intersection safety - Driveway visibility - Pedestrian safety	- A roundabout at the intersection with Jackie Howe Crescent - Jackie Howe Crescent - Speed cushions **Two options are proposed to address the issues at the Coyne Street/Bugden Avenue intersection:** **Option 1:** Re-aligning Coyne Street whereby it connects to Bugden Avenue at the Larcombe Crescent intersection. A roundabout is proposed at this new intersection. **Option 2:** Re-aligning Coyne Street whereby it connects to Bugden Avenue at the Larcombe Crescent intersection. A roundabout is proposed at this new intersection.
BUDGEN AVENUE	- Traffic crashes - Traffic speed - Driveway visibility - "Rat-running"	- Roundabouts and speed cushions south of Coyne Street - Speed cushions, raised platforms and pedestrian refuges between Coyne Street and Sternberg Crescent
CASTLETON CRESCENT	- Intersection safety - Traffic speed - Driveway visibility - Driveway safety	- Speed cushions - Raised platforms - A roundabout at the intersection with Sternberg Crescent - A roundabout at the intersection with Bugden Avenue
PARTRIDGE STREET	- Traffic speed - Intersection safety	- Speed cushions - Raised platforms
BRAMSTON STREET	- "Rat-running" - Intersection safety - Pedestrian safety	- Speed cushions

For information on the traffic calming devices see the impact of traffic calming devices document.

Stage 2 Community consultation/feedback

The community was consulted again in March/April 2013 to seek views on the proposed treatments for improvement.

The feedback received included 254 hardcopy responses and 63 online submissions. 40 people also attended the public display/information session at the Gowrie Primary School on 13 March 2013.

This feedback included:

- Strong support for the proposed scheme (69% of respondents).

- Preference for Option 1: Coyne Street re-alignment (73% of respondents)
- 44% of respondents supported the scheme 'as is'.
- 25% of respondents supported the scheme but suggested changes to some of the proposed treatments.
- Coyne Street was nominated as the priority street for treatments (44% of responses).

Final master plan

In view of the results of the technical analysis and the feedback received from the community, and considering the technical effectiveness of the proposed treatments, the final scheme has been modified and now incorporates some alternative treatments suggested and supported by the community.

It is important to note that the final scheme is an overall "Master Plan" for the area and that not all proposed devices will be installed at once. The "Master Plan" will guide the implementation of the scheme over a number of years due to annual budgetary constraints.

To view the Master Plan <View a PDF of the final scheme for implementation> (**please note:** *this map contains elements which cannot be made accessible. If you are experiencing difficulty accessing the information in this map please contact 13 22 81 to request a hard copy*).

Priorities and Staging

In that context, priorities have been assigned to the proposed treatments based on the results of the technical analysis and the feedback from the community. It is anticipated that the detailed design of Priority 1 treatments will take place in 2013/14. The implementation date of these works is yet to be determined and is dependent on the availability of funding.

Six months after the implementation of Priority 1 treatments, an evaluation of the effectiveness of these treatments will take place. The evaluation will include a technical analysis of the scheme's impacts and the residents' views of the extent to which the stated objectives were achieved. Further implementation of Priority 2 and 3 treatments will depend on the results of this evaluation.

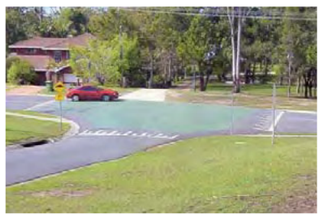
The Priority 1 treatments are three speed cushions, a raised platform and a pedestrian refuge on Coyne Street.

THE PROPOSED TRAFFIC MANAGEMENT TREATMENTS

This traffic management scheme aims to improve traffic conditions on Coyne Street, as well as issues on other streets identified during the analysis of traffic data and from community feedback.

The proposed treatment measures are shown in the attached concept plan and summarised below.

STREET	MAIN ISSUES OF CONCERN	PROPOSED TREATMENT DEVICES
COYNE STREET	• Traffic crashes • Traffic speed • Intersection safety • Driveway visibility • Pedestrian safety	▪ A roundabout at the intersection with Jackie Howe Crescent ▪ Pedestrian refuges ▪ Speed cushions **Two options are proposed to address the issues at the Coyne Street/Bugden Avenue intersection:** **Option 1:** Re-aligning Coyne Street whereby it connects to Bugden Avenue at the Larcombe Crescent intersection. A roundabout is proposed at this new intersection. **Option 2:** Improved signage and speed cushions on the section of Coyne Street prior to the existing Bugden Avenue intersection.
BUDGEN AVENUE	• Intersection safety • Traffic speed • Driveway visibility • "Rat-running"	▪ Roundabouts and speed cushions south of Coyne Street ▪ Speed cushions, raised platforms and pedestrian refuges between Coyne Street and Sternberg Crescent
CASTLETON CRESCENT	• Intersection safety • Traffic speed • Driveway visibility • Driveway safety	▪ Speed cushions ▪ Raised platforms ▪ A roundabout at the intersection with Sternberg Crescent ▪ A roundabout at the intersection with Bugden Avenue
PARTRIDGE STREET	• Traffic speed • Intersection safety	▪ Speed cushions ▪ Raised platforms
BRAMSTON STREET	• "Rat-running" • Intersection safety • Pedestrian safety	▪ Speed cushions



Raised platform

Speed cushions

MORE INFORMATION

For more information on any of the above proposed traffic management measures:

- Come to the public display at Gowrie Primary School on Wednesday 13 March 2013 between 4.30 pm – 7.30 pm
- Visit www.timetotalk.act.gov.au
- Email purdons@purdon.com.au
- Contact Canberra Connect on 13 22 81

ACT Government
Territory and Municipal Services

Residential Street Improvement Program
Macarthur, Fadden and Gowrie
Newsletter # 2 - March 2013

The ACT Government is currently assessing the traffic conditions in Macarthur, Fadden and Gowrie under its Residential Street Improvement Program. Brown Consulting and Purdon Associates have been commissioned to undertake this study.

In December 2012 Roads ACT collected feedback about issues of concern from residents of these suburbs and the wider community. Key areas of concern included speeding traffic, dangerous intersections, driveway safety and "rat-running" through the suburbs.

The technical analysis of traffic speed, volume and crash data also confirmed some of these issues.

RATIONALE FOR PROPOSED TREATMENTS

The proposed treatments take into consideration:

- results of the analysis of existing traffic and land-use data
- issues raised by residents and the wider community during the December 2012 consultation
- objectives established from the assessment of the above information.

OBJECTIVES

The objectives of this proposed traffic management scheme are to:

- reduce travelling speeds
- improve safety at intersections
- reduce traffic volumes
- discourage "rat-running".

TECHNICAL PRINCIPLES

In order to reduce speeds all day, every day (24/7), it is necessary to place physical devices on the road so that motorists must slow down.

These devices must be spaced evenly along the road to achieve the desired travel speed at, or below, the posted/default speed limit.

Different devices serve different purposes, have different levels of effectiveness, and vary in construction cost. However, the aim of all these devices is to reduce speeding and encourage through-traffic to use the surrounding arterial roads.

Slower speeds and devices which create safer crossing opportunities for pedestrians would also help to improve the safety and amenity of residents.

Examples of traffic management devices include roundabouts, raised platforms, speed cushions, painted medians and signage. Photos of these devices can be viewed at the public display or online at www.timetotalk.act.gov.au

PUBLIC DISPLAY

For more information on the proposed treatments come to the public display/information session which includes results of the earlier community consultation and the technical analysis.

When: Wednesday 13 March 2013 from 4.30 pm – 7.30 pm

Where: Gowrie Primary School
Jeffries Street, Gowrie

Representatives of the study team, including officers from Roads ACT, will be in attendance to explain the proposals, answer questions and discuss issues.

HAVE YOUR SAY

We now seek your views on these treatments to improve traffic conditions in your area, including the types of devices, their locations, and the priorities for their implementation.

Please review the proposed traffic management proposal and provide comments by returning the attached household survey in the reply paid envelope enclosed or by submitting it at the public display.

Alternatively you may complete an online survey on www.timetotalk.act.gov.au or email your comments to purdons@purdon.com.au

STAGED IMPLEMENTATION

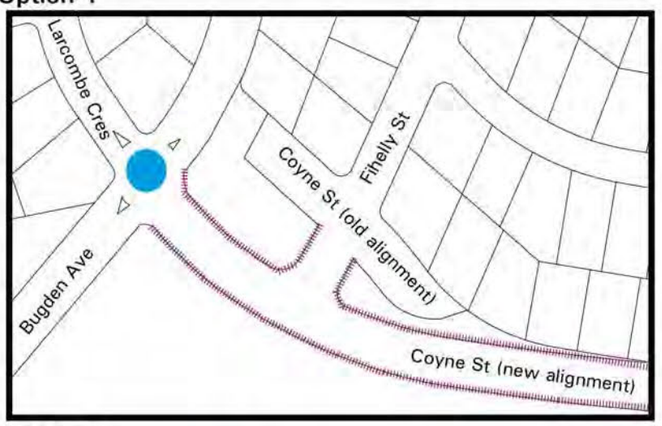
Following this round of consultation and assessment, the proposed devices will be subject to detailed design and costing. It is likely a staged implementation will be necessary over the coming years due to annual budgetary constraints, and priorities for implementation will be determined taking into account your views.

We look forward to your active involvement in this project. Your feedback will assist in determining the final scheme for improvement.

Rifaat Shoukrallah
Senior Manager
Traffic Management and Safety
Roads ACT
Territory and Municipal Services

Bugden Ave/Coyne St Intersection

Option 1



Option 2

Macarthur - Fadden - Gowrie Residential Street Improvements

ACT Government
Territory and Municipal Services

1 March 2013

Dear Stakeholder

Residential Street Improvement Program – Macarthur, Fadden and Gowrie
Stage 2 Consultation

The ACT Government is currently assessing the traffic conditions in Macarthur, Fadden and Gowrie in response to community complaints about speeding and traffic safety. Brown Consulting and Purdon Associates have been commissioned to undertake this study.

In December 2012 we collected feedback about issues of concern from residents of these suburbs and the wider community. We are now seeking further feedback on potential treatment options to improve the traffic conditions in these suburbs. These treatments have been developed to address feedback received during the earlier consultation period as well as the results of the technical analysis of traffic data.

We would like to provide you with the opportunity to give feedback on the proposed treatments for improvement. A newsletter with information about the treatments and a survey questionnaire are attached.

Please complete the attached questionnaire to express your views and send it back in the reply paid envelope enclosed by Friday, 12 April 2013. Alternatively, you may complete the survey online at www.timetotalk.act.gov.au or email your comments to purdons@purdon.com.au

If you would like more information about the proposed traffic management concepts you may

- Attend the public display/information session:
  When: Wednesday, 13 March 2013 from 4.30 pm – 7.30 pm
  Where: Gowrie Primary School
  Jeffries Street, Gowrie
- Visit www.timetotalk.act.gov.au
- Email purdons@purdon.com.au

Consultation closes at **5 pm Friday 12 April 2013.**

Yours sincerely

Rifaat Shoukrallah
Senior Manager – Traffic Management and Safety
Roads ACT

Residential Street Improvement Program

Macarthur, Fadden and Gowrie – Stage 2 Consultation

The ACT Government is currently assessing the traffic conditions in Macarthur, Fadden and Gowrie, to address community concerns and improve the safety and amenity of residents. Browns & Purdons have been engaged to undertake this study.

An important part of this project is seeking feedback from local residents and the surrounding community.

In December 2012 we collected feedback about issues of concern from local residents in these three suburbs, as well as the wider community. We are now seeking further feedback on potential options to improve traffic conditions in this local area. These options have been developed to address feedback received during the earlier consultation period and the results of the technical analysis of traffic data.

Community feedback

Key concerns raised by the community included speeding, dangerous intersections, driveway safety and "rat running" through the suburbs.

The concerns identified as requiring immediate solutions were speeding, traffic safety and excessive traffic volumes.

Results of technical analysis of traffic data

Technical analysis of traffic data showed that 85th percentile speeds* are above the speed limit on Coyne Street (near Carson Street), Bugden Avenue (near Partridge Street and Bramston Street) and Castleton Crescent (near Partridge Street).

Traffic volumes on Sternberg Crescent, Kellett Street and Coyne Street (near Bugden Avenue and Carson Street) also exceed the acceptable limits for the road environment.

*(*the speed at which 85% of the surveyed traffic is travelling at or below.)*

Rationale for proposed treatments

The proposed treatments take into consideration:

- results of the analysis of existing traffic and land-use data
- issues raised by residents and the wider community during the earlier consultation period in December 2012
- objectives established from the assessment of the above information.

Objectives

The objectives of the proposed traffic management scheme are to:

- reduce travelling speeds
- improve safety at intersections
- reduce traffic volumes
- discourage 'rat-running'.

Technical principles

In order to reduce speeds all-day every day (24/7), it is necessary to place physical devices on the road so that motorists must slow down.

These devices must be spaced evenly along the road to achieve the desired travel speed at, or below, the posted/default speed limit.

Different devices serve different purposes, have different levels of effectiveness, and vary in construction cost. However, the aim of all these devices is to reduce speeding and encourage through-traffic to use the surrounding arterial roads.

Slower speeds and devices which create safer crossing opportunities for pedestrians would also help to improve the safety and amenity of residents.

Proposed traffic management treatments

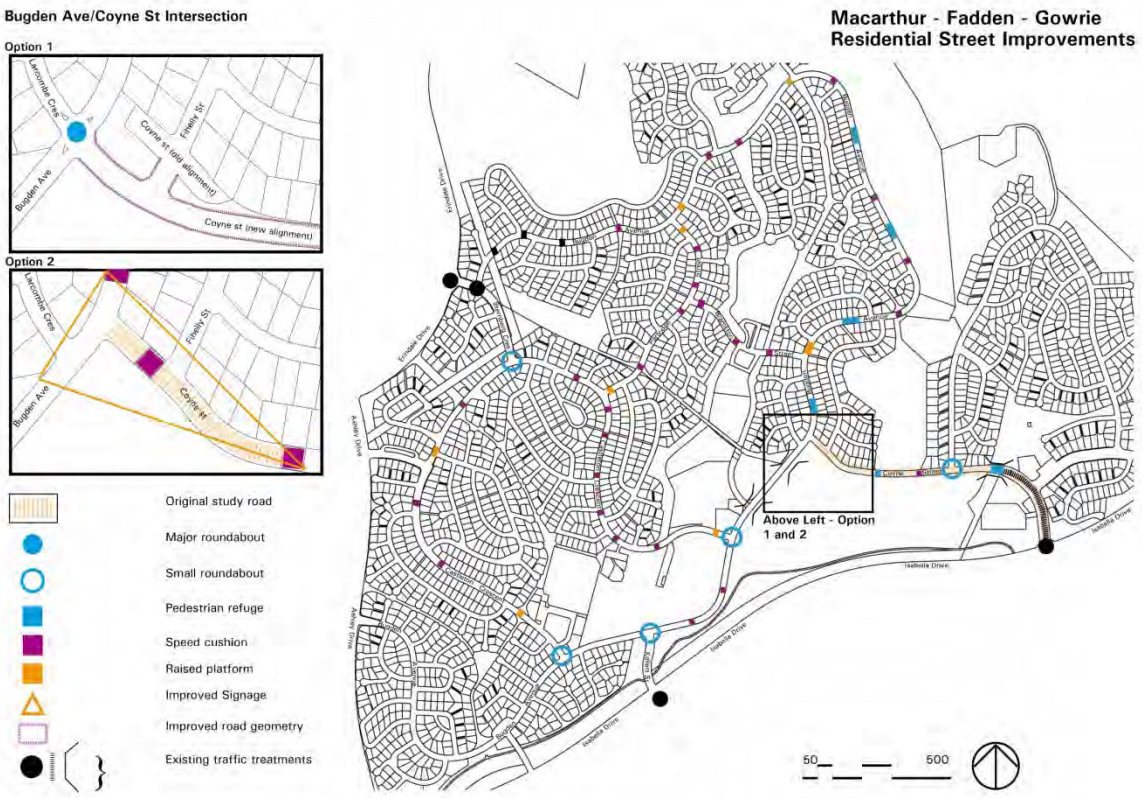
This traffic management scheme aims to improve traffic conditions on Coyne Street, as well as issues on other streets identified during the analysis of traffic data and from community feedback.

The proposed treatment measures are shown in the concept plan (insert hyperlink) and summarised below.

STREET	MAIN ISSUES OF CONCERN	PROPOSED DEVICES
COYNE STREET	• Traffic crashes • Traffic speed • Intersection safety • Driveway visibility • Pedestrian safety	▪ A roundabout at the intersection with Jackie Howe Crescent ▪ Pedestrian refuges ▪ Speed cushions **Two options are proposed to address the issues at the Coyne Street/Bugden Avenue intersection:** **Option 1:** Re-aligning Coyne Street whereby it connects to Bugden Avenue at the Larcombe Crescent intersection. A roundabout is proposed at this new intersection. **Option 2:** Improved signage and speed cushions on the section of Coyne Street prior to the existing Bugden Avenue intersection.
BUDGEN AVENUE	• Intersection safety • Traffic speed • Driveway visibility • "Rat-running"	▪ Roundabouts and speed cushions south of Coyne Street ▪ Speed cushions, raised platforms and pedestrian refuges between Coyne Street and Sternberg Crescent
CASTLETON CRESCENT	• Intersection safety • Traffic speed • Driveway visibility • Driveway safety	▪ Speed cushions ▪ Raised platforms ▪ A roundabout at the intersection with Sternberg Crescent ▪ A roundabout at the intersection with Bugden Avenue
PARTRIDGE STREET	• Traffic speed • Intersection safety	▪ Speed cushions ▪ Raised platforms
BRAMSTON STREET	• "Rat-running" • Intersection safety • Pedestrian safety	▪ Speed cushions

For information on the traffic calming devices visit (insert link).

Map



Raised platform

Speed cushions

Staged implementation

Following this round of consultation and assessment, the proposed devices will be subject to detailed design and costing. It is likely a staged implementation will be necessary over the coming years due to annual budgetary constraints, and priorities for implementation will be determined taking into account your views.

Have your say

To provide feedback or for more information on any of the above proposed traffic management measures:

- **Visit** the public display/information session at Gowrie Primary School on Wednesday 13 March 2013 between 4.30 pm – 7.30 pm
- **Complete** an online survey (insert link)

- **Email** purdons@purdon.com.au
- **Contact** Canberra Connect on 13 22 81

Text for Time to Talk

Residential Street Improvement Program
Macarthur, Fadden and Gowrie – Stage 2 consultation

The ACT Government is currently assessing the traffic conditions in Macarthur, Fadden and Gowrie, to address community concerns and improve the safety and amenity of residents. Browns & Purdons have been engaged to undertake this study.

An important part of this project is seeking feedback from local residents and the surrounding community.

In December 2012 we collected feedback about issues of concern from local residents in these three suburbs, as well as the wider community. We are now seeking further feedback on potential options to improve traffic conditions in this local area. These options have been developed to address feedback received during the earlier consultation period and the results of the technical analysis of traffic data.

COMMUNITY FEEDBACK

Key concerns raised by the community included speeding, dangerous intersections, driveway safety and "rat running" through the suburbs.

The concerns identified as requiring immediate solutions were speeding, traffic safety and excessive traffic volumes.

RESULTS OF TECHNICAL ANALYSIS OF TRAFFIC DATA

- 85th percentile speeds* are above the speed limit on Coyne Street (near Carson Street), Bugden Avenue (near Partridge Street and Bramston Street) and Castleton Crescent (near Partridge Street).
- Traffic volumes on Sternberg Crescent, Kellett Street and Coyne Street (near Bugden Avenue and Carson Street) exceed the acceptable limits for the road environment.

**the speed at which 85% of the surveyed traffic is travelling at or below.*

THE PROPOSED TRAFFIC CALMING TREATMENTS

A number of traffic improvement treatments are proposed to address the above concerns. These are summarised below and shown on the attached plan:

STREET	MAIN ISSUES OF CONCERN	PROPOSED TREATMENT DEVICES
COYNE STREET	• Traffic crashes • Traffic speed • Intersection safety • Driveway visibility • Pedestrian safety	▪ A roundabout at the intersection with Jackie Howe Crescent ▪ Pedestrian refuges ▪ Speed cushions **Two options are proposed to address the issues at the Coyne Street/Bugden Avenue intersection:** **Option 1:** Re-aligning Coyne Street whereby it connects to Bugden Avenue at the Larcombe Crescent intersection. A roundabout is proposed at this new intersection. **Option 2:** Improved signage and speed cushions on the section of Coyne Street prior to the existing Bugden Avenue intersection.
BUDGEN AVENUE	• Intersection safety • Traffic speed • Driveway visibility • "Rat-running"	▪ Roundabouts and speed cushions south of Coyne Street ▪ Speed cushions, raised platforms and pedestrian refuges between Coyne Street and Sternberg Crescent
CASTLETON CRESCENT	• Intersection safety • Traffic speed • Driveway visibility • Driveway safety	▪ Speed cushions ▪ Raised platforms ▪ A roundabout at the intersection with Sternberg Crescent ▪ A roundabout at the intersection with Bugden Avenue
PARTRIDGE STREET	• Traffic speed • Intersection safety	▪ Speed cushions ▪ Raised platforms
BRAMSTON STREET	• "Rat-running" • Intersection safety • Pedestrian safety	▪ Speed cushions

To view the plan view <Insert link to map>

For more information about the proposed traffic calming treatments please view <Insert link to Impacts of traffic calming devices>

OBJECTIVES OF THE PROPOSED TREATMENTS

The objectives of the proposed traffic management scheme are to:

- reduce travelling speeds
- improve safety at intersections
- reduce traffic volumes
- discourage “rat-running”.

STAGED IMPLEMENTATION

Following this round of consultation and assessment, the proposed devices will be subject to detailed design and costing. It is likely a staged implementation will be necessary over the coming years due to annual budgetary constraints, and taking into account your views.

HAVE YOUR SAY

- **Come to the public display/information session** at Gowrie Primary School on Wednesday 13 March 2013 between 4.30 pm – 7.30 pm
- **Visit** www.timetotalk.act.gov.au
- **Email** purdons@purdon.com.au
- **Contact** Canberra Connect on 13 22 81

Consultation closes **5 pm Friday 12 April 2013.**

ACT Government
Territory and Municipal Services

RESIDENTIAL STREET IMPROVEMENT PROGRAM

Macarthur, Fadden and Gowrie

Household Survey #2

The ACT Government is assessing traffic conditions in Chisholm, Richardson and Gilmore in response to community concerns about speeding and traffic safety.

This survey seeks to gather your feedback on the proposed options for improvement. It is recommended that you read the attached Newsletter, and if possible, view the material at the public display or visit www.timetotalk.act.gov.au for more information, before completing this survey.

The information you provide will assist to inform the determination of the final scheme.

PLEASE SEND THIS FORM BACK TO PURDON ASSOCIATES IN THE REPLY PAID ENVELOPE PROVIDED OR DROP IT INTO THE BOX PROVIDED AT THE PUBLIC DISPLAY.

PLEASE RESPOND TO THE FOLLOWING QUESTIONS BY CIRCLING YOUR ANSWER

---

1. Where do you live?

Street: .....

Suburb: .....

2. Do you generally support the proposed scheme?

Yes No Unsure

3. Which improvement option would you support at the Coyne Street/Bugden Avenue intersection?

Option 1 Option 2 Unsure

4. Would you object to a traffic calming device being placed near your property?

Yes No Unsure

5. Indicate any changes you would like made to the scheme:

Name the street, the device(s) and your reason for the change.

Street.....

Device.....

Reason for change.....

.....

.....

.....

6. Nominate up to THREE treatments in this scheme which you believe should have the highest priority for implementation.

Please indicate the street and device.

First.....
.....
.....
.....

Second.....
.....
.....
.....

Third.....
.....
.....
.....

7. Are you satisfied with this opportunity to provide feedback on traffic management in Chisholm, Richardson and Gilmore?

Very satisfied

Satisfied

Neither satisfied or dissatisfied

Dissatisfied

Very dissatisfied

8. Do you have any further comments about the proposed treatments for improvement?

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

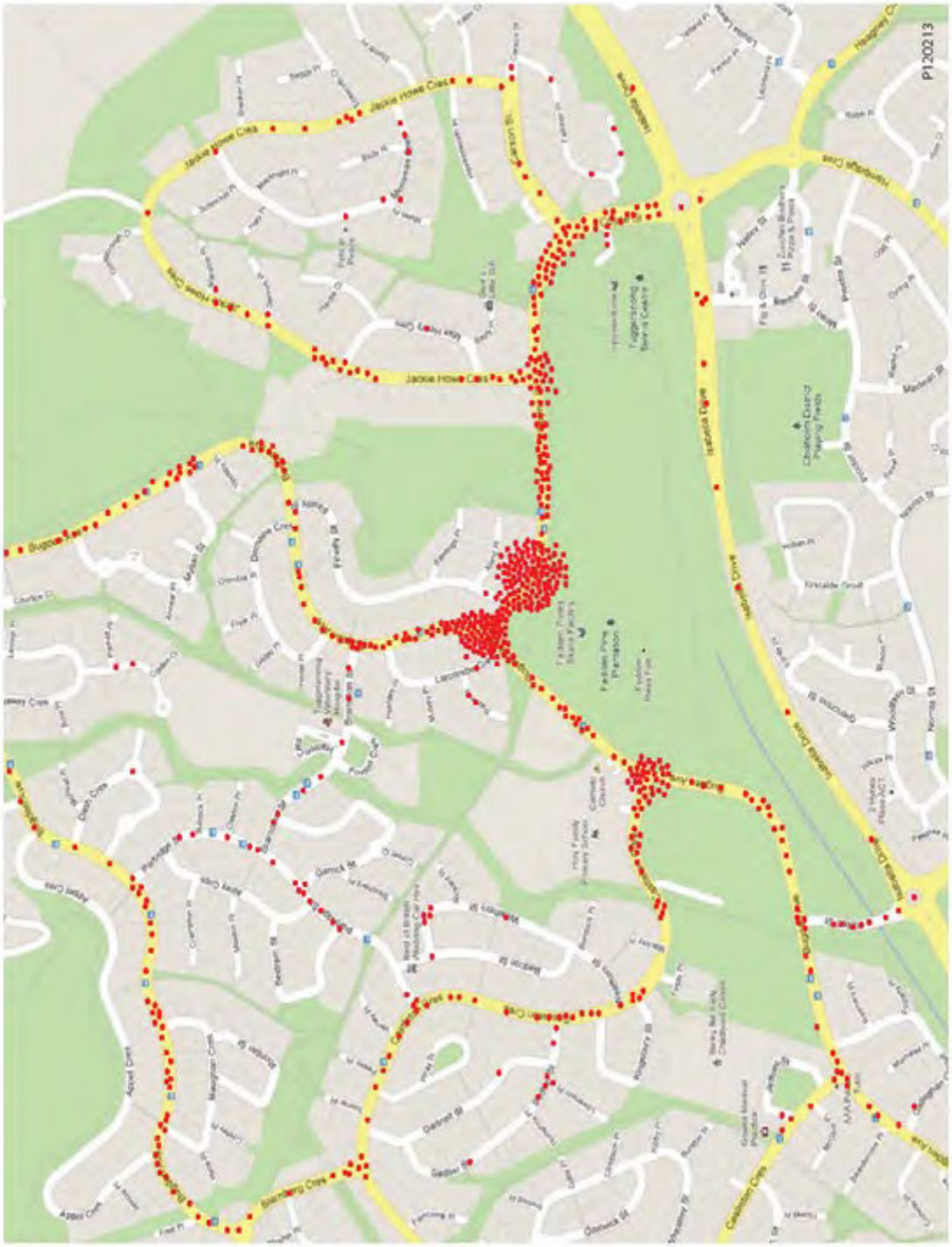
.....

.....

THANK YOU FOR YOUR COOPERATION AND CONTRIBUTION

PLEASE RETURN THIS COMPLETED QUESTIONNAIRE BY 5 PM FRIDAY 12 APRIL 2013
Email: purdons@purdon.com.au Fax: 02 6248 8347 Mail: Via reply paid envelope provided
For more information contact Canberra Connect on 13 22 81

Figure 3-2: Indicative Locations of Traffic Issues



Source: Household & Online Surveys (February 2013, Purdon)

ACT Government
Territory and Municipal Services

RESIDENTIAL STREET IMPROVEMENT PROGRAM
Macarthur, Fadden, Gowrie

Impacts of traffic calming devices

To assist your assessment of the proposed concepts, a summary of the positive and negative impacts of the proposed traffic calming devices is tabled below.

		Advantages	Disadvantages	Cost
	**"Major" Roundabout with Coyne Street realignment**	– slows traffic – resolves Coyne St geometry issues – aids access/egress to/from Coyne St – improves intersection safety	– major expenditure – issues related to encroachment into reserve	High to very high cost
	**Small Roundabout**	– slows traffic – defines traffic priorities – improves pedestrian safety	– can be visually displeasing – can increase traffic difficulties for pedestrians and cyclists	Moderate to high cost
	**Pedestrian refuge**	– improves pedestrian access and safety – can reduce speeds if combined with lane narrowing and/or bus stops	– may require removal of on street parking to create room	Low to moderate cost
	**Speed cushions**	– reduce traffic speed – improve traffic safety – indirectly reduce traffic volume – bus friendly – busses straddle a cushion	– can transfer a problem by diverting traffic to other route(s)	Low cost
	**Raised platform**	– reduces traffic speeds – improves pedestrian safety	– may increase traffic noise just before and after the platform – not as bus friendly as the speed cushions	Moderate to low cost

Macarthur, Fadden, Gowrie LATM study - Community Noticeboard Text – for 2 March 2013

Residential street improvement study for Macarthur, Fadden and Gowrie – Stage 2 consultation

The ACT Government is currently undertaking a study into local traffic conditions in Macarthur, Fadden and Gowrie with particular emphasis on Coyne Street between Bugden Avenue and Isabella Drive.

In December 2012 we collected feedback about issues of concern from residents of these suburbs and the wider community. A range of traffic improvement options have now been developed to address the community's concerns as well as the results of the technical analysis of traffic data. We now seek feedback on the potential treatment options to improve the traffic conditions in these suburbs.

A newsletter which summarises the proposed traffic improvements and a survey form for your feedback is being distributed to all houses in these suburbs.

A public display/community drop-in consultation session will be held on Wednesday 13 March 2013 to seek feedback on the proposed treatments.

WHEN: 4.30 pm to 7.30 pm, Wednesday 13 March 2013
WHERE: Gowrie Primary School, Jefferies Street, Gowrie

The community survey is also available on **www.timetotalk.act.gov.au** or from the Tuggeranong and Erindale libraries or the Tuggeranong Canberra Connect shopfront. You may also email your comments to purdons@purdon.com.au

Consultation closes 5 pm Friday 12 April 2013.

For more information please contact Canberra Connect on 13 22 81.

Interim Draft Report

Residential Street Improvement Study

Macarthur, Fadden and Gowrie

Stage 2 – Summary of Community Consultations

(includes survey results analysed to 17 April 2013)

22 April 2013

PURDON
PLANNING SUSTAINABLE FUTURES

Table of Contents

1.0 INTRODUCTION 1
1.1 Purpose 1
1.2 Background 1
1.3 Project Objectives 1
1.4 Overall Consultation Strategy 2
1.5 Study Area 3

2.0 CONSULTATIONS 5
2.1 Media Information 5
2.2 Household Newsletter 5
2.3 Household Survey 5
2.4 Online Survey 5
2.5 Web Page information 5
2.6 Tuggeranong Community Council Briefing 5
2.7 Community Display 6
2.8 Public Submissions 6
2.9 Other Stakeholder Briefing 6

3.0 SUMMARY OF STAGE ONE CONSULTATIONS 7

4.0 SURVEY RESULTS – STAGE TWO 10
4.1 Reponses by Suburb (Q1) 10
4.2 Response by Street 11
4.3 Support for Proposals (Q2) 12
4.4 Coyne Street Options (Q3) 13
4.5 Proposed Changes (Q4) 14
4.6 Priority Treatments (Q5) 19
4.7 Satisfaction with Consultation Process (Q6) 21
4.8 Further Comments (Q7) 22

5.0 CONCLUSIONS 24

ATTACHMENTS 25

Figures

Figure 1-1: Study Area Context 3
Figure 1-2: Study Area 4
Figure 3-1: Top Five Traffic and Safety Problems 7
Figure 3-2: Indicative Locations of Traffic Issues 9
Figure 4-1: Survey Response by Suburb 10
Figure 4-2: Survey Responses by Street 11
Figure 4-3: Support for Proposals 12
Figure 4-4: Coyne Street Options 13
Figure 4-5: Level of Support for Proposals 14
Figure 4-6: Bugden Avenue Changes 16
Figure 4-7: Castleton Crescent Changes 17
Figure 4-8: Coyne Street Changes 17
Figure 4-9: Proposed Changes to Scheme 18
Figure 4-10: First Priority Street 20
Figure 4-11: Coyne Street Priority Treatments 20
Figure 4-12: Level of Satisfaction with Consultation Process 21
Figure 4-13: Streets Mentioned in Further Comments 22

Tables

Table 4-1: Response by Suburb 10
Table 4-2: Level of Support for Proposals 12
Table 4-3: Coyne Street Options 13
Table 4-4: Level of Support and Respondents who Proposed Change 14
Table 4-5: Change/ No Change to Proposals 15
Table 4-6: Streets Listed as a First Priority for Treatment 19
Table 4-7: Satisfaction with Consultation Process 21
Table 4-8: Most Frequent Issues/Devices Raised for Each Street in Further Comment 23

Attachments

Attachment A: Household Newsletter #2 25
Attachment B: Household Survey #2 25

1.0 Introduction

1.1 Purpose

This interim report provides a summary of the second stage of the community consultation process and outcomes for the Residential Street Improvement study in Macarthur, Fadden and Gowrie being undertaken by Brown Consulting and Purdon Associates for Roads ACT in the Territory and Municipal Services Directorate (TAMS).

The consultation period for Stage 2 ran from 1st March 2013 to 12th April 2013.

The report includes an analysis of 317 surveys (254 household surveys and 63 electronic) received by Purdons as at 17 April 2013 and other comments received by the project team during the consultation process.

1.2 Background

In late 2012, Roads ACT commenced a residential street improvement study for Macarthur, Fadden and Gowrie in Tuggeranong in response to comments received from the community about traffic safety issues in the local area. The study was also undertaken in response to a motion passed in the ACT Legislative Assembly in May 2012 calling for a study of local traffic issues.

The current study is one of several initiatives being undertaken by Roads ACT in Tuggeranong and other parts of Canberra.

1.3 Project Objectives

The specific objectives of the study are:

a) To identify and assess the traffic safety and amenity issues with emphasis on the traffic conditions in the nominated street (Coyne Street).

b) To consider and develop options which would mitigate/improve these issues.

c) To evaluate these options in terms of their expected technical effectiveness and economic performance.

d) To identify an agreed solution for the study area and prepare designs.

e) To recommend a program of works for implementation in future capital works programs.

f) To consult with the community throughout the process.

1.4 Overall Consultation Strategy

A consultation strategy has been prepared for the duration of the project, in conjunction with Roads ACT, to capture comments on local traffic issues and provide the community with an opportunity to comment on proposed street improvements. The consultations are being undertaken in three stages:

Stage 1: Information gathering

- Media release from the Minister for TAMS
- Presentation to Tuggeranong Community Council
- Household newsletter
- Household survey
- Electronic survey
- A drop-in public information session at the Gowrie Primary School between 4:30 and 7:30pm on Tuesday 27 November 2012 to present traffic survey results and discuss local issues.
- A shop-front display at Chisholm Shops and Tuggeranong libraries for a period of six weeks in November – December 2012.

Stage 2: Developing Solutions

- Media release from the Minister for TAMS
- Presentation to Tuggeranong Community Council
- Household newsletter
- Household survey
- Electronic Survey
- A drop-in public information session at the Gowrie Primary School between 4:30 and 7:30pm on Wednesday 13 March 2013 to summarise findings from the stage one consultations and traffic analysis, and to present the proposed traffic management scheme for the three suburbs

Stage 3: Reporting on findings

- Media release from the Minister for TAMS
- Household Newsletter
- Information on the ACT Government website.

1.5 Study Area

The study area covers the suburbs of Macarthur, Fadden and Gowrie as shown on Figure 1-1 and Figure 1-2.

The area is bounded by Isabella Drive, Ashley Drive and Erindale Drive.

The specific street listed in the study Brief is Coyne Street from Bugden Avenue to Isabella Drive, although residents were also invited to comment on any problems experienced in other local streets in the general study area.

As at August 2011, the ABS census indicated that the study area contained a resident population of approximately 7,615 in 2,763 households (private dwellings).

The study area also includes the following principal land uses that are local traffic generators:

- Schools
- Scout hall
- Community Park (Fadden Pines)
- Indoor District tennis centre
- Local shops.
- Playing Fields

Figure 1-1: Study Area Context

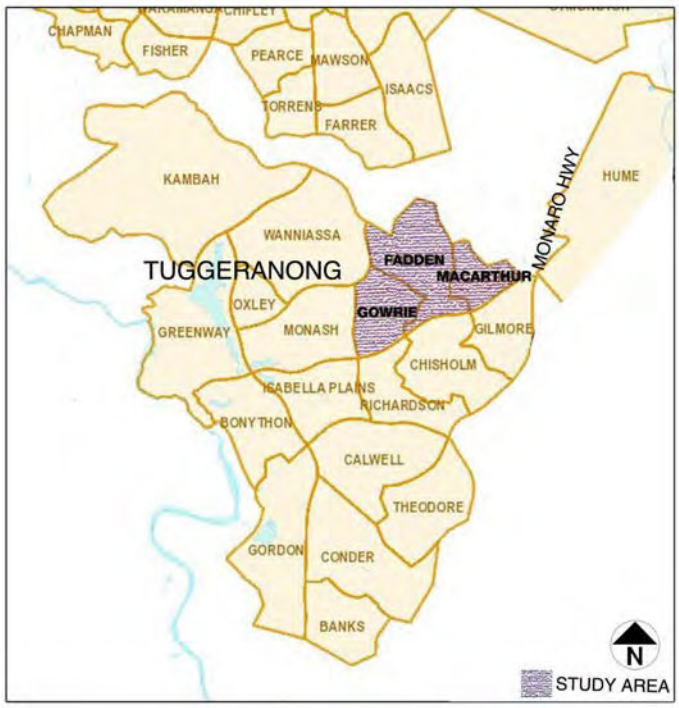


Figure 1-2: Study Area

2.0 Consultations

A range of consultation measures have been employed by Roads ACT for this study as summarised below.

2.1 Media Information

The Canberra Times has been used as the basis for a media release to inform residents of the Study and to provide details about the community information display.

2.2 Household Newsletter

A household newsletter informing residents of the proposed study and consultation process was delivered to all households, as well as business outlets, schools and other land uses in the study area during February – March 2013. Total distribution was to approximately 2,763 households. A copy of Newsletter #2 is in Attachment A.

2.3 Household Survey

A two page household survey with reply paid envelope was circulated to all households with the above newsletter.

As at 17 April 2013, a total of 254 responses were received and have been analysed (refer Section 3.0 below).

2.4 Online Survey

An online survey similar to the household survey was established on the ACT Government's Time-To-Talk website.

As at 25 March, 2013, a total of 63 responses were received, analysed and incorporated into the overall survey results outlined below (refer Section 4.0 below).

2.5 Web Page information

Information about the project was uploaded on the Time-To-Talk website.

2.6 Tuggeranong Community Council Briefing

A presentation on the study was provided to members of the Tuggeranong Community Council (TCC) in March 2013 at the Tuggeranong Southern Cross Club. Approximately 40 people attended this presentation, including several elected Local and Federal members.

The presentation outlined the study objectives, timetable and approach including the broad consultation strategy, as well as the proposed concept plan for traffic management improvements in the area.

2.7 Community Display

A public display/information session was held in the Gowrie Primary School hall on Wednesday, 13 March 2013. The display was advertised in the Canberra Times Community Notice Board as well as in the newsletter and online.

About 40 local residents attended in this session.

Information presented at the display included the following:

- Study area context
- Results of Stage One Consultation
- Results of technical assessment of traffic speed, volume and crash data
- Proposed traffic management scheme
- Photos of proposed traffic calming devices.

2.8 Public Submissions

Members of the public were also invited to submit comments on the study, consultation process and proposed devices. A total of 11 submissions, separate to the survey forms; have been received by TAMS/Purdons covering a variety of matters including comments on specific street proposals, newsletter distribution problems, justification for the proposed devices and privacy issues.

2.9 Other Stakeholder Briefing

A number of other stakeholders, including ACTION Buses, Pedal Power, NRMA Motoring and Services and Motorcycle Riders Association were provided with a copy of the newsletter and survey form, and invited to participate in the consultation process.

No individual representation from these stakeholder organisations have been received to date.

3.0 Summary of Stage One Consultations

A wide range of local traffic issues were raised by local residents during the stage one consultations by way of survey responses and other comments at the TCC public meeting and the public display.

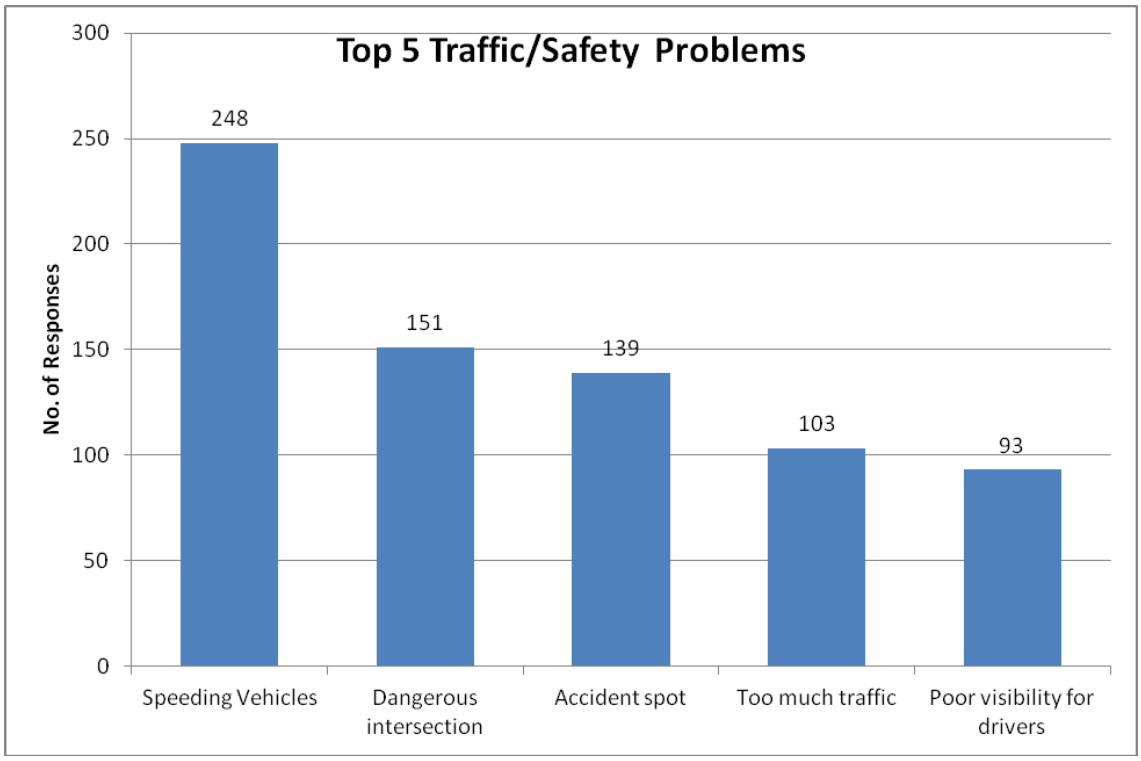
A total of 389 household surveys and 33 electronic surveys were received from local residents representing 14% of total households in the study area.

The top five (5) traffic issues included in comments from the local residents are shown in Figure 3-1 and included:

- Speeding
- Dangerous intersections
- Accident spots
- Peak hour traffic volume
- Poor driver visibility.

A total of 9% of respondents stated they had no concerns regarding traffic and safety in the area.

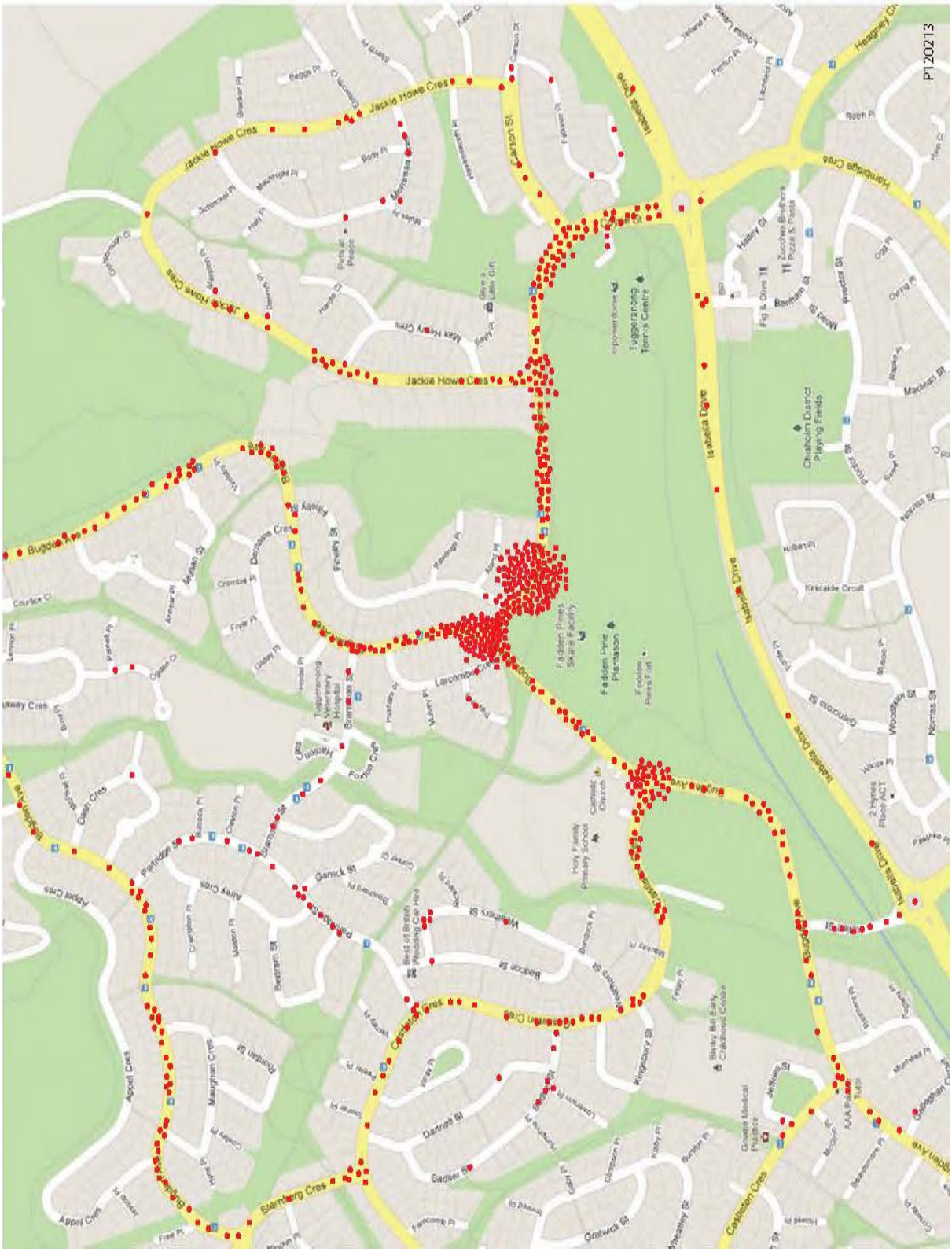
Figure 3-1: Top Five Traffic and Safety Problems



Source: Household & Online Surveys (February 2013, Purdon)

Figure 3-2 summarises the geographic location of traffic issues identified by local residents, and highlight a concentration of problems on Coyne Street, Bugden Avenue and Castleton Crescent and Jackie Howe Crescent.

Figure 3-2: Indicative Locations of Traffic Issues



Source: Household & Online Surveys (February 2013, Purdon)

4.0 Survey Results – Stage Two

This section summarises the main results of the stage two household and on-line surveys.

A total of 317 survey responses have been analysed in this report up to 17 April 2013, comprising 254 household surveys and 63 on-line surveys. This represents a response rate of about 11% of all households in the study area.

Overall there is a very strong support for the proposed traffic management scheme distributed for consultation. However, about 47% of households also requested changes to some treatments in the proposed plan.

4.1 Reponses by Suburb (Q1)

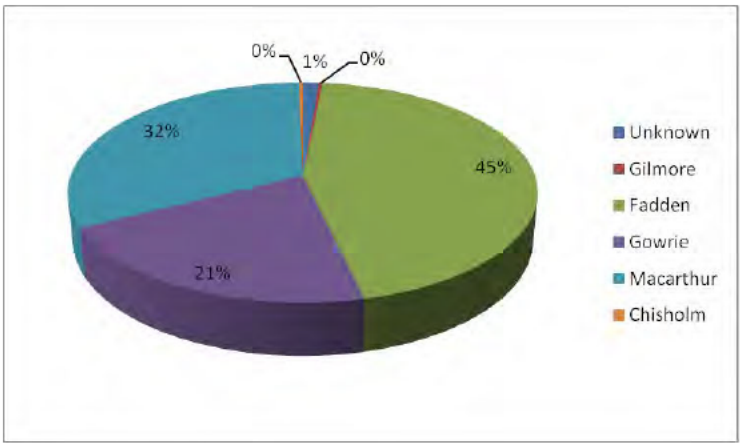
The majority of responses came from Fadden, followed by Macarthur and Gowrie.

Table 4-1: Response by Suburb

Suburb	Respondents	% Responses
Macarthur	102	32%
Fadden	142	45%
Gowrie	67	21%
Gilmore	1	0%
Chisholm	1	0%
Un-stated	4	1%
Total	317	100%

Source: Household & Online Surveys (March 2013, Purdon)

Figure 4-1: Survey Response by Suburb

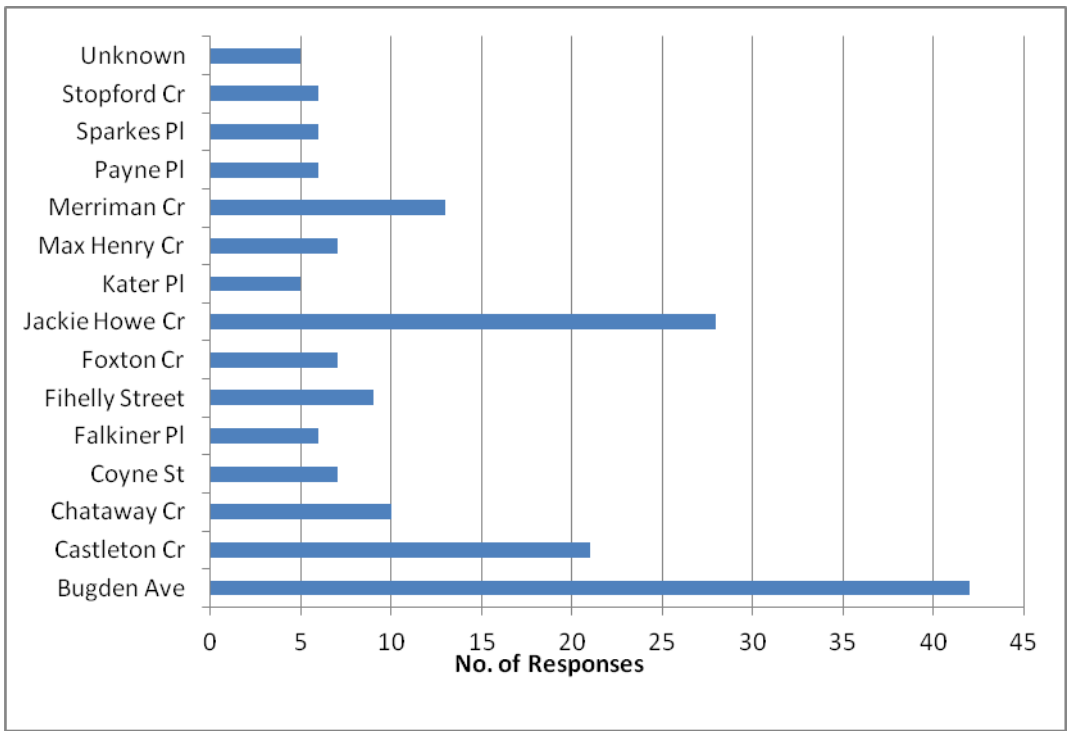


Source: Household & Online Surveys (March 2013, Purdon)

4.2 Response by Street

Figure 4-2 shows the distribution of survey responses received from residents of each street. The volume of responses from Bugden Crescent, Castleton Crescents and Jackie Howe Crescent reflects the length and number of households in each street and confirms interest from these local residents in local traffic issues.

Figure 4-2: Survey Responses by Street



Source: Household & Online Surveys (March 2013, Purdon)

4.3 Support for Proposals (Q2)

Respondents were asked if they supported the proposed traffic management scheme.

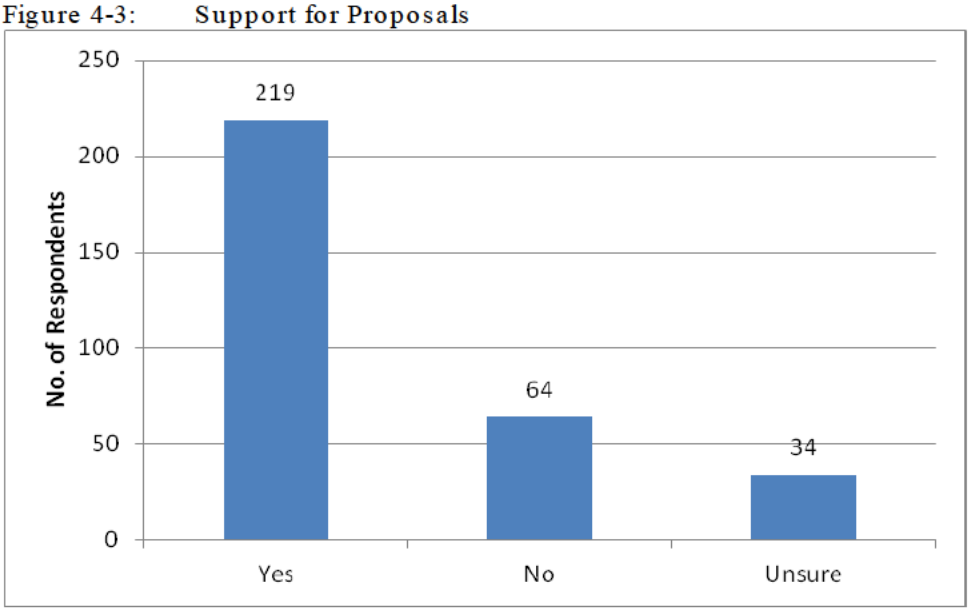
Table 4-2: Level of Support for Proposals

Level of Support	Number of responses	% of responses
Yes	219	69%
No	64	20%
Unsure	34	11%
Total	317	100%

Source: Household & Online Surveys (March 2013)

The survey response indicated a strong (69%) level of local support for the concept plan showing local traffic devices as outlined in the newsletter#2 and community display.

Figure 4-3: Support for Proposals



Source: Household & Online Surveys (March 2013, Purdon)

4.4 Coyne Street Options (Q3)

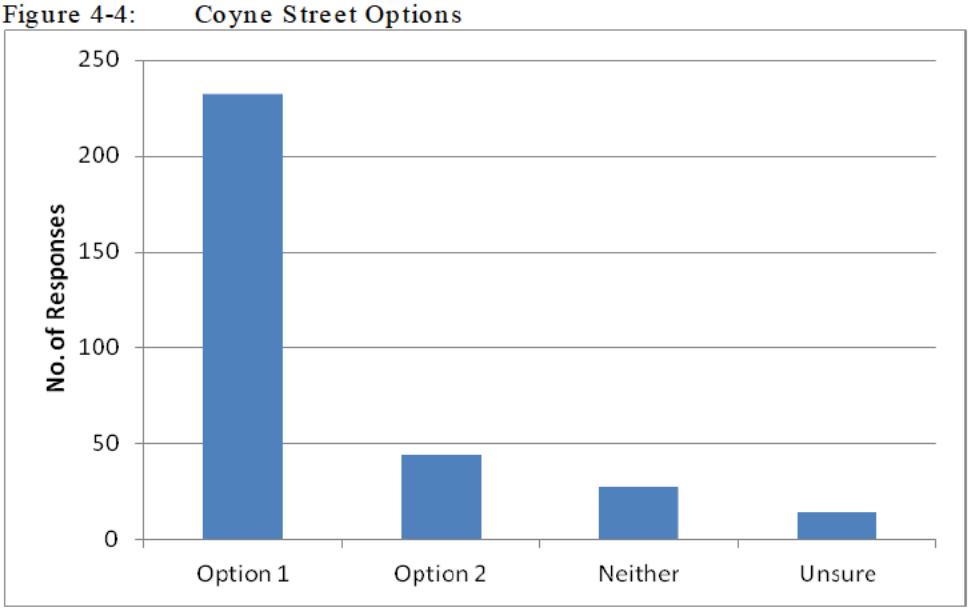
The newsletter contained two basic treatment options for Coyne Street. Respondents were asked which Coyne Street proposal they would like to see implemented.

Table 4-3: Coyne Street Options

Option	Number of Respondents	% of Respondents
Option 1: Coyne St realignment	232	73%
Option 2: Improving signage and adding speed cushions on Coyne St	44	14%
Neither Option 1 or Option 2	27	9%
Unsure	14	4%
Total	317	100%

This response is also mirrored in the response to priority actions in Q5.

Figure 4-4: Coyne Street Options



Source: Household & Online Surveys (March 2013, Purdon)

4.5 Proposed Changes (Q4)

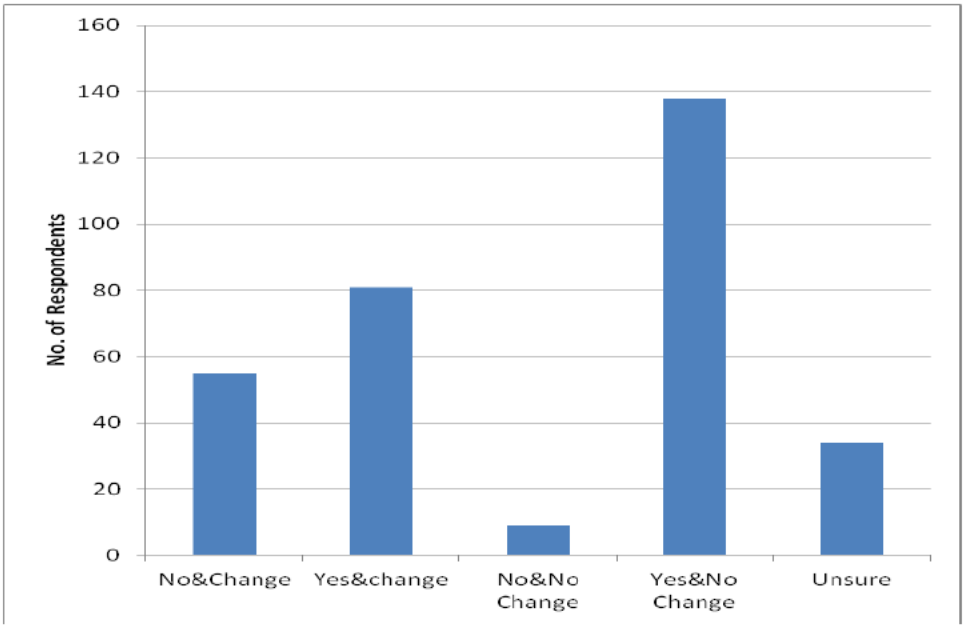
Question 4 asked respondents if they wished to propose any changes to the proposed scheme.

Table 4-4: Level of Support and Respondents who Proposed Change

Support for proposal/Suggest changes	No	%
No support / Wants change	55	16%
No support / No change	9	2%
Support / Wants change	81	25%
Support / No change	138	44%
Unsure	34	10%
Total	317	100%

Note: Percentages rounded to nearest whole figure
Source: Household & Online Surveys (March 2013, Purdon)

Figure 4-5: Level of Support for Proposals



Source: Household & Online Surveys (March 2013, Purdon)

The results showed that 50% (157) of respondents suggested a change to the concept plan on display and in the newsletter.

Table 4-5 summarises the responses to Q4, noting that it was a multiple response question, and includes the most frequently mentioned responses (5% and above) to the proposed traffic devices. The results are summarised by street and type of issue (e.g. comment on devices). Most of the changes proposed by residents were critical of the number and type of devices.

Table 4-5: Change/ No Change to Proposals

Street	Change to Proposal	Number of Responses
Coyne Street	Negative Response to Speed Cushions	13
	Positive Response to Speed Cushions	6
	Negative Response to Roundabouts	7
	Positive Response to Roundabouts	11
Bugden Avenue	Negative Responses to Speed Cushions	21
	Positive Responses to Speed Cushions	7
	Negative Response to Roundabouts	6
	Positive Response to Roundabouts	13
	Negative Response to Raised Platforms	9
	Positive Response to Raised Platforms	10
	Other Issues– Foliage, Speed Limit, Slip Lane, Footpaths, Parking, Buses, Line Markings	13
Castleton Crescent	Negative Response to Speed Cushions	22
	Positive Response to Raised Platforms	7
Total Responses Suggesting Change		145

Note: Question allowed for more than one response

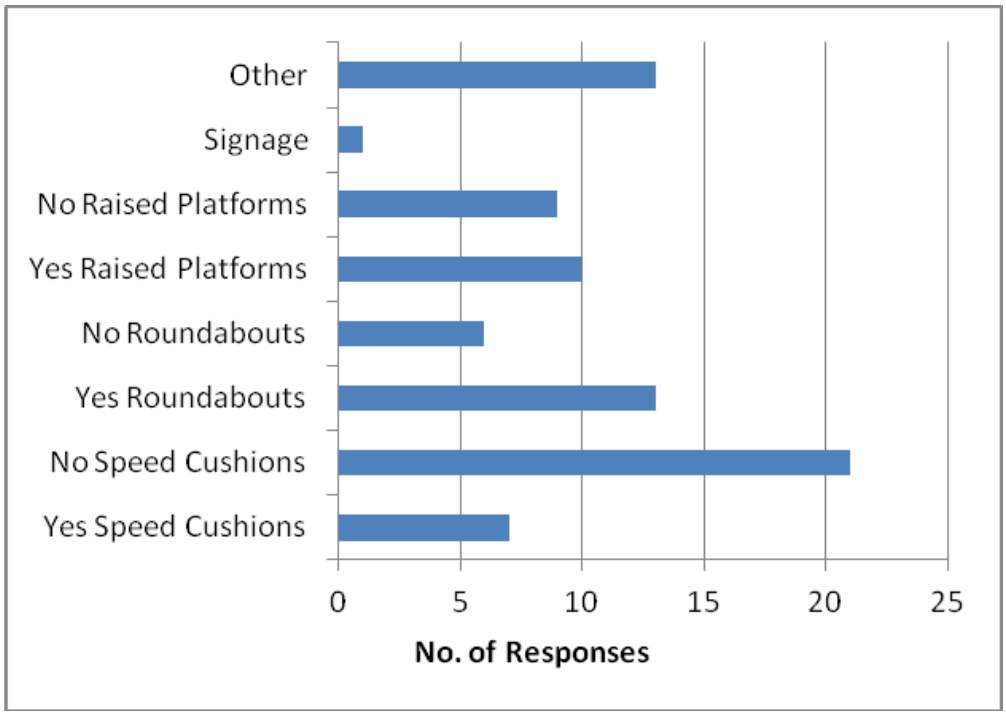
Source: Household & Online Surveys (March 2013, Purdon)

Bugden Avenue received the most number of requests/suggestions for changes. They also received a mixture of positive and negative comments about the need for more devices, as well as a few responses being critical of the proposed number and type of device.

Whilst streets are used by both residents and trough-traffic, the number of responses from individual streets, suggest it is local residents rather than "trough traffic" that are calling for changes in the proposed devices.

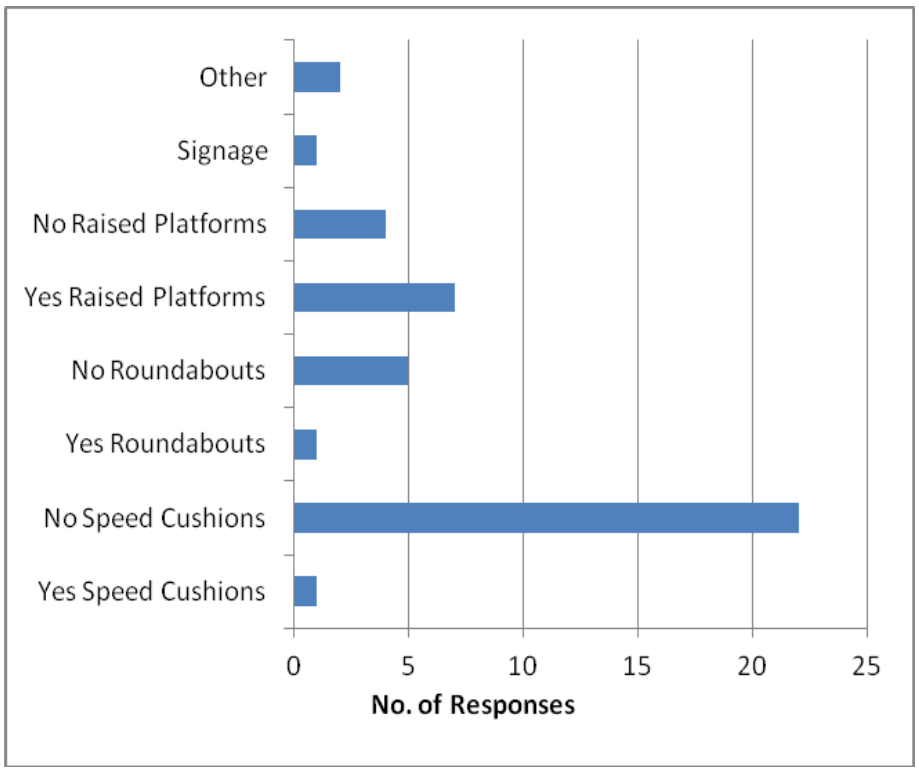
Figure 4-6, Figure 4-7 and Figure 4-8 summarise the types of changes requested by residents for selected local streets.

Figure 4-6*:* Bugden Avenue Changes



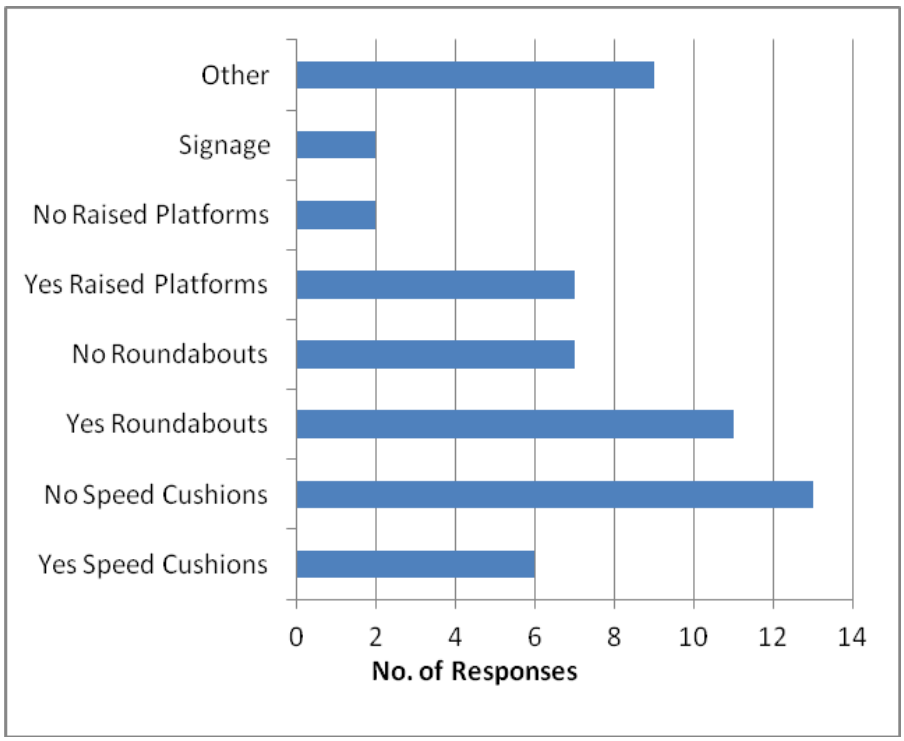
Source: Household & Online Surveys (March 2013, Purdon)

Figure 4-7: Castleton Crescent Changes



Source: Household & Online Surveys (March 2013, Purdon)

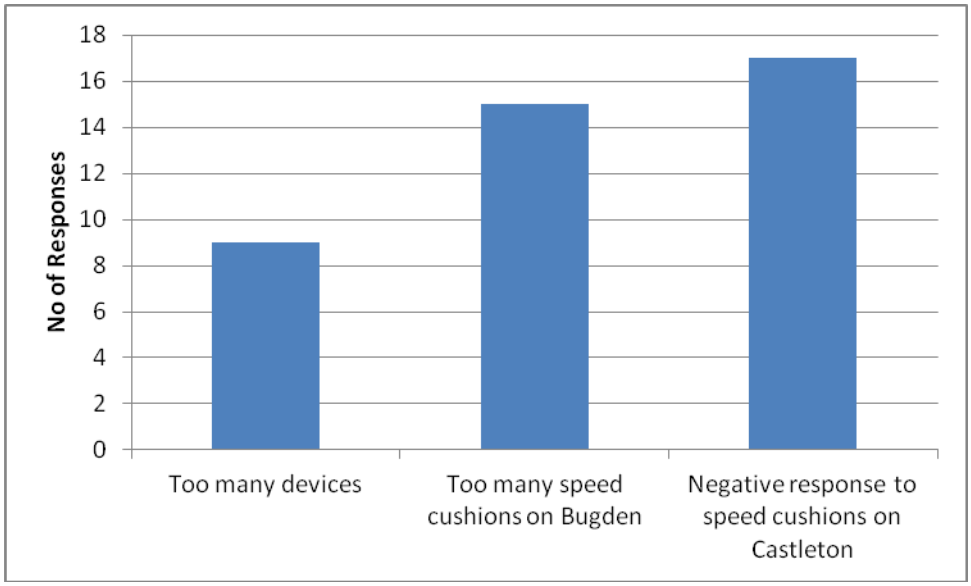
Figure 4-8: Coyne Street Changes



Source: Household & Online Surveys (March 2013, Purdon)

Figure 4-9 below refers to specific proposed changes that have been noted from the household and online survey results (above 5%).

Figure 4-9: Proposed Changes to Scheme



Source: Household & Online Surveys (March 2013, Purdon)

Other popular proposal changes include:

- Further treatments on Jackie Howe Crescent
- Further treatments at the Coyne St and Bugden Avenue intersection
- No treatments necessary
- Greater Police presence
- More treatments in School Zones.

4.6 Priority Treatments (Q5)

Respondents were asked to nominate three treatments that they believe should be of highest priority for implementation.

Table 4-5 and Figure 4-9 list the streets nominated by residents for priority action.

The most frequently mentioned streets were:

- Coyne Street
- Castleton Crescent
- Bugden Avenue
- Bramston Street

Coyne Street was nominated 176 times as the respondent's first preference. The dominance of this street in their responses can be explained by a number of factors, including the crash history of the street and its use as a major gateway to/from the local area.

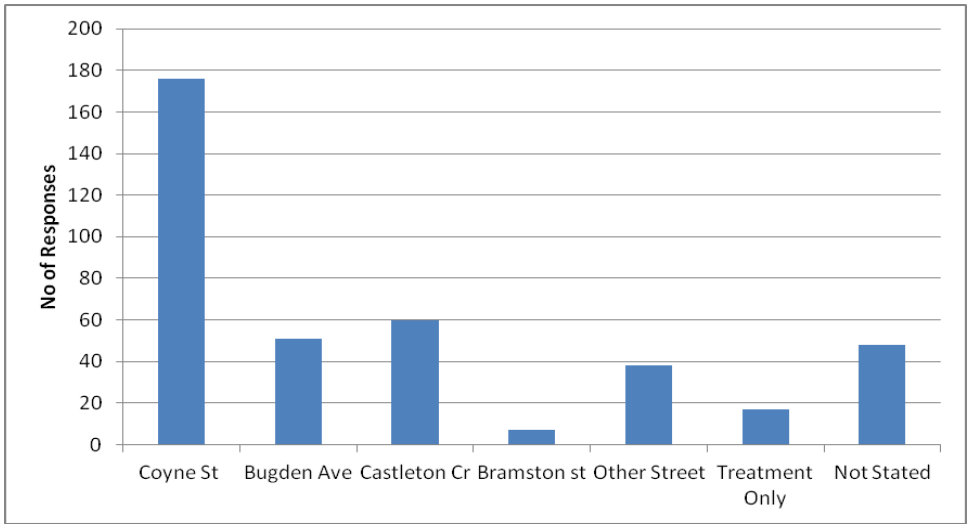
Table 4-6: Streets Listed as a First Priority for Treatment

Street Name	No. Responses
Coyne St	176
Bugden Ave	51
Castleton Cr	60
Bramston St	7
Other Street	38
Treatment Only	17
Not Stated	48
Total	397

Note: Question allowed for more than one response, percentage relates to total number of responses, not respondents

Source: Household & Online Surveys (March 2013, Purdon)

Figure 4-10: First Priority Street

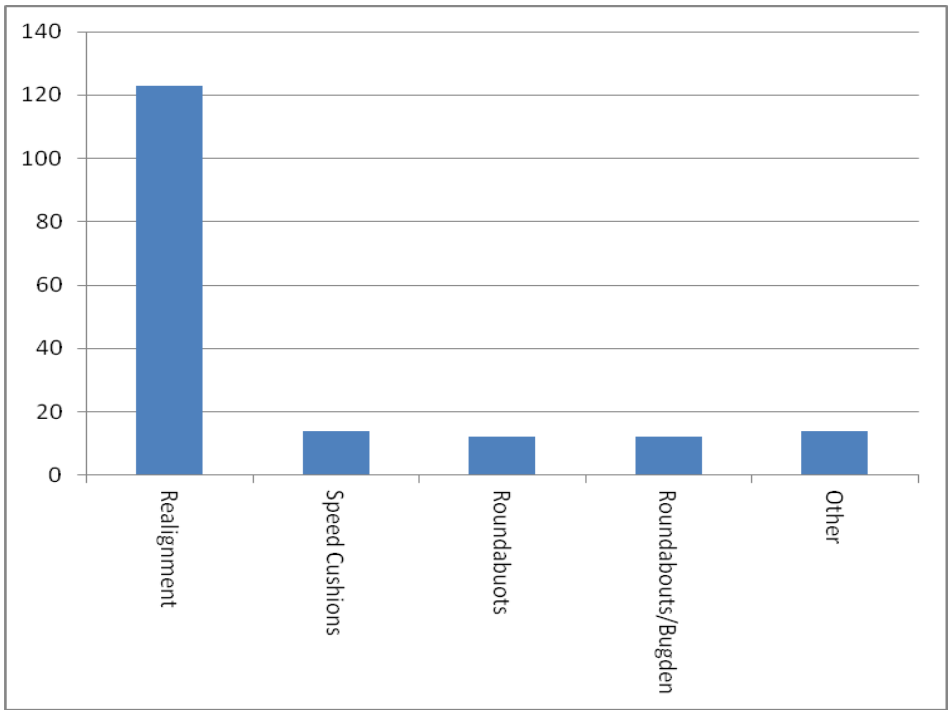


Note: Percentages rounded to nearest whole figure

Source: Household & Online Surveys (March 2013, Purdon)

Figure 4-11 shows the nominated priority treatments on Coyne Street.

Figure 4-11: Coyne Street Priority Treatments



Source: Household & Online Surveys (March 2013, Purdon)

4.7 Satisfaction with Consultation Process (Q6)

Question 6 asks respondents whether they are satisfied with the consultation process.

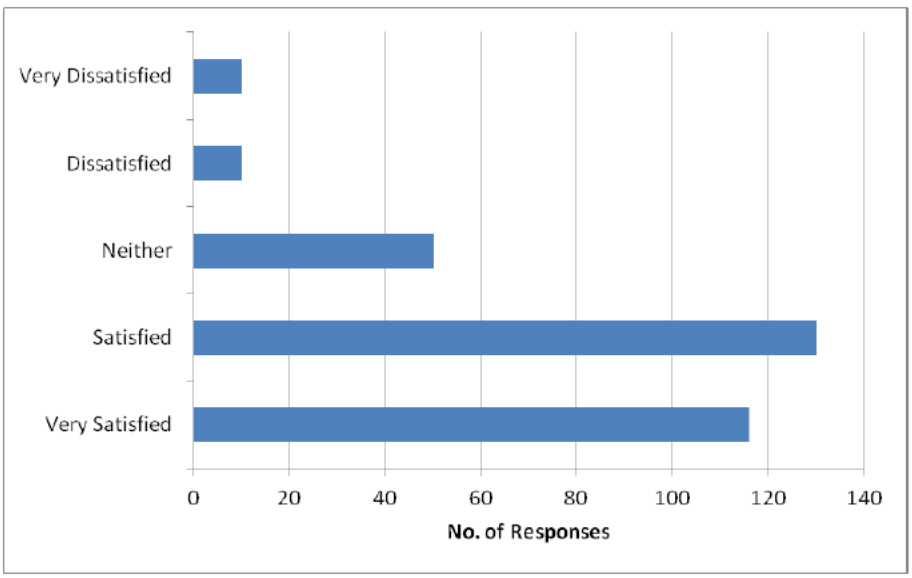
About 78% of respondents were either 'Satisfied' or 'Very Satisfied' with the consultation process, indicating a strong endorsement of the TAMS process. Only 6% of respondents were either dissatisfied or very dissatisfied, and a number of these respondents have also emailed TAMS/Purdons to express these concerns.

Table 4-7: Satisfaction with Consultation Process

Are you satisfied with the consultation process?	Number of Respondents	% of Respondents
Very Satisfied	117	37%
Satisfied	130	41%
Neither Satisfied of Dissatisfied	50	16%
Dissatisfied	10	3%
Very Dissatisfied	10	3%
Total	317	100%

Source: Household and Online Surveys (March 2013, Purdon)

Figure 4-12: Level of Satisfaction with Consultation Process



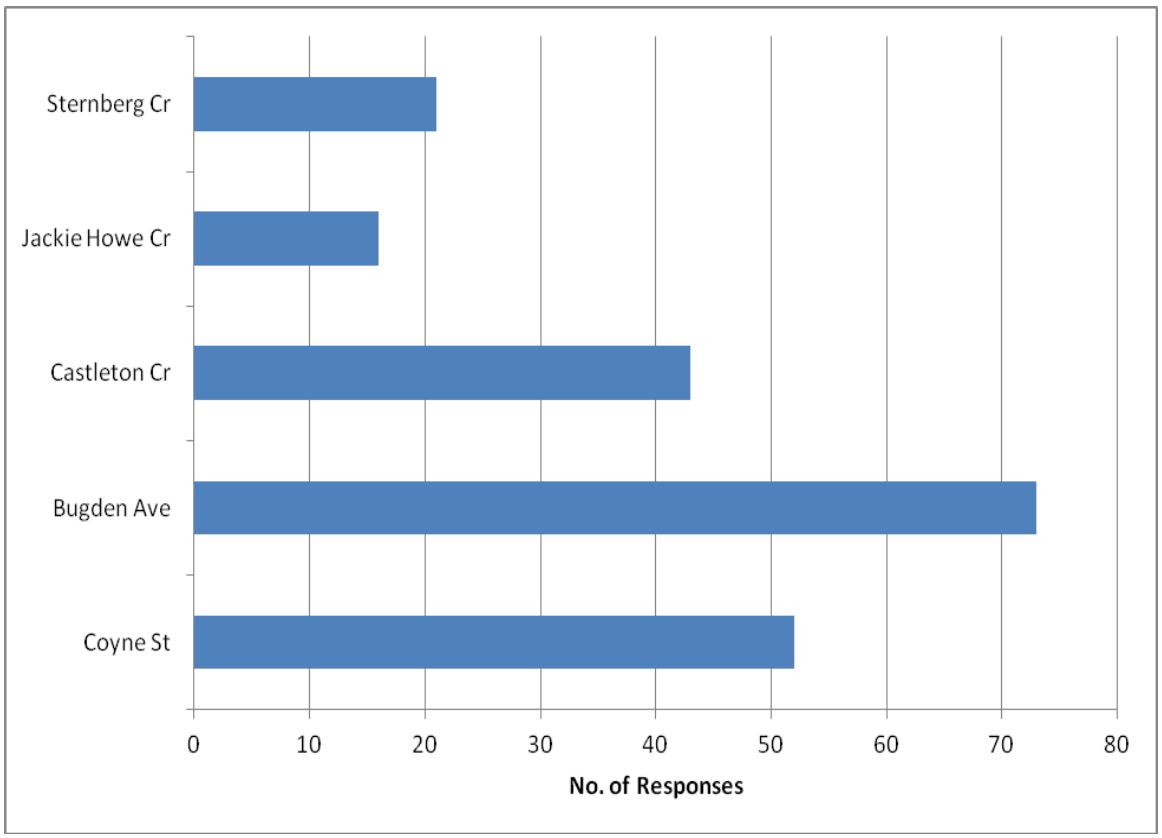
Source: Household & Online Surveys (March 2013, Purdon)

4.8 Further Comments (Q7)

Respondents were also invited to provide any further comments on the proposed treatments.

A total of 199 (63%) respondents made further comments. Figure 4-12 lists the streets that were most frequently mentioned in these comments.

Figure 4-13: Streets Mentioned in Further Comments



Source: Household & Online Surveys (March 2013, Purdon)

The most common issues and/or devices (5% and above) on these frequently mentioned streets are listed in Table 4-6 below.

Table 4-8: Most Frequent Issues/Devices Raised for Each Street in Further Comment

Street	Total No. of Responses	Issue/Device	No. of Responses
Coyne St	52	Negative Response to Speed Cushions	10
		Positive Response to Coyne St Realignment	17
Bugden	73	Negative Response to Speed Cushion	25
		Negative Response to Raised Platform	9
Castleton	43	Negative Response to Speed Cushion	14

Note: Question Allowed for more than one response

Source: Household & Online Surveys (March 2013, Purdon)

Other frequent responses include:

- Positive and response to speed cushions on Coyne Street (3%)
- Positive and negative responses to roundabouts on Castleton Crescent (4%, 2%)
- Negative responses to the Coyne Street Realignment (5%)
- Positive response to roundabouts on Bugden Avenue (4%).

5.0 Conclusions

The following conclusions are drawn from these survey results:

- The number of survey results as a percentage of total households is regarded as a statistically valid sample of community comment.
- It is reasonable to assume minimal "double counting" between mail-back and on-line survey responses, meaning both can be aggregated for a total response.
- The large majority of respondents were satisfied with the consultation process.
- A very high proportion of respondents generally support the proposed scheme. The majority of these respondents also prefer Option 1 – the realignments of Coyne Street
- The Coyne Street realignment is the most popular first priority for treatment in the overall scheme.
- A significant number of respondents made negative comments in relation to speed cushions and other devices on Bugden Avenue.
- A large portion of respondents believe the proposed scheme contains too many speeding devices.
- A significant portion of respondents believe that there are too many speed cushions proposed for Bugden Avenue and Caslteton Crescent.

The feedback from this consultation process will be used by the project team to inform the final scheme for implementation.

Attachments

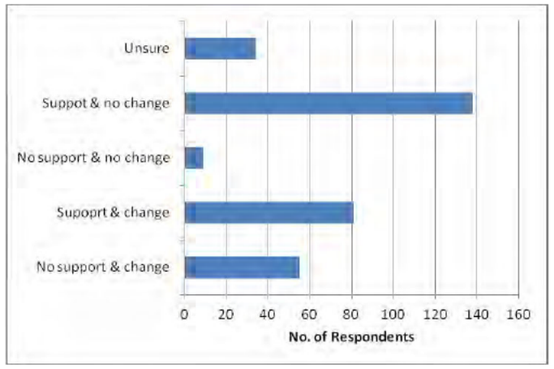
Attachment A: Household Newsletter #2

Attachment B: Household Survey #2

SUMMARY OF STAGE TWO COMMUNITY SURVEY RESULTS

A total of 317 responses, comprising of 254 household survey responses and 63 online survey responses were received from residents in the study area. This represents a response rate of about 11% of all households in the study area.

Overall there was strong support for the draft traffic management scheme distributed for consultation, although a number of respondents also suggested changes to the draft plan.



Speed cushions and prominent signage will assist in slowing traffic and improving safety on Coyne Street.

Streets identified by the community that should have priority for the implementation of treatments were listed as:

Street Name	Responses	%
Coyne Street	176	44%
Bugden Avenue	51	13%
Castleton Crescent	60	15%
Bramston Street	7	2%
Other streets	38	10%
Treatment only	17	4%
Not stated	48	12%
Total	**397**	**100**

The survey results showed a high level of satisfaction with the consultation process.

Satisfaction with the consultation process?	Respondents	%
Very satisfied	117	37%
Satisfied	130	41%
Neither satisfied of dissatisfied	50	16%
Dissatisfied	10	3%
Very dissatisfied	10	3%
Total	**317**	**100%**

Raised platform – no pedestrian crossing

ACT Government
Territory and Municipal Services

Residential Street Improvement Program
Macarthur, Fadden and Gowrie
Newsletter #3 - June 2013

Introduction

The purpose of this newsletter is to present the **revised Master Plan for street improvements and to identify the priority of works that will be implemented in your area**, subject to budget approval.

Since October 2012 the ACT Government (Roads ACT) has been assessing the traffic conditions in Macarthur, Fadden and Gowrie under its Residential Street Improvement Program. Brown Consulting and Purdon Associates have been commissioned to undertake this study.

In November/December 2012 Roads ACT collected feedback about your issues of concern. The technical analysis also confirmed some of these concerns.

In March/April 2013 Roads ACT presented a draft traffic management scheme based on traffic studies and community consultation that occurred to that time. In March 2013 further community comment was received on the draft proposals following a public forum at Gowrie Primary School and a household survey. Further technical studies were also completed.

A traffic management scheme has now been finalised to improve traffic conditions in your area.

Objectives

The objectives of the final traffic management scheme are to:

- reduce travelling speeds
- improve safety at intersections
- reduce traffic volumes
- discourage “rat-running” through suburbs.

Summary of Results of Stage 2 Consultation

The results of the community consultation conducted in March/April 2013 are summarised overleaf. In general, there was strong support for a range of traffic management devices shown in the draft plans, as well as support for the consultation process.

The survey results have been carefully assessed by the project team in combination with traffic data and cost/benefit analyses to produce the final Master Plan for street improvements as well as the proposed Priority 1 works.

Master Plan

The final Master Plan to improve traffic safety in your area is shown overleaf. It has been modified from the draft plan discussed with the community to address the feedback received and further technical assessment. It is important to note that the final scheme is an overall ‘Master Plan’ for the area and that not all proposed devices will be installed at once. This plan will be the subject of staged implementation over a number of years, subject to progressive reviews of each stage of implementation and budget constraints.

Priorities and Proposed Priority 1 Works

Priorities have been assigned to the proposed treatments based on the results of the technical analysis, community feedback and cost/benefit studies. Priority 1 works include:

- **Coyne Street** (speed cushions, raised platform but no pedestrian crossing).

Next Steps - Staged Implementation

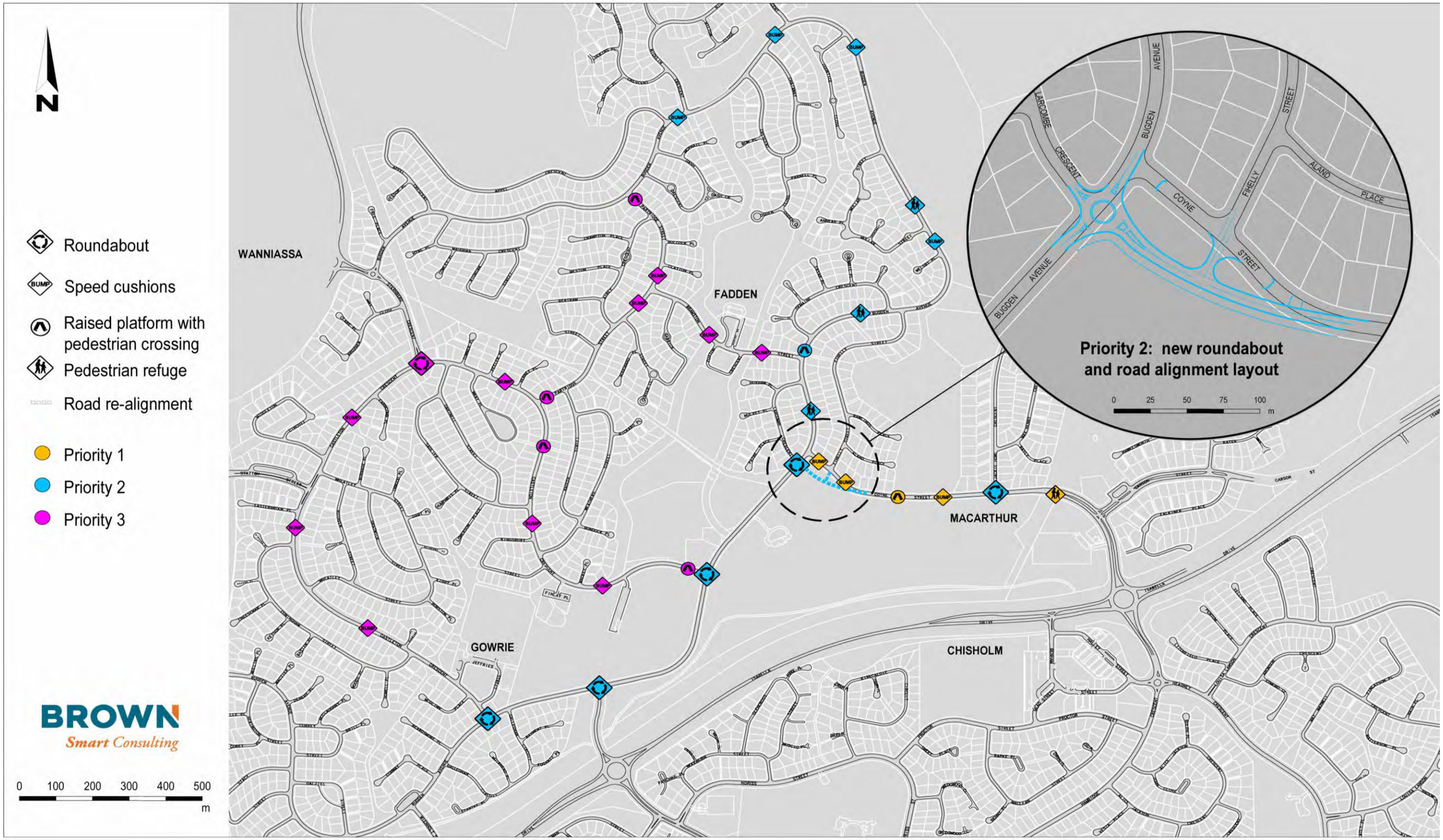
It is anticipated that the detailed design of **Priority 1 works** will take place in 2013/14 during which time further consultation at a local level (one-on-one) will occur with affected property owners. Residents will also be advised when construction is likely to commence.

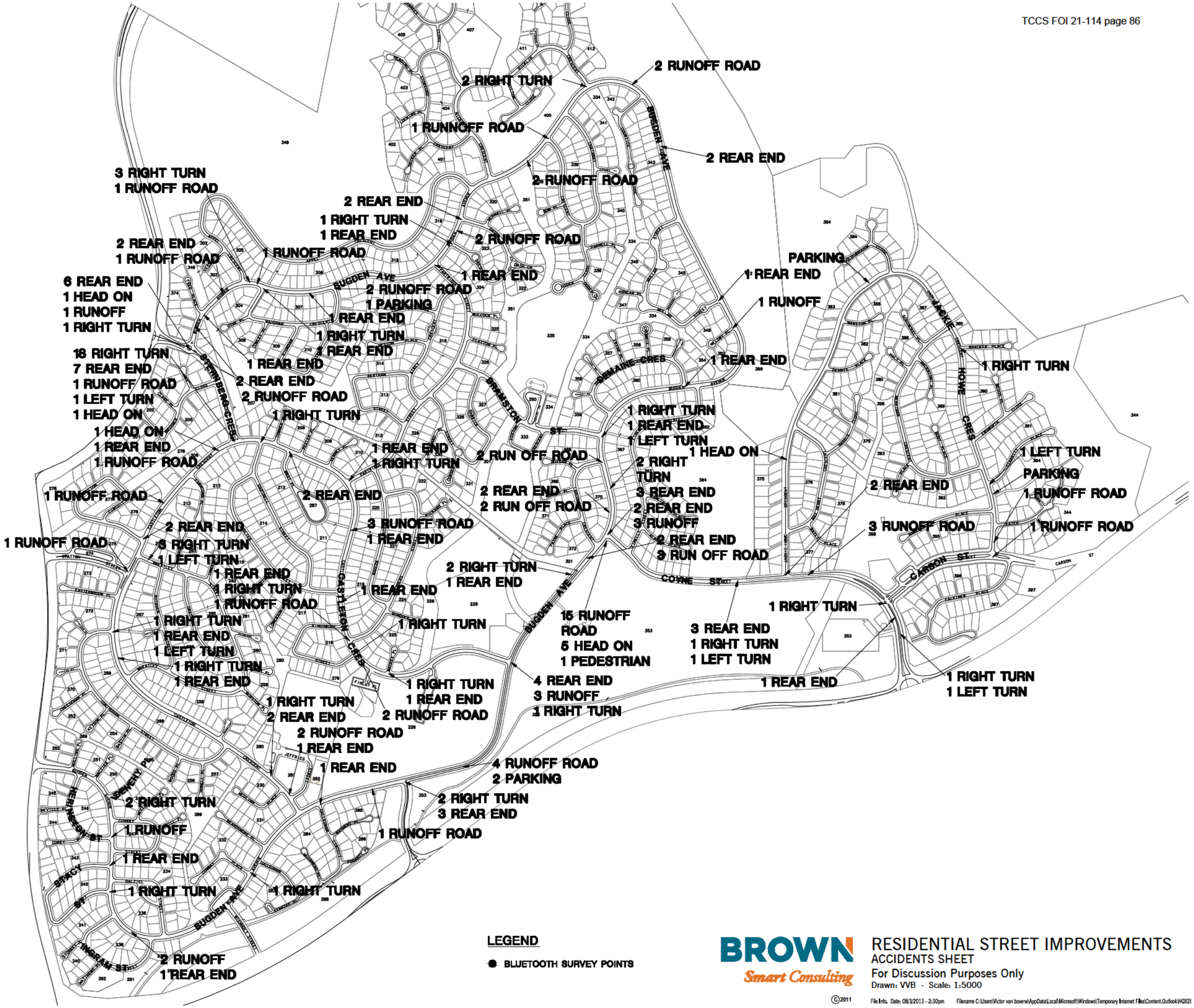
An evaluation of the effectiveness of **Priority 1** devices will take place six months after their implementation. Further implementation of subsequent stages of the Master Plan will depend on the results of this evaluation.

Roads ACT appreciates your involvement in the study to date and looks forward to ongoing discussions. For more information please visit www.tams.act.gov.au

Rifaat Shoukrallah
Senior Manager
Traffic Management and Safety
Roads ACT

Residential Street Improvement Master Plan and Priorities





LEGEND

● BLUETOOTH SURVEY POINTS

BROWN
Smart Consulting

RESIDENTIAL STREET IMPROVEMENTS

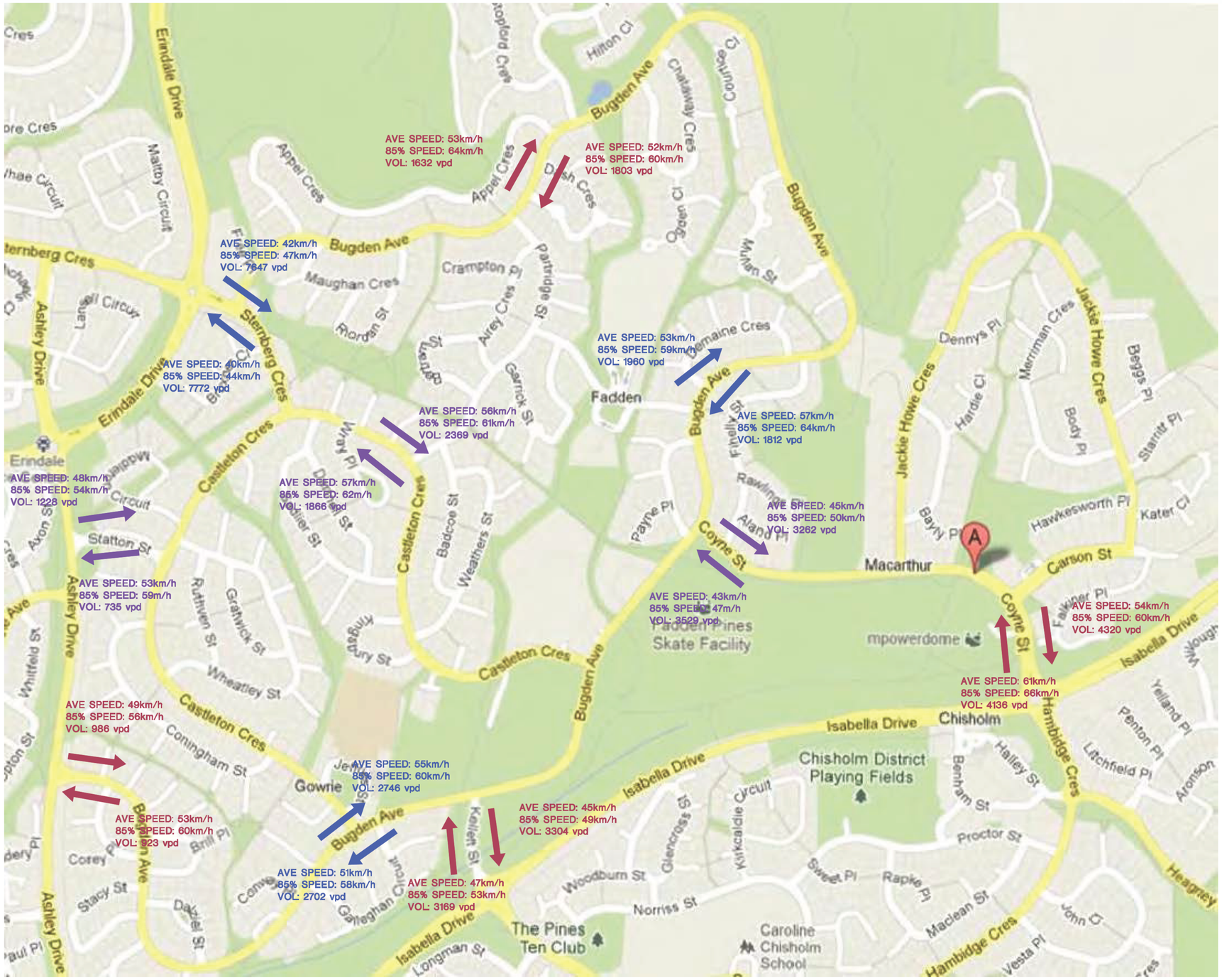
ACCIDENTS SHEET

For Discussion Purposes Only

Drawn: VVB - Scale: 1:5000

File Info. Date: 08/3/2013 - 2:30pm Filename C:\Users\Victor van bovene\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Outlook\HQX2I

SPEED AND VOLUME



Final Project Report

Residential Street Improvement Study

Macarthur Fadden Gowrie

BROWN PURDON
PLANNING SUSTAINABLE FUTURES

May 2014

Disclaimer

This report has been prepared on behalf of and for the exclusive use of the ACT Territory and Municipal Services Directorate (TAMS) and is subject to and issued in accordance with their agreement with Brown Consulting (ACT) Pty Ltd (Brown Consulting). The investigation and analysis specifically caters for the particular requirements of TAMS and may not be applicable beyond this scope. For this reason, any other third parties are not authorised to utilise this report without further input and advice from Brown Consulting.

Brown Consulting accepts no liability or responsibility whatsoever for the report in respect of any use of or reliance upon this report by any third party. Moreover, the investigation and analysis has relied on information provided by others. We accept no responsibility for the accuracy of material supplied by others. The accuracy of the investigation, analysis and report is dependent upon the accuracy of this information.

Any representation, statement, opinion or advice expressed or implied in this publication is made in good faith but on the basis that Brown Consulting, their agents and employees are not liable to any person for any damage or loss whatsoever which has occurred or may occur, in relation to that person taking or not taking (as the case may be) action, in respect of any representation, statement or advice referred to in this report.

Table of Contents

1	**INTRODUCTION**	**3**
1.1	Study Area	4
2	**OBJECTIVES OF STUDY**	**5**
3	**METHODOLOGY**	**5**
3.1	Overall Approach	5
4	**TECHNICAL ANALYSIS**	**8**
4.1	Existing Conditions	8
4.2	Data Collection & Review	12
4.3	Pedestrian and Cycling Facilities	27
4.4	Public Transport	28
5	**COMMUNITY CONSULTATION - STAGE ONE**	**29**
6	**DEVELOPMENT OF OPTIONS**	**33**
6.1	Possible Treatments	33
6.2	Evaluation of Treatments	35
7	**DRAFT TRAFFIC MANAGEMENT SCHEME**	**38**
8	**COMMUNITY CONSULTATION - STAGE 2**	**43**
9	**DETERMINATION OF FINAL SCHEME**	**50**
9.1	Summary	50
9.2	Detailed Proposals	52
9.3	Changes to Final Scheme	55
9.4	Economic Analysis	57
10	**RECOMMENDATIONS FOR STAGED IMPLEMENTATION**	**59**
11	**STAGE 3 COMMUNITY CONSULTATION**	**59**

ATTACHMENTS

Attachment A: Economic Analysis
Attachment B: Stage 1 Consultation Documentation
Attachment C: Stage 2 Consultation Documentation
Attachment D: Stage 3 Consultation Documentation

FIGURES

Figure 1-1:	Study Area Context	3
Figure 1-2:	Study Area	4
Figure 3-1:	Study Methodology	6
Figure 4-1:	Streets within Study Area	8
Figure 4-2:	Traffic Count Locations	13
Figure 4-3:	Adjacent Land Use	14
Figure 4-4:	5 Year Accident Locations	16
Figure 4-5:	Daily Traffic Volumes	17
Figure 4-6:	Peak Hour Traffic Volumes (AM/PM)	18
Figure 4-7:	Peak Hour Mid-Block Capacity	19
Figure 4-8:	Bluetooth Survey Locations	20
Figure 4-9:	85 Percentile Speed Map	23
Figure 4-10:	AM Peak Existing Intersection Performance	25
Figure 4-11:	PM Peak Existing Intersection Performance	26
Figure 4-12:	Pedestrian and Cycling Routes	27
Figure 4-13:	Local Bus Routes & Bus Stops	28
Figure 5-1:	Survey response by Suburb	30
Figure 5-2:	Perceived Traffic Problems	30
Figure 5-3:	Types of Traffic Problems	30
Figure 5-4:	Issues Needing Immediate Actions	30
Figure 5-5:	Indicative Locations of traffic issues (from Public Consultation)	31
Figure 5-6:	Publicly Identified Problem Streets	32
Figure 6-1:	Examples of Potential Treatments	34
Figure 7-1:	Proposed Scheme (Stage 2 Consultations)	42
Figure 8-1:	Level of Support for Proposed Traffic Management Scheme	44
Figure 8-2:	Coyne Street Options	44
Figure 8-3:	Castleton Crescent Changes	46
Figure 8-4:	Coyne Street Changes	46
Figure 8-5:	Bugden Avenue Changes	47
Figure 8-6:	Proposed Changes to Scheme	47
Figure 8-7:	First Priorities Streets	48
Figure 8-8:	Coyne Street Priority Treatments	49
Figure 9-1:	Recommended Final Scheme	51

TABLES

Table 4-1:	Origin Destination Matrix – Bluetooth Survey 24 hrs	21
Table 4-2:	Origin Destination Percentages	21
Table 4-3	85th Percentile Speed by Section	22
Table 4-4:	SIDRA Results	24
Table 6-1:	Advantages and Disadvantages of Potential Treatments	35
Table 6-2:	Uses for Traffic Management Devices	37
Table 7-1:	Proposed Devices	41
Table 8-1:	Coyne Street Options	44
Table 8-2:	Changes to Proposed Scheme	45
Table 9-1:	Comparison of Draft Scheme to Final Recommended Scheme	56
Table 9-2:	Investment Capital Cost	57
Table 9-3:	Master Plan Proposed Investment	57
Table 9-4:	Summary of NPV and BCR Analysis	58
Table 9-5:	Master Plan - Summary Costs and Benefits	58

1 Introduction

The Territory and Municipal Services Directorate (TAMS) has engaged Brown Consulting, in association with Purdon Associates, to undertake a traffic management study for Macarthur, Fadden and Gowrie, in Tuggeranong (Figure 1-1) with particular emphasis on Coyne Street under the Residential Street Improvement Program.

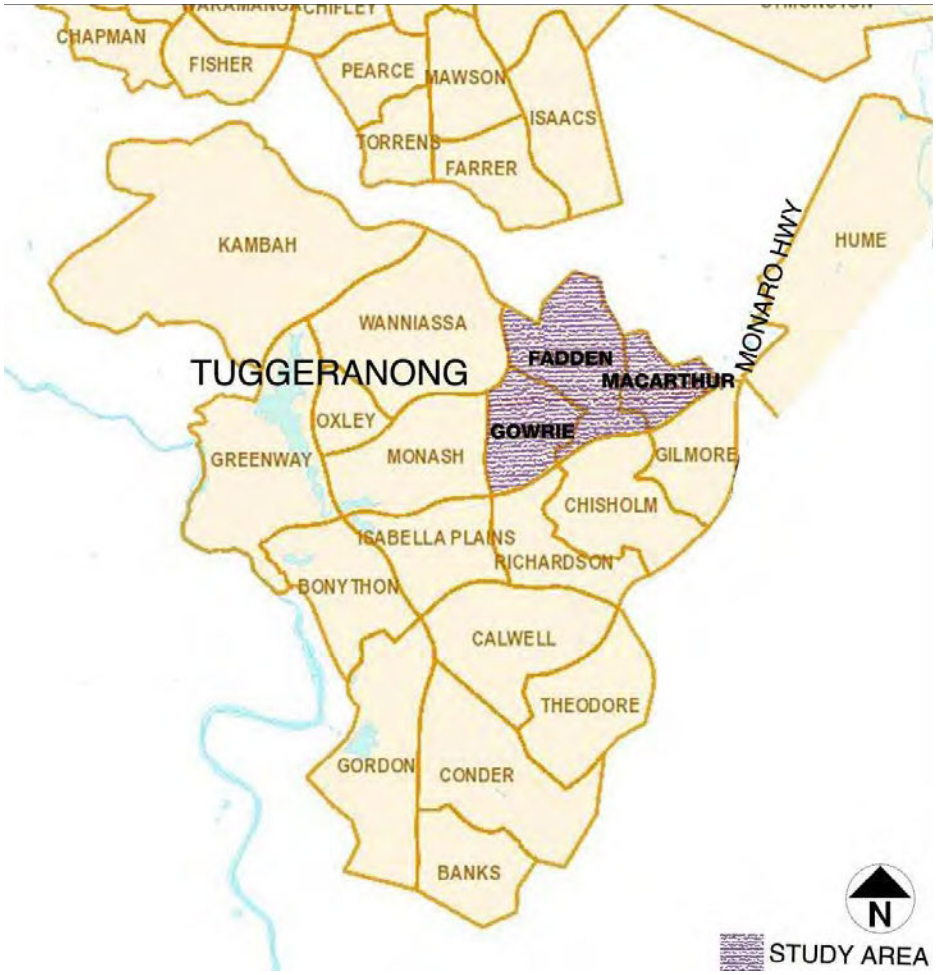
The purpose of this study is to ascertain traffic and safety issues, and prepare recommendations to address traffic issues arising from analysis of collected data and public submissions.

The residential street improvement study for this study area has been undertaken in response to comments received from the community about traffic safety issues in the local area, as well as a motion passed in the ACT Legislative Assembly in May 2012 calling for a study of local traffic issues.

Roads ACT in TAMS, has developed a Traffic Warrant System (TWS) to prioritise collector roads for investigation to identify the need for traffic management measures. Some streets in the study area rank relatively highly in both the 2009 and the 2013 TWS.

The current study is one of several initiatives being undertaken by Roads ACT in Tuggeranong and other parts of Canberra.

Figure 1-1: Study Area Context



1.1 Study Area

The study area covers the suburbs of Macarthur, Fadden and Gowrie as shown on Figure 1-2. The area is bounded by Erindale Drive, Ashley Drive and Isabella Drive.

The specific street listed in the study Brief was Coyne Street, but other streets were also included to ensure all local issues were addressed:

- Bugden Avenue
- Castleton Crescent
- Bramston Street
- Partridge Street.

However, the study was not limited to analysis of the above street, as residents were also invited to comment on any matters experienced in other local streets.

The study area also includes the following principal land uses that are local traffic generators:

- Gowrie, Fadden and Holy Family schools
- local pre-schools
- playing fields
- local shops (Gowrie & Fadden).

Chisholm shops (Group Centre) while located just outside the study area is a major generator of local traffic through the study area.

Figure 1-2: Study Area

Map source: Google Earth

2 Objectives of study

The specific objectives of the study outlined in the Roads ACT brief are:

a) To identify and assess the **traffic safety and amenity issues in the study area** with emphasis on the traffic conditions in the nominated streets.

b) To consider and develop **options** which would mitigate/improve these issues.

c) To **evaluate these options** in terms of their expected technical effectiveness and economic performance.

d) To identify an **agreed solution** for the study area.

e) To recommend a **program of works** for implementation in future capital works programs.

f) To **consult with the community** throughout the process.

3 Methodology

This section outlines the approach implemented to undertake the study.

3.1 Overall Approach

The approach to the study was undertaken in 3 broad phases with parallel emphasis on technical analysis and community input. The 3 phases included:

1. Data collection and analysis – followed by community consultation on key issues affecting residents.

2. Development of traffic management options followed by community consultation on the options.

3. Finalisation of the preferred traffic management scheme and economic assessment, followed by public notification of the outcomes.

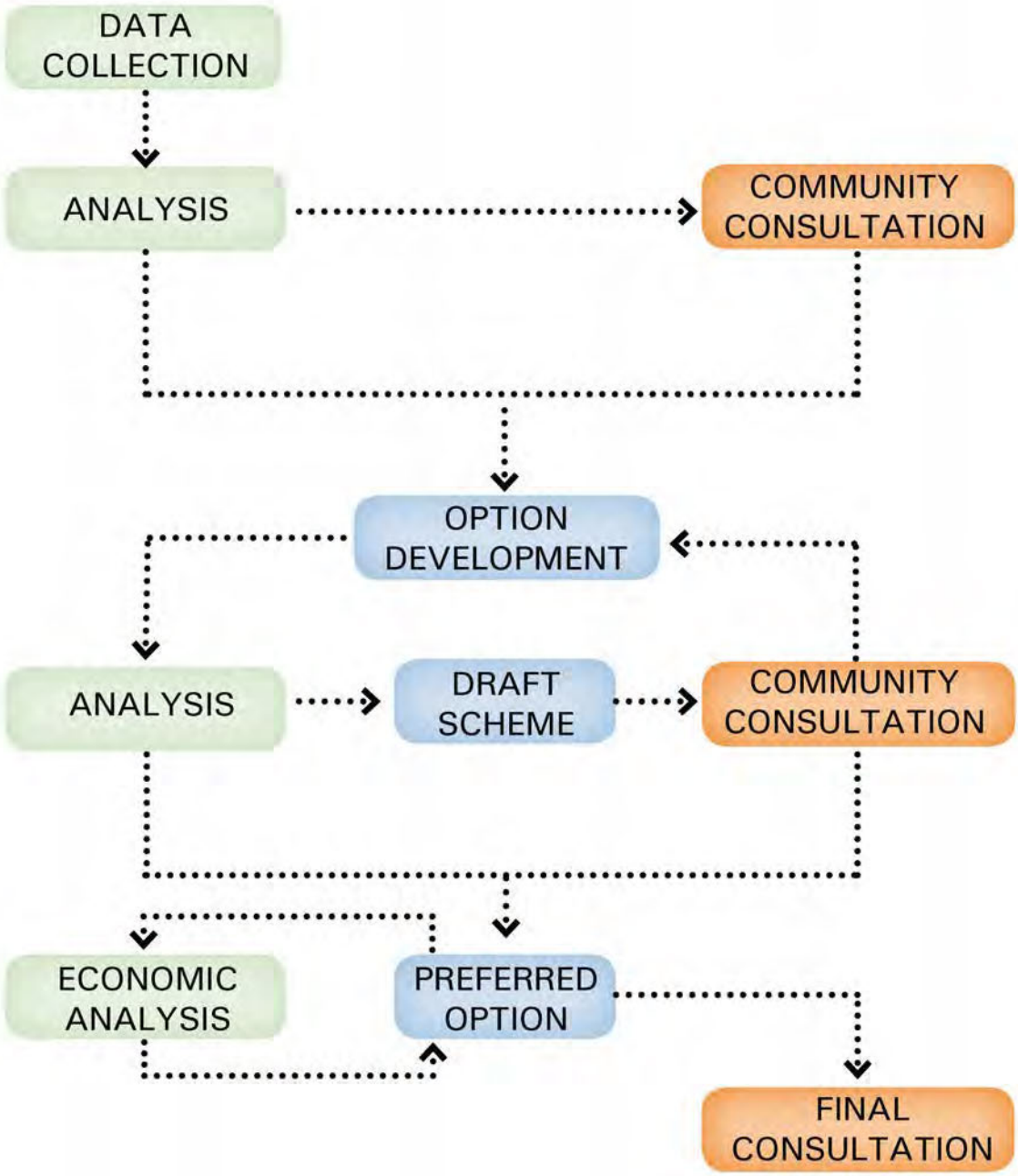
3.1.1 Technical Analysis

The technical analysis involved assessment of existing conditions by traffic engineers to identify key engineering issues and feasible techniques for traffic management having regard to local characteristics including:

- local traffic generation and volumes
- through traffic component
- traffic speeds
- intersection performance; and
- accident statistics.

The outcomes of the analysis at each phase in the study, was included as information provided to the community to enable ongoing community input into the final preferred traffic management scheme. The preferred outcome was also subjected to an economic assessment. Attachment A refers.

Figure 3-1: Study Methodology



3.1.2 Community Consultation

A consultation strategy was prepared for the project, in conjunction with Roads ACT to capture comments on local traffic issues and provide the community with an opportunity to comment on proposed street improvements. The consultations were undertaken in three stages and included the following:

Stage One: Information Gathering

- ***Media release*** from Minister for TAMS to inform residents of the study and consultation process, and to provide details about the community information display
- ***Presentation to Tuggeranong Community Council*** outlining the study objectives, timetable, approach and the consultation strategy.
- ***Household Newsletter*** distributed to all households in the study area informing of the project status to date as well as the public consultation and feedback mechanisms
- ***Household Survey*** with reply paid envelope was circulated to all households with the above newsletter
- ***Electronic Survey*** similar to the household survey was established on the ACT Government's Time-To-Talk website
- Canberra Times Community Notice Board Advertisement
- ACT Government's Time to Talk website
- A ***Community information Display*** (drop-in public information session) at the Gowrie Primary School hall on Tuesday, 27 November 2012. The display included plans and details showing the study area context; project objectives; initial traffic data (speed, volumes and accident data).
- A ***shop-front display*** at Chisholm Shops and Tuggeranong libraries for a period of six weeks in November – December 2012.
- ***Public Submissions*** - Members of the public were invited to submit comments on the study, consultation process and proposed devices
- ***Stakeholder input***, including ACTION Buses, Pedal Power, NRMA Motoring and Services and Motorcycle Riders Association were invited to participate in the consultation process.

Stage Two: Proposed Traffic Management Improvements

- Media release from Minister for TAMS
- Presentation to Tuggeranong Community Council
- Household Newsletter #2
- Household Survey #2
- Electronic Survey #2
- Canberra Times Community Notice Board Advertisement
- Request for stakeholder input
- ACT Government's Time to Talk website
- A second drop-in public information session at the Gowrie School between 4:30 - 7:30pm on 13 March 2013 to summarise findings from the stage one consultations and traffic analysis, and to present the proposed traffic management scheme for the three suburbs.

Stage Three: Reporting on Findings

- Media release from Minister for TAMS
- Household Newsletter #3
- Information on the ACT Government website.

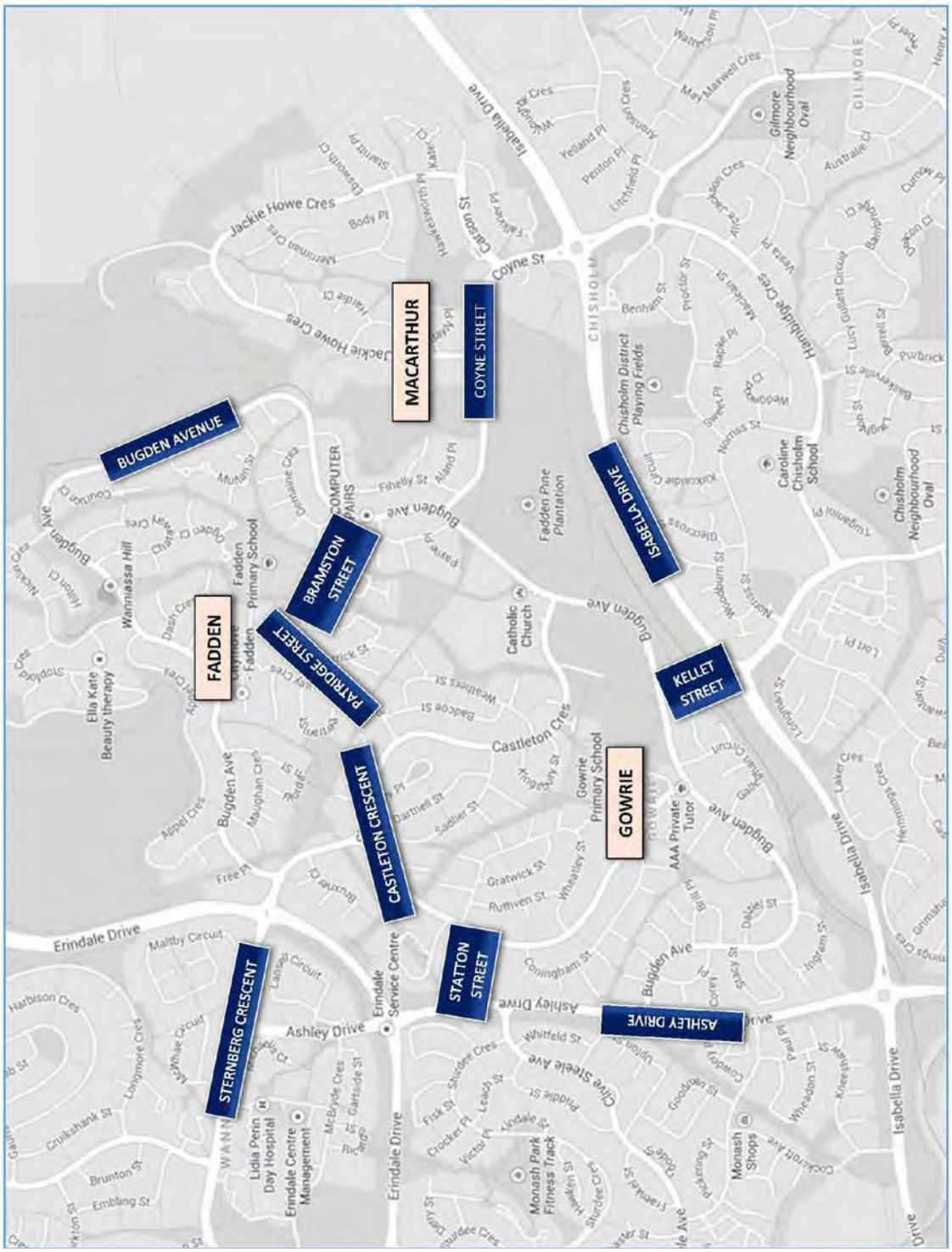
Details of the outcomes of the Community Consultations plus the Technical Analysis are provided in the following chapters and Attachments.

4 Technical Analysis

4.1 Existing Conditions

The following is a summary of the characteristics of each street involved in the study. These streets are shown in Figure 4-1 with details in relation to speeding, traffic volumes and accidents provided in Figure 4-4 to Figure 4-11.

Figure 4-1: Streets within Study Area



Source: Browns

Coyne Street

Coyne Street is approximately 1.3 km in length and is classified as a Major Collector Road in accordance with the ACT Road Hierarchy Plan (3,000-6,000 vehicles per day). It passes through Macarthur and Fadden, and extends from Isabella Drive in the east to Bugden Avenue in the north-west. The posted speed limit is 60 km/h. There are two intersections with minor collector roads, one intersection with a local access street plus a direct access roadway to the MPowerdome along this study street. All intersections are configured as un-signalised T-intersections.

The surrounding land use is predominantly residential with only the MPowerdome indoor sport facility as a major traffic generator. The Fadden Pines Skate Facility and Fadden Pines Fort indirectly generate traffic to Coyne Street but the only access to these facilities is on Bugden Avenue. Further south of Coyne Street are the Gowrie District Playing Fields and Holy Family Primary School with access on Castleton Crescent. Coyne St also provides the most direct access to the Chisholm Group Centre from Macarthur and Fadden.

Speeding is considered a problem, particularly at the eastern end, this is compounded by the peak weekday traffic volumes being above the expected range of a major collector road. Several crashes have been recorded along the length of the street which generally involved cars running off the road, head-on crashes, rear end crashes and right turn crashes.

The main objectives for treatment on Coyne Street are to reduce speeding, increase intersection safety and reduce rat-running. To achieve these objectives, roundabouts, speed cushions, raised platforms, pedestrian refuges and signage may be considered as treatments to this street.

Bugden Avenue

Bugden Avenue is 5.9 km in length and meanders through most of Gowrie and Fadden. It is classified as a Major Collector Road in accordance with the ACT Road Hierarchy Plan (3,000–6,000 vehicles per day) with a speed limit of 60km/h for most of its length, but 50km/h at the north-western end. The adjacent area is mostly low density residential, however, most of the local generators (e.g. Gowrie primary school, Fadden primary school, Holy Family school) are on adjacent streets which have indirect access to Bugden Avenue.

Vehicle speeds along Bugden Avenue are higher than desirable for the area, particularly at the northern. Several crashes occurred along the length of the street which generally involved rear end crashes, running off the road, parking and right turn based crashes. A number of crashes have been recorded at the major intersections with Coyne Street, Castleton Crescent and Sternberg Crescent.

The main objectives for treatment on Bugden Avenue are to reduce speeding, increase intersection safety and reduce rat-running. To achieve these objectives, roundabouts, speed cushions, raised platforms and pedestrian refuges may be considered as treatments to this street.

Castleton Crescent

Castleton Crescent is 2.8 km in length and provides access to most residential neighbourhoods within Gowrie. It is classified as a Major Collector Road in accordance with the ACT Road Hierarchy Plan (3,000–6,000 vehicles per day) with a speed limit of 60 km/h. The adjacent area is mostly low density residential with the Holy Family Primary School, Gowrie Primary and Pre-School and Gowrie shops as the main traffic generator.

Vehicle speeds are slightly higher along Castleton Crescent than desirable for the area. Several crashes occurred along the length of the street which generally involved rear end accidents, running off the road and right turn based crashes.

The main objectives for treatment on Castleton Crescent are to reduce speeding and increase intersection safety. To achieve these objectives, roundabouts, speed cushions and raised platforms may be considered as treatments to this street.

Partridge Street

Partridge Street is 0.9 km in length linking Budgen Avenue and Castleton Crescent. It is classified as a Minor Collector Road in accordance with the ACT Road Hierarchy Plan (1,000 – 3,000 vehicles per day) with a speed limit of 50 km/h. The adjacent area is mostly low density residential. Three crashes have been recorded along the length of the street in the past 5 years which generally involved rear end crashes and right turn based crashes.

The main objectives for treatment on Partridge Street are to reduce speeding, increase intersection safety and reduce rat running. To achieve these objectives speed cushions and raised platforms may be considered as treatments to this street.

Bramston Street

Bramston Street is 500m in length connecting Bugden Avenue with Partridge Street. It is classified as a Minor Collector Road in accordance with the ACT Road Hierarchy Plan (1,000 – 3,000 vehicles per day) with a speed limit of 50 km/h. The adjacent area is mostly low density residential with Fadden Primary School and Pre-school, Fadden shops and The Gardens medium density housing as the main traffic generators. No crashes have been recorded along the length of the street in the past 5 years.

The main objectives for treatment on Bramston Street are to reduce speeding and rat running in the area. To achieve these objectives speed cushions may be considered as treatments to this street.

Ashley Drive

Ashley Drive is 3.6 km in length, providing north-south connection between Isabella Drive and Erindale Drive, of which 1.5km is within study area. It is classified as an Arterial Road in accordance with the ACT Road Hierarchy Plan (> 6,000 vehicles per day) with a posted speed limit of 80 km/h. The adjacent area is mostly low density residential with the Erindale Shopping Centre as the main traffic generator.

Sternberg Crescent

Sternberg Crescent is 3.4 km in length, of which 400m is within the study area. It is classified as a Major Collector Road in accordance with the ACT Road Hierarchy Plan (3,000 – 6,000 vehicles per day) with a speed limit of 60 km/h. The adjacent area is mostly low density residential. Sternberg Crescent also provides the most direct access to the Erindale Group Centre from Fadden and the northern part of Gowrie.

The weekday traffic volume is greater than desirable for a major collector road. A number of crashes have been recorded on Sternberg Crescent in the past 5 years including 18 right turn crashes at the intersection of Sternberg Crescent and Castleton Crescent plus 6 rear-end crashes at the Bugden Avenue roundabout.

Statton Street

Statton Street is 300m in length providing connection between Ashley Drive and Castleton Crescent. It is classified as a Major Collector Road in accordance with the ACT Road Hierarchy Plan (3,000–6,000 vehicles per day) with a speed limit of 60 km/h.

One crash has been recorded on this road in the past 5 years which involved a vehicle running off the road.

Kellett Street

Kellett Street is 300m in length providing connection between Isabella Drive and Bugden Street. It is classified as a Major Collector Road in accordance with the ACT Road Hierarchy Plan (3,000 – 6,000 vehicles per day) with a speed limit of 60 km/h.

The weekday traffic volume is above the desired range of a major collector road. Several crashes have been recorded along the length of the street which generally involved rear end crashes and right turn based crashes.

4.2 Data Collection & Review

4.2.1 Methodology

The approach to data collection for this project was developed to ensure traffic conditions on the subject streets of the study were captured, including information about the local roads identified for this study and the surrounding road network.

Information was obtained and assessed from Roads ACT records as well as field sources.

Overall, the range of information collected and reviewed to assist with identification of the nature and extent of traffic problems throughout the study area included:

- Copies of all relevant background reports
- High quality aerial photographs of the study area
- Accident data in the locality
- Traffic speed and volume data, turning movement counts and mid-block flows
- Morning and afternoon peak hour intersection counts.

Further, identification and prioritisation of potential rat-running streets was undertaken and the count strategy expanded to include these locations. The locations of the counts are shown in Figure 4-2 below.

The methods used to collect field data included intersection counts, tube counts and "Bluetooth" surveys.

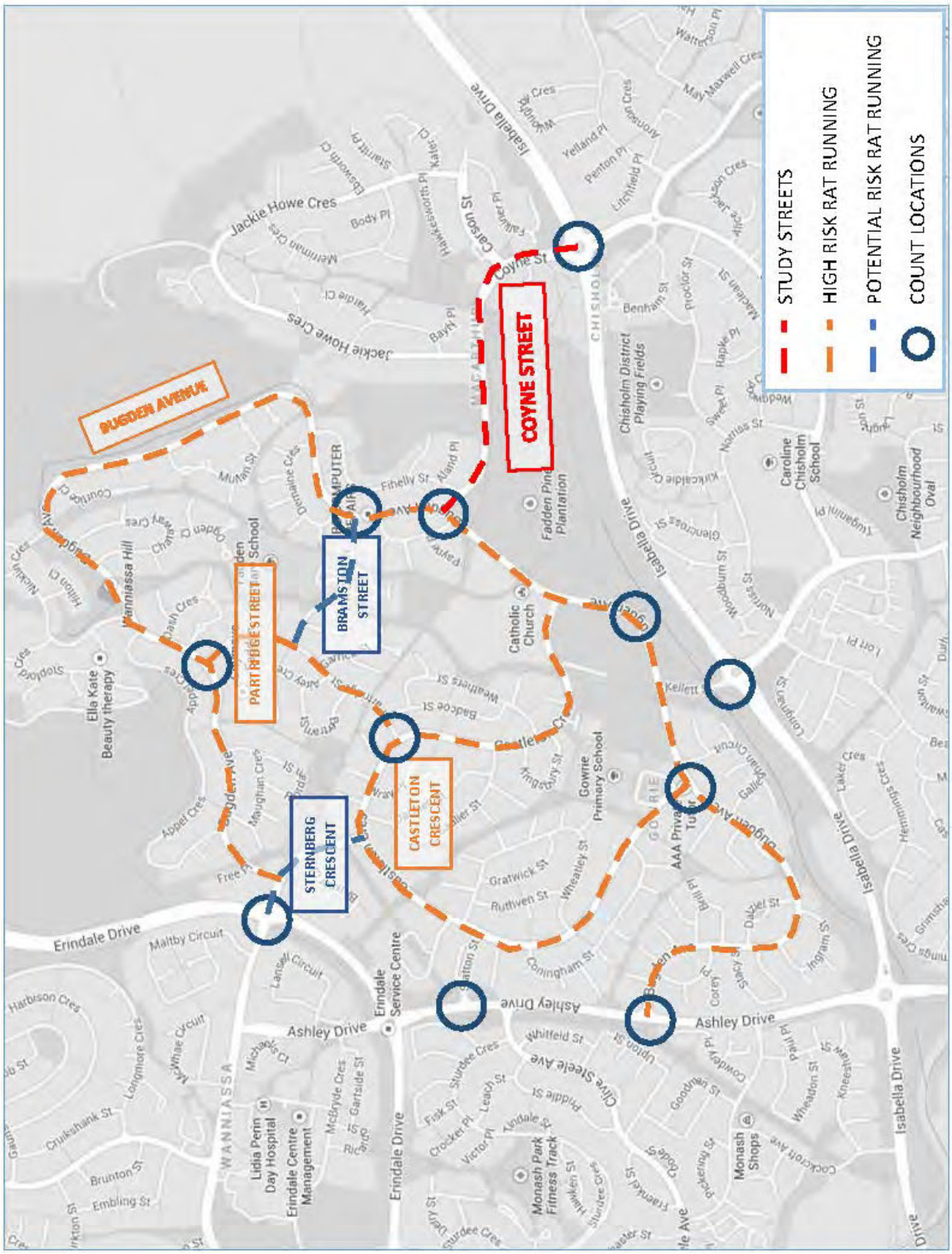
Bluetooth surveys provided a snap shot of travel routes and times, but did not capture any personal information and did not track individual devices to a particular final destination. Bluetooth captures a passing code (from a laptop, smart phone, or other sources) within an approximate 10m range of the measuring point and if the same code is captured at another location a potential route can be determined. There are no records of specific codes from devices retained in the Bluetooth survey.

Data was collected on 12th and 14th November 2012 and processed over the following weeks. Initial findings were reported at drop-in public information session at the Gowrie Primary School hall on Tuesday, 27 November 2012.

Travel times of all identified routes were assessed through the use of Bluetooth capture technology. Travel time, for example, can often influence a motorist's decision on the route they take. The Bluetooth data gathered provide information on both origin / destinations of vehicle entering / leaving the area along with travel time information along each identified route.

Intersection analysis using SIDRA (a traffic software program) was undertaken to provide an indication of current demands against intersection capacity. This enabled assessment of existing levels of service, degree of saturation and delays at each key location in the study area.

Figure 4-2: Traffic Count Locations



Source: Browns

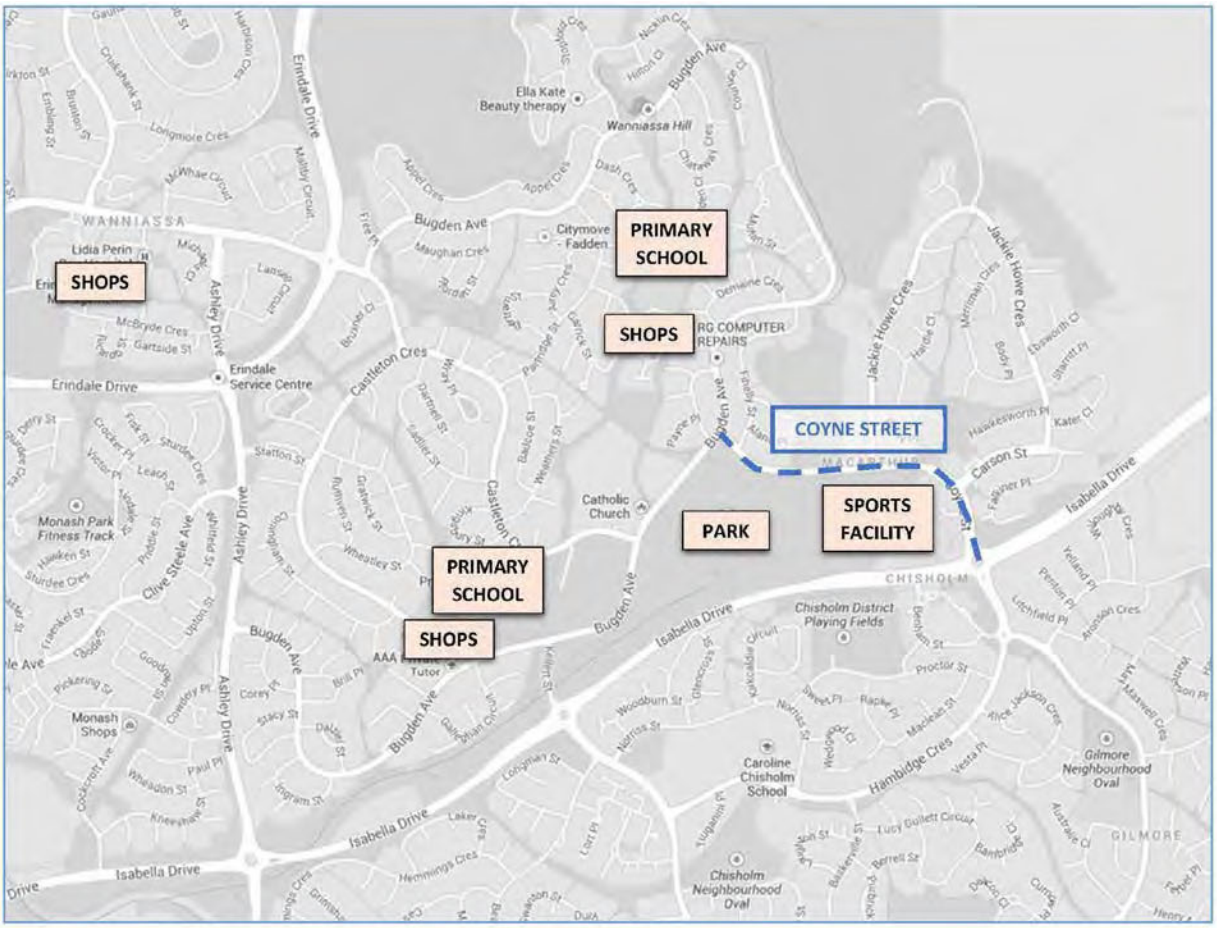
4.2.2 Local Traffic Generation

The land use for the areas adjacent to the subject roads is predominantly residential with the following larger traffic generators (Figure 4-3):

- Coyne Street – MPowerdome sport facility
- Bugden Avenue – Fadden Pines Skate Facility and Fadden Pines Fort
- Castleton Crescent – Gowrie Shops, Gowrie District Playing Fields and Holy Family Primary School
- Bramston Street – Fadden Shops, Fadden Primary School

The surrounding area also includes a Tennis Club, Chisholm District Playing Fields and Chisholm Shops which are just south of Coyne Street. The surrounding suburbs have their own primary school and generated traffic is typically from the immediate surrounding area they service.

Figure 4-3: Adjacent Land Use



Source: Browns

4.2.3 Accident History

Accident data, compiled by Roads ACT, for the last 5-years (2007-2011) was collated for the subject roads and adjacent streets as shown in Figure 4-4. There are seven locations within the study area which included five or more accidents over the past 5 years, being:

- Coyne Street / Bugden Avenue intersection;
- Coyne Street mid-block between Fihelly Street and Jackie Howe Crescent;
- Castleton Crescent / Bugden Avenue intersection;
- Sternberg Crescent / Bugden Avenue intersection;
- Bugden Avenue, along its route generally;
- Sternberg Crescent / Castleton Crescent intersection;
- Castleton Crescent, along its route generally.

4.2.4 Traffic Analysis

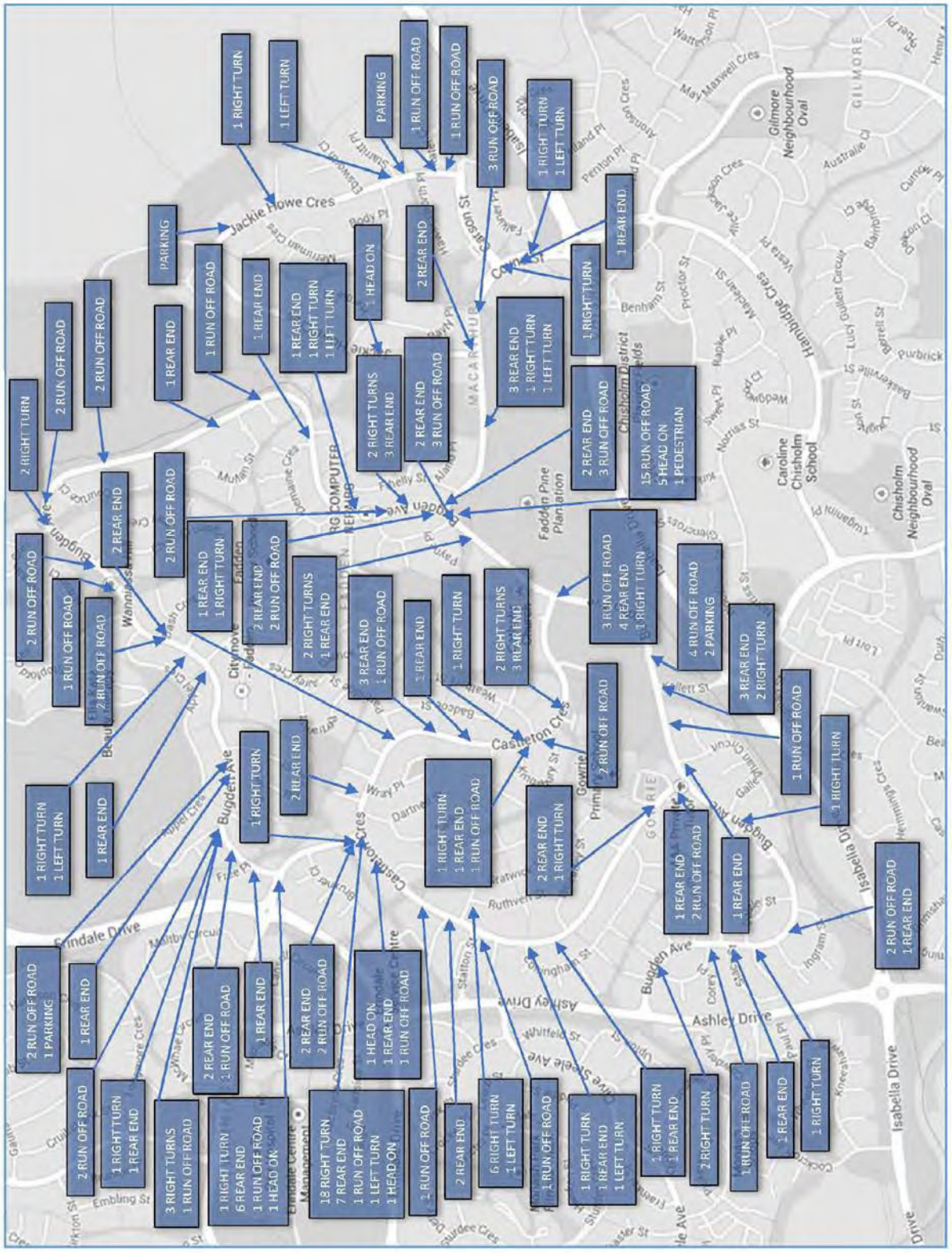
Figure 4-5 provides daily traffic flows on each of the principal roads in the study area. The ACT Estate Development Code states that Major Collector roads should have indicative daily traffic volume between 3,000 and 6,000 vpd and Minor Collectors should be between 1,000 and 3,000 vpd.

Results of the traffic counts showed that most of the daily traffic volumes were within the Code range. Figure 4-5 shows the traffic volumes, including those sections with daily traffic volumes greater than indicative capacity (red numbers.

Intersection turning movement counts were undertaken by TAMS on 14 November 2012 for the AM and PM peak periods. Peak hour mid-block flows are shown in Figure 4-6.

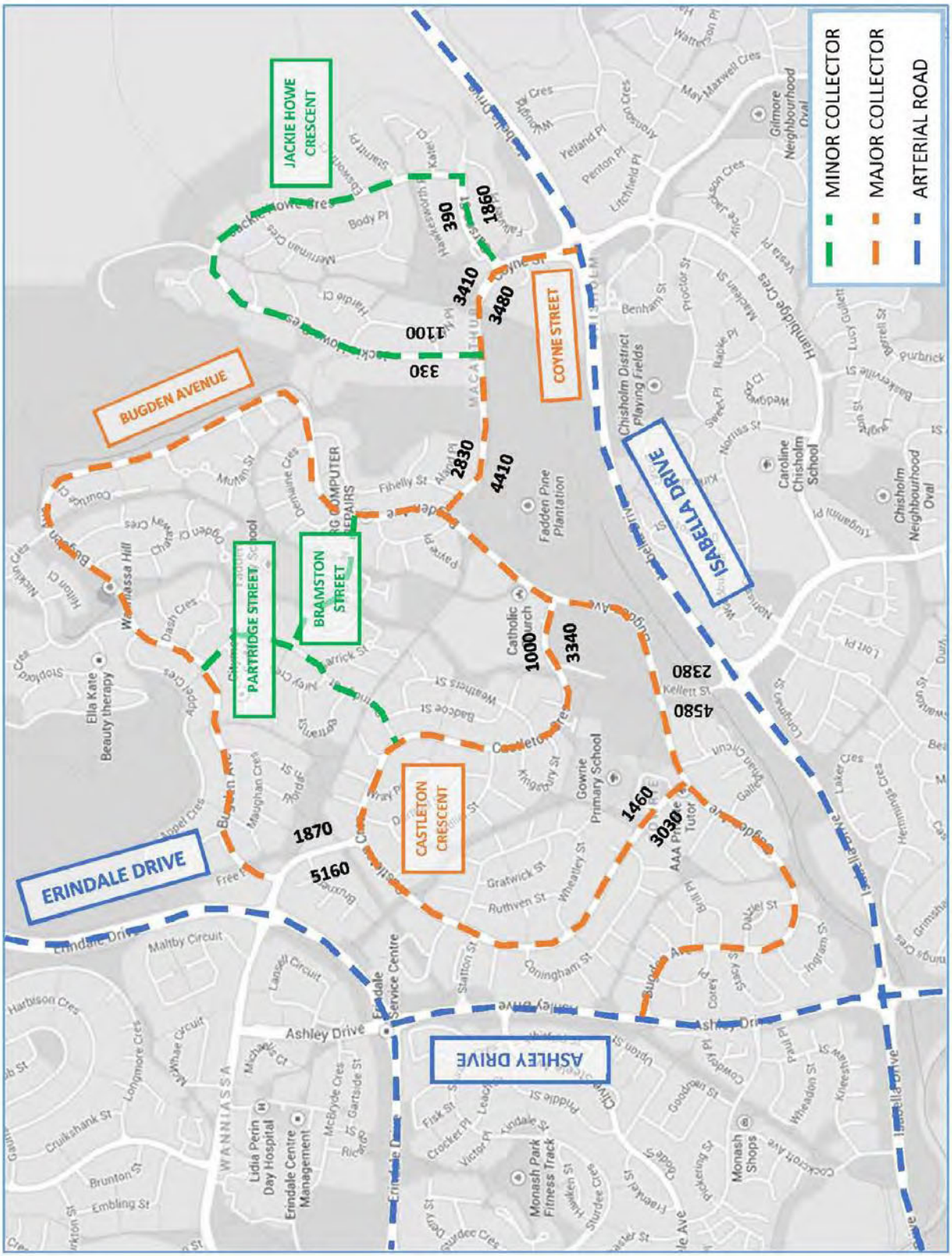
The peak-hour Level of Service (LOS) of the typical mid-block sections of the subject roads was analysed based on the typical capacity of urban streets and LOS as defined in the RTA Guide to Traffic Generating Developments. Refer Figure 4-7.

Figure 4-4: 5 Year Accident Locations



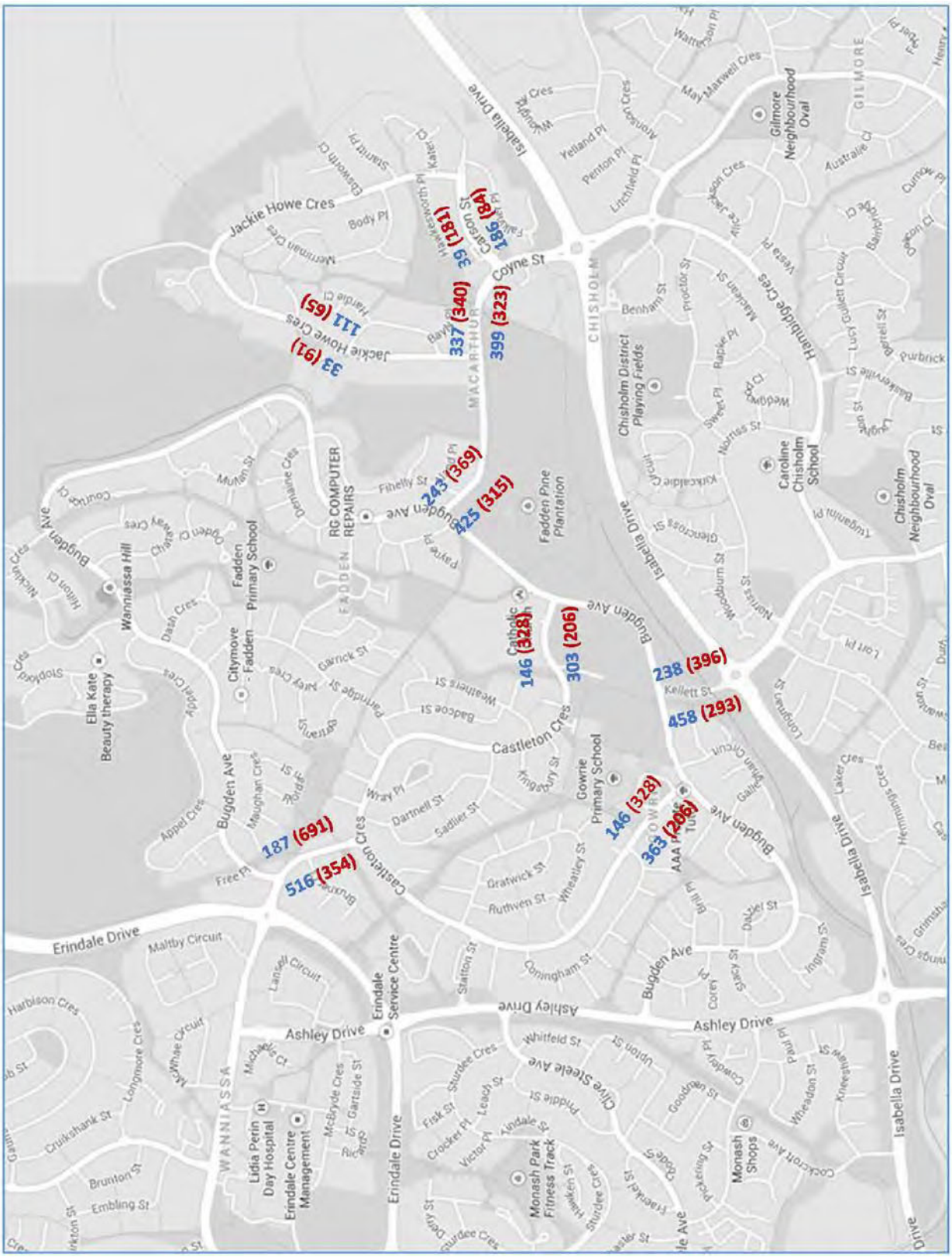
Source: Browns

Figure 4-5: Daily Traffic Volumes



Source: Browns

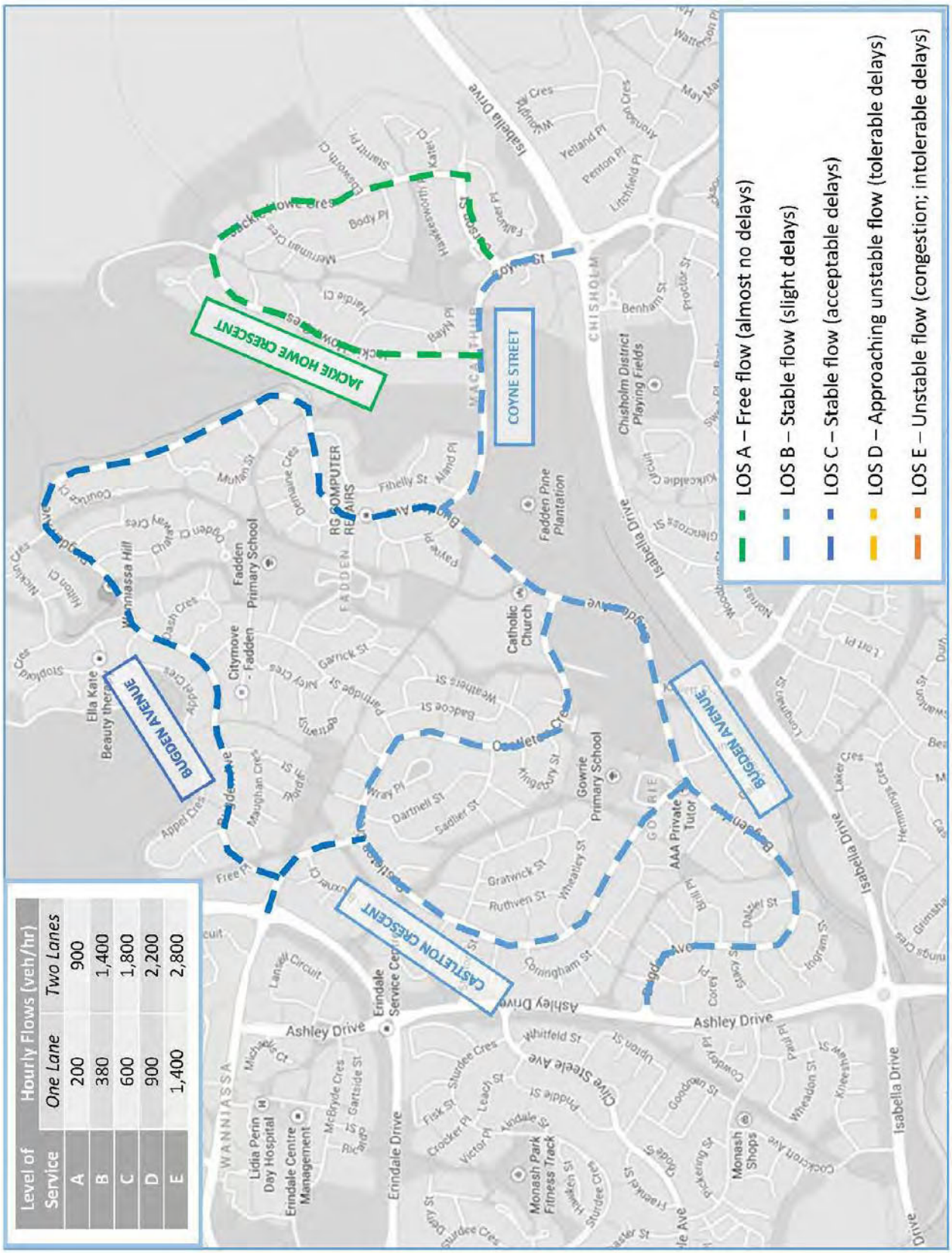
Figure 4-6: Peak Hour Traffic Volumes (AM/PM)



AM Peak Hour Traffic Volumes noted in Blue
PM Peak Hour Traffic Volumes noted in Red

Source: Browns

Figure 4-7: Peak Hour Mid-Block Capacity



Source: Browns

4.2.5 Through Traffic Component

Analysis of the proportion of through traffic was undertaken using "Bluetooth Surveys". This provided information on the extent of vehicles using local residential streets, instead of the intended main roads, to gain access from one area to another. This practice is commonly referred to as "rat-running" and could be undertaken by local residents, as well as visitors or through traffic.

Bluetooth surveys were undertaken 12 December 2012 with data captured at 11 nodes shown on Figure 4-8 and results summarised in Figure 4-8 and Table 4-1.

Significant nodes included:

- Nodes 1- Erindale Drive / Sternberg Crescent
- Node 2 Statton Street / Ashley Drive
- Node 3 Bugden Avenue / Ashley Drive
- Node 7 Kellet Street / Isabella Drive
- Node 10 Coyne Street / Isabella Drive.

Table 4-2 shows the percentage of drive through traffic using the above-mentioned five nodes. Highest percentages of observed blue tooth devices were noted in the following locations:

- Node 1 to Node 3 for 18% of traffic
- Node 1 to Node 7 and 10 for 46% and 21 % respectively.

Figure 4-8: Bluetooth Survey Locations

Source: Browns

Table 4-1: Origin Destination Matrix – Bluetooth Survey 24 hrs

		Destination Node										
		1	2	3	4	5	6	7	8	9	10	Total
Origin Node	1		1	4	101	35	62	12	8	19	56	298
	2	1		1	1	7	12	2	2	3	2	31
	3	0	1		0	0	10	1	0	1	1	14
	4	82	0	0		0	0	0	8	0	2	92
	5	89	2	1	0		0	7	2	13	26	140
	6	71	5	14	0	1		1	3	3	3	101
	7	20	1	1	0	3	7		8	4	9	53
	8	26	0	0	6	1	0	0		0	14	47
	9	28	1	0	0	1	10	1	23		152	216
	10	25	0	1	1	0	3	2	18	137		187
	Total	**342**	**11**	**22**	**119**	**48**	**104**	**26**	**72**	**180**	**265**	

Table 4-2: Origin Destination Percentages

		Destination Node				
		1	2	3	7	10
Origin Node	1		9%	18%	46%	21%
	2			5%	8%	1%
	3		9%		4%	
	7	6%	9%	5%		3%
	10	7%		5%	8%	

4.2.6 Traffic Speeds

Figure 4-9 shows the observed 85th percentile speed for roads in Fadden, Macarthur and Gowrie. This data is also summarised in Table 4-3.

The 85th percentile speed is the speed at, or below, which 85% of vehicles are travelling. Ideally, the 85th percentile speed recorded of traffic using the street should be the posted speed limit of the street. The RTA *Guide to Traffic Generating Developments* acknowledges that, whilst not ideal, 15% of the traffic which uses a street will do so at speeds above the posted speed limit.

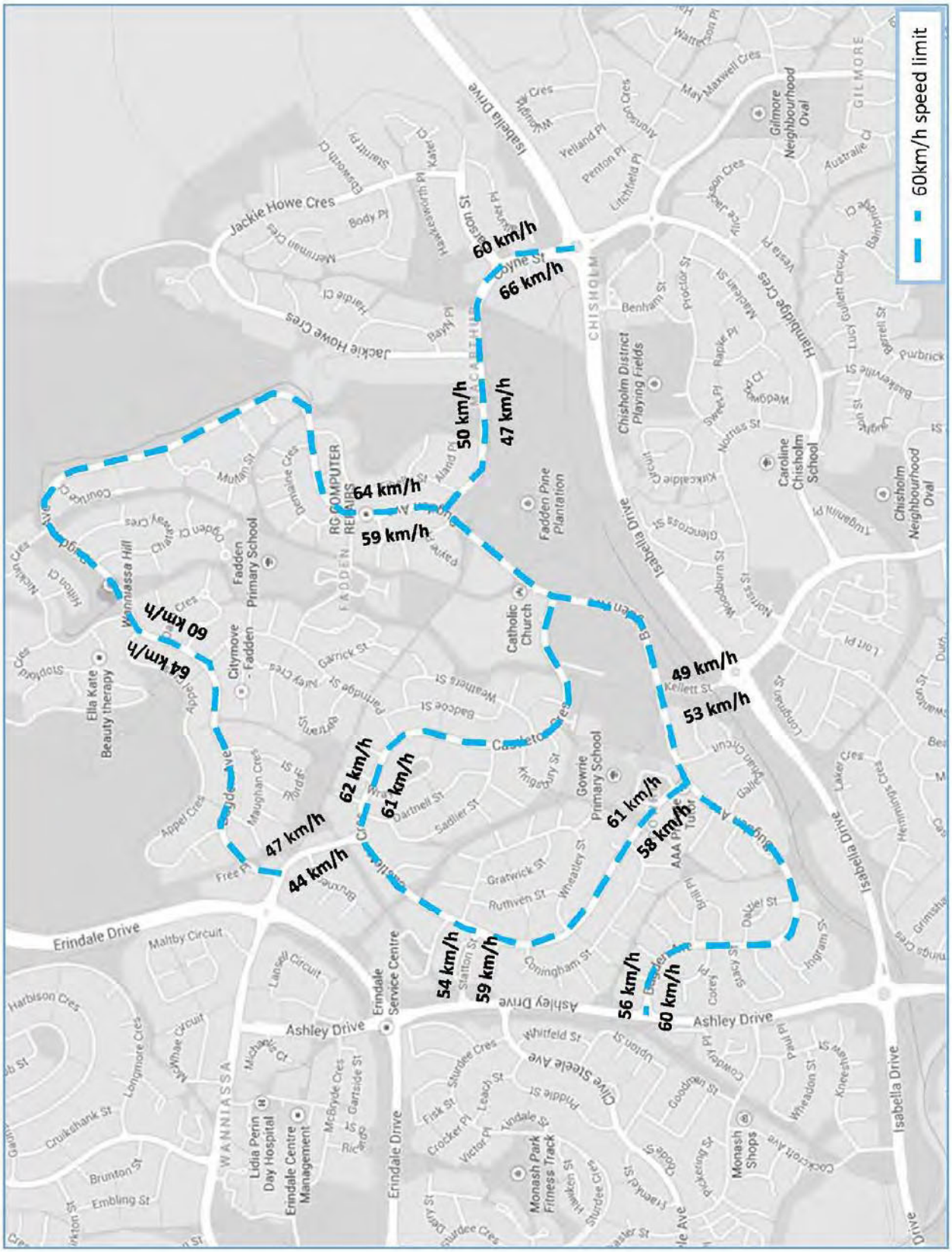
Figure 4-9 highlights that in the majority of locations, the 85th percentile speeds recorded were greater than the posted speed limit. The speed surveys found, in particular two locations in Bugden Avenue, observed speeds greater than the posted speed limit. Coyne Street had one survey point with 85% speed limit greater than 60 km /h. Castleton Crescent had three out of four survey points with observe speeds greater than the posted speed limit.

Table 4-3 85th Percentile Speed by Section

STREET	Section	Direction	85th Percentile Speed	Signposted Speed Limit
Sternberg Crescent	Bugden Ave & Castleton Cr	EB	46.77	60
		WB	44.37	60
Stratton Street	Ashley Dr & Castleton Cr	EB	53.86	60
		WB	59.32	60
Bugden Avenue	Ashley Dr and Herington St	EB	56.18	60
		WB	59.53	60
Bugden Avenue	Partridge St & Maughan Cr	NB	64.02	50
		SB	60.07	50
Bugden Avenue	Bramston St & Larcombe Cr	NB	59.32	60
		SB	64.35	60
Castleton Crescent	Partridge St & Sadler St	NB	62.12	60
		SB	60.77	60
Bugden Avenue	Castleton Cr & Larcombe Cr	EB	60.44	60
		WB	57.84	60
Kellett Street	Isabella Dr & Bugden Ave	NB	52.80	60
		SB	49.22	60
Coyne Street	Bugden Ave & Fihelly St	EB	50.17	60
		WB	47.26	60
Coyne Street	Carson St & Isabella Dr	NB	66.05	60
		SB	60.42	60

Note: EB = east bound WB = west bound
Note: Excludes school zones.

Figure 4-9: 85 Percentile Speed Map



Source: Browns

4.2.7 Intersection Performance

SIDRA intersection performance analysis was performed on 12 intersections using the results from the intersection counts undertaken on December 14.

As shown in Figure 4-10 and Figure 4-11, almost all intersections had LOS C or better for both AM and PM peak periods. Only Ashley Drive / Bugden Avenue had LOS F for both AM and PM peak periods and Castleton Crescent / Sternberg Crescent with an LOS E for the PM peak period.

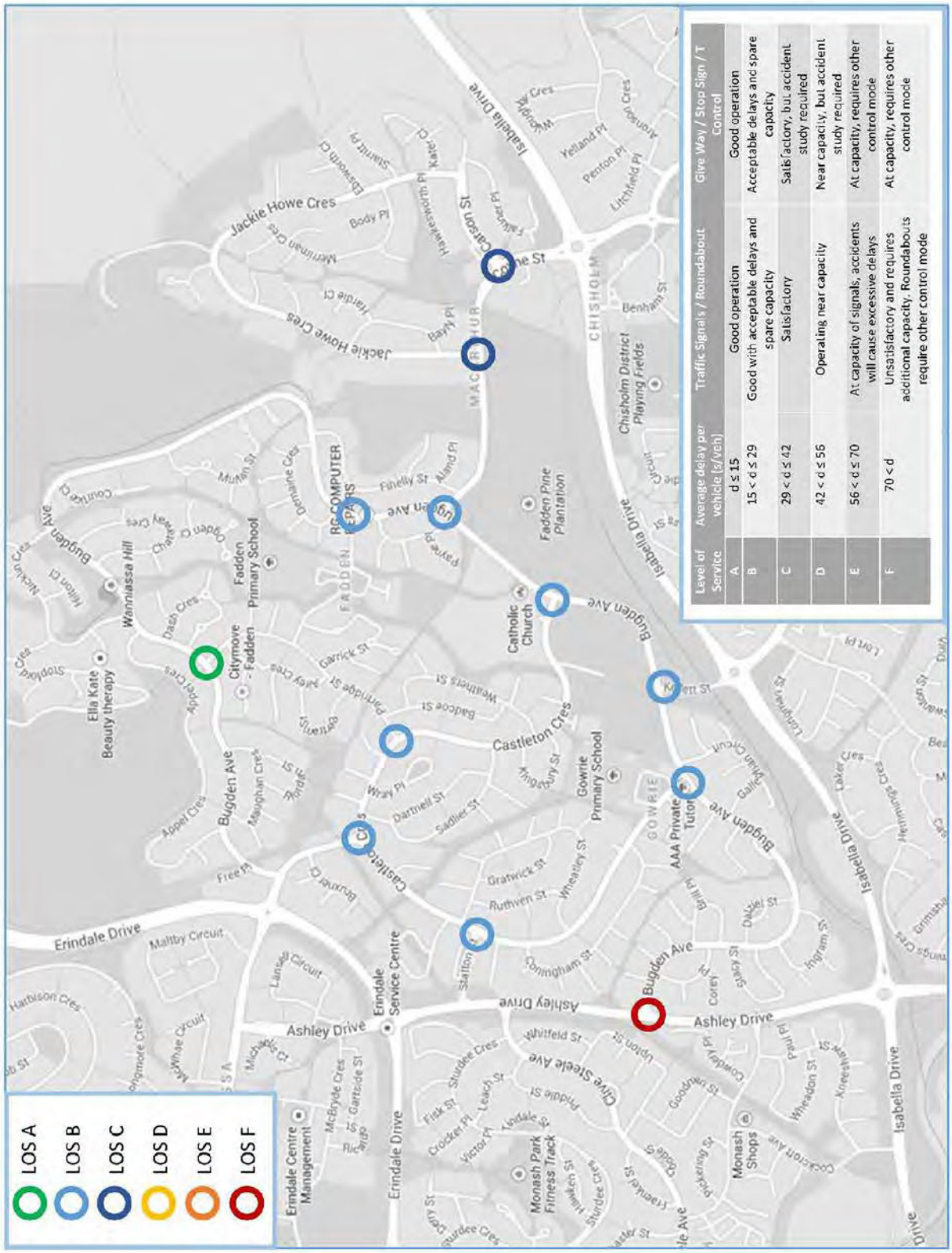
Therefore, in all but two locations, the intersections throughout the area are operating at a satisfactory level of service in both peak periods. The results are also provided in Figure 4-10 and Figure 4-11.

Table 4-4: SIDRA Results

ID	Peak	Road1	Road2	LOS	Degree of Saturation	Delay	Control
1	AM	Bugden Ave	Partridge St	A	0.127	8.40	give way
	PM			A	0.170	8.50	give way
2	AM	Castleton Cr	Partridge St	B	0.148	10.80	give way
	PM			B	0.236	14.10	give way
3	AM	Ashley Dr	Bugden Ave	F	1.203	296.20	give way
	PM			F	1.053	247.60	give way
4	AM	Castleton Cr	Stratton St	B	0.154	13.30	give way
	PM			B	0.203	14.50	give way
5	AM	Castleton Cr	Sternberg Cr	B	0.460	12.30	give way
	PM			E	0.981	46.70	give way
6	AM	Castleton Cr W	Bugden Ave	B	0.411	10.20	give way
	PM			A	0.338	9.60	give way
7	AM	Bugden Ave	Kellet St	B	0.649	13.10	give way
	PM			B	0.530	12.10	give way
8	AM	Castleton Cr E	Bugden Ave	B	0.371	11.20	give way
	PM			A	0.337	9.30	give way
9	AM	Bugden Ave	Coyne St	B	0.630	13.40	give way
	PM			B	0.495	12.10	give way
10	AM	Bugden Ave	Bramston St	B	0.214	10.70	give way
	PM			A	0.176	9.00	give way
11	AM	Coyne St	Jackie How Cr	C	0.313	16.40	give way
	PM			B	0.251	14.40	give way
12	AM	Coyne St	Carson St	C	0.161	15.20	give way
	PM			C	0.237	16.30	give way

The tabulated results above show the over-saturation of the Ashley Drive / Bugden Avenue intersection during the AM and PM peak period, this has resulted in an average delay of approximately 296 seconds for the AM period and 248 seconds for the PM period. Alternative measures such as signalisation should be considered for this intersection to mediate this issue.

Figure 4-10: AM Peak Existing Intersection Performance



Source: Browns

Figure 4-11: PM Peak Existing Intersection Performance

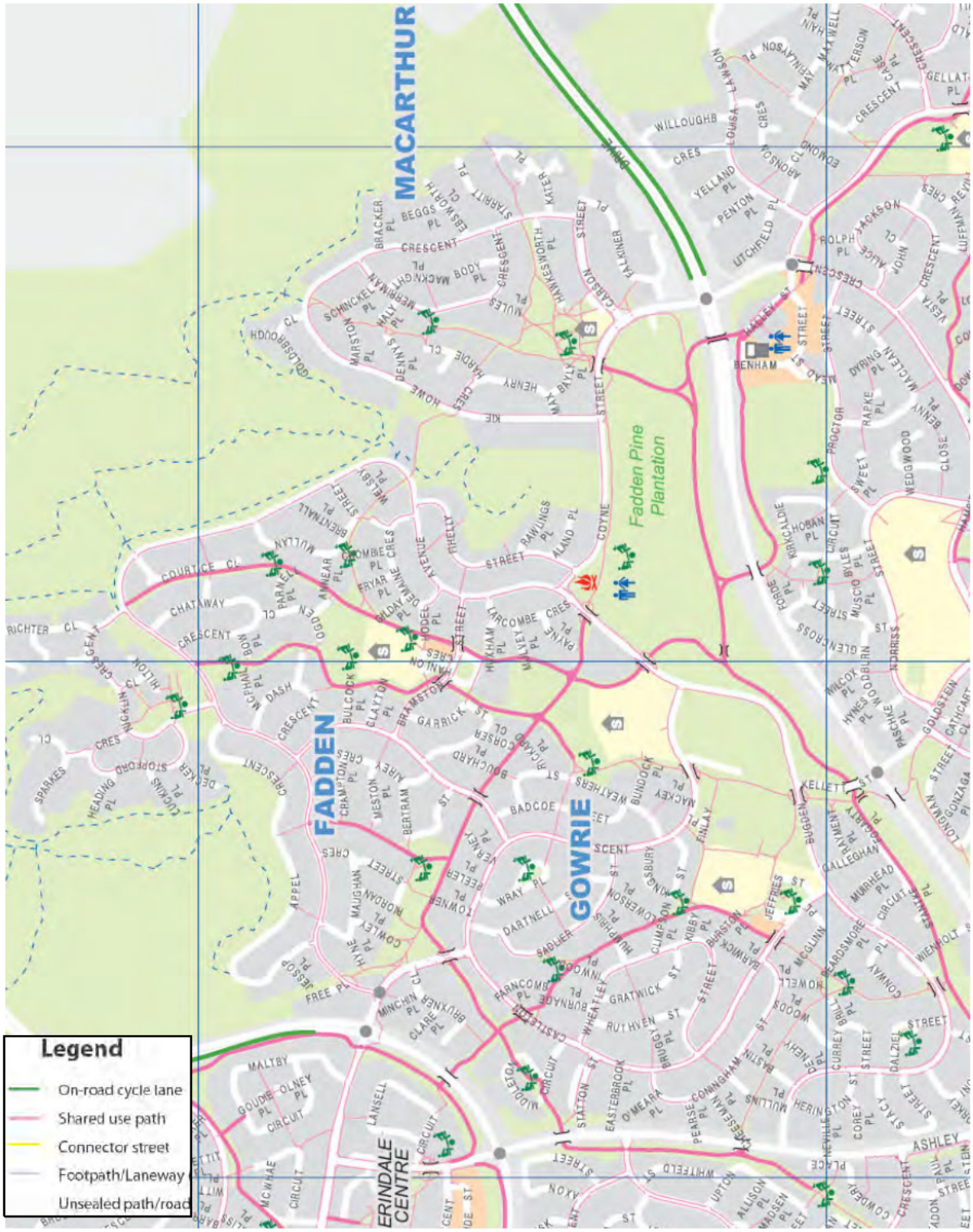
Source: Browns
LOS = Level of Service A = Best F = Worst

4.3 Pedestrian and Cycling Facilities

The existing pedestrian / cycle routes are presented in Figure 4-12 below.

Pedestrian and cyclist infrastructure consist of footpaths and shared paths (mostly bitumen). Coyne Street includes footpaths with shared paths south (in Fadden Pine Plantation) and west towards Fadden and Gowrie suburbs.

Figure 4-12: Pedestrian and Cycling Routes



(Source: The Canberra & Queanbeyan Cycling and Walking Map, 2013, ACT Government)

4.4 Public Transport

A number of streets within the study area are designated local bus routes (Figure 4-13). Bus routes include:

- Routes 67 & 267 along Coyne Street and Bugden Avenue
- Route 65 & 265 along Budgen, Partridge, Castleton, and Coyne Streets
- Routes 11 & 111 along Ashley Drive,

Figure 4-13: Local Bus Routes & Bus Stops

Source: Action Buses

5 Community Consultation - Stage One

The overall strategy and purpose of community consultation for this study was outlined in Section 3.1.2.

5.1.1 Purpose & Approach

The purpose of this consultation phase was to tell people about the study and get initial comments on issues and problems.

The initial round of consultation on the project commenced with a media statement by the Minister, a briefing of the Tuggeranong Community Council, and letters to key stakeholders. These were followed by a household newsletter and survey.

The first Community Information display (drop-in public information session) was held at the Gowrie Primary School on 27 November 2012 from 4:30 - 7:30pm, to present traffic survey results and discuss local issues. The Information Display was staffed by representatives of TAMS and the Consultant Team. The display was notified to residents through media advertising as well as through the first Household Newsletter.

The Newsletter to all households in the study area included a Household Survey with reply paid envelope to facilitate resident feedback on key concerns within the study area. In addition, an Electronic Survey similar to the household survey was established on the ACT Government's Time-To-Talk website. The newsletter and survey developed as part of consultation process are provided in Attachment B.

5.1.2 Community Feedback

A wide range of local traffic issues were raised by local residents during the Stage One consultations. Whilst valuable comments were offered at the display and through the on-line survey the most statistically valid responses came from the household survey returns of which 389 (or 15% of total households) were received and analysed. Figure 5-1 to Figure 5-6.

A total of 84% of people thought there was some sort of traffic problem in the local area. Only 7% of respondents stated they had no concerns regarding traffic and safety in the area.

The top five traffic / safety problems raised in resident (Figure 5-3) submissions were:

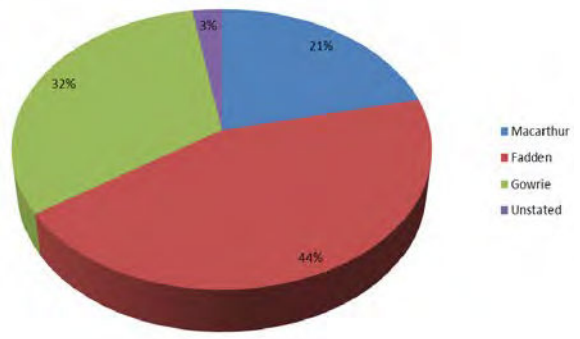
1. Speeding
2. Dangerous intersections
3. Accident spots
4. Peak hour traffic volume
5. Poor driver visibility.

Figure 5-5 shows the geographic location of issues mentioned in the survey. A number of sites identified as problem areas by local residents included:

- Coyne Street, including the intersections with Bugden Avenue, Jackie Howe Crescent, Carson Street and Fihelly Street
- Bugden Avenue, including the intersections with both Castleton Crescents and Kellett Street.

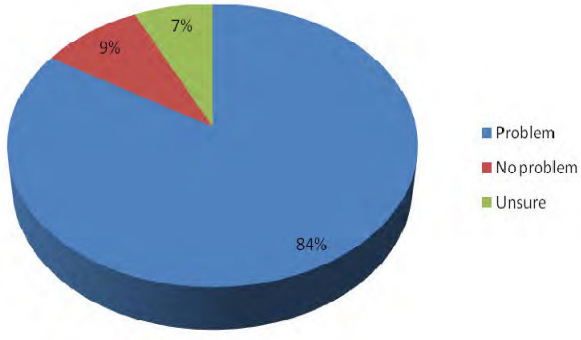
Speeding was, by far, the most frequently cited specific problem (87% total responses) requiring immediate action. The main issues and streets causing concerns to local residents are shown on Figure 5-4.

Figure 5-1: Survey response by Suburb



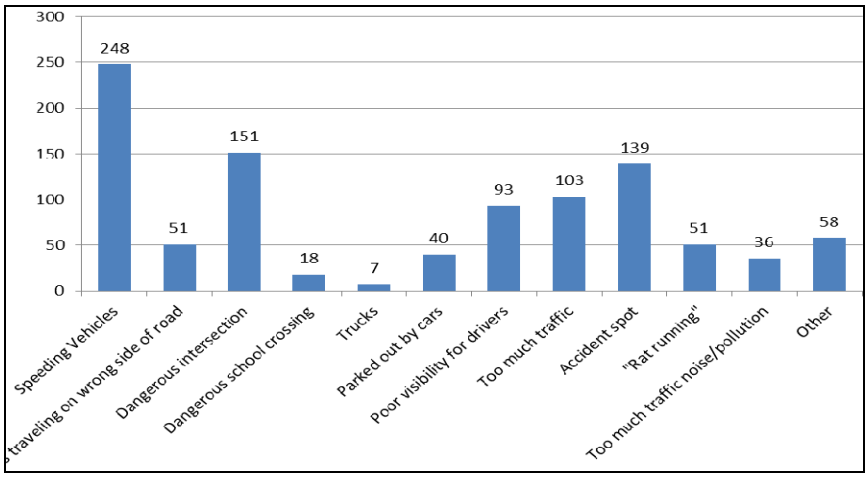
Source:
Household & On-line Surveys (12 February 2013, Purdon)
Note: Percentages rounded to nearest whole figure

Figure 5-2: Perceived Traffic Problems



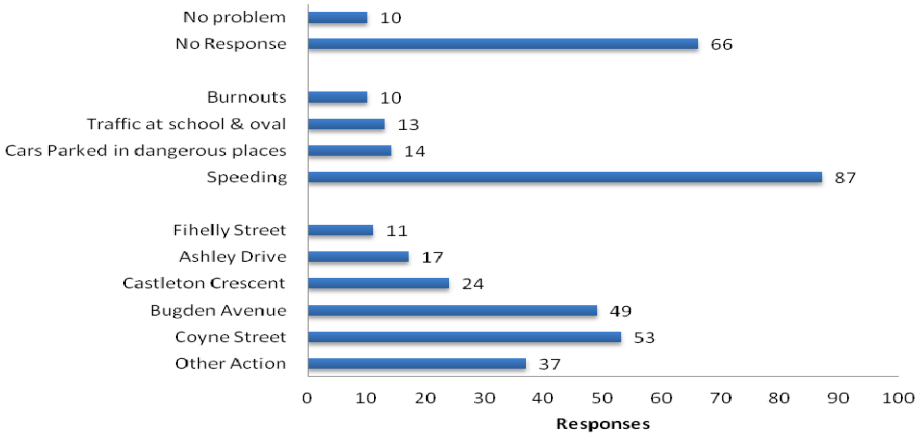
Source:
Household & On-line Surveys (12 February 2013, Purdon)
Note: Percentages rounded to nearest whole figure

Figure 5-3: Types of Traffic Problems



Source: Household & On-line Surveys (12 February 2013, Purdon)
Note: Percentages rounded to nearest whole figure

Figure 5-4: Issues Needing Immediate Actions

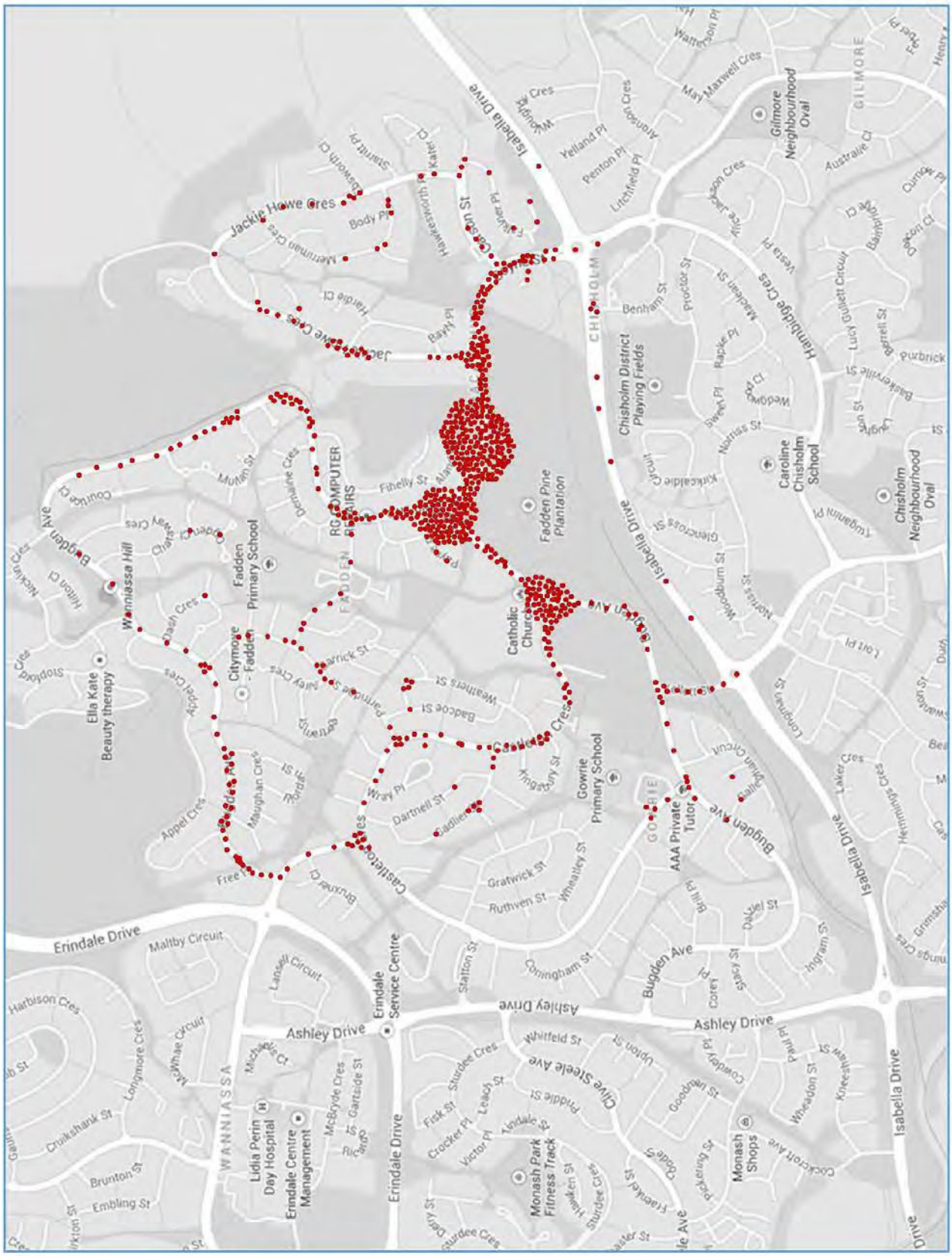


5.1.3 Summary of Stage 1 Consultation

The feedback from the first stage community consultations provided a clear message for the Study Team that there were perceived problems with local road network that warranted implementation of a traffic management scheme and that such a scheme should focus on solutions to issues such as:

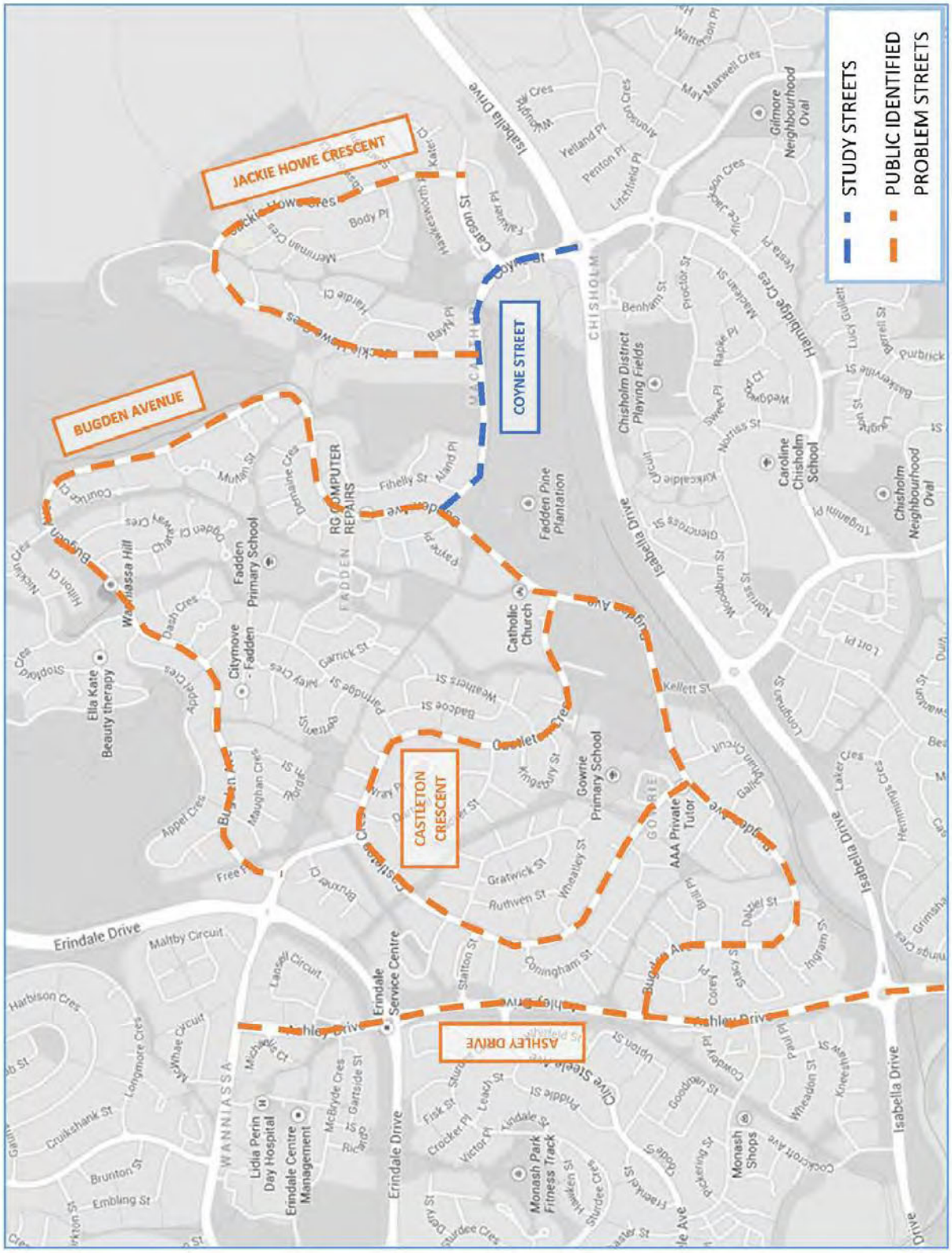
- Speeding
- Accident spots
- Intersection safety
- "Rat-running".

Figure 5-5: Indicative Locations of traffic issues (from Public Consultation)



Source: Browns

Figure 5-6: Publicly Identified Problem Streets



Source: Browns

6 Development of Options

This section looks at the identified traffic issues, possible local area traffic management measures and the warrants supporting them.

6.1 Possible Treatments

There are a range of potential traffic management measures available to achieve the objectives of this study and respond to the key issues raised during community consultations. The following is a 'snapshot' of some of the traffic management measures available (refer Figure 6-1):

- ***Small roundabouts*** located at intersection to help reduce travel speed.
- ***Speed cushions*** are several small speed humps installed across the width of the road with spaces between them.
- ***Raised pavements*** involve the inclusion of a raised platform. This includes ***Wombat crossings*** which are a raised platform incorporating painted pedestrian crossing.
- ***Lane narrowing*** involves the restriction of the horizontal course of a vehicle to reduce speeds, improve delineation and minimise pedestrian crossing distances.
- A ***centre blister*** is a concrete island positioned in the median of a road. Often centre blisters incorporate kerb extensions and may be used as a pedestrian and cyclist refuge.
- A ***mid-block median*** is a raised or flush island positioned in the median of a road.
- ***Modified 'T' intersections*** are used to affect a change in the vehicle travel path. They act in a similar manner to slow points in moderating traffic speeds but in a 3-way intersection.
- Speed cameras.
- Partial road closures .

In the selection of suitable treatments, the following issues have been considered:

- The requirement to reduce traffic speeds;
- The requirement to deter 'rat running'[1] and decrease in local traffic volumes;
- The existing road environment;
- Road user groups including:
  - residents
  - emergency vehicles
  - ACTION Buses
  - cyclists
  - pedestrians; and
  - commercial users.

[1] *Rat-running* is the term used to describe travellers taking "short cuts" through local residential streets to gain access from one area to another, instead of the intended main road network.

Figure 6-1: Examples of Potential Treatments

Raised Platform

Speed Cushions

Lane Narrowing

Centre Blister

Mid-block Median

Small Roundabout

Modified 'T' Intersection

Raised Intersection

6.2 Evaluation of Treatments

The potential treatments have been assessed in regard to their effectiveness in addressing the key issues of deterring "rat running", preventing localised speeding, improving safety at intersections and limiting the diversion of traffic to lower order streets.

The existing condition of the study area streets were defined in Chapters 4 & 5 above, based on public consultations and technical analysis of intersection traffic counts and bluetooth surveys.

The range of traffic calming measures considered for this study, outlined in Section 6.1 have been evaluated in relation to whether they achieve the objectives of the study and reflect community concerns, as well as in relation to other traffic issues such as impact on emergency service vehicles, bus routes, pedestrian and cycle facilities and local amenity for residents. A list of the available treatment devices and their benefits for each mode considered is shown in Table 6-1 below, includes a summary of the positive and negative impacts of possible traffic calming devices.

Table 6-1: Advantages and Disadvantages of Potential Treatments

Advantages	Disadvantages
Small Roundabout	
▪ slows traffic ▪ defines traffic priorities ▪ improves pedestrian safety	▪ can have visual impacts ▪ can increase traffic difficulties for pedestrians and cyclists ▪ Moderate to high cost
Speed cushions	
▪ reduce traffic speed ▪ improve traffic safety ▪ indirectly reduce traffic volume ▪ bus friendly – busses straddle a cushion ▪ emergency service vehicles straddle it	▪ can transfer a problem by diverting traffic to other route(s) ▪ Low cost
Raised platform	
▪ reduces traffic speeds ▪ improves pedestrian safety ▪ could be used as a threshold to low speed environment ▪ Improved delineation ▪ Increased bicycle safety ▪ Moderate to low cost	▪ may increase traffic noise just before and after the platform ▪ not as bus friendly as the speed cushions ▪ should only be used on relatively straight and flat streets away from intersections
Raised intersection	
▪ reduces traffic speeds ▪ improves intersection safety ▪ improves pedestrian and cyclist safety	▪ may increase traffic noise just before and after the platform ▪ not as bus friendly as the speed cushions ▪ Moderate to high cost
Lane narrowing / kerb extensions	
▪ minimised crossing distances for pedestrians; ▪ improve visibility of pedestrians and vehicles; ▪ assist in the reduction of vehicle speeds,	▪ Will restrict parking opportunities. ▪ May result in confrontations between opposing drivers arriving simultaneously at a single lane slow point. ▪ May not reduce motorcycle speeds.

Advantages	Disadvantages
particularly on curvilinear alignments; ▪ relatively low cost; ▪ little effect on emergency vehicles; and ▪ less disruptive to local traffic than some other forms of LATM devices that are more severe in their design i.e. wombat crossings and raised pavements.	
Centre blister	
▪ reduce vehicle speeds; ▪ provide a refuge for pedestrians and cyclists crossing the street; & ▪ flexible in design allows buses and other commercial traffic to be accommodated. ▪ Careful consideration during the design of the centre blister would be required to ensure that it is possible to account for the needs of on-road cyclists.	▪ Reduction of on street parking adjacent to the islands. ▪ May create a squeeze point for cyclists. ▪ May impact on property access and egress.
Mid-block treatments	
▪ provision of a refuge for pedestrians and cyclists crossing the street; ▪ separation of vehicles in opposing traffic lanes thereby reducing the probability of head-on collisions; ▪ flexibility in design allows buses and other commercial traffic to be accommodated; ▪ they are relatively low cost; ▪ they may reduce vehicle speeds; and ▪ flush treatments do not restrict vehicle movements, particularly right turning vehicle movements from driveways.	▪ May impact on property access. ▪ Can create a squeeze point for cyclists. ▪ May impact on kerbside parking
Modified T-intersection	
▪ controlling of traffic movement and improvement in traffic flow; ▪ facilitation of safe pedestrian crossing; ▪ reduction in vehicle conflict paths; and ▪ accommodation of buses.	▪ May impact on property access. ▪ Can create a squeeze point for cyclists. ▪ Can reduce on street parking spaces. ▪ May reduce sight distance.
Speed Cameras	
▪ act as speed deterrent ▪ can be used as mobile or fixed ▪ fixed cameras are low maintenance ▪ can be installed as temporary deterrent.	▪ Can cause deviation in traffic routes to avoid camera ▪ Generally used along major routes, not suburban locations.
Street Closures (culs-de-sac)	
▪ Redirects through-traffic ▪ Works best for narrow streets where intersecting with busy road.	▪ interferes with “normal” traffic flow and convenient traffic movement ▪ requires capital cost for cul-de-sac turning circle ▪ not a solution for major intersection.

Table 6-2: Uses for Traffic Management Devices

MEASURE		Reduce Speeds	Reduce Traffic Volume	Increase Pedestrian Safety	Increase Bicycle Safety	Accounts for Buses
Vertical Deflection Devices	Speed Cushions	✓	✓	-	-	✓
	Raised Pavements	✓	✓	-	✓	-
	Lane Narrowing / kerb Extensions	✓	-	✓	-	✓
Horizontal Deflection Devices	Small Roundabout	✓	-	-	-	-
	Mid-block Median Treatments	✓	-	✓	✓	✓
Diversion Devices	Modified 'T' Intersection	✓	✓	✓	✓	✓

7 Draft Traffic Management Scheme

Objectives

The objectives of the draft traffic management scheme are to:

- reduce travelling speeds
- improve safety at intersections
- reduce traffic volumes
- discourage 'rat-running'.

Rationale for proposed treatments

The proposed treatments take into consideration:

- results of the analysis of existing traffic and land-use data
- issues raised by residents and the wider community during the earlier consultation period in December 2012
- objectives established from the assessment of the above information.

Technical principles

In order to reduce speeds all-day every day (24/7), it is necessary to place physical devices on the road so that motorists must slow down. These devices must be spaced evenly along the road to achieve the desired travel speed at, or below, the posted/default speed limit. Different devices serve different purposes, have different levels of effectiveness, and vary in construction cost. However, the aim of all these devices is to reduce speeding and encourage through-traffic to use the surrounding arterial roads. Slower speeds and devices which create safer crossing opportunities for pedestrians would also help to improve the safety and amenity of residents.

This traffic management scheme aims to improve traffic conditions on Coyne Street, as well as issues on other streets identified during the analysis of traffic data and from community feedback.

The following treatments were identified in a draft Traffic Management Scheme used as the basis for Stage Two consultations.

7.1.1 Draft traffic management treatments

This traffic management scheme aims to improve traffic conditions on Coyne Street, as well as issues on other streets identified during the analysis of traffic data and from community feedback.

The initial proposed treatment measures are shown in the draft concept plan below (Figure 7-1).

Coyne Street / Bugden Avenue Intersection

This section of road has recorded 85% speeds at 68 km/h and 67 km/ h for eastbound and westbound respectively and numerous residents' complaints regarding traffic conditions. This is coupled with 5 year recorded accidents of 2 rear end & 3 run off at the intersection and 4 run off and 2 rear end at the approaches. In response to these issues, two options for upgrading are proposed, being:

- Re-alignment of the road to create a 4-way intersection at Bugden Avenue, with roundabout, aligned with Larcombe Crescent.
- Two sets of speed cushions within Coyne Street and another set in Bugden Avenue near the Coyne Street intersection.

Coyne Street / Bugden Avenue intersection looking south

looking north

Coyne Street / Bugden Avenue intersection looking west

Coyne Street / Jackie Howe Intersection

It is proposed to modify this T intersection to construct a small roundabout to better define this intersection. Over the past 5 years, there were 2 rear end accidents recorded at this intersection with 1 left turn, 1 right turn and 3 rear ends occurring on the west approach and 3 run off road accidents on the east approach.

Coyne Street/Jackie Howe Street Intersection: looking west

looking east

Coyne Street Mid-block

With the number of accidents consisting of 15 run off road and 5 head on over a 5 year period as well as residents' complaints about speeding, this 500-metre stretch of road should have additional speed controls comprising of a set of speed cushions and two raised platforms..

Coyne Street mid-block: looking west

looking east

Bugden Avenue / Castleton Crescent Street Intersections

It is proposed to modify these two T-intersections to construct a small roundabout at each intersection. There were 4 rear-end, 1 right turn and 3 run off accidents recorded over a 5 year period for this intersection.

Bugden Avenue Mid-block Treatments

In addition to the proposed roundabouts on Bugden Avenue there is also proposed to be 9 additional speed cushions and 3 additional raised platforms located strategically along the length of the roadway to reduce speeding improve the safety of this road. Particular attention has been paid to the north eastern portion of the road where speeding is most prominent.

Bugden Avenue / Castleton Crescent: looking south

looking south east

Castleton Crescent / Sternberg Crescent Intersection

It is proposed to modify this T intersection to construct a small roundabout. The roundabout will reduce speed in the area and improve the operation of the intersection.

Castleton Crescent Mid-block Treatments

In a similar fashion to the Bugden Avenue mid-block treatments, 10 speed cushions and 3 raised platforms are proposed to reduce speeding and improve safety. The location of these treatments has been chosen to focus on the areas which have the most significant problems.

Kellet Street / Bugden Avenue Intersection

It is recommended that modifications be applied to this T intersection consisting of the installation of a small roundabout at this intersection. A small roundabout will improve the safety of the vehicular movements at the intersection and may reduce speeding in the area.

Bramston Street Mid-block Treatments

Three speed cushions are recommended as treatment for the Bramston Street mid-block to reduce speeding and discouraging rat-running in the area.

Partridge Street Mid-block Treatments

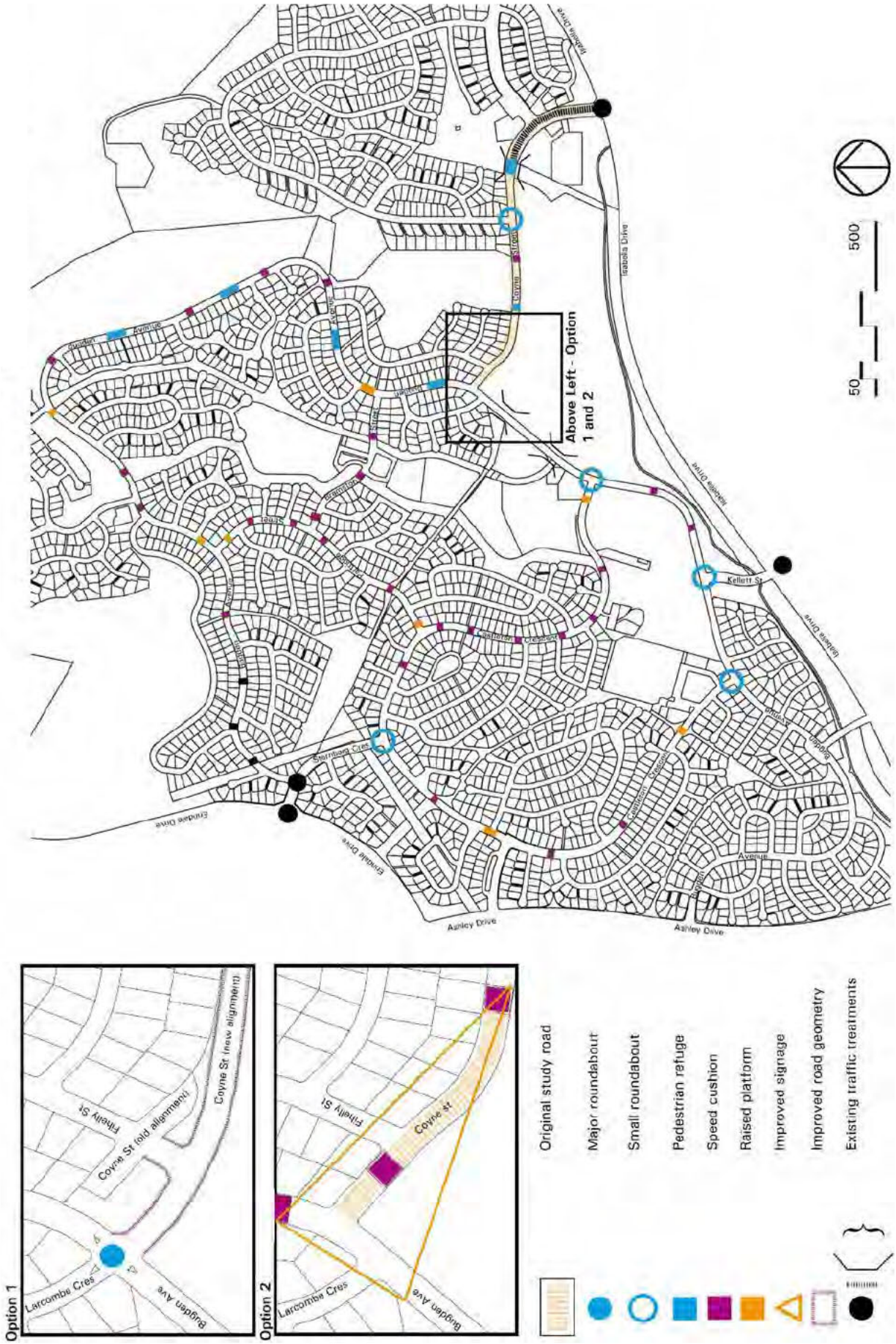
In a similar fashion to the Bugden Avenue and Castleton Crescent mid-block treatments, 4 speed cushions and 2 raised platforms are proposed to reduce speeding and improve safety of this roadway. The location of these treatments has been chosen to focus on the areas which have the most significant problems.

Figure 7-1 and Table 7-1 summarise the overall draft scheme for the study area.

Table 7-1: Proposed Devices

STREET	MAIN ISSUES OF CONCERN	PROPOSED DEVICES
COYNE STREET	▪ Speeding ▪ Intersection safety ▪ "Rat-running"	▪ Roundabouts ▪ Speed Cushions ▪ Raised Platform ▪ Pedestrian Refuge
BUGDEN AVENUE	▪ Speeding ▪ Intersection safety ▪ "Rat-running"	▪ Roundabouts ▪ Speed Cushions ▪ Raised Platform ▪ Pedestrian Refuge
CASTLETON CRESCENT	▪ Speeding ▪ Intersection safety	▪ Roundabouts ▪ Speed Cushions ▪ Raised Platform
PARTRIDGE STREET	▪ Speeding ▪ Intersection safety ▪ "Rat-running"	▪ Speed Cushions ▪ Raised Platform
BRAMSTON STREET	▪ Speeding ▪ "Rat-running"	▪ Speed Cushions
STERNBERG CRESCENT	▪ Intersection safety	▪ Roundabout
KELLETT STREET	▪ Intersection safety	▪ Roundabout

Figure 7-1: Proposed Scheme (Stage 2 Consultations)



8 Community Consultation - Stage 2

8.1.1 Purpose & Approach

While Stage One Consultation focussed on gaining community feedback on the key traffic issues in the area, the Stage Two Consultations focussed on generating feedback on the draft Traffic Management Plan which was distributed and displayed for comment.

The Stage Two consultations followed a similar approach to Stage One by incorporating activities such as:

- Media release from Minister for TAMS
- Presentation to Tuggeranong Community Council
- Household Newsletter #2
- Household Survey #2
- Electronic Survey #2
- Drop-in public information session #2.

The Public Information Display was held at the Gowrie Primary School on Wednesday 13 March 2013 between 4:30-7:30pm and staffed by representatives from TAMS and the Consultant Team. The display included posters, plans and information to summarise findings from the Stage One Consultations and technical traffic analysis. The draft proposed traffic management scheme was also displayed for the three suburbs.

A shop front poster display was located at Chisholm Shops for a period of six weeks in February/March 2013.

The main mechanism for residents to provide feedback on the draft proposed traffic management scheme was through a Household Survey (distributed to all households with a second newsletter), and through an on-line survey (in the same format as the household survey).

8.1.2 Community Feedback

A total of 317 survey responses have been analysed in this report up to 17 April 2013, comprising 254 household survey responses and 63 on-line survey responses. This represents a response rate of about 11% of all households in the study area.

The majority of survey responses came from Fadden (45%) followed by Macarthur (32%) and Gowrie (21%).

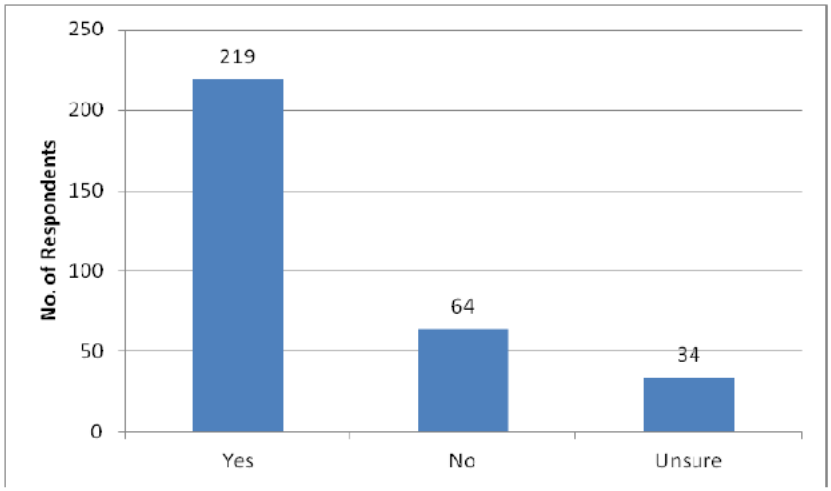
Responses were received from a large number of streets although the most frequent responses came from Bugden Avenue, Castleton Crescent and Jackie Howe Crescent.

Overall, there was very strong support for the draft traffic devices plan distributed for consultation. However, 50% of respondents added some sort of change(s) to the draft plan (see below).

The survey response indicated a very strong (69%) level of local support for the concept plan showing local traffic devices as outlined in the newsletter#2 and community display.

When asked if they support the current proposals 69% of respondents answered 'Yes', 20% answered 'No' and 11% were 'Unsure'. Suggested changes to the draft scheme are shown below.

Figure 8-1: Level of Support for Proposed Traffic Management Scheme



Source: Household & Online Surveys (March 2013, Purdon)

8.1.3 Coyne Street Options

The newsletter contained two basic treatment options for Coyne Street. Respondents were asked which Coyne Street proposal they would like to see implemented (Table 8-1).

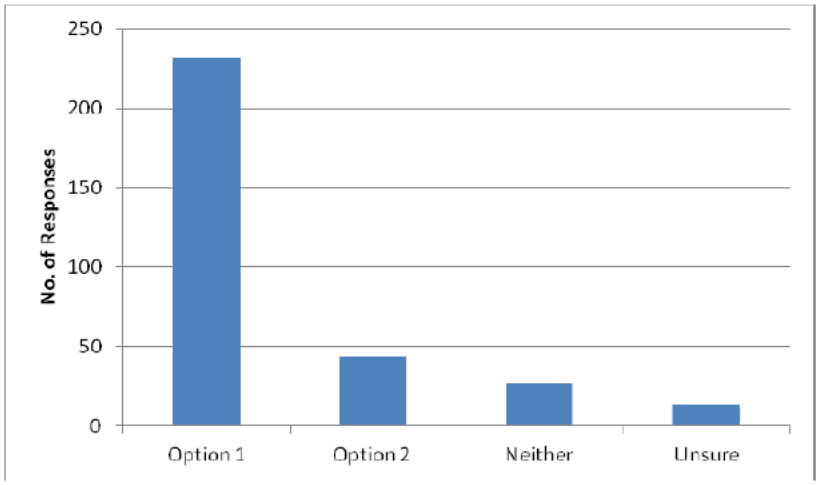
Option 1 comprising realignment of Coyne Street at Bugden Avenue was strongly supported in the survey. This response is also mirrored in the response to priority actions in Q5.

Table 8-1: Coyne Street Options

Option	Number of Respondents	% of Respondents
Option 1: Coyne St realignment	232	73%
Option 2: Improving signage and adding speed cushions on Coyne St	44	14%
Neither Option 1 or Option 2	27	9%
Unsure	14	4%
Total	317	100%

Source: Household & Online Surveys (March 2013, Purdon)

Figure 8-2: Coyne Street Options



Source: Household & Online Surveys (March 2013, Purdon)

8.1.4 Proposed Changes

The survey results showed that 49% (156) of respondents suggested a change(s) to the concept plan for proposed traffic devices (Table 8-2) on display and in the newsletter.

Of these responses, the majority were focussed in three streets (Coyne Street, Bugden Avenue and Castleton Crescent) and were generally critical of the number and type proposed devices. However, there were also some changes that increased the number of proposed devices in selected streets.

Table 8-2: Changes to Proposed Scheme

Street	Change to Proposal	No	% of Respondents that wanted change
Coyne Street	No Speed Cushions at all	4	3%
	Positive Response to Speed Cushions	6	4%
	Does not support Roundabouts (including adjoining intersections with Bugden & Jackie Howe)	6	4%
	Positive Response to Coyne/Bugden roundabout	11	7%
Bugden Avenue	Negative Responses to Speed Cushions	12	8%
	Fewer Speed Cushions	5	3%
	Positive Responses to Speed Cushions	9	5%
	Negative Response to Roundabouts (generally referring to adjoining roundabout with Castleton)	5	3%
	Supports Roundabouts (generally at Coyne intersection but also at Kellet & Bramston St's)	13	8%
	Negative Response to Raised Platforms	9	6%
	Positive Response to Raised Platforms	10	6%
	Other Issues– Foliage, Speed Limit, Slip Lane, Footpaths, Parking, Buses, Line Markings	13	8%
Castleton Crescent	Fewer Speed Cushions	9	6%
	No Speed Cushions at all	8	5%
	Positive Response to Raised Platforms	7	4%
Total Responses Suggesting Change		127	

Note: Question allowed for more than one response

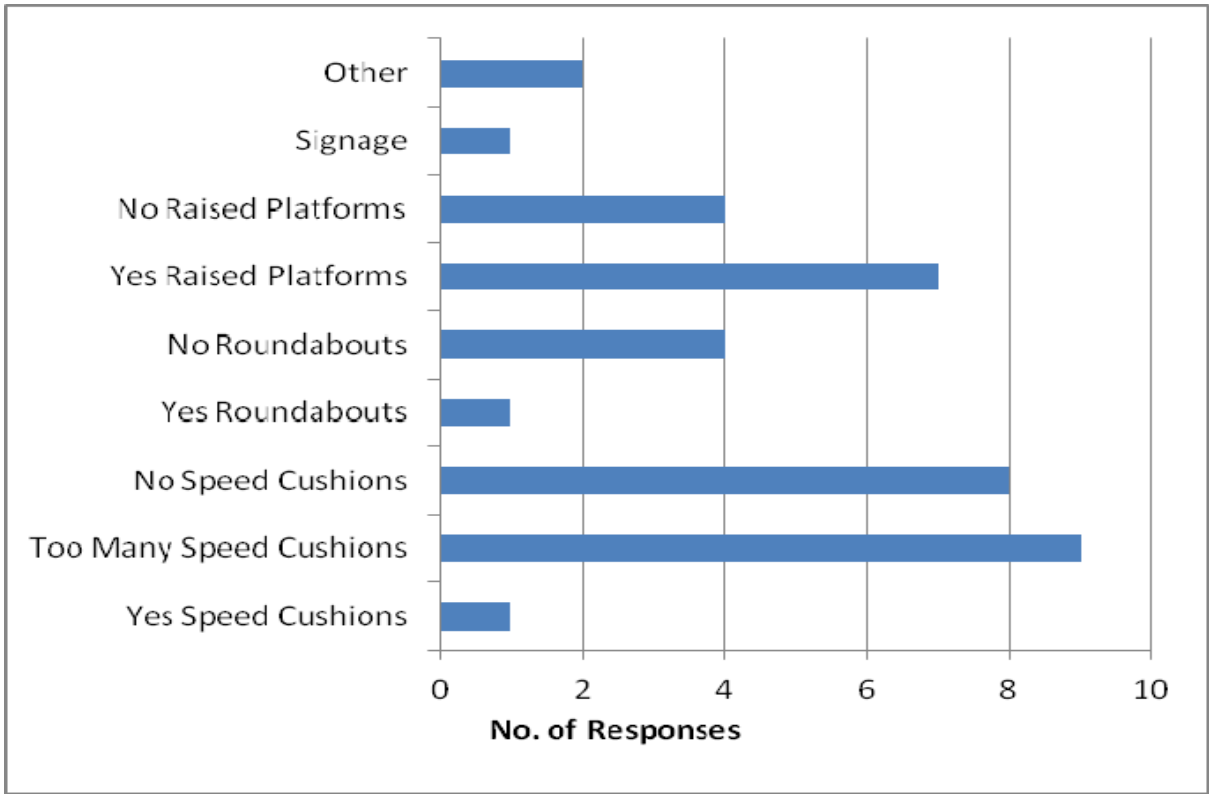
Bugden Avenue received the most number of requests/suggestions for changes. They also received a mixture of positive and negative comments about the need for more devices, as well as a few responses being critical of the proposed number and type of device.

Whilst streets are used by both residents and trough-traffic, the number of responses from individual streets, suggest it is local residents rather than "trough traffic" that are calling for changes in the proposed devices.

Figure 8-3, Figure 8-4 and Figure 8-5, summarise the types of changes listed by residents for selected local streets.

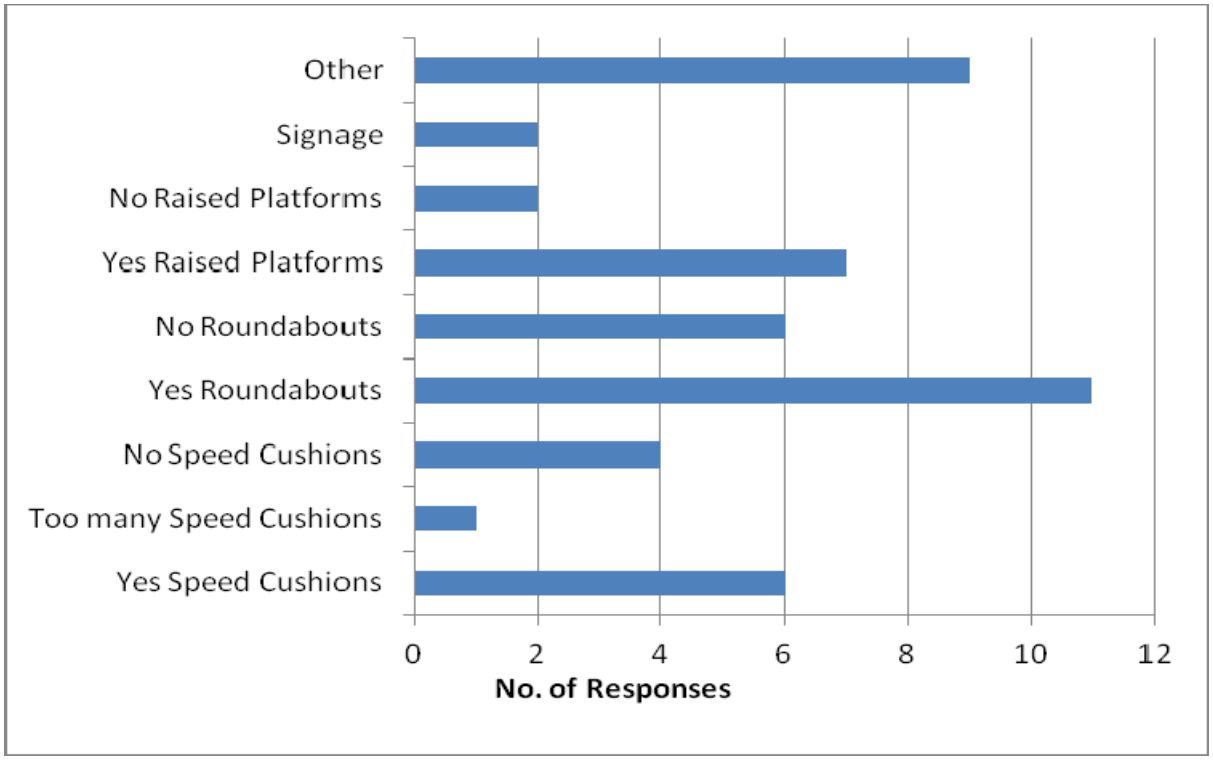
Figure 8-6 below refers to specific proposed changes that have been noted from the household and online survey results (above 5%).

Figure 8-3: Castleton Crescent Changes



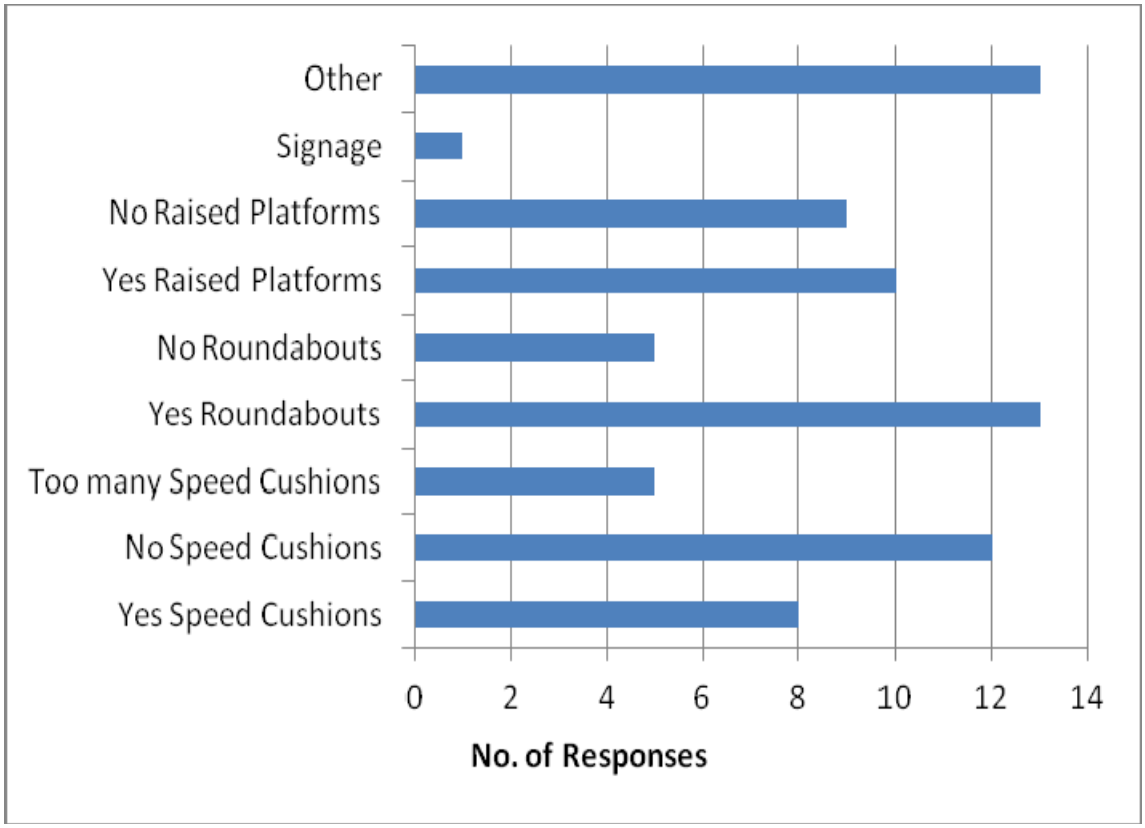
Source: Household & Online Surveys (March 2013, Purdon)

Figure 8-4: Coyne Street Changes



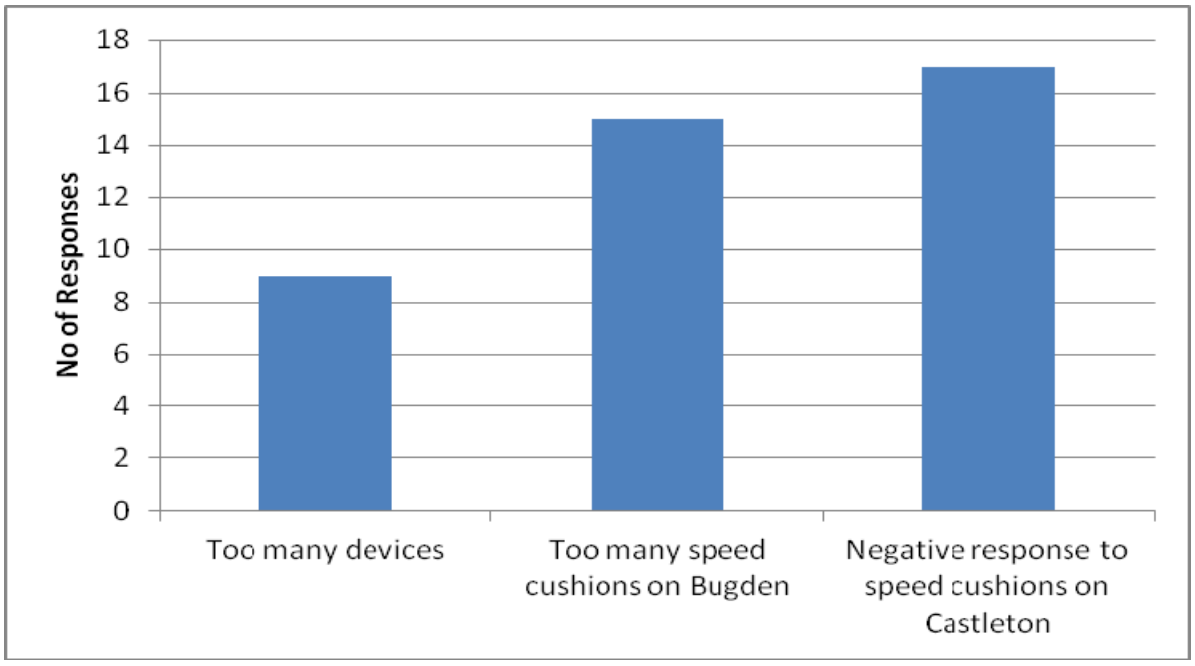
Source: Household & Online Surveys (March 2013, Purdon)

Figure 8-5: Bugden Avenue Changes



Source: Household & Online Surveys (March 2013, Purdon)

Figure 8-6: Proposed Changes to Scheme



Source: Household & Online Surveys (March 2013, Purdon)

Other popular proposal changes include:

- Further treatments on Jackie Howe Crescent (7)
- Further treatments at the Coyne St and Bugden Avenue intersection (6)
- No treatments necessary (6)
- Support Coyne Street realignment (5)
- Greater Police presence (4)
- More treatments in School Zones (4).

8.1.5 High Priority Treatments

Respondents were asked to nominate three treatments that they believe should be of highest priority for implementation.

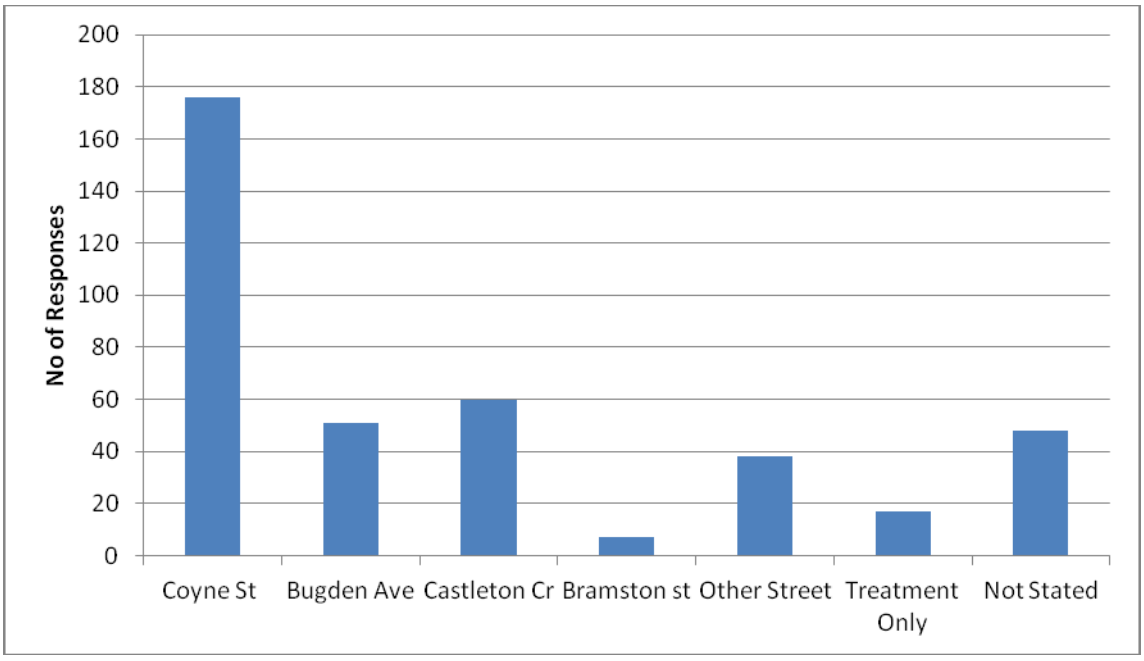
Figure 8-7 lists the streets and devices nominated by residents for priority action.

The most frequently mentioned streets were:

- Coyne Street
- Castleton Crescent
- Bugden Avenue
- Bramston Street.

Out of 316 responses Coyne Street was nominated 174 (44%) times as the respondent's first preference. The dominance of this street in their responses can be explained by a number of factors including the crash history of the street and its use as a major gateway to/from the local area.

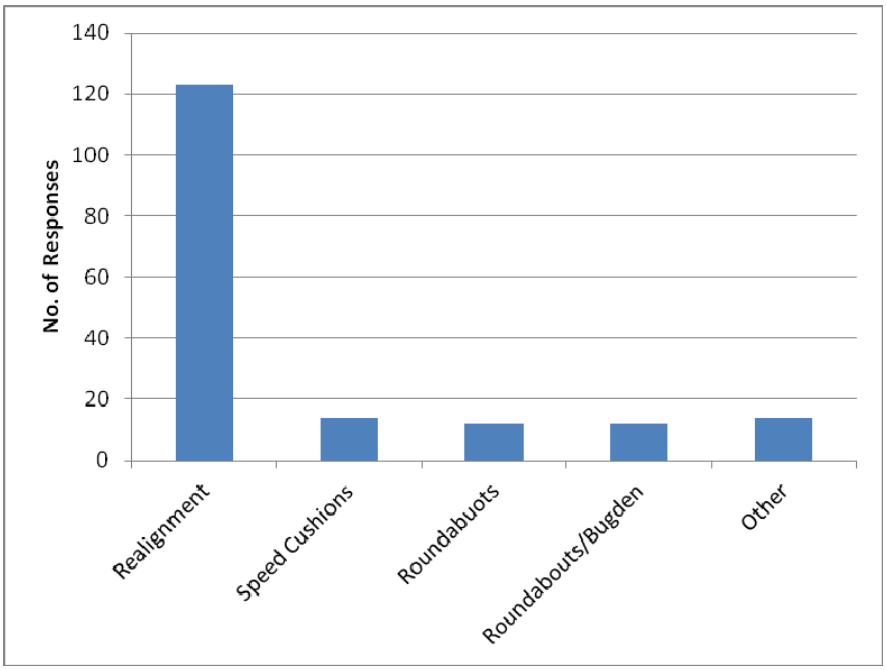
Figure 8-7: First Priorities Streets



Note: Percentages rounded to nearest whole figure
Source: Household & Online Surveys (March 2013, Purdon)

Figure 8-8 shows preferences for actions on Coyne Street.

Figure 8-8: Coyne Street Priority Treatments



Source: Household & Online Surveys (March 2013, Purdon)

8.1.6 Consultation Conclusions

The following conclusions are drawn from these survey results.

- Local residents have been given a significant opportunity to comment on local traffic issues and participate in discussion about the nature and location of possible future traffic devices to address these issues.
- The number of survey results as a percentage of total households is regarded as a statistically valid sample of community comment.
- It is reasonable to assume minimal "double counting" between mail-back and on-line survey responses, meaning both can be aggregated for a total response.
- The majority of respondents were satisfied with the consultation process.
- A very high proportion of respondents generally support the proposed scheme. The majority of these respondents also prefer Option 1 – the realignment of Coyne Street.
- There is a very large support for Option 1: Realignment of Coyne Street with Bugden Avenue and Larcombe Crescent.
- The Coyne Street realignment is the most popular first priority for treatment in the overall scheme.
- A significant number of respondents made negative comments in relation to speed cushions and other devices on Bugden Avenue.
- A significant number of respondents believe the proposed scheme contains too many speeding devices.
- A significant number of respondents believe that there are too many speed cushions proposed for Bugden Avenue and Castleton Crescent.

The feedback from this consultation process will be used by the project team to inform the final scheme for implementation.

9 Determination of Final Scheme

This traffic management scheme aims to improve traffic conditions on Coyne Street, as well as issues on other streets identified during the analysis of traffic data and from community feedback. The proposed treatment measures are shown in the Master Plan (Figure 9-1) and as extracts from this plan for nominated streets.

9.1 Summary

In determination of the final scheme for implementation, a number of factors were taken into consideration, including:

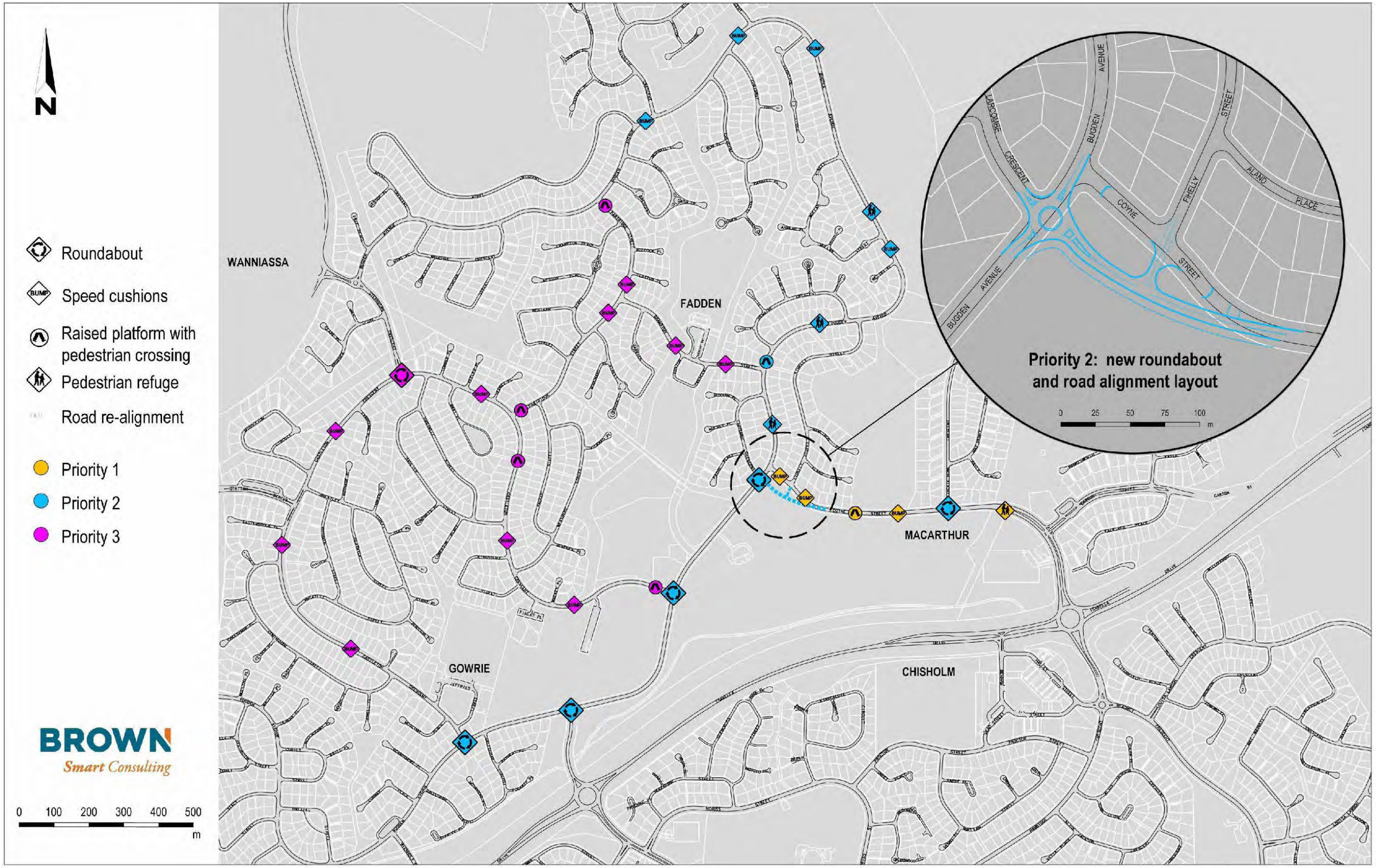
- Traffic and safety benefits
- Community feedback
- Economic and financial benefits.

The scheme that is recommended for implementation involves the following traffic and safety benefits:

- Speed reduction
- Improved intersection safety
- Discouraging "Rat Running"
- Dispersing traffic volumes.

The community feedback assisted in the determination of the final strategy. Public satisfaction with the proposed scheme is of the utmost importance when implementing these strategies. There was generally strong support for the draft scheme, as outlined in Section 8 above, although a variety of modifications were suggested by some members of the local community. The consultation also revealed that the priority street to be upgraded in the local area is Coyne Street.

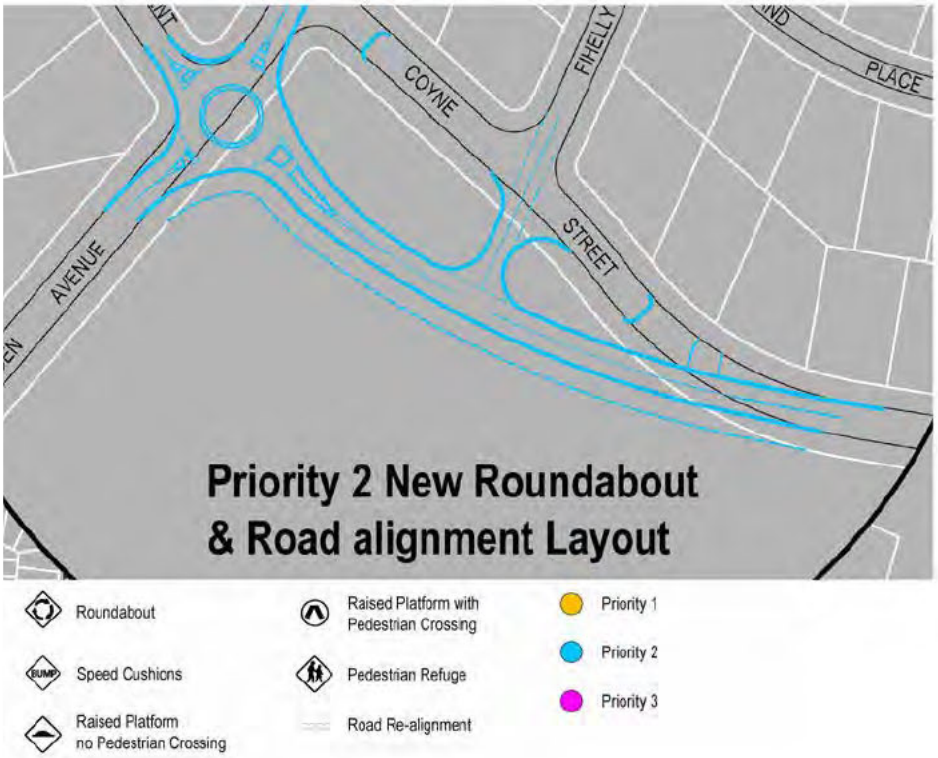
Figure 9-1: Recommended Final Scheme



9.2 Detailed Proposals

9.2.1 Coyne Street

- ***Coyne Street Intersections*** – New roundabout at the intersections with Jackie Howe Crescent (North).
- ***Coyne Street Mid-block Treatments*** – Three sets of speed cushions, at the western end plus a raised platform with pedestrian crossing and a pedestrian refuge.
- ***Coyne Street Re-alignment*** – Re-alignment of the road to create a four-way intersection (roundabout) at the Budgen Avenue intersection.



9.2.2 Bugden Avenue

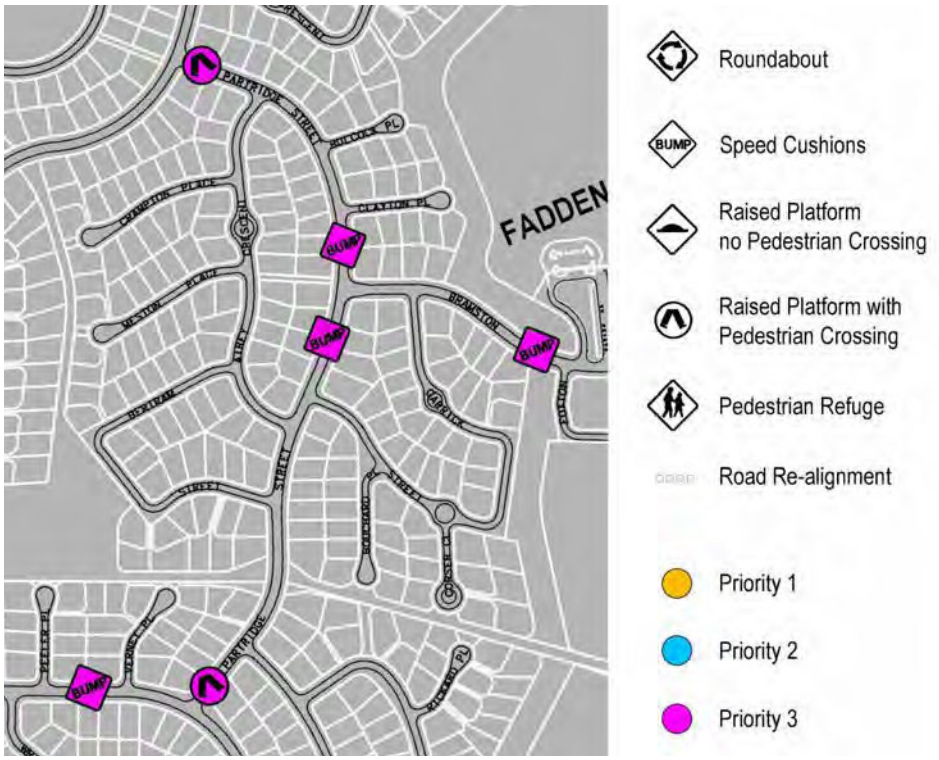
- ***Bugden Avenue Intersections*** – New roundabouts at the two intersections with Castleton Cres', intersection with Kellett St, and Coyne Sts.
- ***Bugden Avenue Mid-block Treatments*** – Four sets of speed cushions plus three pedestrian refuges and one raised platform with pedestrian crossing.

9.2.3 Castleton Crescent

- ***Castleton Crescent Intersections*** – New roundabouts at intersections with Sternberg Cres and Bugden Ave (both intersections).
- ***Castleton Mid-block Treatments*** – Six sets of speed cushions plus two raised platforms with pedestrian crossings.

9.2.4 Partridge Street

- ***Mid-block treatments*** – two sets of speed cushions either side of the intersection with Bramston Street plus two raised platform at each end of the street, near the Bugden Avenue intersection and the Castleton Crescent intersection.



9.2.5 Bramston Street

- ***Mid-block Treatments*** – two sets of speed cushions.

9.3 Changes to Final Scheme

As outlined in Section 7, a draft Traffic Management Scheme was prepared based primarily on the technical assessment of road data collected for the study. This draft scheme was publicly exhibited through the public information sessions and household surveys. Section 8 summarised the feedback received on the draft scheme.

Changes were subsequently made to the draft scheme in response to issues raised by the community as well as further technical analysis, including economic assessment.

Changes from the draft scheme to the recommended scheme in some streets included reduction of the number of sets of speed cushions as it was considered that the speeding issues were adequately addressed with speed cushions placed at greater intervals, some raised platforms changed to speed cushions to address speeding, and addition of some raised platforms in specific locations to better facilitate pedestrian movement.

Details of the changes to the final recommended scheme are outlined in Table 9-1 below.

Table 9-1: Comparison of Draft Scheme to Final Recommended Scheme

Street	Traffic Issues	Objectives	Proposed Devices	Rationale for Proposed Treatments	Recommended Final Scheme	Rationale for Final Scheme
Coyne Street	▪ High number of accidents for Bugden Avenue / Coyne Street intersection, 35 in the past 5 years within proximity of the intersection. ▪ Intersection of Bugden Avenue / Coyne Street identified as problem area by residents through public consultation. ▪ 85% speed up to 66 km/hr. ▪ Observed "Rat-running". ▪ Proximity to park and sports facility. High pedestrian activity. ▪ Intersections identified as problem area by residents through public consultation.	▪ Reduce speeding. ▪ Increase intersection safety. ▪ Reduce "Rat-running".	2 Roundabouts	▪ 55% crash reduction effectiveness ▪ Reduced conflict points in comparison to conventional intersections ▪ Reduced crash severity ▪ Increased visibility	2 Roundabouts	No change
			3 Speed cushions	▪ 20% crash reduction effectiveness ▪ Reduction of speeds	3 Speed cushions	No change
			2 Pedestrian refuges	▪ 45% reduction in pedestrian crashes ▪ Protects pedestrians and reduces pedestrian exposure to traffic by splitting crossing distances ▪ May slow vehicular traffic by narrowing the lanes	1 Pedestrian refuge	1 refuge changed to raised pedestrian crossing to better facilitate pedestrian movement
					1 Raised platform	As above
Bugden Avenue	▪ Intersection of Bugden Avenue / Coyne Street identified as problem area by residents through public consultation. ▪ 85% speed up to 64 km/hr. Speeding observed particularly around the bends in the northern portion of Bugden Avenue. ▪ Proximity to primary schools and shops. ▪ Observed "Rat-running".	▪ Reduce speeding. ▪ Increase intersection safety. ▪ Reduce "Rat-running".	4 Roundabouts	▪ 55% crash reduction effectiveness ▪ Reduced conflict points in comparison to conventional intersections ▪ Reduced crash severity ▪ Increased visibility	4 Roundabouts	No change
			9 Speed cushions	▪ 20% crash reduction effectiveness ▪ Reduction of speeds	4 Speed cushions	Speeding issues adequately addressed with speed cushions placed at greater intervals
			3 Raised platform	▪ 20% crash reduction effectiveness ▪ Increase pedestrian safety	1 Raised platform	2 raised platforms removed, speeding issues addressed with speed cushions provided.
			4 Pedestrian refuges	▪ 45% reduction in pedestrian crashes ▪ Protects pedestrians and reduces pedestrian exposure to traffic by splitting crossing distances ▪ May slow vehicular traffic by narrowing the lanes	3 Pedestrian refuges	Pedestrian refuge on Bugden Avenue to the north-east deemed unnecessary due to relatively low pedestrian activity.
Castleton Crescent	▪ LOS E in the PM for in the intersection of Castleton Crescent and Sternberg Crescent, alternative control mode required ▪ 85% speed up to 62 km/hr. ▪ Proximity to primary school and shops.	▪ Reduce speeding. ▪ Increase intersection safety.	3 Roundabouts	▪ 55% crash reduction effectiveness ▪ Reduced conflict points in comparison to conventional intersections ▪ Reduced crash severity ▪ Increased visibility	3 Roundabouts	No change
			10 Speed cushions	▪ 20% crash reduction effectiveness ▪ Reduction of speeds	6 Speed cushions	Speeding issues adequately addressed with speed cushions placed at greater intervals
			3 Raised platforms	▪ 20% crash reduction effectiveness ▪ Increased pedestrian safety	2 Raised platforms	2 raised platforms removed, speeding issues addressed with speed cushions provided.
Partridge Street	▪ Observed "Rat-running" ▪ Proximity to primary school and shops.	▪ Reduce speeding. ▪ Increase intersection safety. ▪ Reduce "Rat-running".	2 Raised platforms	▪ 20% crash reduction effectiveness ▪ Increased pedestrian safety	2 Raised platforms	No change
			4 Speed cushions	▪ 20% crash reduction effectiveness ▪ Reduction of speeds	2 Speed cushions	2 speed cushions removed, speeding issues addressed with other speed cushions provided.
Bramston Street	▪ Proximity to shops. ▪ Observed "Rat-running"	▪ Reduce speeding. ▪ Reduce "Rat-running".	3 Speed cushions	▪ 20% crash reduction effectiveness ▪ Reduction of speeds	2 Speed cushions	1 speed cushion removed, speeding issues addressed with other speed cushions provided.

9.4 Economic Analysis

A detailed economic cost benefit analysis for the project was undertaken by Ashley & Co in August 2013 (Appendix A). The analysis compares the economic costs of an investment with the economic benefits. The values used in the analysis reflect the resource costs and benefits to society and do not necessarily reflect financial costs and benefits.

The various investments considered in this study were:

- Roundabouts
- Speed cushions
- Raised platform
- Improved line marking and signage.

The economic analysis shows the Net Present Value (NPV) and Benefit Cost Ratio (BCR) of each of the potential strategies for the project area. Table 9-2 shows the capital cost estimates used for determination of the NPV and BCR of each component.

Table 9-2: Investment Capital Cost

Investment per item	Capital Cost
Roundabout	$350,000
Speed Cushions	$17,000
Raised Platform	$25,000

The recommended Priority 1 works are three speed cushions, a raised platform and a pedestrian refuge on Coyne Street. As such, the investment for Priority 1 measures would be $101,000 and the investment to implement the whole Master Plan would be $2.639M (refer Table 9-3).

Table 9-3: Master Plan Proposed Investment

	Roundabouts	Speed cushions	Raised platform	Total
Coyne Street	-	$51,000	$50,000	$101,000
Sub Total - Priority 1	**-**	***$51,000***	***$50,000***	***$101,000***
Bramston Street	-	$34,000	-	$34,000
Bugden Ave	$1,400,000	$68,000	$100,000	$1,568,000
Castleton Cres	$350,000	$102	$50,000	$502,000
Coyne Street (not P1)	$350,000	-	-	$350,000
Partridge Street	-	$34,000	$50,000	$84,000
Sub-Total	***$2,100,000***	***$238,000***	***$200,000***	***$2,538,000***
Total (including Priority 1)	**$2,100,000**	**$289,000**	**$250,000**	**$2,639,000**

Table 9-4 sets out the Net Present Values (discounted at 7%) and the BCR for each street, the Master Plan, priority 1 and the Master Plan less priority 1. The conclusion is that Priority one is a very viable set of measures.

Table 9-4: Summary of NPV and BCR Analysis

	NPV	BCR
Coyne Street	$55,000	1.5
Sub-total - Priority 1	***$55,000***	***1.5***
Bramston Street	-$34	-
Bugden Ave	-$1,556	0.0
Castleton Cres	-$511,000	0.0
Coyne not P1	-$350,000	
Partridge Street	-$84,000	
Sub- Total	***-$2,481,000***	***0.1***
Total less P1	**-$2,535,000**	**-0.9**

Table 9-5 shows the summary results for the overall Master Plan as well as Priority 1 measures. The economic analysis concludes that Priority 1 investments are very worthwhile. While the analysis shows that the overall master plan is marginal, most road safety projects do not have a BCR much greater than 1. This reinforces the approach of completing Priority 1 and then at a suitable time repeating the economic analysis as well as a review of traffic performance to judge what should be the new priority streets.

Table 9-5: Master Plan - Summary Costs and Benefits

Total Capital Expenditure	$2,639,000			
Discount rates = >	4%	7%	10%	
Benefits present value [(1)]	$260,000	$158,000	$101,000	
Overall Master Plan BCR	0.1	0.1	0.0	Marginal
Net Present Value (NPV)	-$2,379,000	-$2,481,000	-$2,538,000	Marginal
NPV for Priority 1	$137,000	$55,000	$7,000	*Viable*
Priority 1 BCR	2.4	1.5	1.1	*Viable*

NOTES:

(1) benefits accruing from accident cost savings, costs from additional travel time and costs from additional vehicle operating costs (Appendix A)

10 Recommendations for Staged Implementation

The staging for the project works should be implemented to attain the greatest value from the money invested in the project whilst ensuring the most efficient and cost effective solutions are adopted consistent with general community priorities.

For the Macarthur, Fadden and Gowrie study it is recommended that the works be staged as follows:

Priority	Street	Action	Outcome
1	Coyne Street	Three speed cushions, a raised platform and a pedestrian refuge.	Reduce speeding, reduce rat running and improve the safe movement of pedestrians.
2	Coyne Street	New roundabouts and road realignment.	Improve intersection safety.
	Budgen Avenue	Roundabouts with Kellett St, Coyne Street plus Castleton Crescent (both ends), speed cushions, raised platforms and pedestrian refuges between Coyne Street and Partridge Street.	This will reduce speeding, rat-running and increase intersection and pedestrian safety.
3	Castleton Crescent	Speed cushions, raised platforms and a roundabout.	Increase intersection safety, driveway visibility and pedestrian safety.
	Partridge Street	Speed cushions and raised platforms.	Reduce speeding and increase intersection safety.
	Bramston Street	Speed cushions.	Reduce rat-running and increase intersection and pedestrian safety.

11 Stage 3 Community Consultation

The stage 3 community consultation involved reporting on the findings of the previous stages of the community consultation to the public and presentation of the final recommended traffic management scheme. The reporting on the findings was undertaken through the means of a household newsletter, media release and information posted to the ACT Government website (Attachment A).

Attachments

Attachment A: Economic Analysis

Attachment B: Stage 1 Consultation Documentation

Attachment C: Stage 2 Consultation Documentation

Attachment D: Stage 3 Consultation Documentation

ATTACHMENT A

ECONOMIC ANALYSIS

1.0 Residential Street Improvement Study - Economic Analysis

1.1 Background

An economic cost benefit analysis, or more correctly a "Social Cost Benefit Analysis", compares the economic costs over time of an investment with the economic benefits over time associated with that investment. The values used in that analysis reflect the resource costs and benefits to society and do not necessarily reflect financial costs and benefits. For example taxation is a transfer payment and is ignored unless it is large enough for a calculation of the associated deadweight costs and the inclusion of such costs in the analysis.

The various investments considered in this study were:

- Roundabouts (where integrating traffic from a number of streets is an issue);
- Speed cushions (a very cheap and effective solution where excess speed or travelling to fast for the road environment and high accident costs are major concerns);
- Raised platform but no pedestrian crossing (important where pedestrian safety is a concern);
- Raised platform with pedestrian crossing (important where pedestrian safety is a concern); and
- Improved line marking and signage (important where it is necessary to guide the traffic to avoid conflicts).

It is important to note that there are a number of factors behind accidents on unsafe roads. For example:

- Driver, cyclist or pedestrian error caused by:
  - Driver inattention (using a cell phone, unruly passengers);
  - Driver incapacity (drunk, under the influence of drugs, tired);
  - Driver travelling too fast or too slow;
- Road poorly designed:
  - Road alignment incorrect so vehicles can drift off the assigned path. These roads are usually associated with fatalities;
  - Sight distances are poor; and
  - Traffic management (road markings, intersection, or roundabout) design is confusing or poor leading to vehicle conflicts.

1.2 Summary of Proposed Treatments

Table 1: Final Scheme Treatments

STREET	MAIN ISSUES OF CONCERN	PROPOSED DEVICES
Coyne Street	- 'Rat-running' - Intersection safety - Speeding	- Speed cushions - Roundabouts - Raised Platform - Pedestrian Refuge
Budgen Avenue	- Intersection Safety - Traffic speed - 'Rat-running'	- Roundabouts - Speed cushions - Raised Platform
Castleton Crescent	- Intersection safety - Speeding	- Speed cushions - Roundabout - Raised Platform
Partridge Street	- Traffic speed - Intersection safety - Rat-running	- Speed Cushions - Raised Platforms
Bramston Street	- Traffic speed - Rat-running	- Speed cushions

It is important to note that the final scheme depicted above is an overall 'master plan' for the area and that not all proposed devices will be installed at once. The master plan will guide the implementation of the scheme over a number of years due to annual budgetary constraints.

There is a set of Priority 1 works that tackle the immediate problems where significant improvements in safety can best be achieved for the investment required. This set of works will alter the traffic flows and as some traffic is diverted then new priorities may emerge. After a period the resulting traffic flows can be analysed for the next priority set of works.

The recommended Priority 1 works are:

- The Priority 1 treatments are three speed cushions, a raised platform and a pedestrian refuge on Coyne Street.

Table 2: Master Plan Proposed Treatments, Priority 1 Identified

Investments	Roundabouts	Speed cushions	Raised platform no pedestrian crossing	Raised platform with Pedestrian crossing
Bramston Street		2		
Bugden Ave	4	4	3	1
Castleton Cres	1	6		2
Coyne Street		3	1	1
Coyne Street not P1	1			
Partridge Street		2		2
Total	6	17	4	6
P1	0	3	1	1
Total less P1	6	14	3	5

The proposed investment cost is as follows:

Table 3: Proposed Treatment Costing

Investment	Capital Cost
Roundabout	$350,000.00
Speed Cushions	$17,000.00
Raised Platform no pedestrian crossing	$25,000.00
Raised Platform with pedestrian crossing	$25,000.00

Table 4: Master Plan Proposed Investment, Priority 1 Identified

	Round-abouts	Speed cushions	Raised platform no Ped crossing	Raised platform with Ped crossing	Total
Bramston Street	$-	$34	$-	$-	$34
Bugden Ave	$1,400	$68	$75	$25	$1,568
Castleton Cres	$350	$102	$-	$50	$502
Coyne Street	$-	$51	$25	$25	$101
Coyne Street not P1	$350	$-	$-	$-	$350
Partridge Street	$-	$34	$-	$50	$84
Total	$2,100	$289	$100	$150	$2,639
P1	$-	$51	$25	$25	$101
Total less P1	$2,100	$238	$75	$125	$2,538

The priority 1 street is Coyne Street.

1.3 Estimating Benefits

The economic benefits associated with the various traffic management investments are:

- Accident cost savings. Accidents are the major factor in this study and are expected to dwarf all other benefits;

- Vehicle operating costs, which are expected to increase as dropping the speed in a residential environment leads to increased operating costs. However, vehicle operating costs are not expected to be a major factor;
- Travel time savings are expected to decrease with the decease in travel speed. This is not expected to be a significant factor;
- Emissions avoided. Emissions are directly related to operating costs and are expected to slightly increase. They are marginal in this study and as such are not calculated.

1.1.1 Accident cost savings

The approach to estimating the benefits from the traffic management measures proposed is set out in the "Guide to Project Evaluation Part 4: Project Evaluation Data", Fourth Edition August 2012, © Austroads Ltd. 2012. This publication sets out both the approach and the suggested parameter values. These parameter values and approach are used in this study unless notified otherwise.

The ACT TAMS team provided the values per accident type using both the values for each RUM code and the values for "severity of incident". These two sets of values reflect the difficulty that exists in measuring accident costs such that they can be used in a cost benefit analysis that relies on 30-year forecasts. The RUM Codes reflect the "road user movement" at the time of the incident (e.g. [RUM 601] hit parked or parking vehicle $23,675 or [RUM 801 to 805] loss of Control – on curve $59,817).

The incident severity type is one of: Fatal valued at $2.3 million, Serious injury valued at $0.4 million, Minor injury valued at $0.06 million, or Property Damage valued at only $0.02 million. A serious injury is where the person was admitted to hospital.

RUM costs are an average of the incident severity types for each RUM code. Because they are an average they do not take account of the potential for a traffic hazard to generate, for example, fatalities. That is to say they effectively assume that the road is a safe road with good sight distances, free of dangerous roadside objects, with a safety lane and appropriate horizontal and vertical alignment. This is not true of all the roads in the area. Moreover, when the road is used above the design speed then it may be assumed that it is unsafe in that use.

It was possible to review and calculate accident costs for the 5 years to 31/12/2011 by both RUM and by Severity. In some cases the differences are marked. In most of these areas it was because the number of fatalities was greater than the average. The problem here (called mean reversion) is that the 5-year period may be atypical either with a greater number of accidents (in severity and scale). If a different five-year period were picked then the accident costs, no matter how measured, would most likely be either more or less. In the longer term the accident costs are expected to revert to the mean accident cost, which is most likely depicted by the RUM code.

The ACT TAMS team provided information on all the accidents between 2007 and 2011 in all the roads in the area by both RUM Code and Severity Type. This information was then analysed to give the following table.

Table 5: Average Annual Accident Costs

Average annual Accident Cost over period	By Accident Type (ACT RUM Code)	By Accident Severity Incident type
Bugden Ave	864,527	628,644
Castleton Cres	408,670	446,507
Coyne Street	551,940	190,552
Total	1,825,136	1,265,704

Accident costs were not measured for Bramston Street as that is a school zone and the consultation showed there was rat running and concerns for children's safety. The measures suggested address those concerns. Partridge Street was considered following consultation process to be part of the Bramston Street rat run where traffic calming and children's safety was a concern. Accident costs were not measured for Partridge Street. Again the measures suggested address those concerns.

The next matter is to calculate the reduction in accident costs from implementing the proposed measures. For both the whole area study and for the Priority 1 measures study we have assumed that the drop in speed and the consequential drop in accident costs can capture the benefits. This is set out in Table D 3 in the Guide to Project Evaluation Part 4. After discussing the values in Table D4 Average Casualty Crash Cost by road type with one of the authors of both the 2008 and the 2010 documents the 2008 values were used. A power curve was fitted and the values from it were used to calculate the percentage drop in accident costs if vehicles were to lower their speed to the speed limit. The derived power curve is set out below.

$$y = 2048.2x^2 - 1506.5x + 26987$$
$$R^2 = 0.99869$$

Table 6: Expected percentage Accident Cost Savings

Speed	Percentage drop in accident costs
60	
61	2.8%
62	5.6%
63	8.5%
64	11.5%
65	14.6%
66	17.8%
67	21.0%
68	24.4%
69	27.8%
70	31.4%
71	35.0%
72	38.8%
73	42.6%
74	46.6%
75	50.6%
76	54.8%
77	59.1%
78	63.5%
79	68.1%
80	72.8%

The drop in accident costs are measured by:

1. Assuming the 85% speed, where it exceeds 60 kmph, will drop to 60 kmph and that volume of traffic can be taken to all travel at the 85% speed.
   This is a conservative approach, as we would expect that most of those vehicles would be traveling faster than the 85% speed; and
2. We used the maximum of the RUM code and the Severity results.

Table 7: Expected Annual Accident Cost Savings

	Expected Annual Accident Cost Savings
Bugden Ave	29,702
Castleton Cres	4,372
Coyne Street	31,966
Total	66,040

1.1.2 Vehicle Operating Costs (VOC)

The Guide to Project Evaluation Part 4 referred to above sets out how vehicle operating costs can be calculated. The formula is (where C is cost and V is speed):

$$C\ (VOC) = A\ (\text{fixed value}) + B/V + C*V + D*V^2$$

Parameter values are on the following table. Note, parameter values for 2008 and 2010 were considered. After discussing the values with one of the authors of both the

2008 and the 2010 documents the 2008 values were used. There is little difference in the results between either set of parameter values.

Year	A	B	C	D
2008	2.185	976.210	0.057	0.001
2010	2.497	1115.669	0.065	0.001

The actual calculated values for the drop in speed to 60 kmph were:

Table 8: Expected percentage Accident Cost Savings

Speed	Percentage drop in Vehicle operating costs
60	
61	-1%
62	-1%
63	-2%
64	-2%
65	-3%
66	-3%
67	-3%
68	-4%
69	-4%
70	-4%
71	-4%
72	-5%
73	-5%
74	-5%
75	-5%
76	-5%
77	-5%
78	-5%
79	-5%
80	-5%

The expected annual savings by street were:

Table 9: Expected Annual Vehicle Operating Cost Savings

	Expected Annual Vehicle Operating Cost Savings
Bugden Ave	-$211
Castleton Cres	-$40
Coyne Street	-$137
Total	-$388

1.1.3 Travel Time cost savings

The following is the based data used to calculate the travel time value per vehicle.

Table 10: Travel time value

Car	Occupancy rate (persons/veh)	Value per occupant ($/person-hour)	Value per car per hour	%
Private	1.6	13.17	21	90%
Business	1.4	42.15	59	10%
Weighted average			$24.87	

Applying this to the reduction in speed, the length of the street, the number off vehicles per day and for 365 days of the year gave the following results.

Table 11: Expected Annual Travel Time Cost Savings

	Expected Annual Travel Time Cost Savings
Bugden Ave	-26,691
Castleton Cres	-4,720
Coyne Street	-18,482
Total	-$49,893

1.4 Summary

The following tables discussing results for individual streets need to be interpreted with care. The results for individual streets are indicative at best. It is the overall result that matters. The area is a network and needs to be considered as a network not as individual components.

Implementing Priority 1 measures will likely see most traffic more to other more appropriate routes but no doubt some traffic will move to inappropriate routes. The recommendation is that after a suitable period, the study be repeated to discern the changed traffic pattern, consult on any new community concerns and establish which should be the next set of priority measures from the master plan.

The table below sets out the summary results for the master plan. The master plan is marginally viable. However, it would be unusual to have a BCR much greater than 1 on a residential road. That would mean significant traffic problems and or very poorly design roads, neither of which are expected in the area. Moreover, this is an economic analysis where there is some uncertainty in the parameters. The results are probably accurate to +_ 10%.

Table 12: Master Plan - Summary Costs and Benefits

Total Capex Cost	$2,639			
Discount rates =>	4%	7%	10%	
Benefits present value	$260	$158	$101	
BCR	0.1	0.1	0.0	marginal
Net Present Value (NPV)	-$2,379	-$2,481	-$2,538	marginal
Net Present Value (NPV) for Priority 1	$137	$55	$7	*Viable*
Priority 1 BCR	2.4	1.5	1.1	*Viable*

All figures (except BCR) in $ 000;

The table below sets out the estimated cost of the measures proposed.

Table 13: Master Plan - Summary Costs @ 7%

	Capex Cost
Bramston Street	$34
Bugden Ave	$1,568
Castleton Cres	$502
Coyne Street	$101
Coyne not P1	$350
Partridge Street	$84
Total	$2,639
P1	$101
Total less P1	$2,538

The table below sets out the benefits accruing from accident cost savings, costs from additional travel time and costs from additional vehicle operating costs.

Table 14: Master Plan - Summary Benefit Present Values @ 7%

	PV Benefits Accident	PV Benefits Travel Time	PV Benefits VOC	PV Benefits Total
Bugden Ave	$385	-$370	-$3	$12
Castleton Cres	$57	-$65	-$1	-$9
Coyne Street	$414	-$256	-$2	$156
Total less P1	$855	-$691	-$5	$158
P1	$414	-$256	-$2	$156
Total less P1	$441	-$435	-$3	$3

The table below sets out the Net Present Values (discounted at 7%) and the BCR for each street, the master plan, priority 1 and the master plan less priority 1. The conclusion is that Priority one is a very viable set of measures.

Table 15: Master Plan - Summary Net Present Values @ 7% & BCR

	NPV	BCR
Bramston Street	-$34	-
Bugden Ave	-$1,556	0.0
Castleton Cres	-$511	0.0
Coyne Street	$55	1.5
Coyne not P1	-$350	
Partridge Street	-$84	
Total	-$2,481	0.1
P1	$55	1.5
Total less P1	-$2,535	-0.9

The table below sets out the above Benefit Value results for the master plan, priority 1 and the master plan less priority 1. It does this for the three discount rates 4%, 7% and 10%.

Table 16: Master Plan - Summary Benefit Present Values @ 7%

Travel Time			
	4%	7%	10%
Total	-$982	-$691	-$517
P1	-$364	-$256	-$191
Total less P1	-$618	-$435	-$325

Vehicle Operating Costs (VOC)			
	4%	7%	10%
Total	-$8	-$5	-$4
P1	-$3	-$2	-$1
Total less P1	-$5	-$3	-$3

Accident Costs			
	4%	7%	10%
Total	$1,249	$855	$622
P1	$605	$414	$301
Total less P1	$645	$441	$321

Grand Total all Benefits			
	4%	7%	10%
Total	$260	$158	$101
P1	$238	$156	$108
Total less P1	$22	$3	-$7

1.5 Conclusion

The summary tables show that Priority 1 investments are very worthwhile. The master plan is marginal. However, most road safety projects do not have a BCR much greater than 1. This reinforces the approach of completing Priority 1 and then at a suitable time repeating the study to judge what should be the new priority streets.

Table 17: Master Plan - Summary Costs and Benefits

Total Capex Cost	$2,639			
Discount rates =>	4%	7%	10%	
Benefits present value	$260	$158	$101	
BCR	0.1	0.1	0.0	Marginal
Net Present Value (NPV)	-$2,379	-$2,481	-$2,538	Marginal

Net Present Value (NPV) for Priority 1	$137	$55	$7	*Viable*
Priority 1 BCR	2.4	1.5	1.1	*Viable*

All figures (except BCR) in $ 000;

ATTACHMENT B

STAGE 1 CONSULTATION DOCUMENTATION

Residential Street Improvement Study

Macarthur, Fadden and Gowrie

Stage 1 Community Consultations

12 February 2013

PURDON
PLANNING SUSTAINABLE FUTURES

Table of Contents

1.0 INTRODUCTION 1
1.1 Purpose 1
1.2 Background 1
1.3 Project Objectives 1
1.4 Consultation strategy 1
1.5 Study Area 2

2.0 CONSULTATION 5
2.1 Media Information 5
2.2 Household Newsletter 5
2.3 Household Survey 5
2.4 Online Survey 5
2.5 Web Page information 5
2.6 Community Display 5
2.7 Tuggeranong Community Council Briefing 5
2.8 Posters 6
2.9 Other stakeholder Briefing 6

3.0 MAIN ISSUES 6
3.1 Summary 6

4.0 SURVEY RESULTS 9
4.1 Reponses by Suburb (Q1) 9
4.2 Household age (Q2) 10
4.3 Number of Cars per household (Q3) 11
4.4 Any traffic problems (Q4) 12
4.5 What types of Traffic Problems (Q5) 13
4.6 Other traffic problems (Q6) 14
4.7 Location of traffic Problems (Q7) 14
4.8 Immediate attention (Q8) 15

Figures

Figure 1-1: Study Area Context 3
Figure 1-2: Study Area 4
Figure 3-1: Main Traffic and Safety Problems 7
Figure 3-2: Indicative Locations of Traffic Issues 8
Figure 4-1: Response by Suburb 9
Figure 4-2: Household Age Groups 10
Figure 4-3: Cars per Household 11
Figure 4-4: Traffic Problems 12
Figure 4-5: Type of Traffic Problems 13
Figure 4-6: Other Traffic Problems 14
Figure 4-7: Immediate Actions 15

Tables

Table 4-1: Response by Suburb 9
Table 4-2: Household Age 10
Table 4-3: Cars per household 11
Table 4-4: Traffic Problems 12
Table 4-5: Type of Traffic Problems 13

1.0 Introduction

1.1 Purpose

This interim report provides a summary of the first stage of the community consultation process and outcomes for the Residential Street Improvement study in Macarthur, Fadden and Gowrie being undertaken by Brown Consulting and Purdon Associates for Roads ACT in the Territory and Municipal Services Directorate (TAMS).

The consultation period ran from 9th November 2012 to 21st December 2012.

The interim report includes an analysis of about 422 household surveys received by Purdons at the end of the Stage 1 consultation period, as well as other comments received by the project team during the consultation process.

1.2 Background

In September 2012, Roads ACT commenced a residential street improvement study for Macarthur, Fadden and Gowrie in Tuggeranong in response to comments received from the community about traffic safety issues in the local area, as well as in response to a motion passed in the ACT Legislative Assembly in May 2012 calling for a study of local traffic issues.

The current study is one of several initiatives being undertaken by Roads ACT in Tuggeranong and other parts of Canberra.

1.3 Project Objectives

The **specific objectives** of the study are:

a) To identify and assess the **traffic safety and amenity issues** with emphasis on the traffic conditions in the nominated street (Coyne Street).

b) To consider and develop **options** which would mitigate/improve these issues.

c) To **evaluate these options** in terms of their expected technical effectiveness and economic performance.

d) To identify an **agreed solution** for the study area and prepare designs.

e) To recommend a **program of works** for implementation in future capital works programs.

f) To **consult with the community** throughout the process.

1.4 Consultation strategy

A consultation strategy has been prepared for the duration of the project, in conjunction with Roads ACT, to capture comments on local traffic issues and provide the community with an opportunity to comment on proposed street improvements. The consultations will be undertaken in three stages:

Stage 1: Information gathering

- Household survey
- A drop-in public information session at the Gowrie Primary School on Tuesday 27 November 2012 from 4:30-7:30pm, to present traffic survey results and discuss local issues.
- A shop-front display at Chisholm Shops and Tuggeranong libraries for a period of six weeks in November – December 2012.

Stage 2: Developing Solutions

- Household survey
- A drop-in public information session to summarise findings and present a range of viable options will be organised mid February 2013
- A shop-front display at Chisholm Shops for a period of six weeks in February – March 2013

Stage 3: Reporting on findings

- Household Newsletter
- A public exhibition of the agreed solutions for a period of six weeks in April – May 2013

1.5 Study Area

The study area covers the suburbs of Macarthur, Fadden and Gowrie as shown on Figure 1-1 and Figure 1-2.

The area is bounded by Isabella Drive and Ashley Drive.

The specific street listed in the study Brief is Coyne Street from Bugden Avenue to Isabella Drive, although residents were also invited to comment on any problems experienced in other local streets.

As at August 2011, the ABS census indicated that the study area contained a resident population of approximately 7,651 in 2,551 households. The study area also includes the following principal land uses that are local traffic generators:

- Schools
- Tennis Centre
- Scout hall
- Community Park (Fadden Pines)
- Local shops.

Figure 1-1: Study Area Context

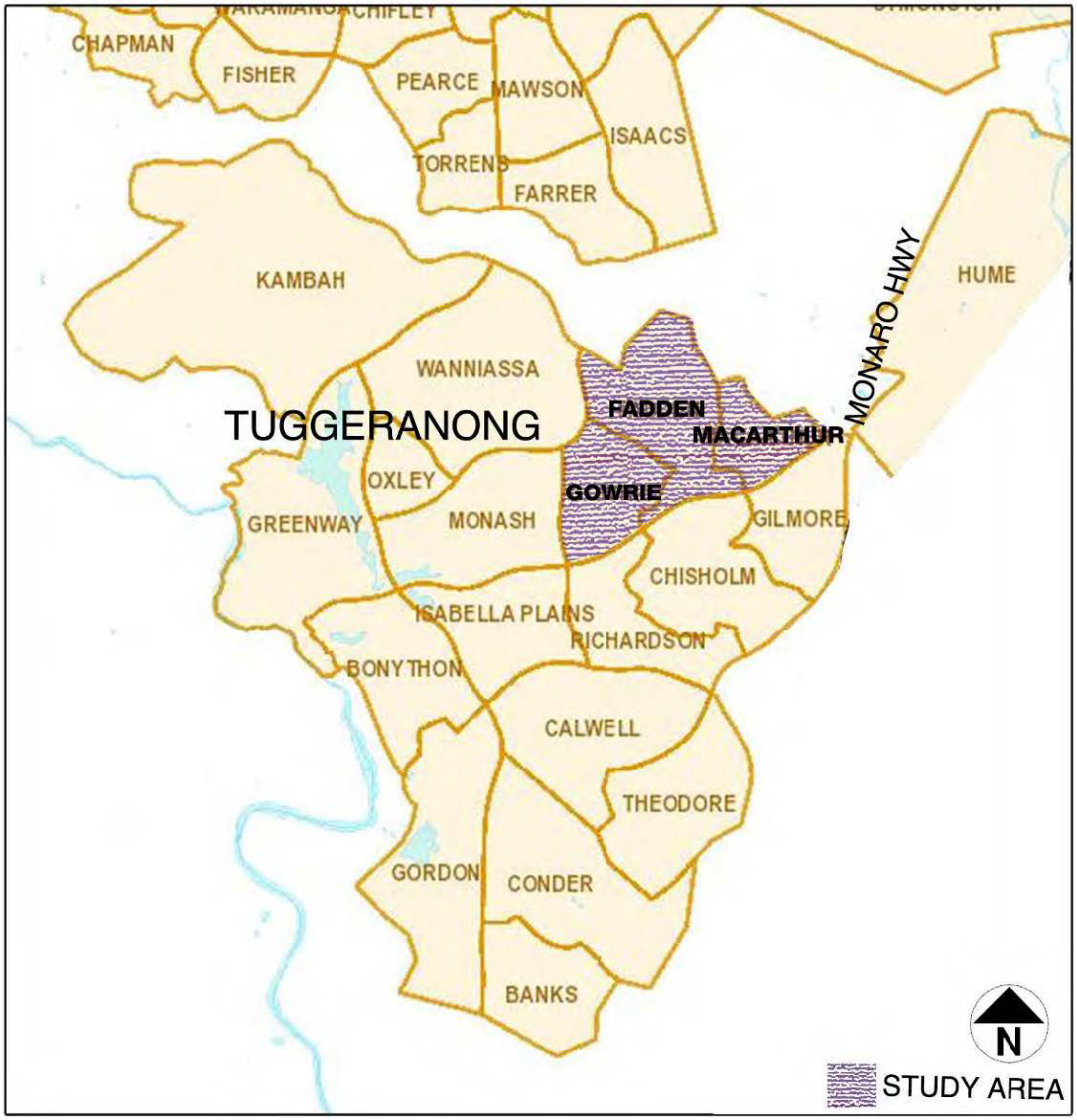


Figure 1-2: Study Area

2.0 Consultation

A range of consultation measures have been employed by Roads ACT for this study as summarised below.

2.1 Media Information

The Canberra Times has been used as the basis for a media release to inform residents of the Study and to provide details about the community information display.

2.2 Household Newsletter

A household newsletter informing residents of the proposed Study was hand delivered to all residential accommodation, as well as business outlets, schools and other land uses in the study area during November 2012. Total distribution was to approximately 2,550 households.

2.3 Household Survey

A two page household survey with reply paid envelope was circulated to all households with the above newsletter. A total of 389 responses were received and have been analysed (refer Section 3.0 below).

2.4 Online Survey

An online survey similar to the household survey was established on the ACT Government's Time-To-Talk website. A total of 49 responses were received of which 33 related to this study (the remaining 16 were related to the associated study undertaken for the Chisholm area). These online results have been analysed and incorporated with results of the household survey (refer section 3 below).

2.5 Web Page information

Information about the project, including material presented at the displays, was uploaded on the Time-To-Talk website.

2.6 Community Display

A community display was held in the Gowrie Primary School hall on Tuesday, 27 November 2012. The display was advertised in the Canberra Times Community Notice Board as well as in the newsletter and online.

About 10 local residents participated in the display.

2.7 Tuggeranong Community Council Briefing

An initial study briefing was provided to members of the Tuggeranong Community Council in November 2012 at Greenway. A total of approximately 30 people attended this presentation, including several elected Local and Federal members.

The briefing outlined the proposed study objectives, timetable and approach including the broad consultation strategy.

2.8 Posters

Posters were placed on display in the Tuggeranong library and at vacant shop windows in the Chisholm Group Centre.

2.9 Other stakeholder Briefing

A number of other stakeholders were contacted and invited to comment and participate in the consultation process.

3.0 Main Issues

3.1 Summary

A wide range of local traffic issues have been raised by local residents through the two surveys and discussion at the community display.

There was a high degree of consistency amongst respondents in all three response streams about the type of problems being experienced in the local area.

Whilst valuable comments were offered at the display and through the online survey the most statistically valid responses came from the household survey returns:

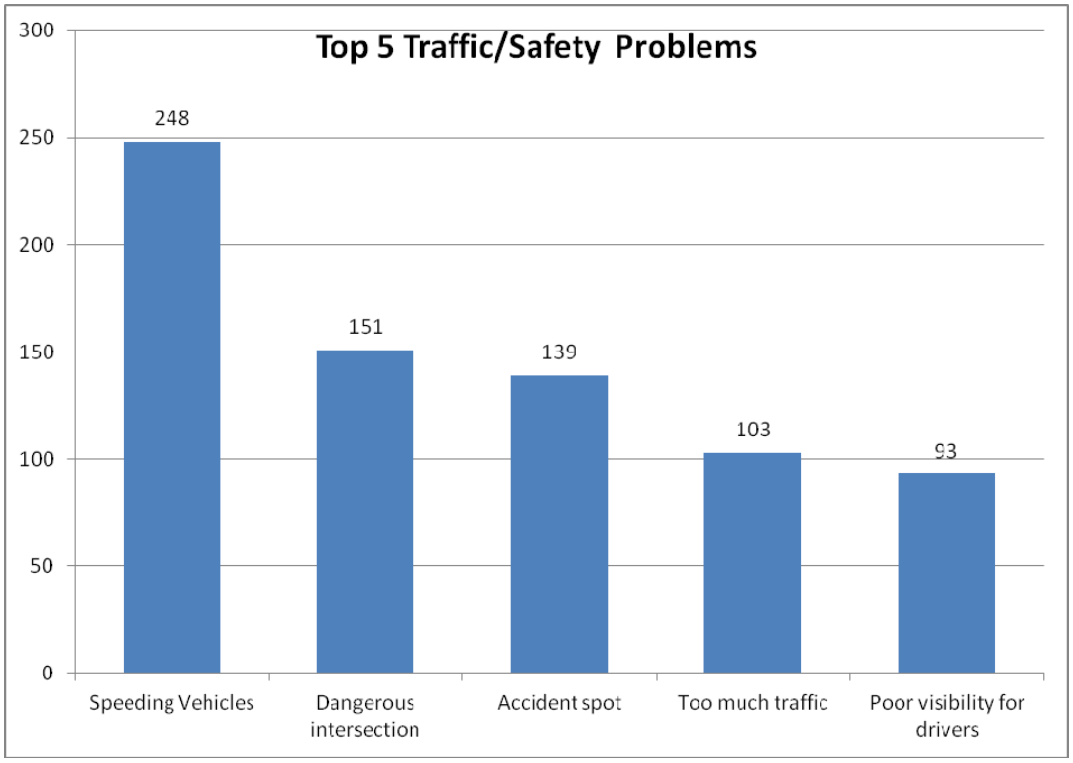
- Attendance at display - 10
- Online survey responses - 33
- Household survey responses – 389 (15.25% of total households).

The following sections summarise the results of the household survey. The top five (5) issues included:

- Speeding
- Dangerous intersections
- Accident spots
- Peak hour traffic volume
- Poor driver visibility.

A total of 7% of respondents stated they had no concerns regarding traffic and safety in the area.

Figure 3-1: Main Traffic and Safety Problems



Source: Household & Online Surveys (February 2013, Purdon)

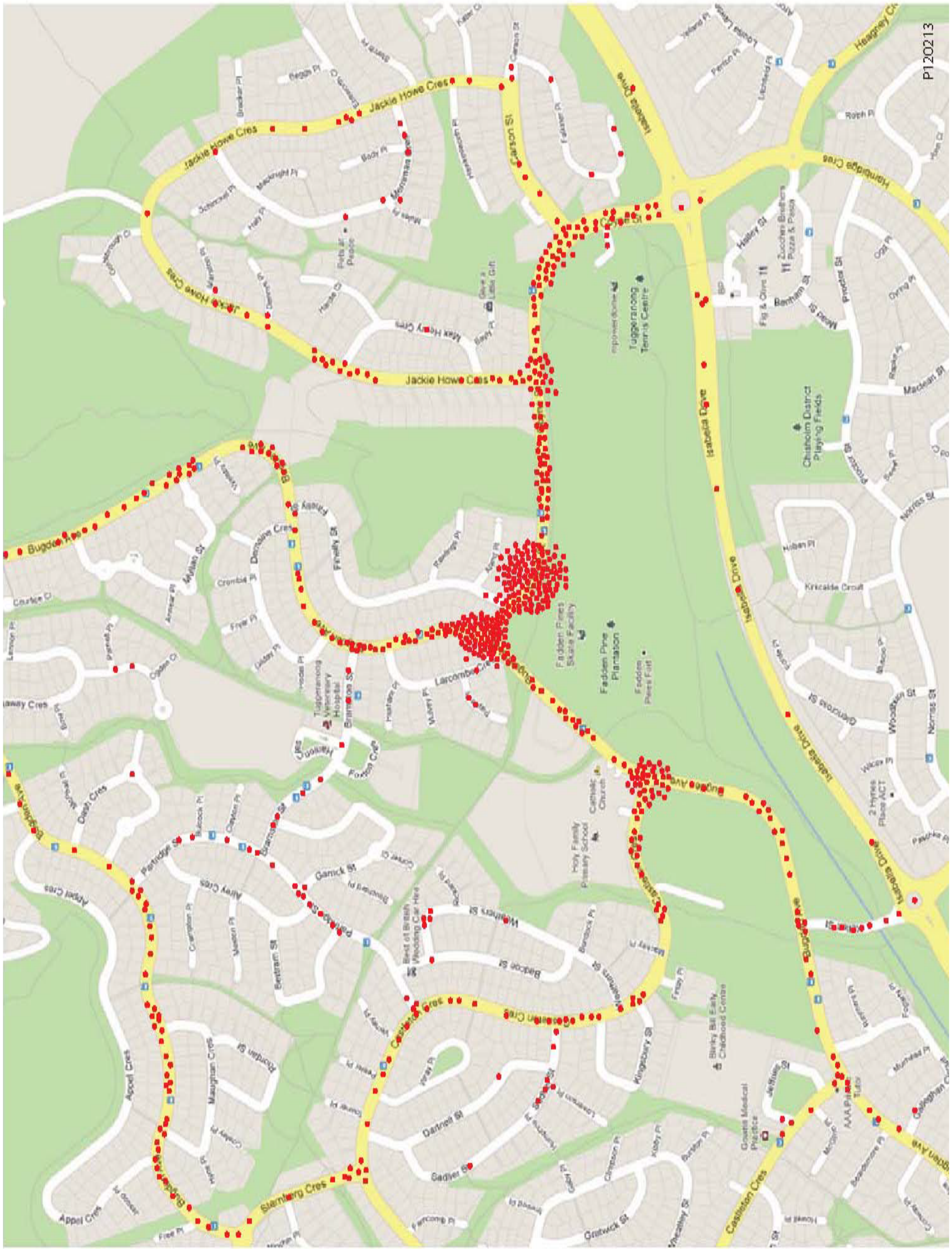
Figure 3-2 shows the geographic location of issues mentioned in the survey.

The top five (5) issues included:

- Speeding
- Dangerous intersections
- Accident spots
- Peak hour traffic volume
- Poor driver visibility

A total of 7% of respondents stated they had no concerns regarding traffic and safety in the area.

Figure 3-2: Indicative Locations of Traffic Issues



Source: Household & Online Surveys (February 2013, Purdon)

4.0 Survey results

The following is a summary of the household and on-line survey results received by Purdons. Total responses = 389 hardcopy responses and 33 online responses.

4.1 Reponses by Suburb (Q1)

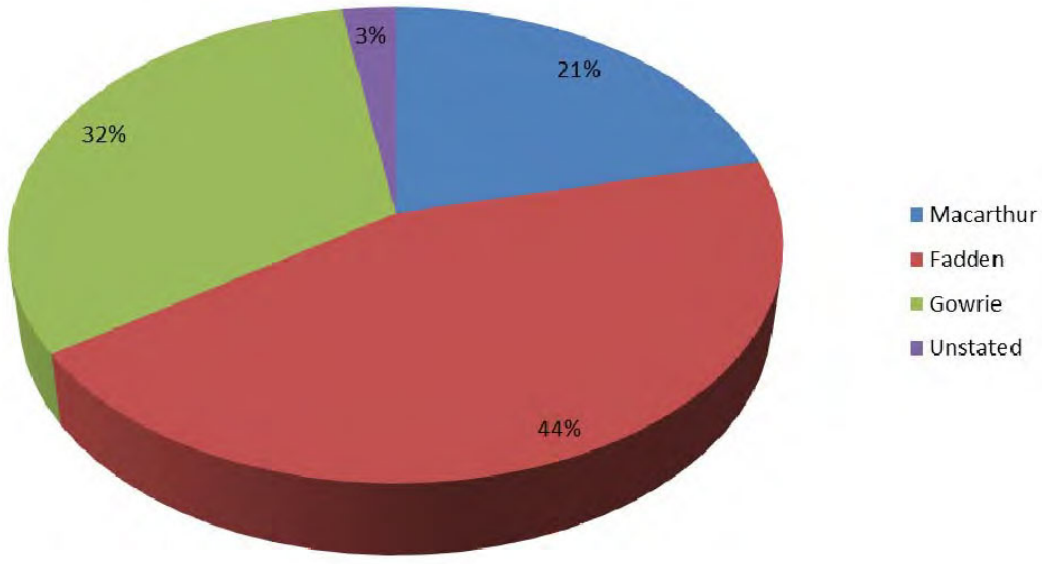
The majority of responses came from Fadden, followed by Gowrie and Macarthur.

Table 4-1: Response by Suburb

Suburb	Respondents	% Responses	2011 Census Population	% of Suburb Population
Macarthur	90	21%	1,460	6%
Fadden	186	44%	3,083	6%
Gowrie	134	32%	3,072	4%
Unstated	11	3%		
Total	**422**	**100%**	**7,615**	**6%**

Source: Household & Online Surveys (February 2013, Purdon)

Figure 4-1: Response by Suburb



Source: Household & Online Surveys (February 2013, Purdon)

4.2 Household age (Q2)

According to ABS 2011 Census data, the median age for Macarthur residents is 38, 18.5% of the suburb population is under 14 years and 6% of the population is over 65. Fadden's median age is 43 with 17.6% of the suburb population under 14 years and 9.2% over 65 years. Gowrie's median age is 38 with 19.1% of the population under 14 years and 9% over 65 years.

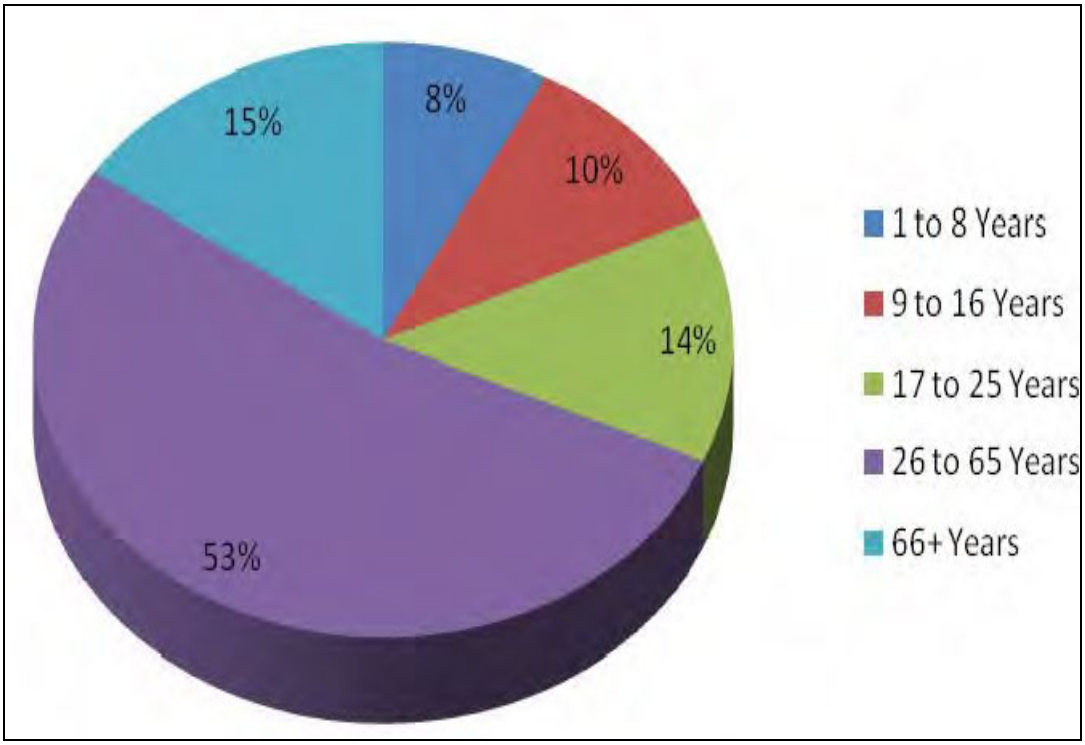
The responses were received from households with a wide cross-section of ages, with the largest number of responses (53%) from households with occupants ranging from 26 to 65 year age group. The older median ages of Macarthur, Fadden and Gowrie are shown with higher number of respondents also over 66 years.

Table 4-2: Household Age

	1 to 8 Years	9 to 16 Years	17 to 25 Years	26 to 65 Years	66+ Years
Respondents	50	64	85	324	91
% Responses	8%	10%	14%	53%	15%

Source: Household & Online Surveys (February 2013, Purdon)

Figure 4-2: Household Age Groups



Source: Household & Online Surveys (February 2013, Purdon)

4.3 Number of Cars per household (Q3)

ABS 2011 Census data indicates that Macarthur residents have 2.3 cars per household; Fadden residents have 2.3 cars per households while Gowrie residents have 2 cars per household. The survey results were consistent with this Census data.

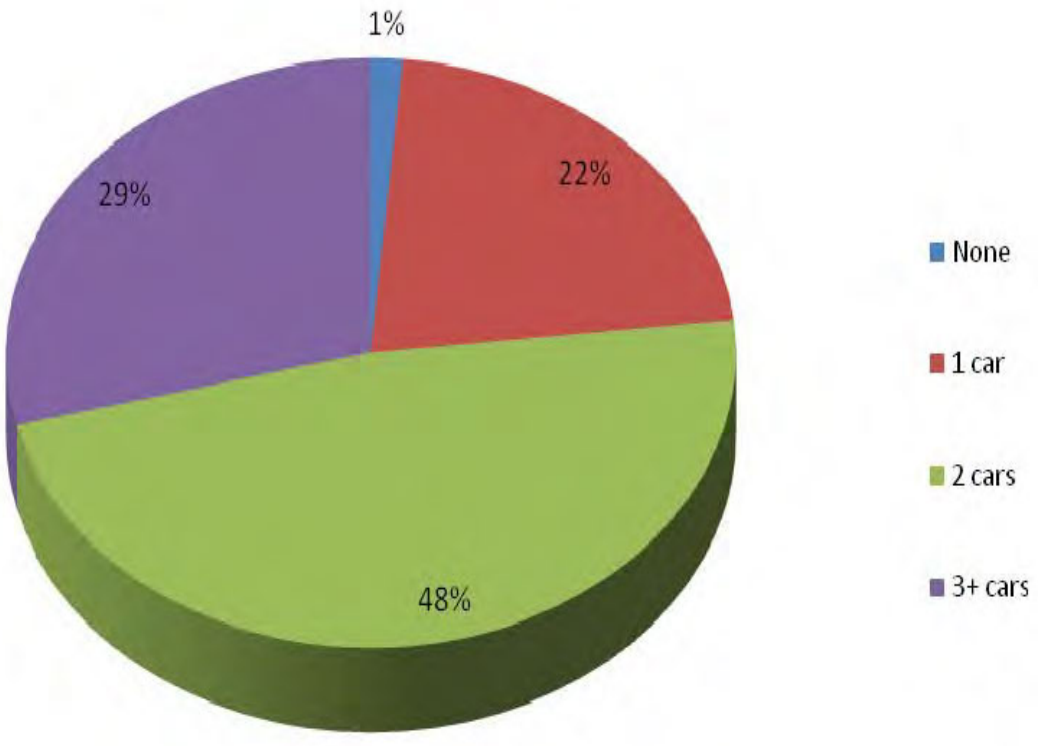
The survey showed that the majority of households responding had 2 or more vehicles.

Table 4-3: Cars per household

	None	1 car	2 cars	3+ cars
Respondents	6	81	184	111
% Responses	1%	22%	48%	29%

Source: Household & Online Surveys (February 2013, Purdon)

Figure 4-3: Cars per Household



Source: Household & Online Surveys (February 2013, Purdon)

4.4 Any traffic problems (Q4)

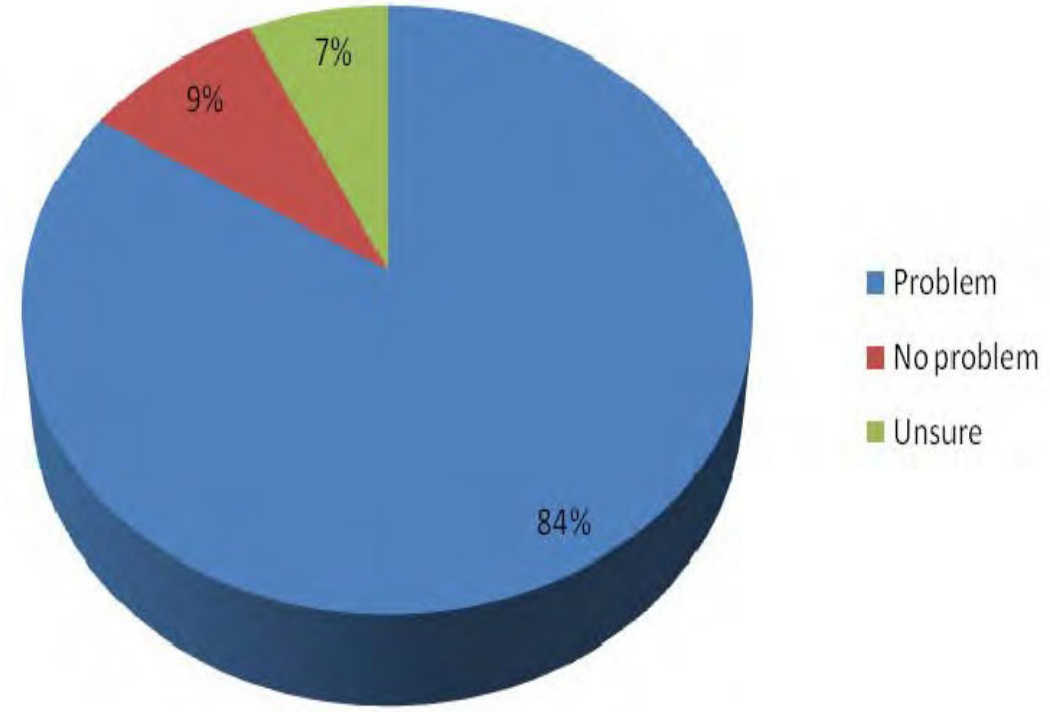
A very large percentage of respondents (84%) indicated some form of perceived traffic problem.

Table 4-4: Traffic Problems

	Problem	No problem	Unsure	No Response	Total
Respondents	314	33	26	49	422
% Responses	84%	9%	7%	-	100%

Source: Household & Online Surveys (February 2013, Purdon)

Figure 4-4: Traffic Problems



Source: Household & Online Surveys (February 2013, Purdon)

4.5 What types of Traffic Problems (Q5)

Respondents were asked to nominate the type of problem(s) being experienced in their local area. There were many multiple responses (930) to this question as can be seen below.

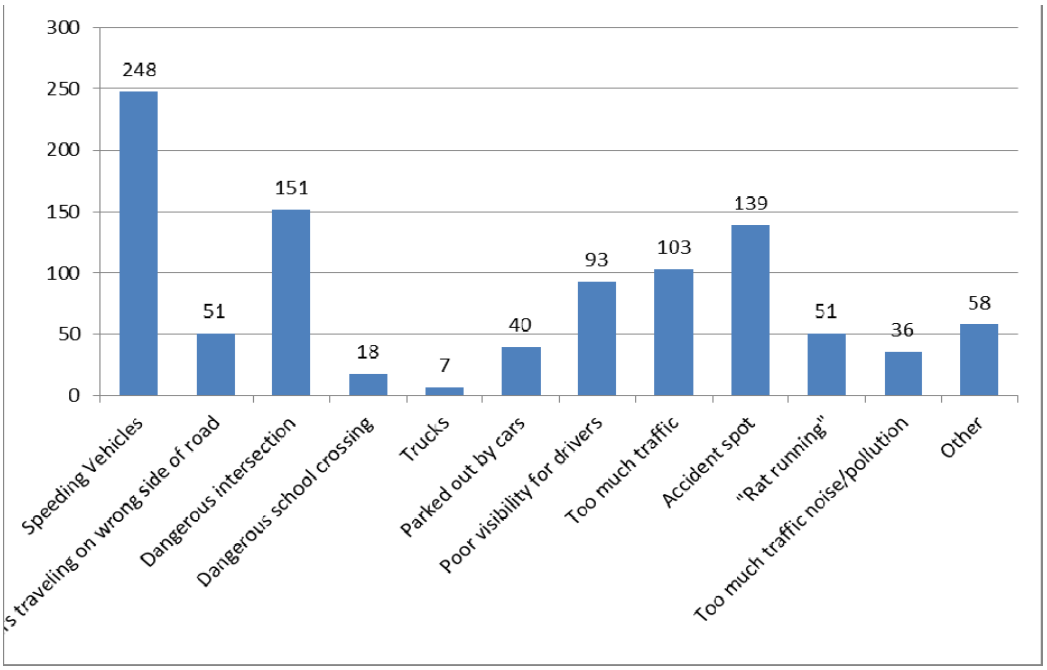
The principal problems were speeding vehicles followed by dangerous intersections.

Table 4-5: Type of Traffic Problems

Issue	No. of Responses	% Responses
Speeding Vehicles	235	25%
Cars travelling on wrong side of road	46	5%
Dangerous intersection	144	15%
Dangerous school crossing	16	2%
Trucks	7	1%
Parked out by cars	38	4%
Poor visibility for drivers	86	9%
Too much traffic in peak hours / all day	97	10%
Accident spot	131	14%
"Rat running"	46	5%
Too much traffic noise / pollution etc	33	4%
Other - see Question 6	51	5%
Total	**930**	**100%**

Source: Household & Online Surveys (February 2013, Purdon)

Figure 4-5: Type of Traffic Problems

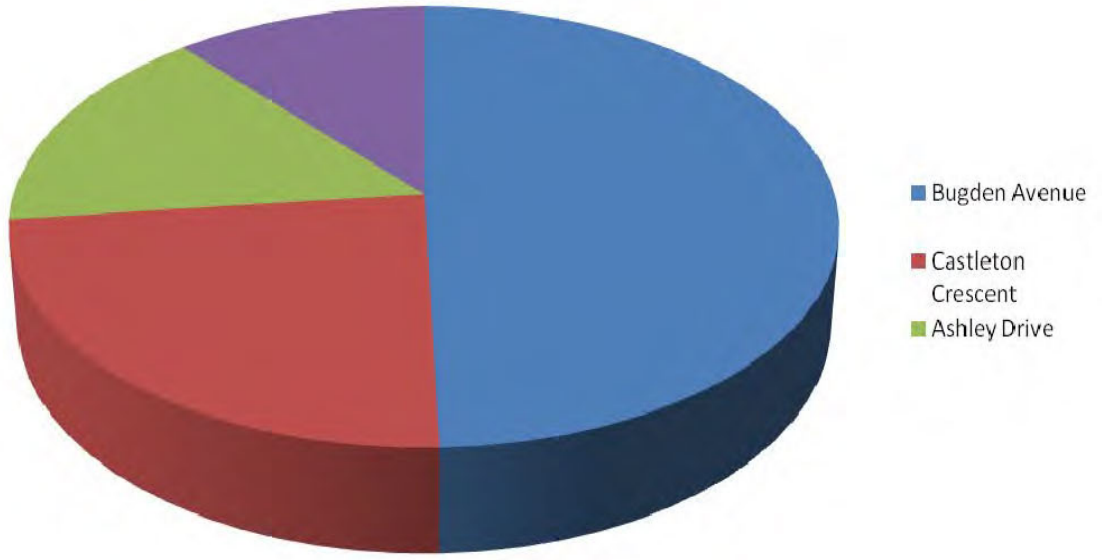


Source: Household & Online Surveys (February 2013, Purdon)

4.6 Other traffic problems (Q6)

Respondents were asked to nominate any other local traffic problems they may be encountering in their area. A total of 216 responses were received to this question. Bugden Avenue was the most frequently nominated street with traffic problems.

Figure 4-6: Other Traffic Problems



Source: Household & Online Surveys (February 2013, Purdon)

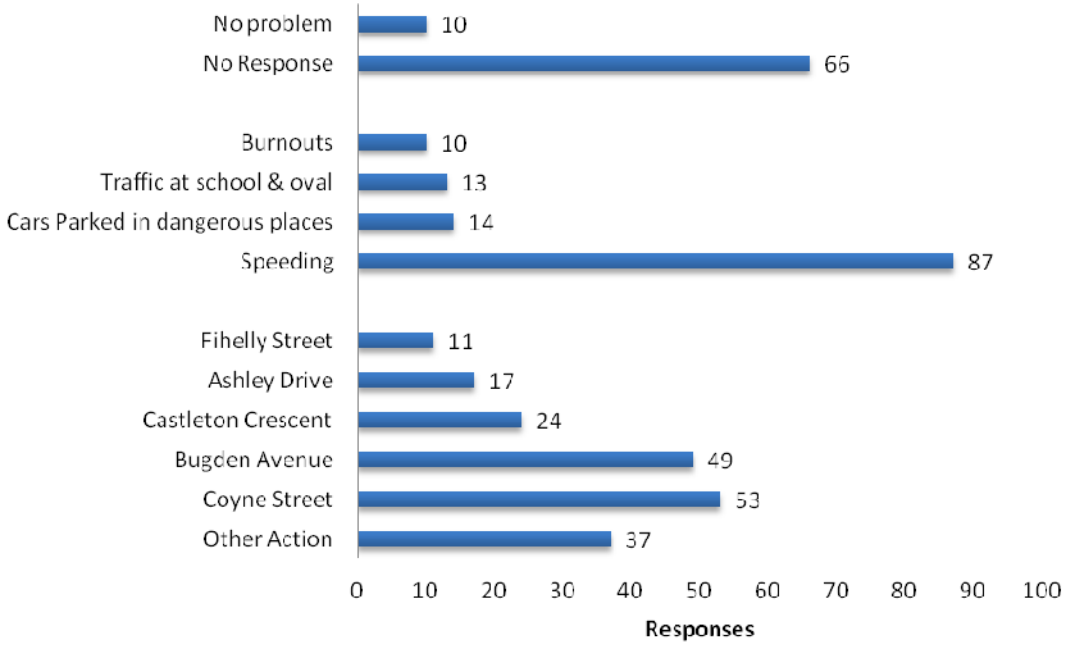
4.7 Location of traffic Problems (Q7)

Respondents were asked to show the location of local traffic problems on a plan provided as part of the survey to show the geographical distribution of these problems. Figure 3-2 shows these results.

4.8 Immediate attention (Q8)

Speeding and improvements to street intersections were the two most frequently cited problems (25% total responses) requiring immediate action. The main intersections with problems are shown on Figure 3-2.

Figure 4-7: Immediate Actions



Source: Household & Online Surveys (February 2013, Purdon)

ACT Government
Territory and Municipal Services

RESIDENTIAL STREET IMPROVEMENT STUDY

Macarthur, Fadden and Gowrie

Newsletter N° 1

Dear Resident

In May 2012 the ACT Legislative Assembly passed a motion relating to local traffic issues. Following concerns raised by local residents, the Territory and Municipal Services Directorate - Roads ACT has commissioned a study of local traffic safety and traffic management initiatives in:

- **Coyne Street** between Bugden St and Isabella Drive

Brown Consulting and Purdon Associates have been engaged by Roads ACT to undertake this study and will be preparing background analysis of local traffic conditions and accident statistics. This research will be used to inform the overall street improvement study and will be available to the public.

The **specific objectives** of the study are:

a) To identify and assess the **traffic safety and amenity issues** with emphasis on the traffic conditions in the nominated streets.

b) To consider and develop **options** which would mitigate/improve these issues.

c) To **evaluate these options** in terms of their expected technical effectiveness and economic performance.

d) To identify an **agreed solution** for the study area and prepare designs.

e) To recommend a **program of works** for implementation in future capital works programs.

f) To **consult with the community** throughout the process.

Over the next six months, Roads ACT will hold a range of public consultations in your area to capture comments on local traffic issues and give you the opportunity to comment on proposed street improvements. The consultations will be undertaken in three stages:

Stage 1: Information gathering

- Household survey
- A drop-in public information session at the Gowrie Primary School, on Tuesday 27 November 2012 from 4:30-7:30pm, to present traffic survey results and discuss local issues.
- A shop-front display at Chisholm Shops and Tuggeranong libraries for a period of six weeks in November – December 2012.

Stage 2: Developing Solutions

- Household survey
- A drop-in public information session to summarise findings and present a range of viable options will be organized mid February 2013.
- A shop-front display at Chisholm Shops for a period of six weeks in February – March 2013.

Stage 3: Reporting on findings

- Household Newsletter.
- A public exhibition of the agreed solutions for a period of six weeks in April – May 2013.

This Newsletter contains a **household survey** which is distributed to each residence and business in the study area. We would appreciate you completing the survey to assist with a better understanding of community concerns about local traffic issues in your suburb. The results of this survey will also help our project team consider options for improvements to local traffic management and safety.

Alternatively you can complete the same survey on-line at ACT Government's Time-to-Talk website **http://timetotalk.act.gov.au/**.

Information about the time and venue of the public display sessions will be provided in the **Canberra Times "Community Notice Board"** as well as **http://timetotalk.act.gov.au/.**

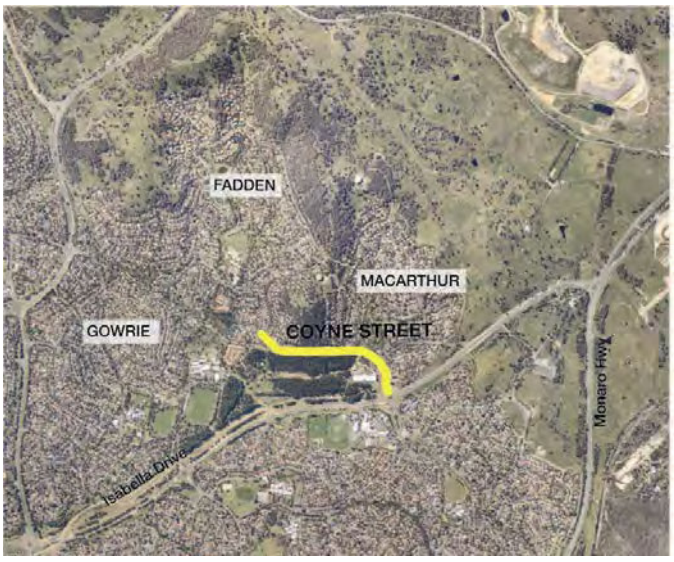
You can view the Roads ACT website **http://timetotalk.act.gov.au/** and comment online, or contact Purdons at: purdons@purdon.com.au or Fax 6248 8347 or 3/9 McKay St Turner ACT 2612.

For further information please call Roads ACT on (13 22 81) quoting the project title.

We look forward to your interest and active involvement in this project.

Rifaat Shoukrallah
Senior Manager
Traffic Management & Safety
Roads ACT

Project study area and nominated streets



ACT Government
Territory and Municipal Services

RESIDENTIAL STREET IMPROVEMENT STUDY

Coyne Street – Macarthur, Fadden & Gowrie

Household Survey

Dear Resident

Over recent years, TaMS (Roads ACT) has received complaints from residents in Chisholm, Gilmore and Richardson about traffic behavior and the unsafe nature of some local streets, and there was a motion passed in the ACT Legislative Assembly during 2012 on local traffic issues.

As a result, Roads ACT has commissioned Brown Consulting Pty Ltd and Purdon Associates Pty Ltd to study local traffic conditions with a view to improving the safety and amenity in the following street:

- **Coyne Street, between Bugden St and Isabella Dr**

We would appreciate your assistance to complete this short survey as a household (including your children and elderly parents).

PLEASE RESPOND TO THE FOLLOWING QUESTIONS BY EITHER CIRCLING YOUR ANSWER OR PLACING A TICK IN THE RELEVANT BOX

1. **Write your full address**.....

2. **Mark all age groups in your household** 1-8yrs 9-16yrs 17-25yrs 26-65yrs 66+yrs

3. **How many cars in your household?** None 1 car 2 cars 3+ cars

4. **Are there road safety issues in your local area which need to be addressed?**

   ☐ Yes ☐ No ☐ Unsure

5. **What types of traffic problems do you encounter in your local street and in other streets where you walk, drive, cycle or where your children go to school or play?** (Tick *one or more boxes*)

☐ 1.Speeding vehicles	☐ 7.Poor visibility for drivers
☐ 2.Cars travel on wrong side of road	☐ 8.Too much traffic in peak hours / all day
☐ 3.Dangerous intersection	☐ 9.Accident spot
☐ 4.Dangerous school crossing	☐ 10.“Rat running”
☐ 5.Trucks	☐ 11.Too much traffic noise / pollution etc
☐ 6.Parked out by cars	☐ 12.Other – see Question 6 below

6. **Do you have any other local traffic problems not specified above?**

.....

.....

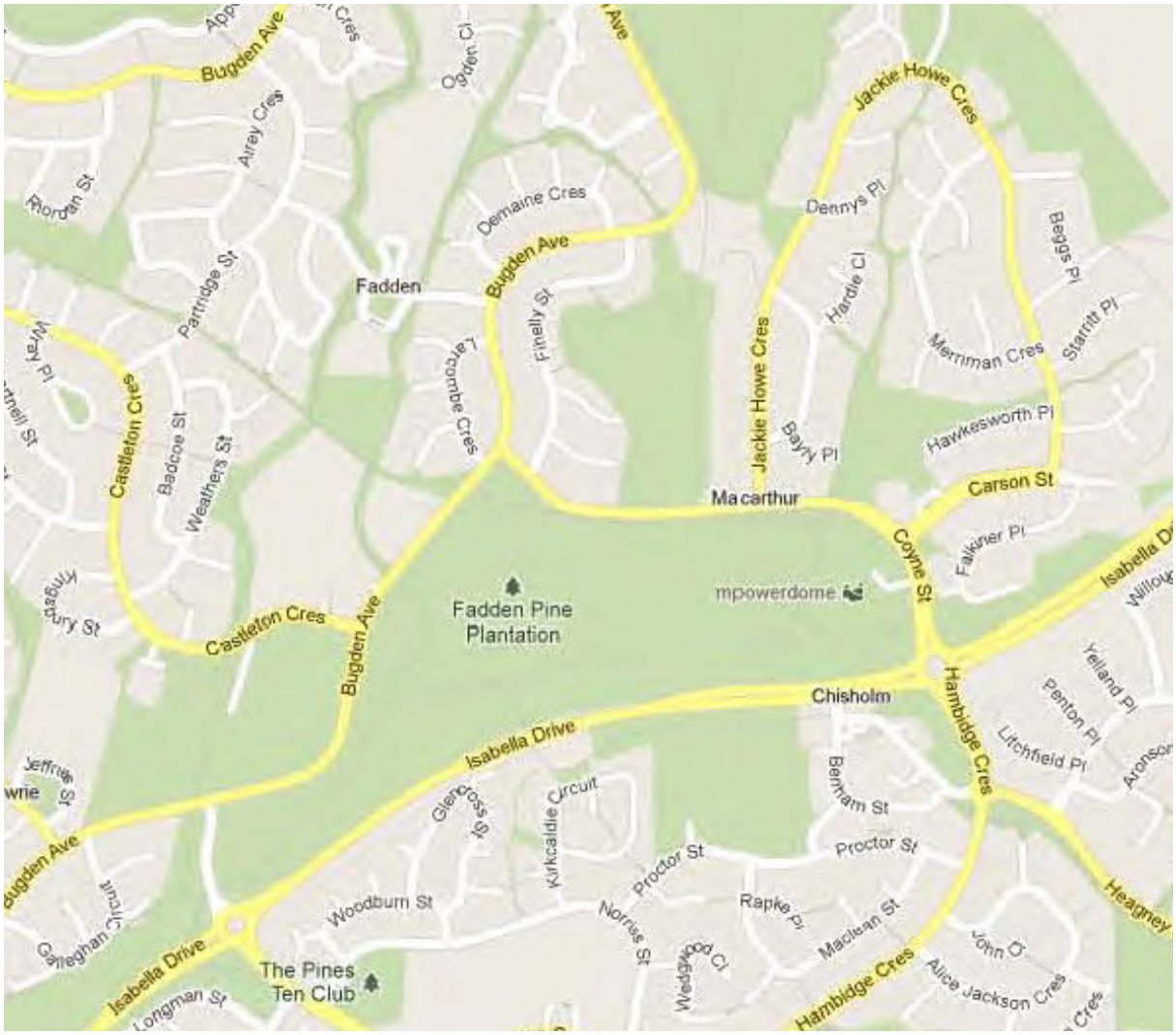
.....

PLEASE COMPLETE SURVEY OVER PAGE ➔

PLEASE RETURN THIS COMPLETED QUESTIONNAIRE BY FRIDAY 21 DECEMBER 2012

Email (purdons@purdon.com.au) **Fax** (02 6248 8347) **Mail** (in Reply Paid Envelope Provided)

7. **On the map below, mark a numbers corresponding to the location of a traffic related problem you identified in Questions 5 and 6.**



8. **Of the problems you described, which one do you believe requires the most immediate attention?**

.....

9. **Any further comments.**

.....

.....

.....

.....

.....

THANK YOU FOR YOUR COOPERATION

PLEASE RETURN THIS COMPLETED QUESTIONNAIRE BY FRIDAY 21 DECEMBER 2012

Email (purdons@purdon.com.au) **Fax** (02 6248 8347) **Mail** (in Reply Paid Envelope Provided)

ATTACHMENT C

STAGE 2 CONSULTATION DOCUMENTATION

Interim Draft Report

Residential Street Improvement Study

Macarthur, Fadden and Gowrie

Stage 2 – Summary of Community Consultations

(includes survey results analysed to 17 April 2013)

22 April 2013

PURDON
PLANNING SUSTAINABLE FUTURES

Table of Contents

1.0 INTRODUCTION 1
1.1 Purpose 1
1.2 Background 1
1.3 Project Objectives 1
1.4 Overall Consultation Strategy 2
1.5 Study Area 3

2.0 CONSULTATIONS 5
2.1 Media Information 5
2.2 Household Newsletter 5
2.3 Household Survey 5
2.4 Online Survey 5
2.5 Web Page information 5
2.6 Tuggeranong Community Council Briefing 5
2.7 Community Display 6
2.8 Public Submissions 6
2.9 Other Stakeholder Briefing 6

3.0 SUMMARY OF STAGE ONE CONSULTATIONS 7

4.0 SURVEY RESULTS – STAGE TWO 10
4.1 Reponses by Suburb (Q1) 10
4.2 Response by Street 11
4.3 Support for Proposals (Q2) 12
4.4 Coyne Street Options (Q3) 13
4.5 Proposed Changes (Q4) 14
4.6 Priority Treatments (Q5) 19
4.7 Satisfaction with Consultation Process (Q6) 21
4.8 Further Comments (Q7) 22

5.0 CONCLUSIONS 24

ATTACHMENTS 25

Figures

Figure 1-1: Study Area Context 3
Figure 1-2: Study Area 4
Figure 3-1: Top Five Traffic and Safety Problems 7
Figure 3-2: Indicative Locations of Traffic Issues 9
Figure 4-1: Survey Response by Suburb 10
Figure 4-2: Survey Responses by Street 11
Figure 4-3: Support for Proposals 12
Figure 4-4: Coyne Street Options 13
Figure 4-5: Level of Support for Proposals 14
Figure 4-6: Bugden Avenue Changes 16
Figure 4-7: Castleton Crescent Changes 17
Figure 4-8: Coyne Street Changes 17
Figure 4-9: Proposed Changes to Scheme 18
Figure 4-10: First Priority Street 20
Figure 4-11: Coyne Street Priority Treatments 20
Figure 4-12: Level of Satisfaction with Consultation Process 21
Figure 4-13: Streets Mentioned in Further Comments 22

Tables

Table 4-1: Response by Suburb 10
Table 4-2: Level of Support for Proposals 12
Table 4-3: Coyne Street Options 13
Table 4-4: Level of Support and Respondents who Proposed Change 14
Table 4-5: Change/ No Change to Proposals 15
Table 4-6: Streets Listed as a First Priority for Treatment 19
Table 4-7: Satisfaction with Consultation Process 21
Table 4-8: Most Frequent Issues/Devices Raised for Each Street in Further Comment 23

Attachments

Attachment A: Household Newsletter #2 25
Attachment B: Household Survey #2 25

1.0 Introduction

1.1 Purpose

This interim report provides a summary of the second stage of the community consultation process and outcomes for the Residential Street Improvement study in Macarthur, Fadden and Gowrie being undertaken by Brown Consulting and Purdon Associates for Roads ACT in the Territory and Municipal Services Directorate (TAMS).

The consultation period for Stage 2 ran from 1st March 2013 to 12th April 2013.

The report includes an analysis of 317 surveys (254 household surveys and 63 electronic) received by Purdons as at 17 April 2013 and other comments received by the project team during the consultation process.

1.2 Background

In late 2012, Roads ACT commenced a residential street improvement study for Macarthur, Fadden and Gowrie in Tuggeranong in response to comments received from the community about traffic safety issues in the local area. The study was also undertaken in response to a motion passed in the ACT Legislative Assembly in May 2012 calling for a study of local traffic issues.

The current study is one of several initiatives being undertaken by Roads ACT in Tuggeranong and other parts of Canberra.

1.3 Project Objectives

The **specific objectives** of the study are:

a) To identify and assess the **traffic safety and amenity issues** with emphasis on the traffic conditions in the nominated street (Coyne Street).

b) To consider and develop **options** which would mitigate/improve these issues.

c) To **evaluate these options** in terms of their expected technical effectiveness and economic performance.

d) To identify an **agreed solution** for the study area and prepare designs.

e) To recommend a **program of works** for implementation in future capital works programs.

f) To **consult with the community** throughout the process.

1.4 Overall Consultation Strategy

A consultation strategy has been prepared for the duration of the project, in conjunction with Roads ACT, to capture comments on local traffic issues and provide the community with an opportunity to comment on proposed street improvements. The consultations are being undertaken in three stages:

Stage 1: Information gathering

- Media release from the Minister for TAMS
- Presentation to Tuggeranong Community Council
- Household newsletter
- Household survey
- Electronic survey
- A drop-in public information session at the Gowrie Primary School between 4:30 and 7:30pm on Tuesday 27 November 2012 to present traffic survey results and discuss local issues.
- A shop-front display at Chisholm Shops and Tuggeranong libraries for a period of six weeks in November – December 2012.

Stage 2: Developing Solutions

- Media release from the Minister for TAMS
- Presentation to Tuggeranong Community Council
- Household newsletter
- Household survey
- Electronic Survey
- A drop-in public information session at the Gowrie Primary School between 4:30 and 7:30pm on Wednesday 13 March 2013 to summarise findings from the stage one consultations and traffic analysis, and to present the proposed traffic management scheme for the three suburbs

Stage 3: Reporting on findings

- Media release from the Minister for TAMS
- Household Newsletter
- Information on the ACT Government website.

1.5 Study Area

The study area covers the suburbs of Macarthur, Fadden and Gowrie as shown on Figure 1-1 and Figure 1-2.

The area is bounded by Isabella Drive, Ashley Drive and Erindale Drive.

The specific street listed in the study Brief is Coyne Street from Bugden Avenue to Isabella Drive, although residents were also invited to comment on any problems experienced in other local streets in the general study area.

As at August 2011, the ABS census indicated that the study area contained a resident population of approximately 7,615 in 2,763 households (private dwellings).

The study area also includes the following principal land uses that are local traffic generators:

- Schools
- Scout hall
- Community Park (Fadden Pines)
- Indoor District tennis centre
- Local shops.
- Playing Fields

Figure 1-1: Study Area Context

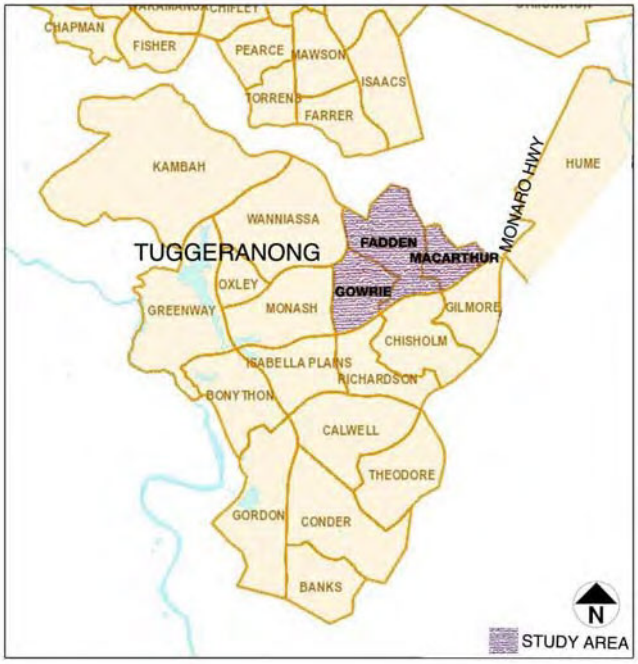


Figure 1-2: Study Area

2.0 Consultations

A range of consultation measures have been employed by Roads ACT for this study as summarised below.

2.1 Media Information

The Canberra Times has been used as the basis for a media release to inform residents of the Study and to provide details about the community information display.

2.2 Household Newsletter

A household newsletter informing residents of the proposed study and consultation process was delivered to all households, as well as business outlets, schools and other land uses in the study area during February – March 2013. Total distribution was to approximately 2,763 households. A copy of Newsletter #2 is in Attachment A.

2.3 Household Survey

A two page household survey with reply paid envelope was circulated to all households with the above newsletter.

As at 17 April 2013, a total of 254 responses were received and have been analysed (refer Section **Error! Reference source not found.** below).

2.4 Online Survey

An online survey similar to the household survey was established on the ACT Government's Time-To-Talk website.

As at 25 March, 2013, a total of 63 responses were received, analysed and incorporated into the overall survey results outlined below (refer Section 4.0 below).

2.5 Web Page information

Information about the project was uploaded on the Time-To-Talk website.

2.6 Tuggeranong Community Council Briefing

A presentation on the study was provided to members of the Tuggeranong Community Council (TCC) in March 2013 at the Tuggeranong Southern Cross Club. Approximately 40 people attended this presentation, including several elected Local and Federal members.

The presentation outlined the study objectives, timetable and approach including the broad consultation strategy, as well as the proposed concept plan for traffic management improvements in the area.

2.7 Community Display

A public display/information session was held in the Gowrie Primary School hall on Wednesday, 13 March 2013. The display was advertised in the Canberra Times Community Notice Board as well as in the newsletter and online.

About 40 local residents attended in this session.

Information presented at the display included the following:

- Study area context
- Results of Stage One Consultation
- Results of technical assessment of traffic speed, volume and crash data
- Proposed traffic management scheme
- Photos of proposed traffic calming devices.

2.8 Public Submissions

Members of the public were also invited to submit comments on the study, consultation process and proposed devices. A total of 11 submissions, separate to the survey forms; have been received by TAMS/Purdons covering a variety of matters including comments on specific street proposals, newsletter distribution problems, justification for the proposed devices and privacy issues.

2.9 Other Stakeholder Briefing

A number of other stakeholders, including ACTION Buses, Pedal Power, NRMA Motoring and Services and Motorcycle Riders Association were provided with a copy of the newsletter and survey form, and invited to participate in the consultation process.

No individual representation from these stakeholder organisations have been received to date.

3.0 Summary of Stage One Consultations

A wide range of local traffic issues were raised by local residents during the stage one consultations by way of survey responses and other comments at the TCC public meeting and the public display.

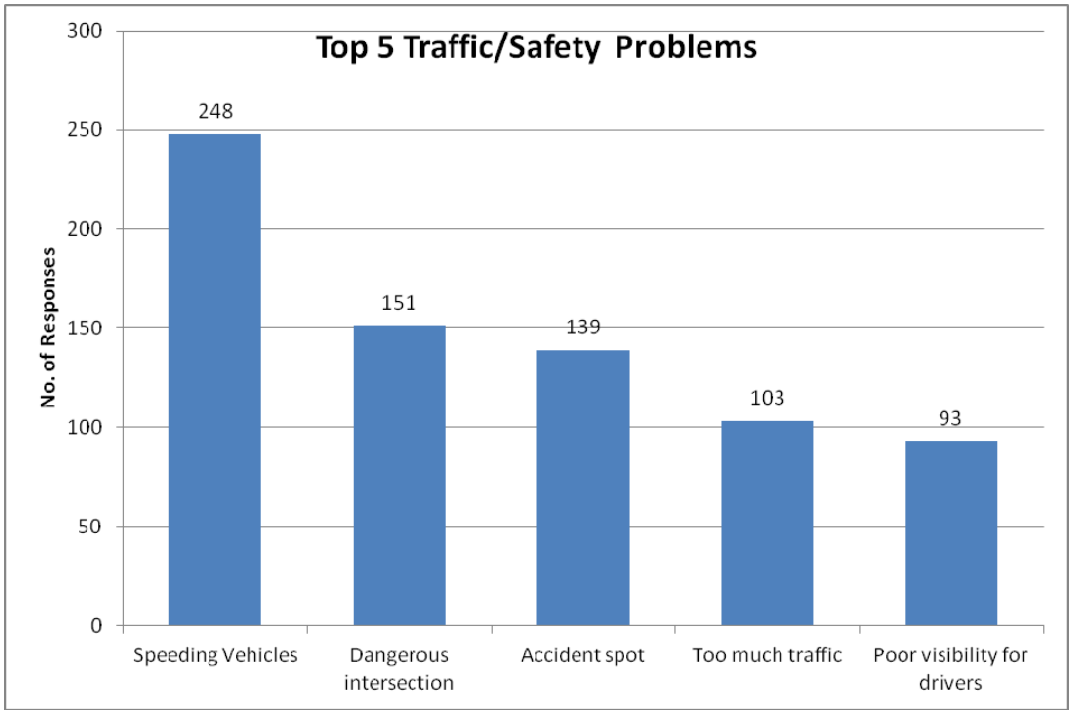
A total of 389 household surveys and 33 electronic surveys were received from local residents representing 14% of total households in the study area.

The top five (5) traffic issues included in comments from the local residents are shown in Figure 3-1 and included:

- Speeding
- Dangerous intersections
- Accident spots
- Peak hour traffic volume
- Poor driver visibility.

A total of 9% of respondents stated they had no concerns regarding traffic and safety in the area.

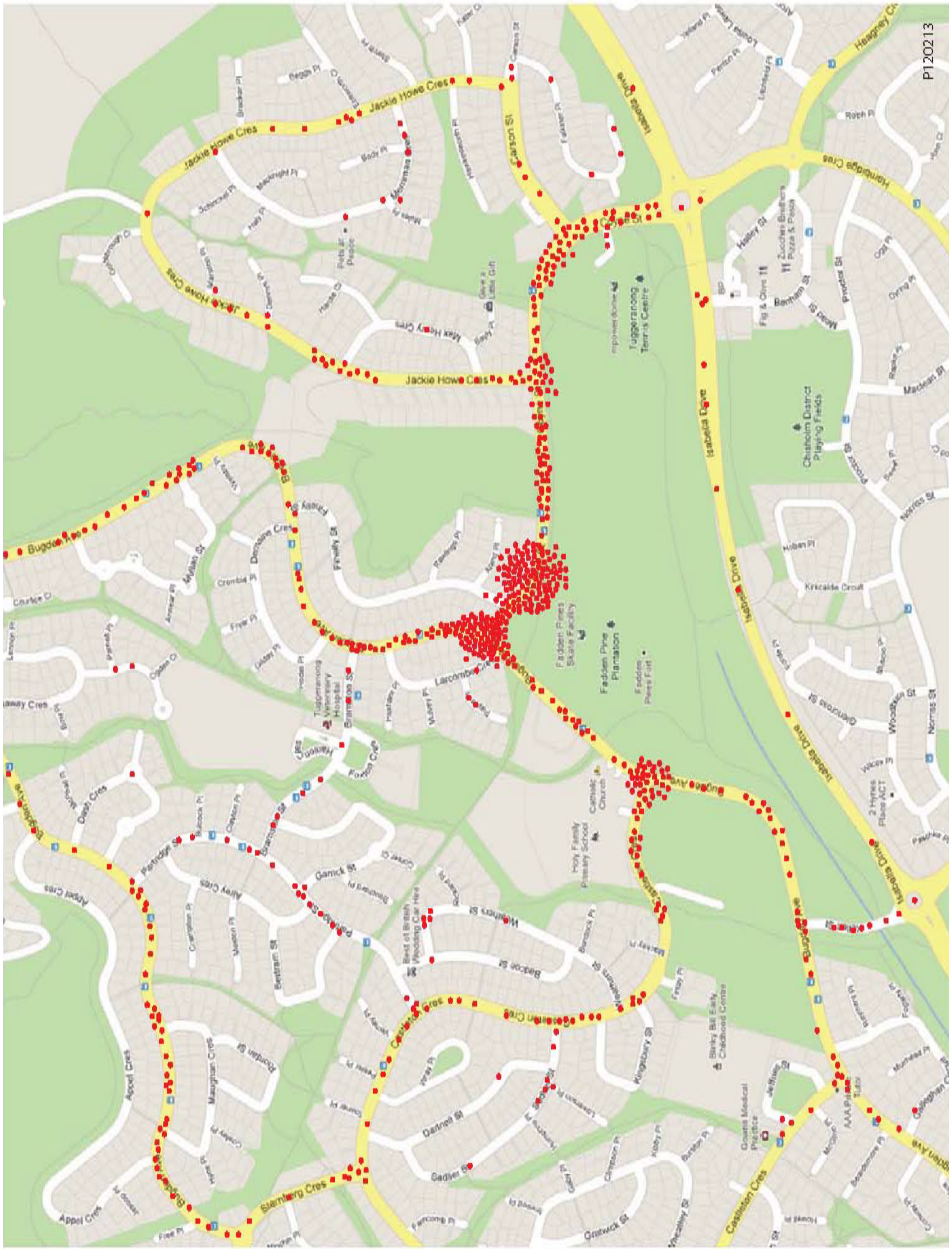
Figure 3-1: Top Five Traffic and Safety Problems



Source: Household & Online Surveys (February 2013, Purdon)

Figure 3-2 summarises the geographic location of traffic issues identified by local residents, and highlight a concentration of problems on Coyne Street, Bugden Avenue and Castleton Crescent and Jackie Howe Crescent.

Figure 3-2: Indicative Locations of Traffic Issues



Source: Household & Online Surveys (February 2013, Purdon)

4.0 Survey Results – Stage Two

This section summarises the main results of the stage two household and on-line surveys.

A total of 317 survey responses have been analysed in this report up to 17 April 2013, comprising 254 household surveys and 63 on-line surveys. This represents a response rate of about 11% of all households in the study area.

Overall there is a very strong support for the proposed traffic management scheme distributed for consultation. However, about 47% of households also requested changes to some treatments in the proposed plan.

4.1 Reponses by Suburb (Q1)

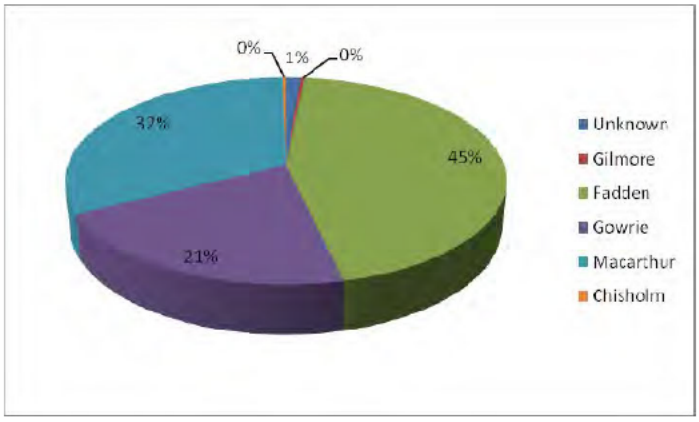
The majority of responses came from Fadden, followed by Macarthur and Gowrie.

Table 4-1: Response by Suburb

Suburb	Respondents	% Responses
Macarthur	102	32%
Fadden	142	45%
Gowrie	67	21%
Gilmore	1	0%
Chisholm	1	0%
Un-stated	4	1%
Total	**317**	**100%**

Source: Household & Online Surveys (March 2013, Purdon)

Figure 4-1: Survey Response by Suburb

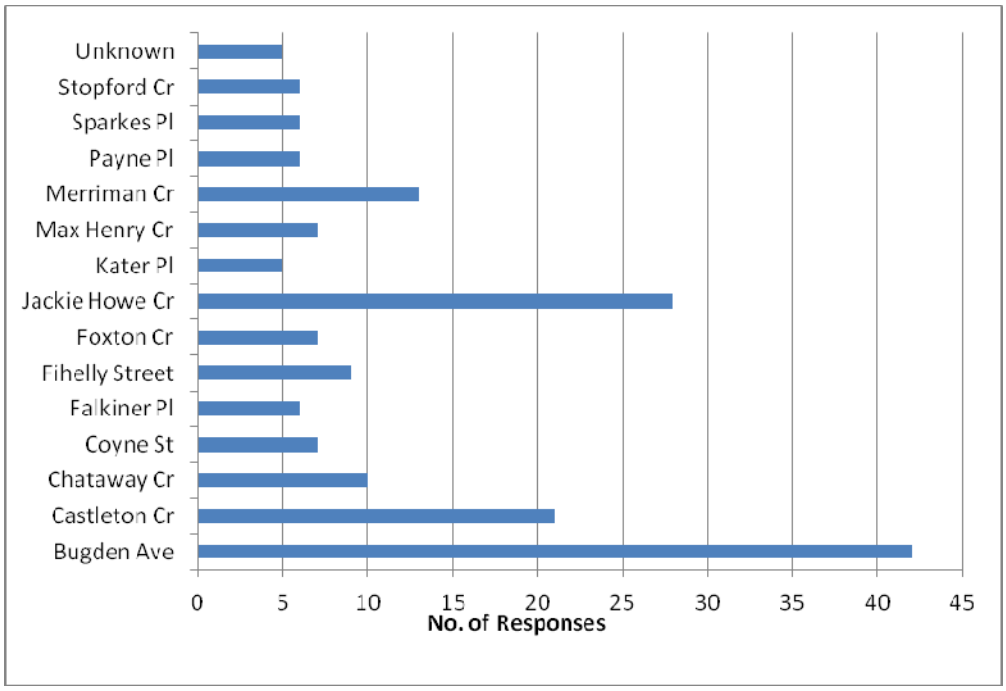


Source: Household & Online Surveys (March 2013, Purdon)

4.2 Response by Street

Figure 4-2 shows the distribution of survey responses received from residents of each street. The volume of responses from Bugden Crescent, Castleton Crescents and Jackie Howe Crescent reflects the length and number of households in each street and confirms interest from these local residents in local traffic issues.

Figure 4-2: Survey Responses by Street



Source: Household & Online Surveys (March 2013, Purdon)

4.3 Support for Proposals (Q2)

Respondents were asked if they supported the proposed traffic management scheme.

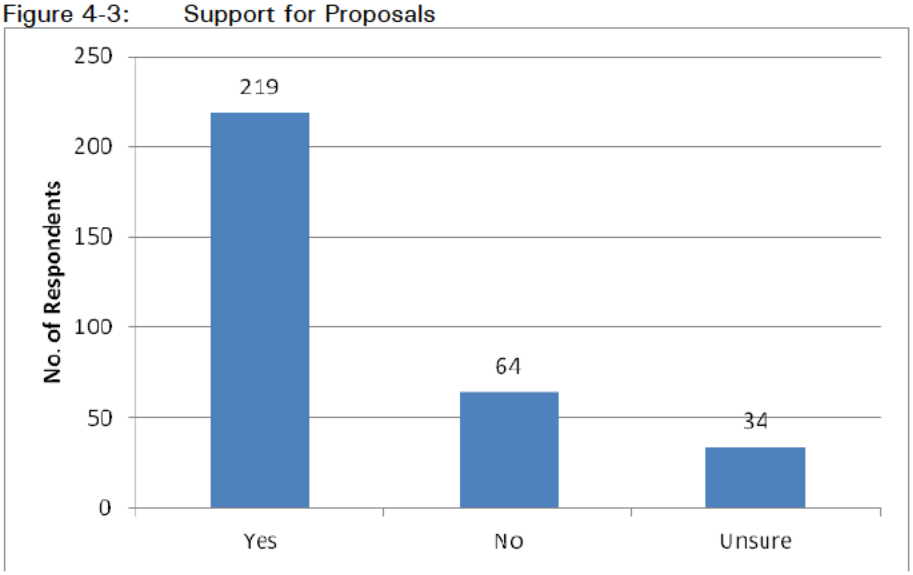
Table 4-2: Level of Support for Proposals

Level of Support	Number of responses	% of responses
Yes	219	69%
No	64	20%
Unsure	34	11%
Total	317	100%

Source: Household & Online Surveys (March 2013)

The survey response indicated a strong (69%) level of local support for the concept plan showing local traffic devices as outlined in the newsletter#2 and community display.

Figure 4-3: Support for Proposals



Source: Household & Online Surveys (March 2013, Purdon)

4.4 Coyne Street Options (Q3)

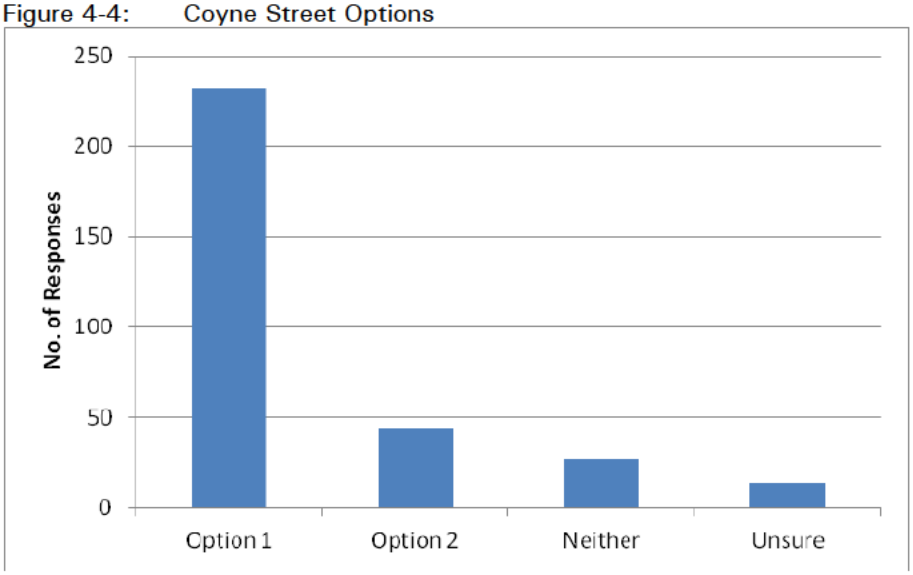
The newsletter contained two basic treatment options for Coyne Street. Respondents were asked which Coyne Street proposal they would like to see implemented.

Table 4-3: Coyne Street Options

Option	Number of Respondents	% of Respondents
Option 1: Coyne St realignment	232	73%
Option 2: Improving signage and adding speed cushions on Coyne St	44	14%
Neither Option 1 or Option 2	27	9%
Unsure	14	4%
Total	**317**	**100%**

This response is also mirrored in the response to priority actions in Q5.

Figure 4-4: Coyne Street Options



Source: Household & Online Surveys (March 2013, Purdon)

4.5 Proposed Changes (Q4)

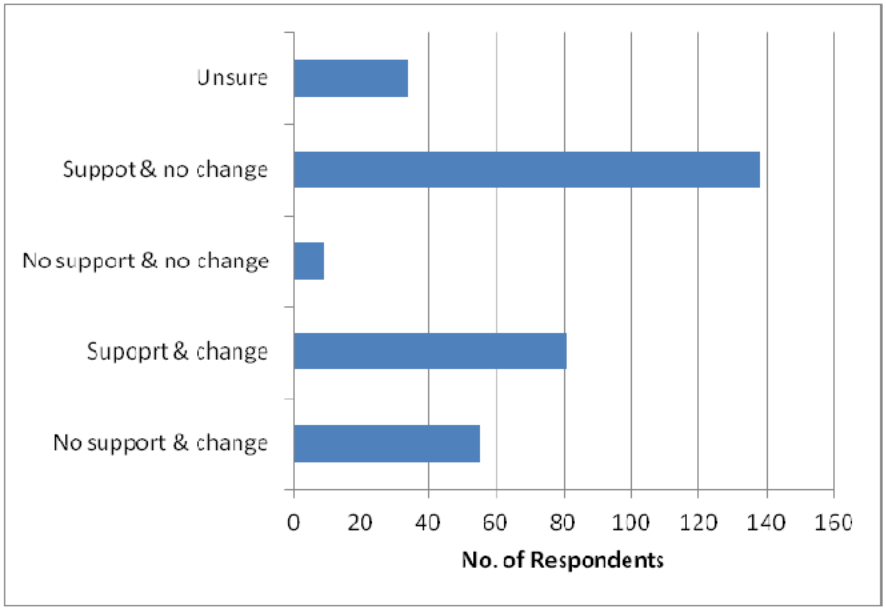
Question 4 asked respondents if they wished to propose any changes to the proposed scheme.

Table 4-4: Level of Support and Respondents who Proposed Change

Support for proposal/Suggest changes	No	%
No support / Wants change	55	16%
No support / No change	9	2%
Support / Wants change	81	25%
Support / No change	138	44%
Unsure	34	10%
Total	317	100%

Note: Percentages rounded to nearest whole figure
Source: Household & Online Surveys (March 2013, Purdon)

Figure 4-5: Level of Support for Proposals



Source: Household & Online Surveys (March 2013, Purdon)

The results showed that 50% (157) of respondents suggested a change to the concept plan on display and in the newsletter.

Table 4-5 summarises the responses to Q4, noting that it was a multiple response question, and includes the most frequently mentioned responses (5% and above) to the proposed traffic devices. The results are summarised by street and type of issue (e.g. comment on devices). Most of the changes proposed by residents were critical of the number and type of devices.

Table 4-5: Change/ No Change to Proposals

Street	Change to Proposal	No	% of Respondents that wanted change
Coyne Street	No Speed Cushions at all	4	3%
	Positive Response to Speed Cushions	6	4%
	Does not support Roundabouts (including adjoining intersections with Bugden & Jackie Howe)	6	4%
	Positive Response to Coyne/Bugden roundabout	11	7%
Bugden Avenue	Negative Responses to Speed Cushions	12	8%
	Fewer Speed Cushions	5	3%
	Positive Responses to Speed Cushions	9	5%
	Negative Response to Roundabouts (generally referring to adjoining roundabout with Castleton)	5	3%
	Supports Roundabouts (generally at Coyne intersection but also at Kellet & Bramston St's)	13	8%
	Negative Response to Raised Platforms	9	6%
	Positive Response to Raised Platforms	10	6%
	Other Issues– Foliage, Speed Limit, Slip Lane, Footpaths, Parking, Buses, Line Markings	13	8%
Castleton Crescent	Fewer Speed Cushions	9	6%
	No Speed Cushions at all	8	5%
	Positive Response to Raised Platforms	7	4%
Total Responses Suggesting Change		**145**	

Note: Question allowed for more than one response

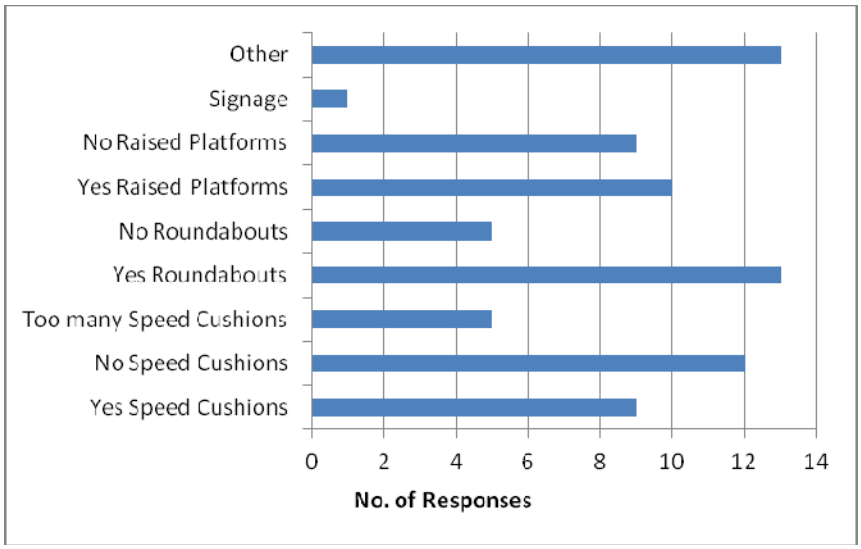
Source: Household & Online Surveys (March 2013, Purdon)

Bugden Avenue received the most number of requests/suggestions for changes. They also received a mixture of positive and negative comments about the need for more devices, as well as a few responses being critical of the proposed number and type of device.

Whilst streets are used by both residents and trough-traffic, the number of responses from individual streets, suggest it is local residents rather than "trough traffic" that are calling for changes in the proposed devices.

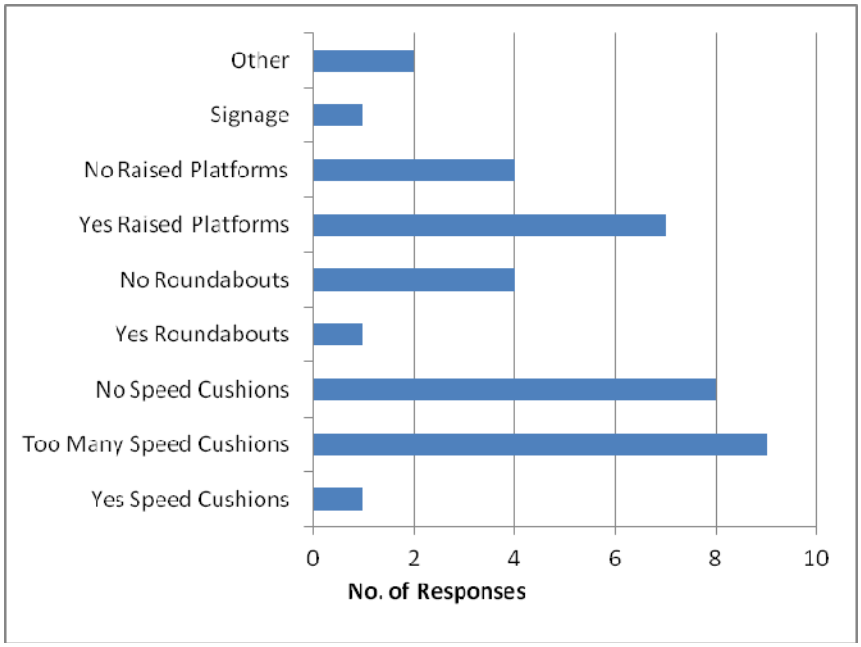
Figure 4-6, Figure 4-7 and Figure 4-8 summarise the types of changes requested by residents for selected local streets.

Figure 4-6: Bugden Avenue Changes



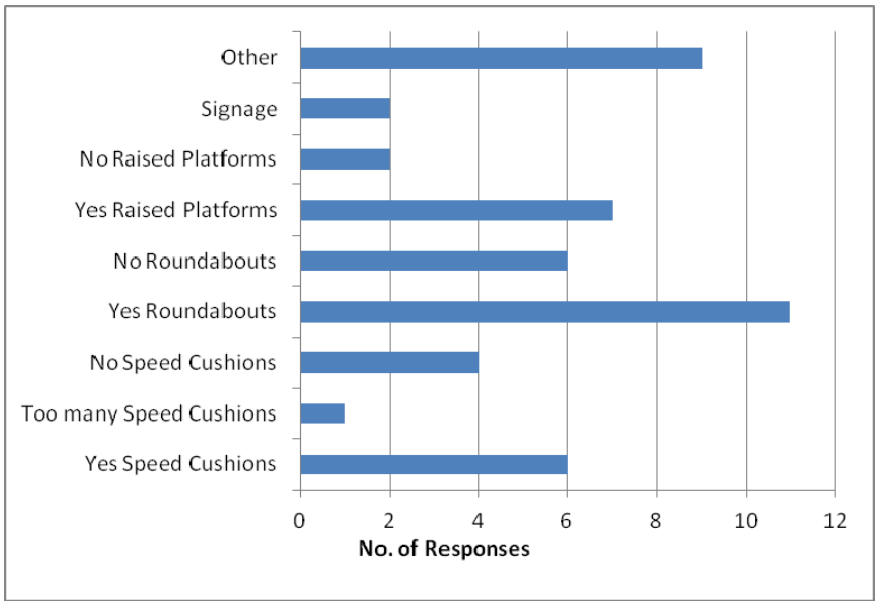
Source: Household & Online Surveys (March 2013, Purdon)

Figure 4-7: Castleton Crescent Changes



Source: Household & Online Surveys (March 2013, Purdon)

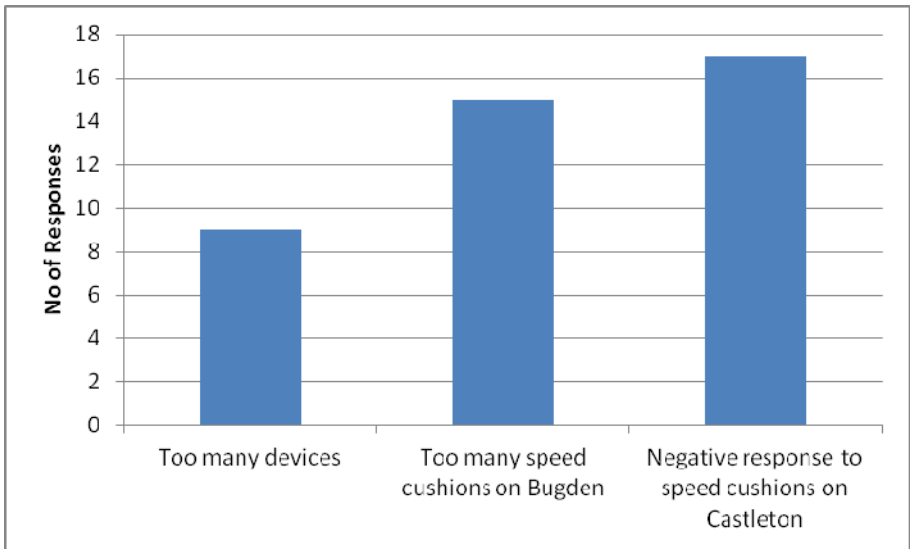
Figure 4-8: Coyne Street Changes



Source: Household & Online Surveys (March 2013, Purdon)

Figure 4-9 below refers to specific proposed changes that have been noted from the household and online survey results (above 5%).

Figure 4-9: Proposed Changes to Scheme



Source: Household & Online Surveys (March 2013, Purdon)

Other popular proposal changes include:

- Further treatments on Jackie Howe Crescent
- Further treatments at the Coyne St and Bugden Avenue intersection
- No treatments necessary
- Greater Police presence
- More treatments in School Zones.

4.6 Priority Treatments (Q5)

Respondents were asked to nominate three treatments that they believe should be of highest priority for implementation.

Table 4-6 and Figure 4-10 list the streets nominated by residents for priority action.

The most frequently mentioned streets were:

- Coyne Street
- Castleton Crescent
- Bugden Avenue
- Bramston Street

Coyne Street was nominated 176 times as the respondent's first preference. The dominance of this street in their responses can be explained by a number of factors, including the crash history of the street and its use as a major gateway to/from the local area.

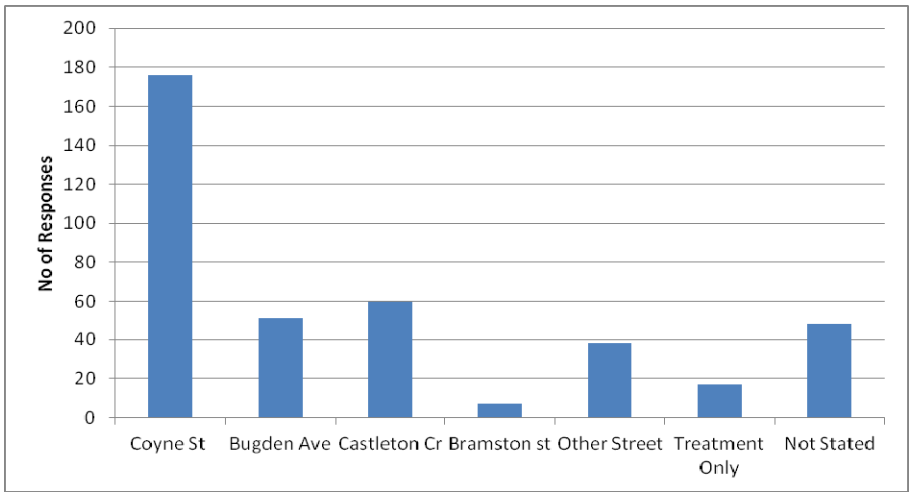
Table 4-6: Streets Listed as a First Priority for Treatment

Street Name	No. Responses	% Responses
Coyne St	176	44%
Bugden Ave	51	13%
Castleton Cr	60	15%
Bramston St	7	2%
Other Street	38	10%
Treatment Only	17	4%
Not Stated	48	12%
Total	**397**	**100**

Note: Question allowed for more than one response, percentage relates to total number of responses, not respondents

Source: Household & Online Surveys (March 2013, Purdon)

Figure 4-10: First Priority Street

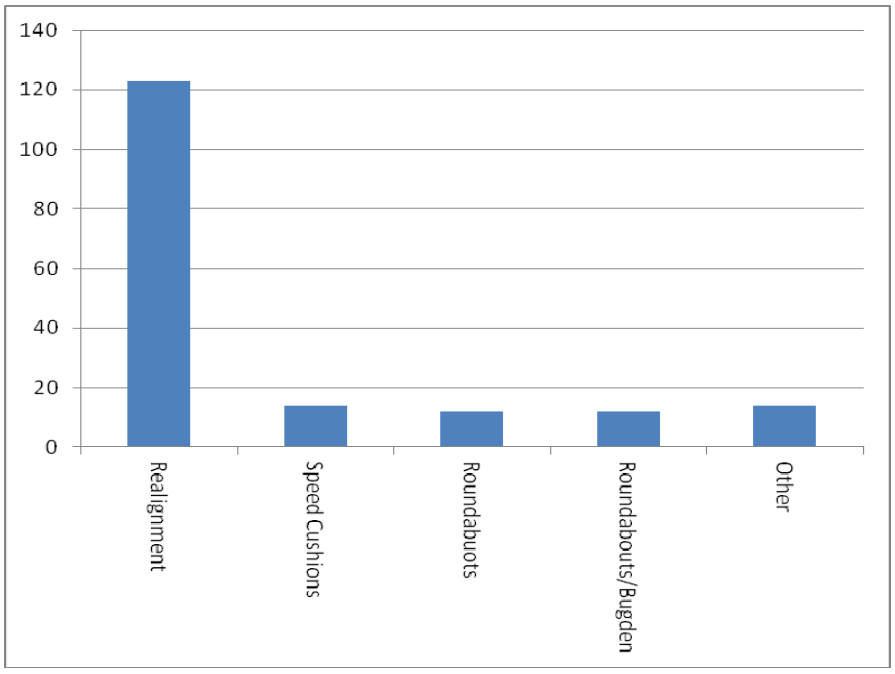


Note: Percentages rounded to nearest whole figure

Source: Household & Online Surveys (March 2013, Purdon)

Figure 4-11 shows the nominated priority treatments on Coyne Street.

Figure 4-11: Coyne Street Priority Treatments



Source: Household & Online Surveys (March 2013, Purdon)

4.7 Satisfaction with Consultation Process (Q6)

Question 6 asks respondents whether they are satisfied with the consultation process.

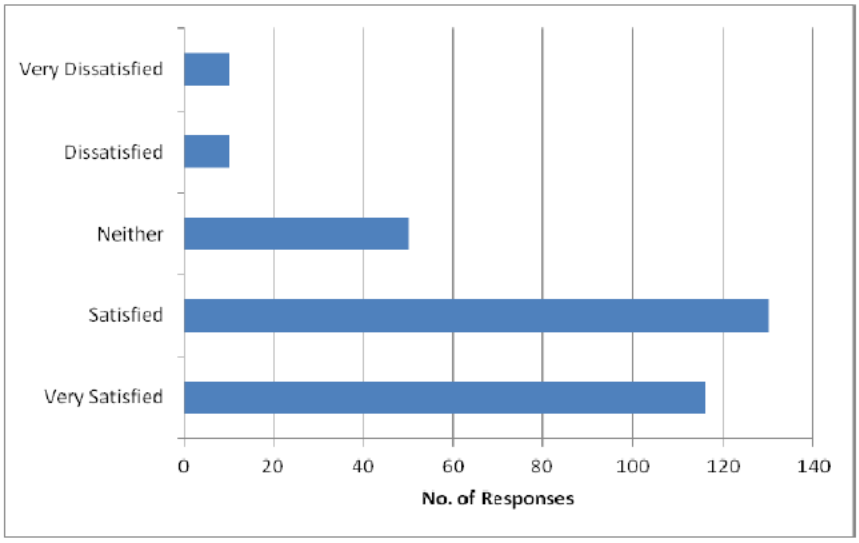
About 78% of respondents were either 'Satisfied' or 'Very Satisfied' with the consultation process, indicating a strong endorsement of the TAMS process. Only 6% of respondents were either dissatisfied or very dissatisfied, and a number of these respondents have also emailed TAMS/Purdons to express these concerns.

Table 4-7: Satisfaction with Consultation Process

Are you satisfied with the consultation process?	Number of Respondents	% of Respondents
Very Satisfied	117	37%
Satisfied	130	41%
Neither Satisfied of Dissatisfied	50	16%
Dissatisfied	10	3%
Very Dissatisfied	10	3%
Total	**317**	**100%**

Source: Household and Online Surveys (March 2013, Purdon)

Figure 4-12: Level of Satisfaction with Consultation Process



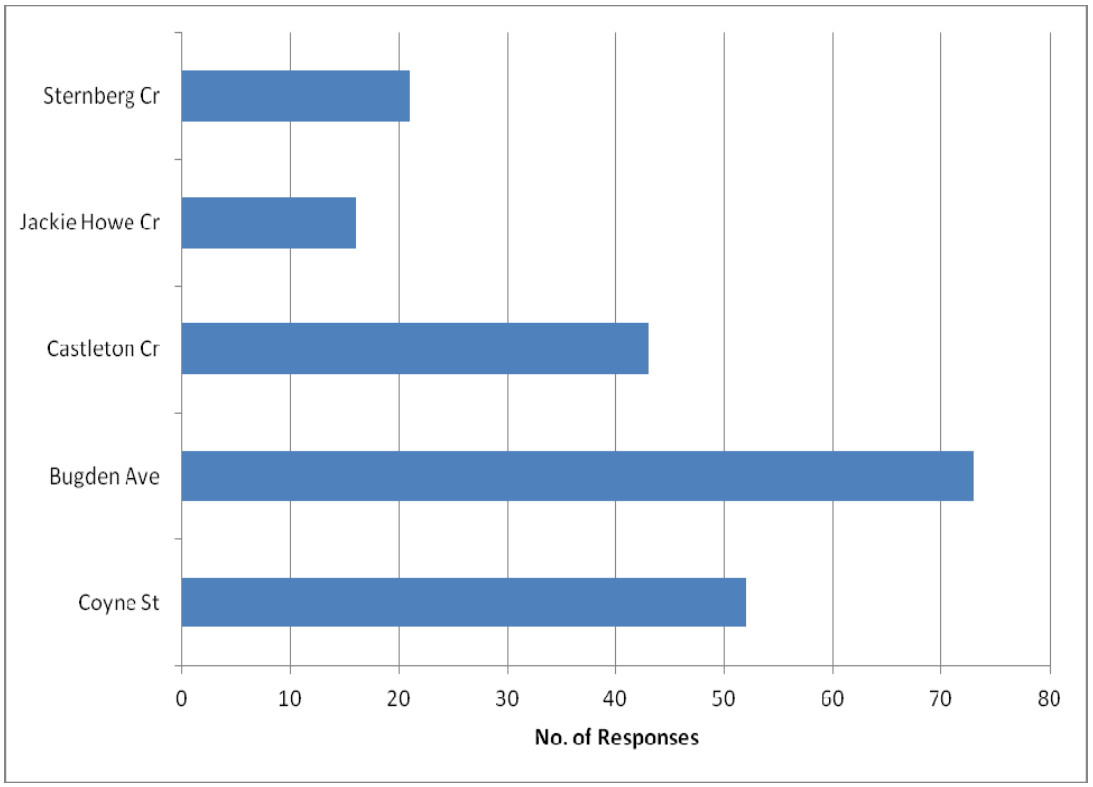
Source: Household & Online Surveys (March 2013, Purdon)

4.8 Further Comments (Q7)

Respondents were also invited to provide any further comments on the proposed treatments.

A total of 199 (63%) respondents made further comments. Figure 4-12 lists the streets that were most frequently mentioned in these comments.

Figure 4-13: Streets Mentioned in Further Comments



Source: Household & Online Surveys (March 2013, Purdon)

The most common issues and/or devices (5% and above) on these frequently mentioned streets are listed in Table 4-8 below.

Table 4-8: Most Frequent Issues/Devices Raised for Each Street in Further Comment

Street	Total No. of Responses	Issue/Device	No. of Responses
Coyne St	52	Negative Response to Speed Cushions	10
		Positive Response to Coyne St Realignment	17
Bugden	73	Negative Response to Speed Cushion	25
		Negative Response to Raised Platform	9
Castleton	43	Negative Response to Speed Cushion	14

Note: Question Allowed for more than one response

Source: Household & Online Surveys (March 2013, Purdon)

Other frequent responses include:

- Positive and response to speed cushions on Coyne Street (3%)
- Positive and negative responses to roundabouts on Castleton Crescent (4%, 2%)
- Negative responses to the Coyne Street Realignment (5%)
- Positive response to roundabouts on Bugden Avenue (4%).

5.0 Conclusions

The following conclusions are drawn from these survey results:

- The number of survey results as a percentage of total households is regarded as a statistically valid sample of community comment.
- It is reasonable to assume minimal "double counting" between mail-back and on-line survey responses, meaning both can be aggregated for a total response.
- The large majority of respondents were satisfied with the consultation process.
- A very high proportion of respondents generally support the proposed scheme. The majority of these respondents also prefer Option 1 – the realignments of Coyne Street
- The Coyne Street realignment is the most popular first priority for treatment in the overall scheme.
- A significant number of respondents made negative comments in relation to speed cushions and other devices on Bugden Avenue.
- A large portion of respondents believe the proposed scheme contains too many speeding devices.
- A significant portion of respondents believe that there are too many speed cushions proposed for Bugden Avenue and Caslteton Crescent.

The feedback from this consultation process will be used by the project team to inform the final scheme for implementation.

Attachments

Attachment A: Household Newsletter #2

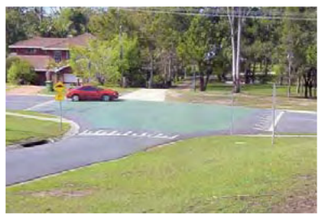
Attachment B: Household Survey #2

THE PROPOSED TRAFFIC MANAGEMENT TREATMENTS

This traffic management scheme aims to improve traffic conditions on Coyne Street, as well as issues on other streets identified during the analysis of traffic data and from community feedback.

The proposed treatment measures are shown in the attached concept plan and summarised below.

STREET	MAIN ISSUES OF CONCERN	PROPOSED TREATMENT DEVICES
COYNE STREET	• Traffic crashes • Traffic speed • Intersection safety • Driveway visibility • Pedestrian safety	▪ A roundabout at the intersection with Jackie Howe Crescent ▪ Pedestrian refuges ▪ Speed cushions **Two options are proposed to address the issues at the Coyne Street/Bugden Avenue intersection:** **Option 1:** Re-aligning Coyne Street whereby it connects to Bugden Avenue at the Larcombe Crescent intersection. A roundabout is proposed at this new intersection. **Option 2:** Improved signage and speed cushions on the section of Coyne Street prior to the existing Bugden Avenue intersection.
BUDGEN AVENUE	• Intersection safety • Traffic speed • Driveway visibility • "Rat-running"	▪ Roundabouts and speed cushions south of Coyne Street ▪ Speed cushions, raised platforms and pedestrian refuges between Coyne Street and Sternberg Crescent
CASTLETON CRESCENT	• Intersection safety • Traffic speed • Driveway visibility • Driveway safety	▪ Speed cushions ▪ Raised platforms ▪ A roundabout at the intersection with Sternberg Crescent ▪ A roundabout at the intersection with Bugden Avenue
PARTRIDGE STREET	• Traffic speed • Intersection safety	▪ Speed cushions ▪ Raised platforms
BRAMSTON STREET	• "Rat-running" • Intersection safety • Pedestrian safety	▪ Speed cushions



Raised platform

Speed cushions

MORE INFORMATION

For more information on any of the above proposed traffic management measures:

- Come to the public display at Gowrie Primary School on Wednesday 13 March 2013 between 4.30 pm – 7.30 pm
- Visit www.timetotalk.act.gov.au
- Email purdons@purdon.com.au
- Contact Canberra Connect on 13 22 81

ACT Government
Territory and Municipal Services

Residential Street Improvement Program
Macarthur, Fadden and Gowrie
Newsletter # 2 - March 2013

The ACT Government is currently assessing the traffic conditions in Macarthur, Fadden and Gowrie under its Residential Street Improvement Program. Brown Consulting and Purdon Associates have been commissioned to undertake this study.

In December 2012 Roads ACT collected feedback about issues of concern from residents of these suburbs and the wider community. Key areas of concern included speeding traffic, dangerous intersections, driveway safety and "rat-running" through the suburbs.

The technical analysis of traffic speed, volume and crash data also confirmed some of these issues.

RATIONALE FOR PROPOSED TREATMENTS

The proposed treatments take into consideration:

- results of the analysis of existing traffic and land-use data
- issues raised by residents and the wider community during the December 2012 consultation
- objectives established from the assessment of the above information.

OBJECTIVES

The objectives of this proposed traffic management scheme are to:

- reduce travelling speeds
- improve safety at intersections
- reduce traffic volumes
- discourage "rat-running".

TECHNICAL PRINCIPLES

In order to reduce speeds all day, every day (24/7), it is necessary to place physical devices on the road so that motorists must slow down.

These devices must be spaced evenly along the road to achieve the desired travel speed at, or below, the posted/default speed limit.

Different devices serve different purposes, have different levels of effectiveness, and vary in construction cost. However, the aim of all these devices is to reduce speeding and encourage through-traffic to use the surrounding arterial roads.

Slower speeds and devices which create safer crossing opportunities for pedestrians would also help to improve the safety and amenity of residents.

Examples of traffic management devices include roundabouts, raised platforms, speed cushions, painted medians and signage. Photos of these devices can be viewed at the public display or online at www.timetotalk.act.gov.au

PUBLIC DISPLAY

For more information on the proposed treatments come to the public display/information session which includes results of the earlier community consultation and the technical analysis.

When: Wednesday 13 March 2013 from 4.30 pm – 7.30 pm

Where: Gowrie Primary School
Jeffries Street, Gowrie

Representatives of the study team, including officers from Roads ACT, will be in attendance to explain the proposals, answer questions and discuss issues.

HAVE YOUR SAY

We now seek your views on these treatments to improve traffic conditions in your area, including the types of devices, their locations, and the priorities for their implementation.

Please review the proposed traffic management proposal and provide comments by returning the attached household survey in the reply paid envelope enclosed or by submitting it at the public display.

Alternatively you may complete an online survey on www.timetotalk.act.gov.au or email your comments to purdons@purdon.com.au

STAGED IMPLEMENTATION

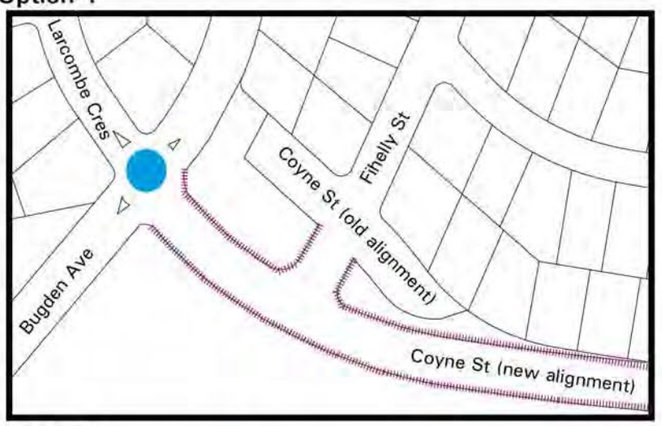
Following this round of consultation and assessment, the proposed devices will be subject to detailed design and costing. It is likely a staged implementation will be necessary over the coming years due to annual budgetary constraints, and priorities for implementation will be determined taking into account your views.

We look forward to your active involvement in this project. Your feedback will assist in determining the final scheme for improvement.

Rifaat Shoukrallah
Senior Manager
Traffic Management and Safety
Roads ACT
Territory and Municipal Services

Bugden Ave/Coyne St Intersection

Option 1



Option 2

Macarthur - Fadden - Gowrie Residential Street Improvements

ACT Government
Territory and Municipal Services

RESIDENTIAL STREET IMPROVEMENT PROGRAM

Macarthur, Fadden and Gowrie

Community Survey #2

The ACT Government is assessing traffic conditions in Macarthur, Fadden and Gowrie in response to community concerns about speeding and traffic safety.

This survey seeks to gather your feedback on the proposed options for improvement. It is recommended that you read the attached newsletter, and if possible, view the material at the public display or visit www.timetotalk.act.gov.au for more information, before completing this survey.

The information you provide will inform the determination of the final scheme.

PLEASE RESPOND TO THE FOLLOWING QUESTIONS

1. Where do you live?

Street: .....

Suburb: .....

2. Do you generally support the proposed scheme as outlined in the newsletter?

☐ Yes ☐ No ☐ Unsure

3. Which improvement option would you support at the Coyne Street/Bugden Avenue intersection?

☐ Option 1: realigning Coyne Street

☐ Option 2: improving signage and adding speed cushions on Coyne Street

☐ Neither

☐ Unsure

4. If you would like to propose a change to the scheme, please name the street, device(s) and provide a reason.

.....

.....

.....

.....

.....

.....

.....

.....

5. Nominate up to THREE treatments in this scheme which you believe should have the highest priority for implementation. Please indicate the street and device.

First.....
.....
.....
.....
.....

Second.....
.....
.....
.....
.....

Third.....
.....
.....
.....
.....

6. Are you satisfied with this opportunity to provide feedback on traffic management in Macarthur, Fadden and Gowrie?

☐ Very satisfied

☐ Satisfied

☐ Neither satisfied or dissatisfied

☐ Dissatisfied

☐ Very dissatisfied

7. Do you have any further comments about the proposed treatments for improvement?
Please feel free to attach additional pages or email comments to purdons@purdon.com.au

THANK YOU FOR YOUR COOPERATION AND CONTRIBUTION

PLEASE RETURN THIS COMPLETED SURVEY BY 5 PM FRIDAY 12 APRIL 2013
Email: purdons@purdon.com.au **Fax:** 02 6248 8347 **Mail:** Via reply paid envelope provided
For more information contact Canberra Connect on 13 22 81 or visit www.timetotalk.act.gov.au

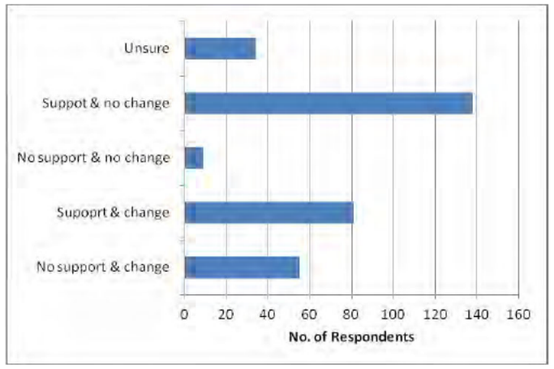
ATTACHMENT D

STAGE 3 CONSULTATION DOCUMENTATION

SUMMARY OF STAGE TWO COMMUNITY SURVEY RESULTS

A total of 317 responses, comprising of 254 household survey responses and 63 online survey responses were received from residents in the study area. This represents a response rate of about 11% of all households in the study area.

Overall there was strong support for the draft traffic management scheme distributed for consultation, although a number of respondents also suggested changes to the draft plan.



Speed cushions and prominent signage will assist in slowing traffic and improving safety on Coyne Street.

Streets identified by the community that should have priority for the implementation of treatments were listed as:

Street Name	Responses	%
Coyne Street	176	44%
Bugden Avenue	51	13%
Castleton Crescent	60	15%
Bramston Street	7	2%
Other streets	38	10%
Treatment only	17	4%
Not stated	48	12%
Total	**397**	**1**

The survey results showed a high level of satisfaction with the consultation process.

Satisfaction with the consultation process?	Respondents	%
Very satisfied	117	37%
Satisfied	130	41%
Neither satisfied of dissatisfied	50	16%
Dissatisfied	10	3%
Very dissatisfied	10	3%
Total	**317**	**100%**

Raised platform – no pedestrian crossing

ACT Government
Territory and Municipal Services

Residential Street Improvement Program
Macarthur, Fadden and Gowrie
Newsletter #3 - June 2013

Introduction

The purpose of this newsletter is to present the **revised Master Plan for street improvements and to identify the priority of works that will be implemented in your area**, subject to budget approval.

Since October 2012 the ACT Government (Roads ACT) has been assessing the traffic conditions in Macarthur, Fadden and Gowrie under its Residential Street Improvement Program. Brown Consulting and Purdon Associates have been commissioned to undertake this study.

In November/December 2012 Roads ACT collected feedback about your issues of concern. The technical analysis also confirmed some of these concerns.

In March/April 2013 Roads ACT presented a draft traffic management scheme based on traffic studies and community consultation that occurred to that time. In March 2013 further community comment was received on the draft proposals following a public forum at Gowrie Primary School and a household survey. Further technical studies were also completed.

A traffic management scheme has now been finalised to improve traffic conditions in your area.

Objectives

The objectives of the final traffic management scheme are to:

- reduce travelling speeds
- improve safety at intersections
- reduce traffic volumes
- discourage “rat-running” through suburbs.

Summary of Results of Stage 2 Consultation

The results of the community consultation conducted in March/April 2013 are summarised overleaf. In general, there was strong support for a range of traffic management devices shown in the draft plans, as well as support for the consultation process.

The survey results have been carefully assessed by the project team in combination with traffic data and cost/benefit analyses to produce the final Master Plan for street improvements as well as the proposed Priority 1 works.

Master Plan

The final Master Plan to improve traffic safety in your area is shown overleaf. It has been modified from the draft plan discussed with the community to address the feedback received and further technical assessment. It is important to note that the final scheme is an overall ‘Master Plan’ for the area and that not all proposed devices will be installed at once. This plan will be the subject of staged implementation over a number of years, subject to progressive reviews of each stage of implementation and budget constraints.

Priorities and Proposed Priority 1 Works

Priorities have been assigned to the proposed treatments based on the results of the technical analysis, community feedback and cost/benefit studies. Priority 1 works include:

- **Coyne Street** (speed cushions, raised platform but no pedestrian crossing).

Next Steps - Staged Implementation

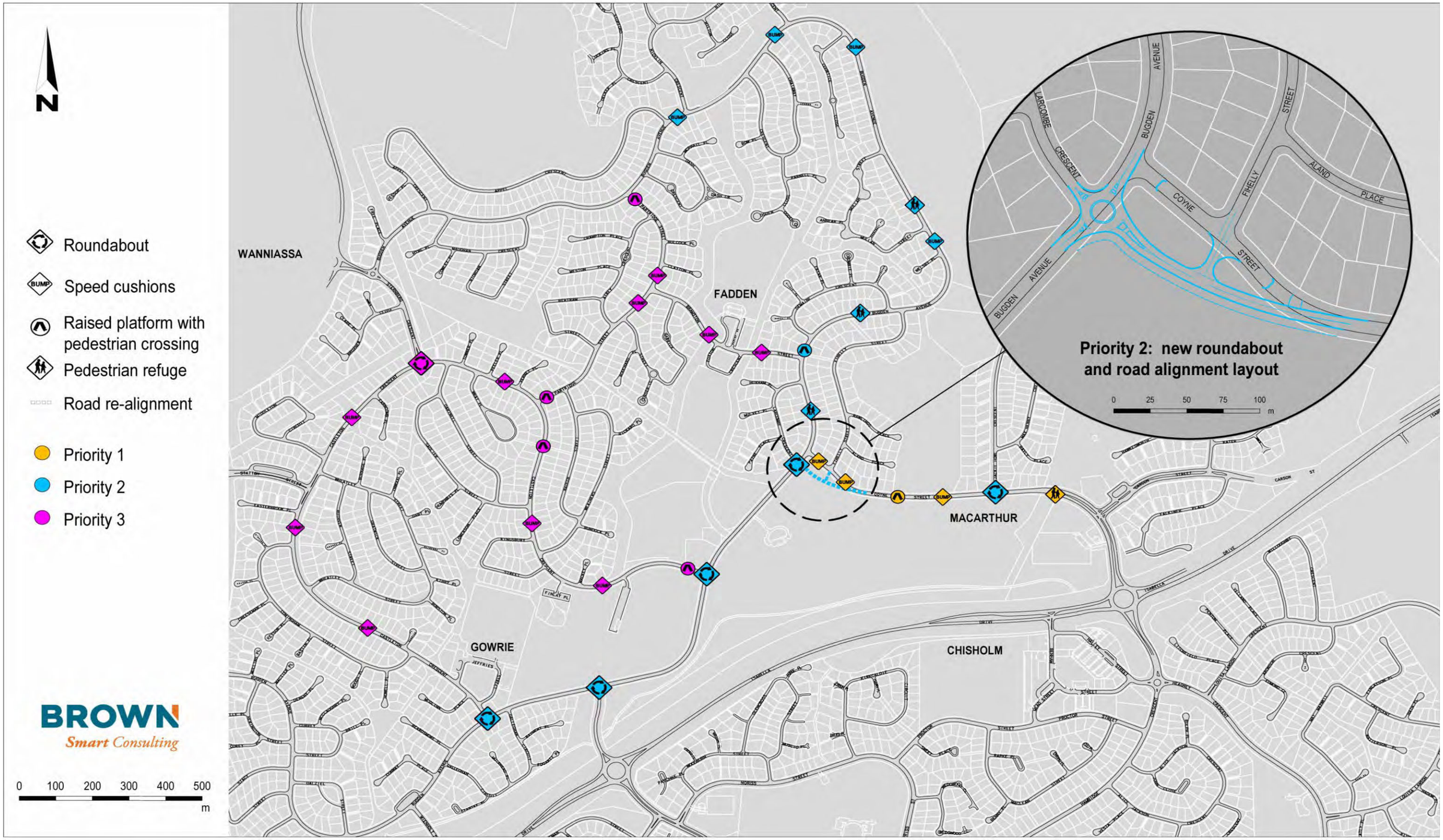
It is anticipated that the detailed design of **Priority 1 works** will take place in 2013/14 during which time further consultation at a local level (one-on-one) will occur with affected property owners. Residents will also be advised when construction is likely to commence.

An evaluation of the effectiveness of **Priority 1** devices will take place six months after their implementation. Further implementation of subsequent stages of the Master Plan will depend on the results of this evaluation.

Roads ACT appreciates your involvement in the study to date and looks forward to ongoing discussions. For more information please visit www.tams.act.gov.au

Rifaat Shoukrallah
Senior Manager
Traffic Management and Safety
Roads ACT

Residential Street Improvement Master Plan and Priorities



Summary Project Report

Residential Street Improvement Study

Macarthur Fadden Gowrie

BROWN PURDON
PLANNING SUSTAINABLE FUTURES

May 2014

Disclaimer

This report has been prepared on behalf of and for the exclusive use of the ACT Territory and Municipal Services Directorate (TAMS) and is subject to and issued in accordance with their agreement with Brown Consulting (ACT) Pty Ltd (Brown Consulting). The investigation and analysis specifically caters for the particular requirements of TAMS and may not be applicable beyond this scope. For this reason, any other third parties are not authorised to utilise this report without further input and advice from Brown Consulting.

Brown Consulting accepts no liability or responsibility whatsoever for the report in respect of any use of or reliance upon this report by any third party. Moreover, the investigation and analysis has relied on information provided by others. We accept no responsibility for the accuracy of material supplied by others. The accuracy of the investigation, analysis and report is dependent upon the accuracy of this information.

Any representation, statement, opinion or advice expressed or implied in this publication is made in good faith but on the basis that Brown Consulting, their agents and employees are not liable to any person for any damage or loss whatsoever which has occurred or may occur, in relation to that person taking or not taking (as the case may be) action, in respect of any representation, statement or advice referred to in this report.

1 Introduction

The Territory and Municipal Services Directorate (TAMS) engaged Brown Consulting and Purdon Associates, to undertake a traffic management study for Macarthur, Fadden and Gowrie, in Tuggeranong (Figure 1-1). The purpose of this study is to ascertain traffic and safety issues, and prepare recommendations to address traffic issues arising from analysis of collected data and public submissions.

The residential street improvement study for this area has been undertaken in response to comments received from the community about traffic safety issues in the local area, as well as a motion passed in the ACT Legislative Assembly in May 2012 calling for a study of local traffic issues.

Roads ACT (TAMS) have developed a Traffic Warrant System (TWS) to prioritise collector roads for investigation to identify the need for traffic management measures. Some streets in the study area rank relatively highly in both the 2009 and the 2013 TWS.

The current study is one of several initiatives being undertaken by Roads ACT in Tuggeranong and other parts of Canberra.

Figure 1-1: Streets within Study Area

Source: ACTMAPi

1.1 Study Area

The study area covers the suburbs of Macarthur, Fadden and Gowrie (Figure 1-1). The area is bounded by Erindale Drive, Ashley Drive and Isabella Drive.

1.2 Objectives of study

The specific objectives of the study outlined in the TAMS Brief are:

a) To identify and assess the **traffic safety and amenity issues in the study area** with emphasis on the traffic conditions in the nominated streets.

b) To consider and develop **options** which would mitigate/improve these issues.

c) To **evaluate these options** in terms of their expected technical effectiveness and economic performance.

d) To identify an **agreed solution** for the study area.

e) To recommend a **program of works** for implementation in future capital works programs.

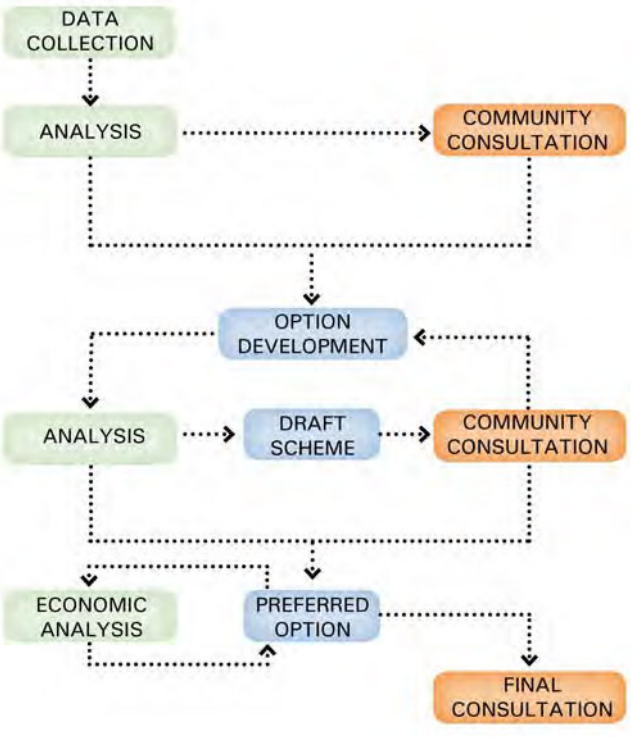
f) To **consult with the community** throughout the process.

1.3 Overall Approach

The approach to the study (Figure 1-2) was undertaken in 3 broad phases with parallel emphasis on technical analysis and community input. The 3 phases included:

1. Data collection and analysis, followed by community consultation on key issues affecting residents.
2. Development of traffic management options followed by community consultation on the options.
3. Finalisation of the preferred traffic management scheme and economic assessment, followed by public notification of the outcomes.

Figure 1-2: Study Methodology



1.4 Community Consultation

A consultation strategy was prepared for the project, in conjunction with TAMS, to capture community concerns on local traffic management issues and provide the community with the opportunity to provide feedback on proposed improvements for the area. The consultations were undertaken in three stages and included the following:

	Stage 1 Information Gathering	Stage 2 Developing Solutions	Stage 3 Reporting on Findings
Media release	✓	✓	✓
Tuggeranong Community Council	✓	✓	
Household Newsletter	✓	✓	✓
Household Survey	✓	✓	
Electronic Survey	✓	✓	
Community Notice Board	✓	✓	
Time to Talk website	✓	✓	✓
Community Information Display	✓	✓	
Shop-front display	✓	✓	
Public Submissions	✓	✓	
Stakeholder input	✓	✓	

2 Existing Conditions

The study area includes three residential suburbs in the north-east corner of Tuggeranong, containing a population of approximately 7,600 (ABS Census 2011). The area contains a number of traffic generating activities (schools; recreation facilities; local shops), and experiences traffic flow through the area not generated by local residents ("rat running").[1]

The following description of existing street conditions is based on a review of recent traffic data and observations by the Study Team.

Coyne Street

Coyne Street is approximately 1.3 km in length and is classified as a Major Collector Road in accordance with the ACT Road Hierarchy Plan (3,000-6,000 vehicles per day). It passes through Macarthur and Fadden, and extends from Isabella Drive in the east to Bugden Avenue in the north-west. The posted speed limit is 60 km/h. There are two intersections with minor collector roads, one intersection with a local access street plus a direct access roadway to the

[1] *Rat-running* is the term used to describe travellers taking "short cuts" through local residential streets to gain access from one area to another, instead of the intended main road network.

MPowerdome along this study street. All intersections are configured as un-signalised T-intersections.

The surrounding land use is predominantly residential with only the MPowerdome indoor sport facility as a major traffic generator. The Fadden Pines Skate Facility and Fadden Pines Fort indirectly generate traffic to Coyne Street but the only access to these facilities is on Bugden Avenue. Further south of Coyne Street are the Gowrie District Playing Fields and Holy Family Primary School with access on Castleton Crescent. Coyne St also provides the most direct access to the Chisholm Group Centre from Macarthur and Fadden.

Speeding is considered a problem, particularly at the eastern end, this is compounded by the peak weekday traffic volumes being above the expected range of a major collector road. Several crashes have been recorded along the length of the street which generally involved cars running off the road, head-on crashes, rear end crashes and right turn crashes.

The main objectives for treatment on Coyne Street are to reduce speeding, increase intersection safety and reduce rat-running. To achieve these objectives, roundabouts, speed cushions, raised platforms, pedestrian refuges and signage may be considered as treatments to this street.

Bugden Avenue

Bugden Avenue is 5.9 km in length and meanders through most of Gowrie and Fadden. It is classified as a Major Collector Road in accordance with the ACT Road Hierarchy Plan (3,000–6,000 vehicles per day) with a speed limit of 60km/h for most of its length, but 50km/h at the north-western end. The adjacent area is mostly low density residential, however, most of the local generators (e.g. Gowrie primary school, Fadden primary school, Holy Family school) are on adjacent streets which have indirect access to Bugden Avenue.

Vehicle speeds along Bugden Avenue are higher than desirable for the area, particularly at the northern. Several crashes occurred along the length of the street which generally involved rear end crashes, running off the road, parking and right turn based crashes. A number of crashes have been recorded at the major intersections with Coyne Street, Castleton Crescent and Sternberg Crescent.

The main objectives for treatment on Bugden Avenue are to reduce speeding, increase intersection safety and reduce rat-running. To achieve these objectives, roundabouts, speed cushions, raised platforms and pedestrian refuges may be considered as treatments to this street.

Castleton Crescent

Castleton Crescent is 2.8 km in length and provides access to most residential neighbourhoods within Gowrie. It is classified as a Major Collector Road in accordance with the ACT Road Hierarchy Plan (3,000–6,000 vehicles per day) with a speed limit of 60 km/h. The adjacent area is mostly low density residential with the Holy Family Primary School, Gowrie Primary and Pre-School and Gowrie shops as the main traffic generator.

Vehicle speeds are slightly higher along Castleton Crescent than desirable for the area. Several crashes occurred along the length of the street which generally involved rear end accidents, running off the road and right turn based crashes.

The main objectives for treatment on Castleton Crescent are to reduce speeding and increase intersection safety. To achieve these objectives, roundabouts, speed cushions and raised platforms may be considered as treatments to this street.

Partridge Street

Partridge Street is 0.9 km in length linking Budgen Avenue and Castleton Crescent. It is classified as a Minor Collector Road in accordance with the ACT Road Hierarchy Plan (1,000–

3,000 vehicles per day) with a speed limit of 50 km/h. The adjacent area is mostly low density residential. Three crashes have been recorded along the length of the street in the past 5 years which generally involved rear end crashes and right turn based crashes.

The main objectives for treatment on Partridge Street are to reduce speeding, increase intersection safety and reduce rat running. To achieve these objectives speed cushions and raised platforms may be considered as treatments to this street.

Bramston Street

Bramston Street is 500m in length connecting Bugden Avenue with Partridge Street. It is classified as a Minor Collector Road in accordance with the ACT Road Hierarchy Plan (1,000–3,000 vehicles per day) with a speed limit of 50 km/h. The adjacent area is mostly low density residential with Fadden Primary School and Pre-school, Fadden shops and The Gardens medium density housing as the main traffic generators. No crashes have been recorded along the length of the street in the past 5 years.

The main objectives for treatment on Bramston Street are to reduce speeding and rat running in the area. To achieve these objectives speed cushions may be considered as treatments to this street.

Ashley Drive

Ashley Drive is 3.6 km in length, providing north-south connection between Isabella Drive and Erindale Drive, of which 1.5km is within study area. It is classified as an Arterial Road in accordance with the ACT Road Hierarchy Plan (>6,000 vehicles per day) with a posted speed limit of 80 km/h. The adjacent area is mostly low density residential with the Erindale Shopping Centre as the main traffic generator.

Sternberg Crescent

Sternberg Crescent is 3.4 km in length, of which 400m is within the study area. It is classified as a Major Collector Road in accordance with the ACT Road Hierarchy Plan (3,000–6,000 vehicles per day) with a speed limit of 60 km/h. The adjacent area is mostly low density residential. Sternberg Crescent also provides the most direct access to the Erindale Group Centre from Fadden and the northern part of Gowrie.

The weekday traffic volume is greater than desirable for a major collector road. A number of crashes have been recorded on Sternberg Crescent in the past 5 years including 18 right turn crashes at the intersection of Sternberg Crescent and Castleton Crescent plus 6 rear-end crashes at the Bugden Avenue roundabout.

Statton Street

Statton Street is 300m in length providing connection between Ashley Drive and Castleton Crescent. It is classified as a Major Collector Road in accordance with the ACT Road Hierarchy Plan (3,000–6,000 vehicles per day) with a speed limit of 60 km/h.

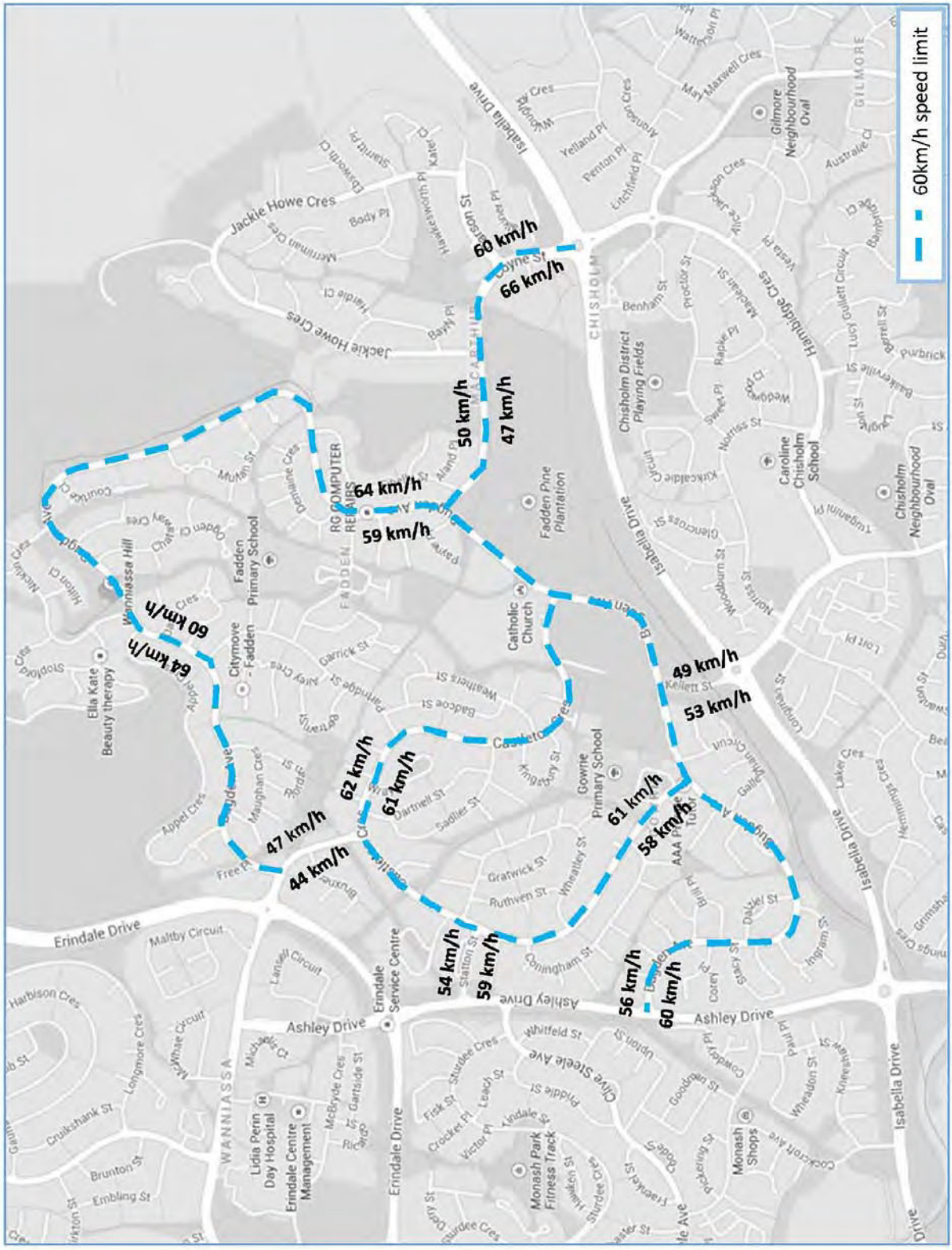
One crash has been recorded on this road in the past 5 years which involved a vehicle running off the road.

Kellett Street

Kellett Street is 300m in length providing connection between Isabella Drive and Bugden Street. It is classified as a Major Collector Road in accordance with the ACT Road Hierarchy Plan (3,000–6,000 vehicles per day) with a speed limit of 60 km/h.

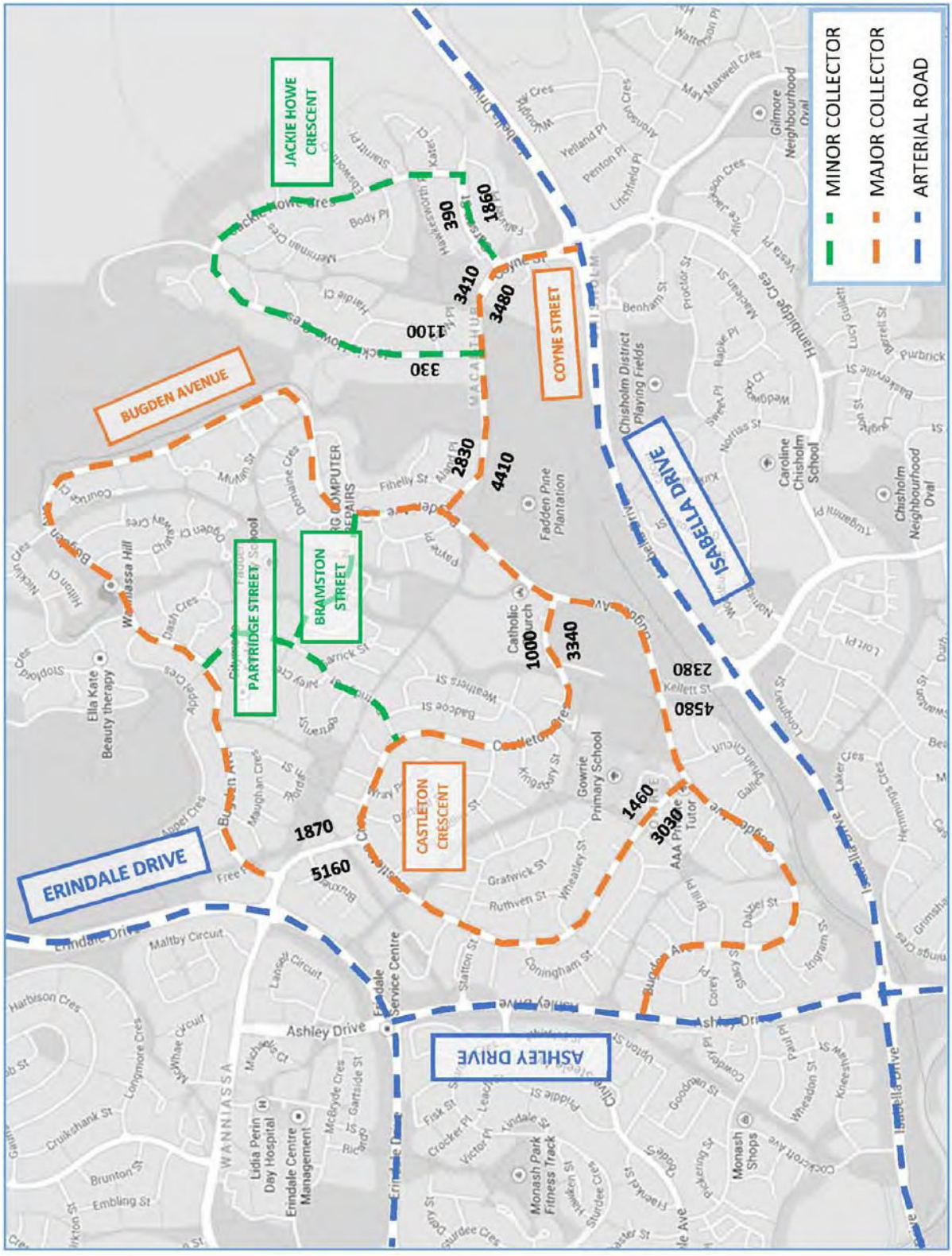
The weekday traffic volume is above the desired range of a major collector road. Several crashes have been recorded along the length of the street which generally involved rear end crashes and right turn based crashes.

Figure 2-1: 85th Percentile Speed Map



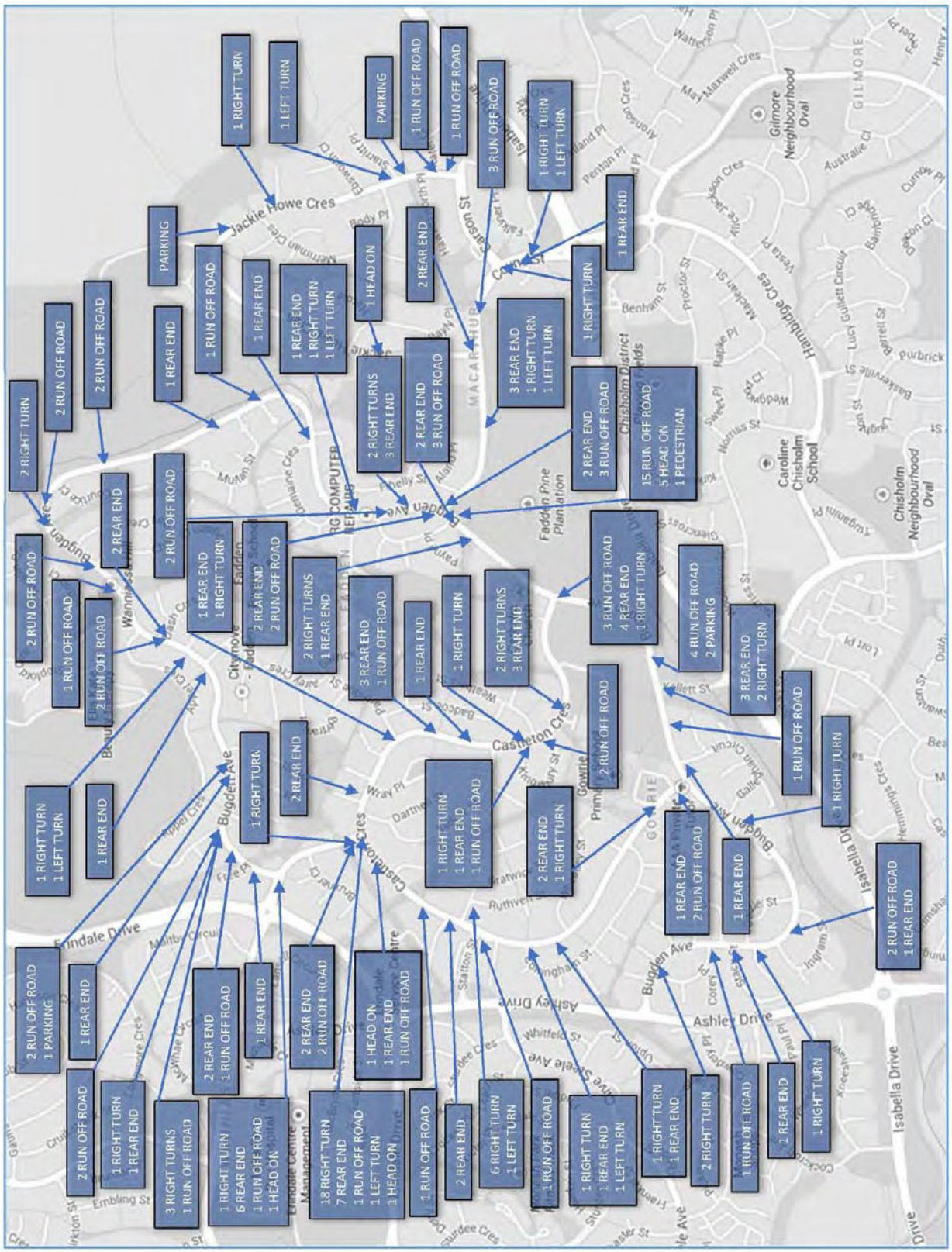
Source: Browns

Figure 2-2: Daily Traffic Volumes



Source: Browns

Figure 2-3: 5 Year Accident Locations



Source: Browns

3 Development of Options

3.1 Objectives

The objectives of proposed traffic management treatments are to:

- Reduce travelling speeds
- Improve safety at intersections
- Reduce traffic volumes
- Discourage 'rat-running'.

3.2 Proposed Treatments

Technical analysis of traffic data showed that 85th percentile speeds are above the speed limit on Statton Street, Bugden Avenue, Castleton Crescent, Kellet Street and Coyne Street. Traffic volumes on Sternberg Crescent exceed the acceptable limits for the road environment.

The proposed treatments take into consideration:

- results of the analysis of existing traffic and land-use data
- issues raised by residents and the wider community during the consultation period in December 2012
- objectives established from the assessment of the above information.

Different devices serve different purposes, have different levels of effectiveness, and vary in construction cost. However, the aim of all these devices is to reduce speeding and encourage through-traffic to use the surrounding arterial roads. Slower speeds and devices which create safer crossing opportunities for pedestrians would also help to improve the safety and amenity of residents. Physical devices on the road help slow traffic down day and night, but must be spaced evenly along the road to achieve the desired travel speed at, or below, the posted/default speed limit.

The range of traffic calming measures considered for this study have been evaluated in relation to whether they achieve the objectives of the study and reflect community concerns, as well as in relation to other traffic issues such as impact on emergency service vehicles, bus routes, pedestrian and cycle facilities, local amenity for residents and cost effectiveness. Table 3-1 shows the proposed treatments to improve traffic conditions in the area.

Table 3-1: Proposed Devices

STREET	MAIN ISSUES OF CONCERN	PROPOSED DEVICES
COYNE STREET	▪ Speeding ▪ Intersection safety ▪ "Rat-running"	▪ Roundabouts ▪ Speed Cushions ▪ Raised Platform ▪ Pedestrian Refuge
BUGDEN AVENUE	▪ Speeding ▪ Intersection safety ▪ "Rat-running"	▪ Roundabouts ▪ Speed Cushions ▪ Raised Platform ▪ Pedestrian Refuge
CASTLETON CRESCENT	▪ Speeding ▪ Intersection safety	▪ Roundabouts ▪ Speed Cushions ▪ Raised Platform
PARTRIDGE STREET	▪ Speeding ▪ Intersection safety ▪ "Rat-running"	▪ Speed Cushions ▪ Raised Platform
BRAMSTON STREET	▪ Speeding ▪ "Rat-running"	▪ Speed Cushions
STERNBERG CRESCENT	▪ Intersection safety	▪ Roundabout
KELLETT STREET	▪ Intersection safety	▪ Roundabout

Figure 3-1: Proposed Scheme (Stage 2 Consultations)

4 Outcomes of Community Consultation

The feedback from the first stage community consultations provided a clear message for the Study Team that there were perceived problems with local road network that warranted implementation of a traffic management scheme.

Stage 1 Community Consultations focussed on gathering data from local residents with an emphasis on the types of traffic issues and the location of incidents. This resulted in a total of 389 household surveys and 33 electronic surveys received from local residents, in addition to 10 feedback sheets being completed at the Information Display. This represents 15% of total households in the study area.

Speeding and improvements to street intersections were the two most frequently cited specific problems (40% total responses) requiring immediate action.

Based on the issues raised by the community it was determined that a local traffic management scheme should focus on solutions to issues such as:

- Speeding
- Intersection safety
- Accident spots
- "Rat-running".

The Stage 2 Consultations resulted in 317 survey responses received and analysed by the Study Team, together with comments made at the display and by written submissions. This survey result represents a response rate of about 11% of all households in the study area.

Overall, there was strong support for the proposed traffic management scheme distributed for consultation. However, about 50% of respondents also requested changes to the proposed scheme.

The following conclusions can be drawn from the Stage 2 Consultations:

- The number of survey results as a percentage of total households is regarded as a statistically valid sample.
- It is reasonable to assume minimal "double counting" between hardcopy surveys and on-line survey responses, meaning both can be aggregated for a total response.
- There was very strong satisfaction with the consultation process.
- A very high proportion of respondents generally support the proposed scheme. The majority of these respondents also prefer Option 1 – the realignment of Coyne Street.
- The highest priority route for treatment is Coyne Street.

The feedback was used by the Study Team to help develop the final scheme for implementation.

5 Determination of Final Scheme

A traffic management scheme has been finalised to improve traffic conditions in the study area. This scheme incorporates the results of the technical analyses of traffic data as well as feedback received from the community.

It is important to note that the final scheme is an overall Master Plan for the area and that not all proposed devices will be installed at once. The Master Plan will guide the implementation of the scheme over a number of years, subject to progressive reviews of each stage and budgetary constraints.

Priorities have been assigned to the proposed treatments based on the results of the technical analysis, community feedback and economic analysis. The proposed treatment measures are shown in the concept plan (Figure 5-1).

In determination of the final scheme for implementation, a number of factors were taken into consideration, including:

- traffic and safety benefits
- community feedback
- economic and financial benefits.

The traffic and safety analysis undertaken as part of the study assisted in determination of the recommended scheme.

The scheme that is recommended for implementation involves the following traffic and safety benefits:

- speed reduction
- improved intersection safety
- discouraging "Rat Running"
- dispersing traffic volumes.

The community feedback assisted in the determination of the final strategy. Public satisfaction with the proposed scheme is of the utmost importance when implementing these strategies. There was generally strong support for the draft scheme, although a variety of modifications were suggested by some members of the local community. The consultation also revealed that the priority street to be upgraded in the local area is Coyne Street.

5.1 Changes to Final Scheme

The draft Traffic Management Scheme was prepared based primarily on the technical assessment of road data collected for the study and initial community consultation. This draft scheme was notified through the public information sessions and household surveys. Changes were subsequently made to the draft scheme in response to issues raised by the community as well as further technical analysis, including economic assessment.

Changes from the draft scheme to the recommended scheme in some streets included reduction of the number of sets of speed cushions as it was considered that the speeding issues were adequately addressed with speed cushions placed at greater intervals, some raised platforms changed to speed cushions to address speeding, and addition of some raised platforms in specific locations to better facilitate pedestrian movement.

5.2 Traffic Management Scheme (Master Plan)

The traffic management scheme aims to improve traffic conditions on Coyne Street, as well as address issues on other streets identified during the analysis of traffic data and from community feedback.

The proposed treatments and priorities are summarised below and shown in Figure 5-1.

Coyne Street

- *Intersection treatments* – New roundabouts at the intersections with Jackie Howe Crescent plus Bugden Avenue, together with re-alignment of the road pavement to create a new intersection with Bugden Avenue.
- *Mid-block treatments* – Install three sets of speed cushions, raised platform and a pedestrian refuge.

Bugden Avenue

- *Intersection treatments* – New roundabouts at the intersections with Kellett St, Coyne St and Castleton Cres (both ends).
- *Mid-block treatments* – Install 4 additional speed cushions, 3 pedestrian refuges plus one additional raised platform located strategically along the length of the roadway.

Castleton Crescent

- *Intersection treatments* – New roundabouts at the intersections with Bugden Avenue (both intersections) and Sternberg Crescent.
- *Mid-block treatments* – Install 6 speed cushions and 2 raised platforms. The location of these treatments has been chosen to focus on the areas which have the most significant problems.

Partridge Street

- *Mid-block treatments* – Install 2 speed cushions and 2 raised platforms. The location of these treatments has been chosen to focus on the areas which have the most significant problems.

Bramston Street

- *Mid-block treatments* – Install 2 speed cushions to reduce speeding and discouraging rat-running in the area.

Sternberg Crescent

- *Intersection treatments* – New roundabout at the intersection with Castleton Crescent.

Kellet Street

- *Intersection treatments* – New roundabout at the intersection with Bugden Avenue.

5.3 Economic Analysis

A detailed economic cost benefit analysis was undertaken to consider the Net Present Value (NPV) and Benefit Cost Ratio (BCR) of each of the potential strategies for the project area.

The various investments considered in the analysis were:

- Roundabouts
- Speed cushions
- Raised platforms, and
- Improved line marking and signage.

The recommended Priority 1 works are three speed cushions, a raised platform and a pedestrian refuge on Coyne Street. As such, the investment for Priority 1 measures would be $101,000 and the investment to implement the whole Master Plan would be $2.639M.

The Net Present Values (discounted at 7%) and the BCR for Coyne Street (Priority 1) are shown below.

Summary of NPV and BCR Analysis

Priority 1 Treatment	NPV	BCR
Coyne Street – Speed Cushions, Raised Platform, Pedestrian Refuge	$101,000	1.5

The economic analysis concludes that Priority 1 investments are very worthwhile. While the analysis concludes that the overall master plan is marginal, most road safety projects do not have a BCR much greater than 1. This reinforces the approach of completing Priority 1 and then at a suitable time repeating the economic analysis as well as a review of traffic performance to judge what should be the new priority streets.

5.4 Staged Implementation

The staging for the project works should be implemented to attain the greatest value from the money invested in the project whilst ensuring the most efficient and cost effective solutions are adopted consistent with general community priorities.

It is recommended that the works be staged as follows:

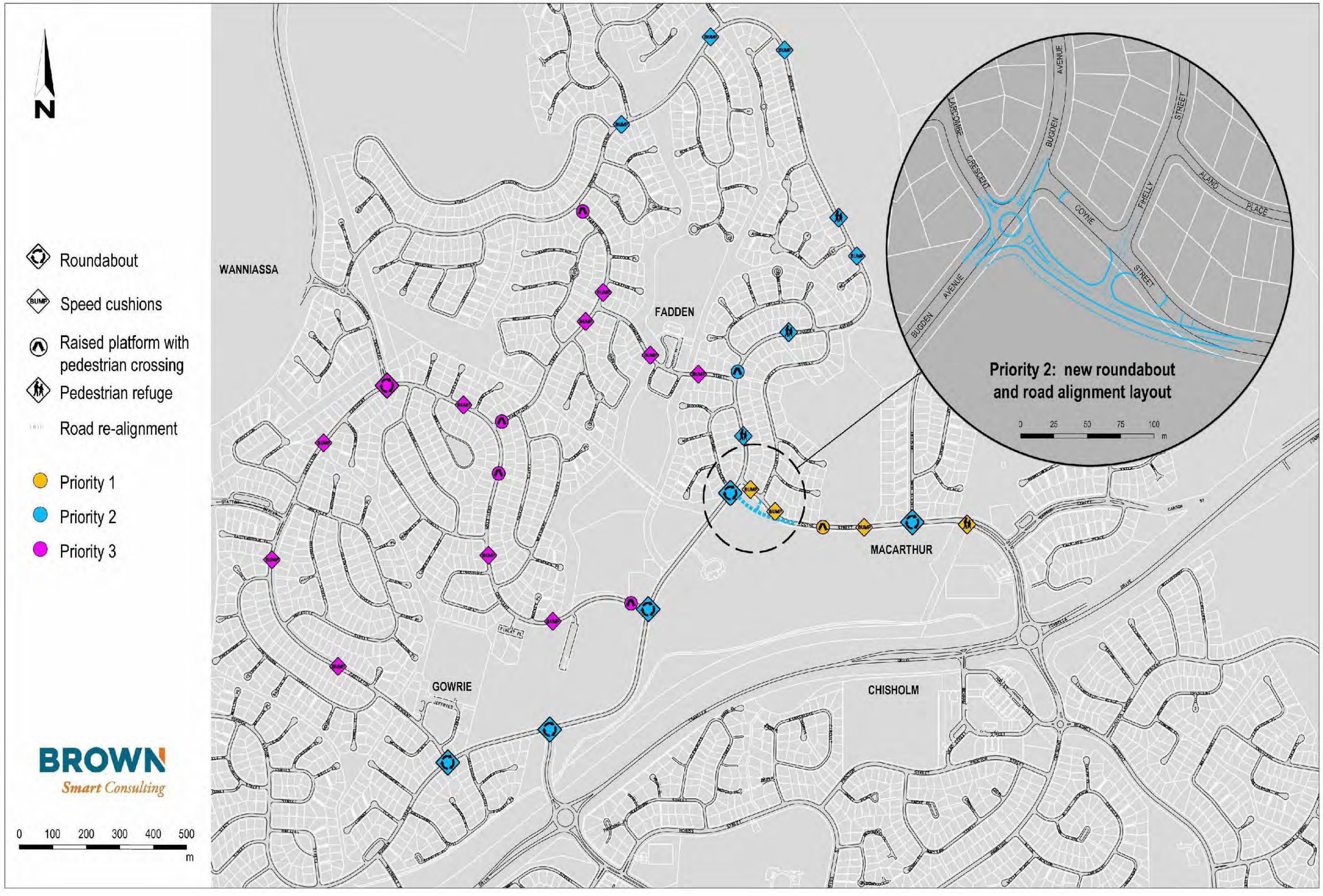
Priority	Street	Action	Outcome
1	Coyne Street	Three speed cushions, a raised platform and a pedestrian refuge.	Reduce speeding, reduce rat running and improve the safe movement of pedestrians.
2	Coyne Street	New roundabouts and road realignment.	Improve intersection safety.
	Budgen Avenue	Roundabouts with Kellett St, Coyne Street plus Castleton Crescent (both ends), speed cushions, raised platforms and pedestrian refuges between Coyne Street and Partridge Street).	This will reduce speeding, rat-running and increase intersection and pedestrian safety.
3	Castleton Crescent	Speed cushions, raised platforms and a roundabout.	Increase intersection safety, driveway visibility and pedestrian safety.
	Partridge Street	Speed cushions and raised platforms.	Reduce speeding and increase intersection safety.
	Bramston Street	Speed cushions.	Reduce rat-running and increase intersection and pedestrian safety.

An evaluation of the effectiveness of Priority 1 treatments will take place six months after their implementation. Further implementation of subsequent stages of the Master Plan will depend on the results of this evaluation to ensure they are still effective and viable options.

5.5 Stage 3 Community Consultation

Stage 3 community consultation involved reporting on the findings of the previous stages of the community consultation to the public and presentation of the final recommended traffic management scheme. The reporting on the findings was undertaken through the means of a household newsletter, media release and information posted to the ACT Government website.

Figure 5-1: Recommended Final Scheme / Master Plan



Community Path Request

Location:	Bugden Avenue, Fadden
IAMS Reference:	922827
Enquirer:	[redacted]
Assessed by:	Jayde Finley- 26/10/16 reassessed by LR

Request to widen the path on the corner of Bugden Avenue and Sternberg Crescent in Fadden. The proposed path would be made of concrete and be approximately 10m long and 1.5m wide. Bugden Avenue is classified as a major collector and has a speed limit of 60km/h or under.

Photos

Figure 1 – Aerial view of Bugden Avenue in Fadden with proposed footpath in red.

Figure 2 – Measurement of length of path that needs to be widened.

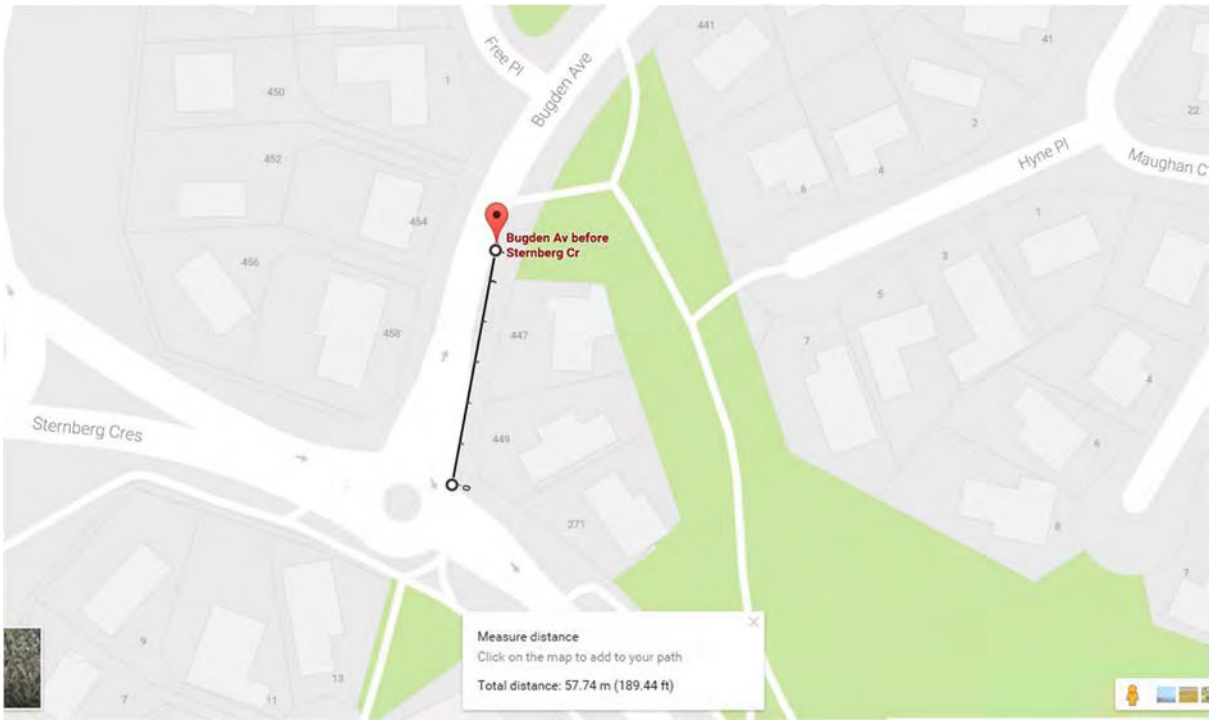
Figure 3 – Corner view of Bugden Ave and Sternberg Cres with view of the proposed path to be widened

Figure 4 – View of the corner to be widened looking from Sternberg Crescent

Figure 5 – View of the corner to be widened looking down Bugden Avenue

Google – Bus Stop locations and Aerial View

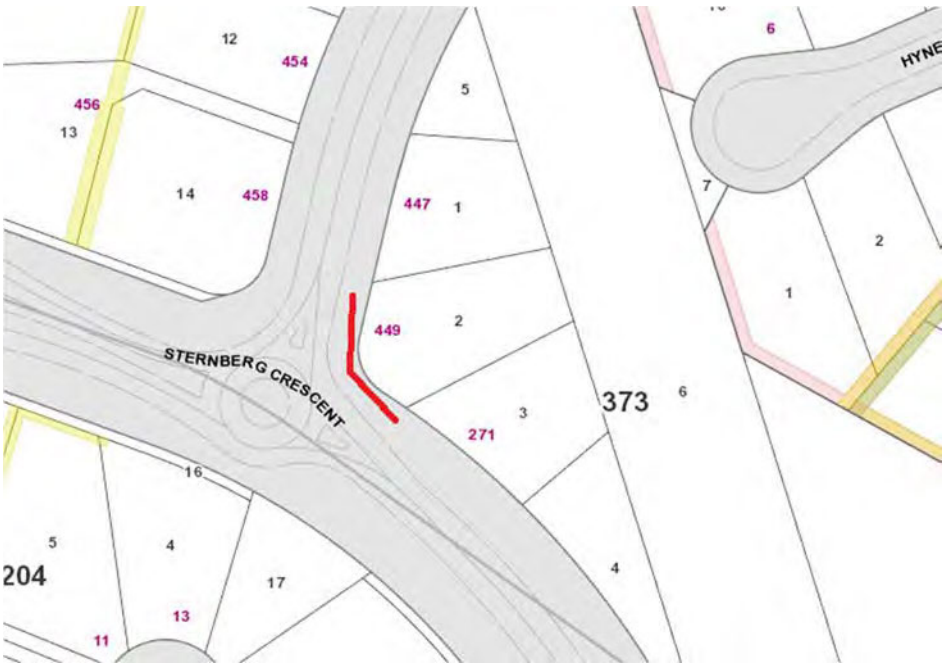
Figure 6 – Bus Stops and Aerial View of Bugden Avenue, Fadden and surrounding area. Closest bus stop to proposed community path is approximately 58m. Local bus service in operation.



ACTMapi

Figure 7 – Bugden Avenue, Fadden

(Missing links shown in red)

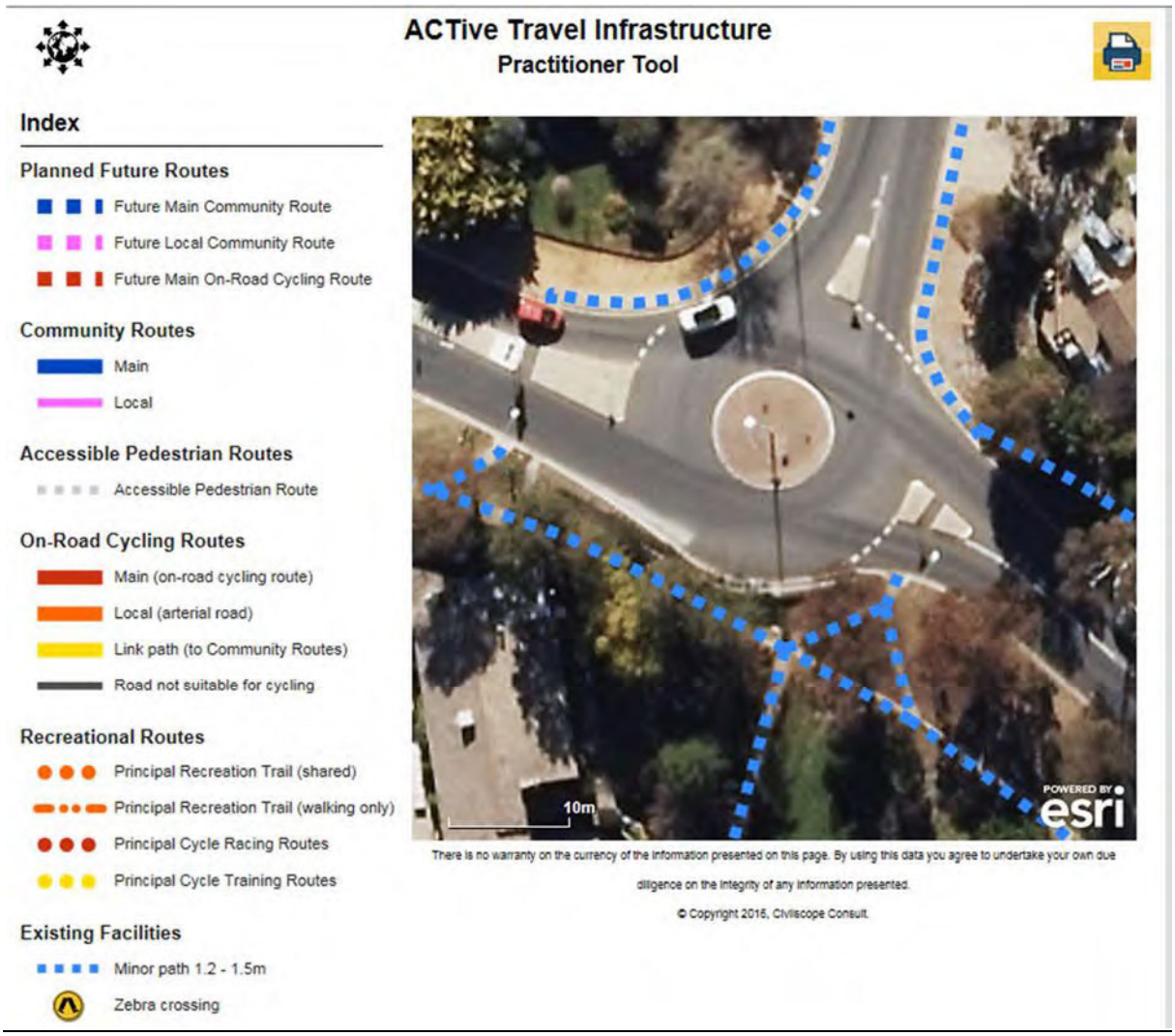


ACTION Bus Routes

Figure 8 - Bus Map – Weekdays

ACTive Travel Practitioners Tool

Figure 9 – Location of existing and future Active Travel facilities

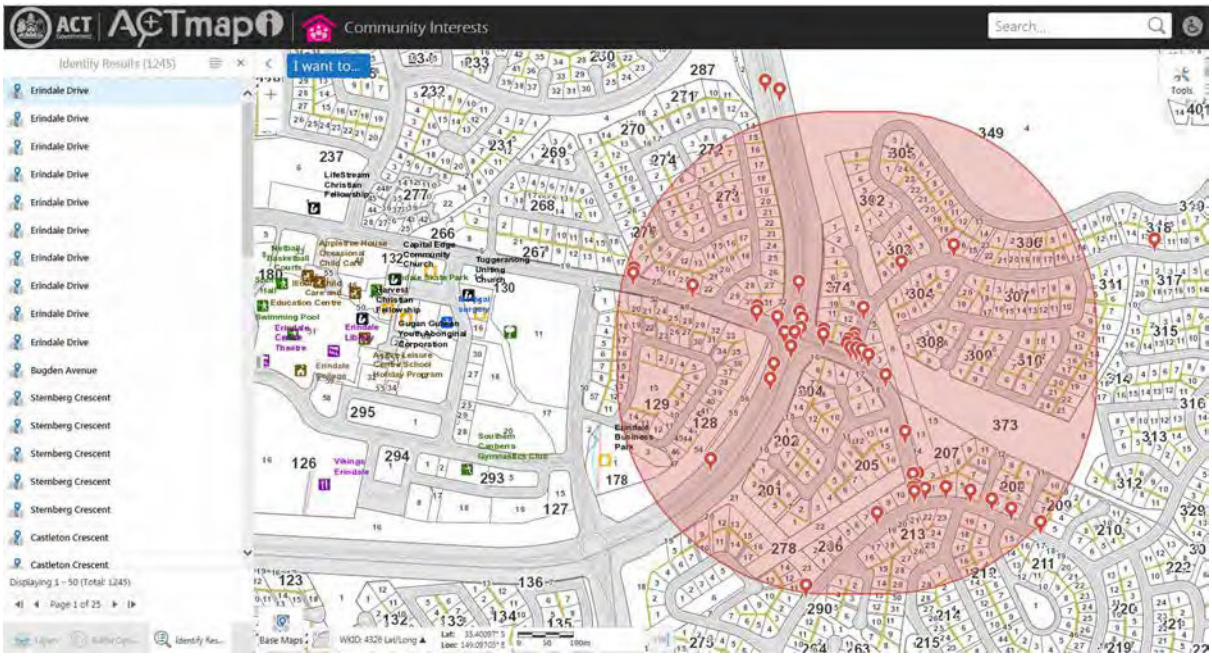


GIS Map

Figure 10 – Updated GIS Map recording request

ACTMapi - Community Interests Map

Figure 11 – Community Interests



There are no community Interests within 400m radius of the proposed path to be widened

Comments

Connectivity in Network:
There is currently an existing community path along the corner of Bugden and Sternberg. Proposal is for 10m of community path to be widened.

Community:
The data from ACTMapi clearly shows a low number of community interests within the 400m radius of the proposed paths. The proposed paths are also based within a medium density urban area.

Public Transport:
There are two local buses which operate near Bugden Avenue, Fadden.

Safety:
The proposed path widening is considered safe to implement.

The proposed community path is not adjacent to any high speed live traffic lanes.

No specific hazards identified related to the terrain and surround environment where the proposed community path is located.

Desire Line:
No clear desire line can be seen from the street view.