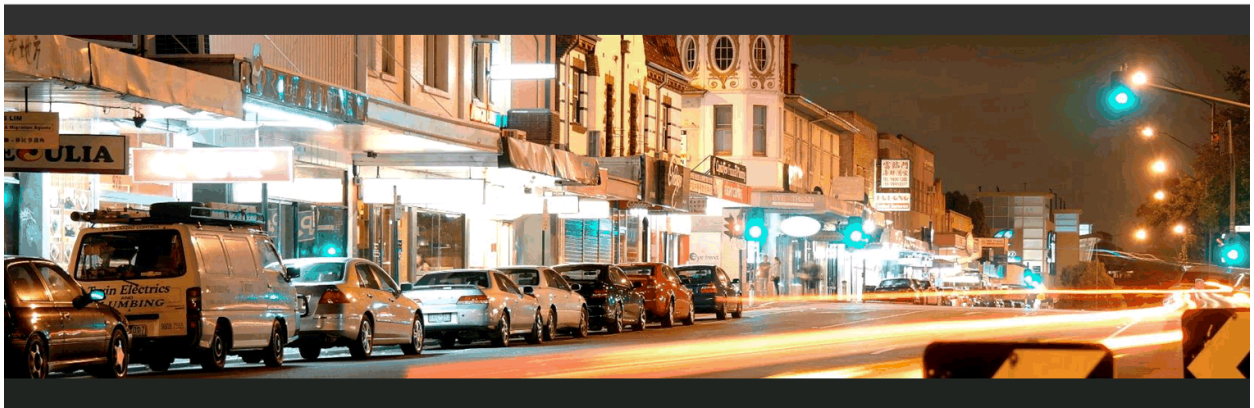




Taylors Hill West Local Area Traffic Management Study



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12 July 2016



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1 EXECUTIVE SUMMARY

The objective of this study was to prepare a Local Area Traffic Management (LATM) plan for the Taylors Hill (West) Precinct in Melton, which addresses existing traffic issues in the area and reflects the requirements and expectations of the local community and relevant stakeholders.

The Local Area Traffic Management Study has involved extensive consultation with the local community to identify and understand local traffic issues, a review of traffic complaints contained in Council files and engineering investigations including traffic surveys and site inspections.

Community engagement in the process included two rounds of questionnaire surveys distributed to local residents (prior to developing the LATM plan, and subsequent to development of the plan) to gain an understanding of existing issues, and seek feedback on the proposed treatments.

In addition to the above, a traffic study group was formed to assist with the study, comprising self-nominated members from the local community, Council Officers, Councillors, Victoria Police and traffic engineers from **onemilegrid**. The Traffic Study Group provided input into the various stages of the study.

A LATM Plan was developed in consultation with Council Officers and the Traffic Study Group, and a copy of the proposed plan was distributed to the local community for public comment in April 2016. The survey responses indicated a high level of support for the proposed Traffic Management Plan. Of the respondents who indicated a preference, 52% were in full support and 32% partially supported the proposed Traffic Management Plan.

In consideration of the surveys results, and engineering investigations undertaken by **onemilegrid**, the following recommendations are made to Melton City Council:

- Council adopt the Traffic Management Plan for the Melton Central Precinct, as detailed in Section 12 of this report;
- Council distribute a letter to the local community advising of the outcomes of the study and including the adopted Traffic Management Plan;
- Council consult with property owners abutting the device locations at the design stage regarding exact locations and design;
- Council continue to promote the use of the Crime Stoppers Hoon Hotline as an effective tool to reduce the incidence of irresponsible driving in the local area; and
- Council implement and monitor the Traffic Management Plan as outlined in Section 13 and 14 of this report as funding becomes available.



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DRAFT



2 INTRODUCTION

onemilegrid have been engaged by Melton City Council to undertake a Local Area Traffic Management (LATM) study of the Taylors Hill West precinct.

The study area comprises approximately 1,850 dwellings located in Melbourne's north-west and encompasses approximately 171 hectares and 82 local streets.

This study comes in response to concerns raised by residents regarding traffic activity within the area. As a result, Council resolved to undertake an independent review of traffic management measures within the study area with a view to mitigating current and future traffic problems.

The following report outlines the study process, summarises existing traffic issues and makes recommendations for mitigation of the problems identified.

3 BACKGROUND INFORMATION

3.1 Melton Traffic Calming Policy

In April 2011, Melton City Council endorsed the Traffic Calming Policy, a policy document designed to provide guidance to Council Officers when assessing the need for and implementing traffic calming measures.

The policy outlines three conditions that must be met before considering the implementation of traffic calming measures in local streets:

- The road segment being investigated must be greater than 200 metres length;
- The road must service more than 35 houses/allotments; and
- The 85th percentile speed exceeds 5km/h above the posted or default speed limit.

If a street is deemed to require the implementation of traffic calming treatments, the project will be added to Council's Capital Works Program for budget consideration. When funding for the treatment is received, Council Officers will compile a shortlist of traffic calming devices that would be suitable for implementation at the specified location. This list will be derived from those provided in the AustRoads Guide to Traffic Engineering Practice – Local Area Traffic Management in a similar manner undertaken in this study.

The policy dictates that all residents within the street will be surveyed to determine the preferred traffic calming devices. Council Officers will then prepare a detailed design of the proposed treatment, incorporating the devices preferred by the residents. This detailed design will then be provided to all residents within the street for comment. Council Officers will consider these comments and respond accordingly before finalising the design.

The need for traffic calming should be triggered by the speed of traffic exceeding acceptable limits but may also be used to deter through-traffic and reduce accidents.

A copy of the traffic calming policy is provided in Appendix A.



3.2 Capital Works Program

As part of traffic investigations undertaken by Council in the past, a number of works have been identified for traffic calming, safety improvement and speed reduction and allocated funding in the 2015/16, 2016/17 or 2017/18 financial years.

A summary of these treatments within the study area is provided below.

Table 1 Capital Works Program

<i>Location</i>	<i>Description</i>
Conrad Terrace	Road hump (mid-way) and splitter island at Taylors Road intersection
Coogee Drive	Splitter island at Bronte Way intersection
Bronte Way	Splitter island on bend
Bond Street	Road hump (mid-way)
Forbes Place	Splitter island at Conrad Terrace intersection, and splitter island on bend
Woolwich Way	Splitter island at Double Bay Drive intersection, and splitter island on bend



4 STUDY METHODOLOGY

4.1 General

This LATM study has been undertaken in accordance with the Austroads *Guide to Traffic Management Part 8: Local Area Traffic Management* (2016). This guide outlines a six stage checklist of tasks that should be undertaken in any LATM study. This study will focus on Stages 2 & 3, with the remaining stages to be managed by Council or other consultants.

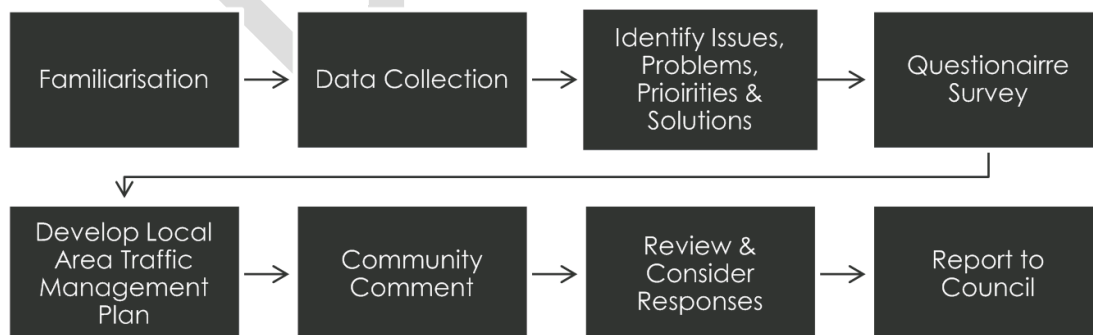
A summary of the relevant stages is provided below:

1. Initiating an LATM program
2. Data collection and problem identification
 - a. Define and collect required data
 - b. Identify problems
 - c. Identify potential solutions
 - d. Define and confirm objectives
3. Development of plans
 - a. Clarify suitable strategies
 - b. Develop outline schemes and supporting arterial improvements
 - c. Consult on draft plans
 - d. Assess and refine alternatives
 - e. Select, present to Council for adoption
4. Scheme design
5. Implementation
6. Monitoring and review

This report will specifically address both Stage 2 and Stage 3 items, including the collection of information and identification of problems and potential solutions and development of the LATM plan.

Figure 1 below outlines the study process to be undertaken.

Figure 1 Project Flowchart





4.2 Community Consultation

Critical in the success of a LATM plan is the engagement of and consultation with the local community who will be most affected by the proposed changes. Without an appropriate level of involvement, any plan is unlikely to gain community acceptance, and may not identify key issues within the study area.

As such, consultation with the community was undertaken at many stages throughout the project, described below:

- Questionnaire Survey No. 1 – A questionnaire was circulated to all dwellings and businesses throughout the study in November 2015 to identify and understand existing traffic problems in specific streets and across the whole study area. The survey also sought nominations for individuals to represent their community as part of the Traffic Study Group. A summary of the responses to the questionnaire survey is provided in Section 8.2.
- Traffic Study Group – Self-nominated residents were invited to form part of the Traffic Study Group (TSG) which would meet on a number of occasions to discuss the LATM plan and assist with its design and implementation. Six residents, two Councillors, one Victorian Police member and three Council engineers formed the TSG.
- Traffic Study Group Meeting #1 – At the first TSG meeting **onemilegrid** detailed the LATM process, results of the background information review (surveys, CAR analysis etc.) and analysis of the first community questionnaire. This information was presented to the Traffic Study Group to assist in prioritising the main traffic and parking issues for the area as well as identifying additional areas for investigation.
- Traffic Study Group Meeting #2 – At the second TSG meeting **onemilegrid** provided the results of additional surveys, outlined the warrants for which LATM treatments would be considered, and made recommendations on which areas warranted inclusion of LATM treatments. Various LATM options were described and evaluated, and ultimately a draft LATM plan was agreed upon by the TSG.
- Questionnaire Survey No. 2 – A questionnaire survey was again distributed to residents and business owners within the study area detailing the location and configuration of the proposed LATM treatments. The questionnaire sought feedback on the suitability of each treatment and the plan as a whole.
- Traffic Study Group Meeting #3 – A final meeting was held with the Traffic Study Group to consider the community response to the proposed Traffic Management Plan and make final recommendations to Council. Final recommendations of the Traffic Study Group were made.



5 LOCAL AREA TRAFFIC MANAGEMENT

5.1 General

Local Area Traffic Management (LATM) is defined within Austroads' *Guide to Traffic Management Part 8: Local Area Traffic Management* (2008) as the planning and management of road usage in a defined area. A LATM is concerned with increasing the safety of drivers, pedestrians and cyclists. This can be achieved by mitigating traffic speed, volume, parking and adjusting road and intersection design.

LATM involves the use of physical devices, streetscaping treatments and other measures to influence vehicle operation and driver behaviour, in order to create safer and more pleasant streets in local areas. This may be employed prior to construction, or as a means to address flaws in the design of local roads that encourages or permits undesirable driver behaviour.

The need for a LATM usually arises from the following:

- An intent to reduce traffic-related problems
- Orderly traffic planning and management
- A need to modify 'transport' behaviour
- A desire to improve the community space
- A desire to improve environmental, economic and social outcomes
- Traffic interventions associated with new development or the implementation of pedestrian and bicycle plans and other local policies (e.g. RTA 2002).

In developing an effective LATM, consideration should be given to the dual, and often conflicting, functions of local streets; movement (access and service), and amenity (social functions associated with the use and enjoyment of the streetspace and the land abutting the street).

5.2 Warrants

When considering the implementation of LATM measures, the following quantitative criteria are typically reviewed:

- Traffic speed – usually in terms of 85th percentile;
- Traffic volume – both in terms of vehicles per day and highest hourly volume;
- Crashes – over the most recent period that gives useable data (say, two to five years), taking separate account of fatalities, serious injuries and other crashes; it may be appropriate to include minor and (if able to be estimated through local reports, debris surveys etc.) unreported crashes; and
- Presence of activity generators and/or sensitive land uses – specifically in terms of likely pedestrian and bicycle generation and requirements for people with disabilities.

In addition to the above, the use of LATM may also be influenced by more subjective matters such as:

- Local perception of the seriousness of the problem;
- How long the problem has been before Council has identified an issue;
- The judgement of the staff involved about need and likely effectiveness of countermeasures; and
- The likely costs and the funds available.



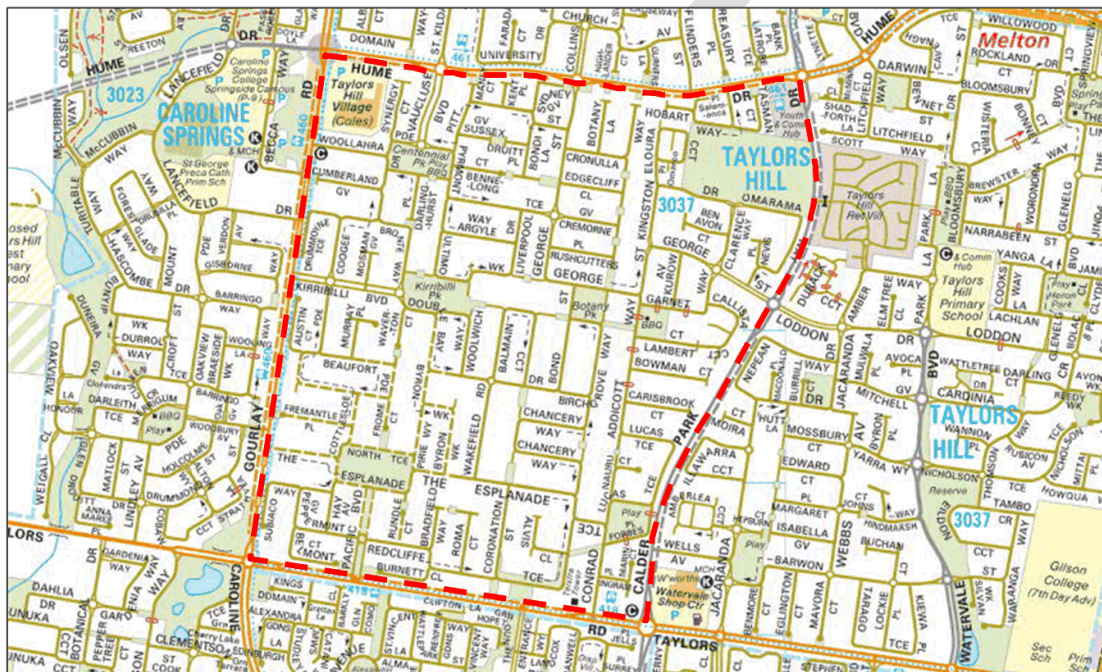
6 EXISTING CONDITIONS

6.1 Site Location & Land-Use

The study area is located within Melton City Council, approximately 22 kilometres north-west of Melbourne’s Central Business District.

The study area is bounded to the south by Taylors Road, to the east by Calder Park Drive, to the north by Hume Drive and to the west by Gourlay Road as shown in Figure 2 below. It is noted that each of the surrounding roads (Hume Drive, Gourlay Road, Taylor Road and Calder Park Drive) are excluded from the scope of this study.

Figure 2 Site Location



As noted previously, the area accommodates in the order of 1,850 dwellings and has been developed over the last 10 years, with the most recent development occurring within the south-western quadrant.

Land-use within the area is predominantly residential, characterised by standard density single-dwelling lots interspersed with small areas of parkland. In addition to these residential uses, the study area accommodates:

- Sporting Oval (Calder Park Drive/ Kingston Drive)
- Taylors Hill Youth and Community Centre (Calder Park Drive)
- Taylors Hill Village shopping centre (Gourlay Road/ Hume Drive)
- Goodstart Early Learning, Taylors Hill (Corner of Woolahra Parade and Gourlay Road)



6.2 Road Hierarchy

6.2.1 Internal

The study area comprises largely local Access Street (Level 1) or Access Street (Level 2), with respective carriageway widths of between 5.5 and 7 metres. These roads have a primary function of providing access to properties and other local streets.

Clause 56 of the Planning Scheme provides indicative traffic capacities for each of these road types. An Access Street (Level 1) is nominated with a capacity for between 1,000 and 2,000 vehicles per day, whilst Access Street (Level 2) are nominated with a capacity for between 2,000 and 3,000 vehicles per day.

In addition to the above, the study area is serviced by four 'boulevard' style entrances; Loddon Drive, Pacific Boulevard, Kirribilli Boulevard, and Vaucluse Boulevard, each providing a single traffic lane in each direction, separated by a landscaped median.

All roads within the study area are subject to a default speed limit of 50km/h.

6.2.2 External

Each of the four roads surrounding the study area are under Council control and designated either 'major' or 'collector' routes.

With the exception of Gourlay Road, each provide a single traffic lane in each direction, with provision for duplication in the future, and ultimately two traffic lanes in each direction, at such time traffic volumes warrant and funding is provided. Gourlay Road is already duplicated, with two traffic lanes provided in each direction, separated by a wide central median.

6.3 Public Transport

The site has limited access to public transport modes, with bus routes 418, 460 and 461 running along the southern, western and northern boundaries of the study area respectively.

Route 418 runs from St Albans Station to Caroline Springs Square Shopping Centre. It runs along the Northern and Western boundaries of the Taylors Hill West subdivision, on Taylors Road and Gourlay Road respectively. There is one designated bus stop in this section; on the corner of Taylors Road and Gourlay Road.

Route 460 runs from Caroline Springs Square Shopping Centre to Watergardens station. It services the Taylors Hill West subdivision along Gourlay Road on the Western boundary. There is one designated bus stop on the perimeter of the Taylors Hill West subdivision, located at the corner of Gourlay Road and Hume Drive.

Route 461 runs from Caroline Springs to Watergardens Station. It services Taylors Hill West via Hume Drive on the northern boundary of the subdivision. There is one designated bus stop on the perimeter of the Taylors Hill West subdivision, located at the corner of Calder Park Drive and Hume Drive.



7 EXISTING CONDITIONS REVIEW

7.1 Resident Complaints

As noted above, this LATM comes in response to concerns raised by local residents of traffic and parking issues occurring within the study area.

Any requests made to Council are recorded within their Customer Action Request (CAR) database for future investigation. Each case is investigated by Council engineers and designated as unwarranted if no action is required, or designated as warranted for future investigation.

The CAR database for the study areas was provided for review, and included all records dating back to 2010. This data was collated and analysed, with a summary of the warranted complaints and their subsequent locations provided in Table 2 below.

A number of CARs have already been reviewed by Council, and mitigation measures already installed. These have been omitted from the results.

Similarly, some CARs have had funding allocated within Council's budget for mitigation works. These mitigating measures are described below where relevant.

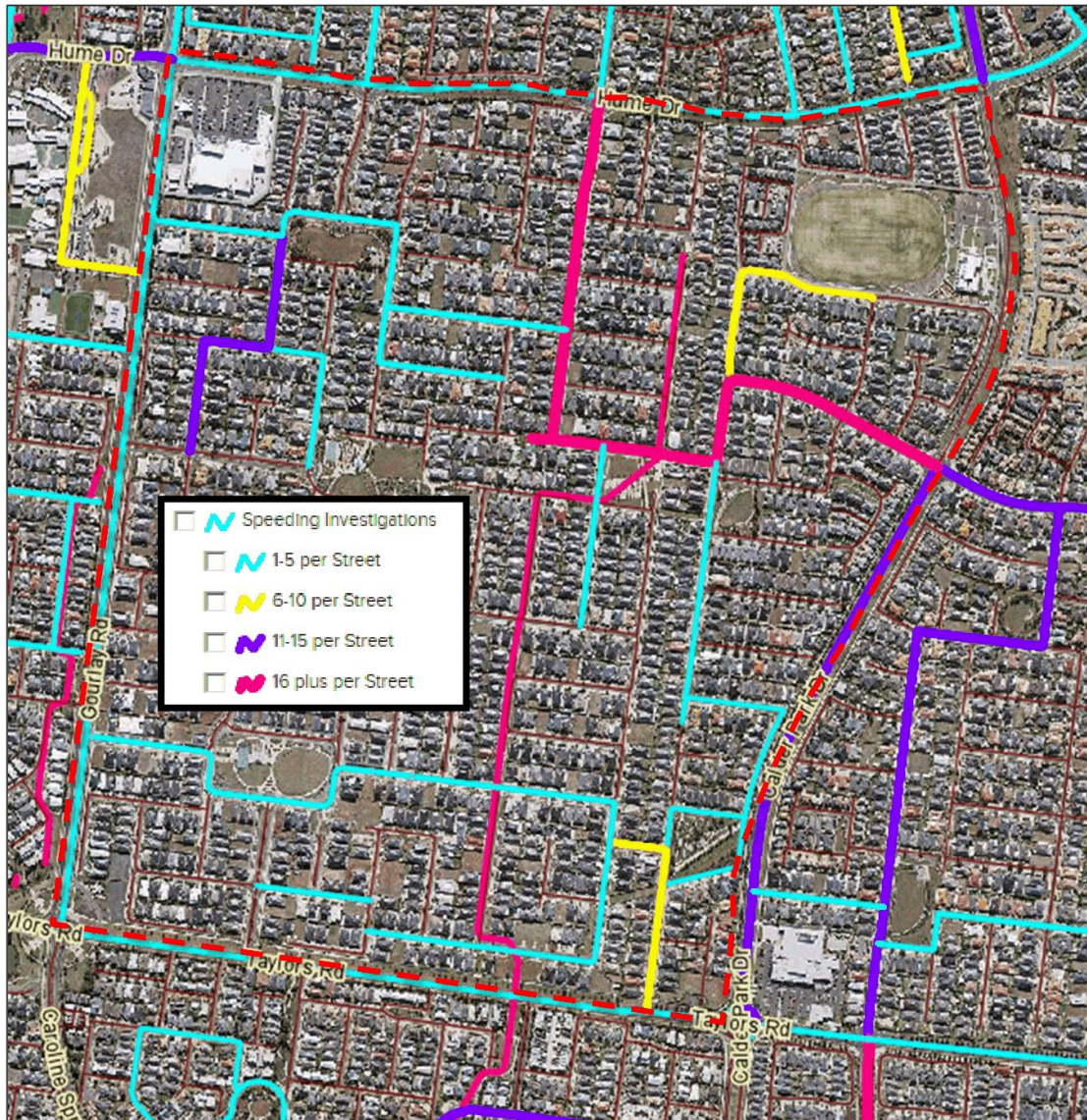
Table 2 CAR Requests Summary

<i>Location</i>	<i>Nature of Complaint</i>	<i>Capital Works Program</i>
Bond Street	Excessive speeding	Speed Hump
Bronte Way	Excessive speeding	Splitter Island
Chancery Way	Signage	
Double Bay Drive	Road safety design	Splitter Island on Woolwich Way
George Street	Excessive speeding	
Kingston Drive	Line marking and signs Requesting parking signage	
Omarama Way	Requesting parking signage	
Woolwich Way	Excessive speeding	Splitter Island at both ends

The location and number of speed investigations for each street within the study area is depicted in Figure 3 overleaf.



Figure 3 Speeding Investigations





7.2 Traffic Survey

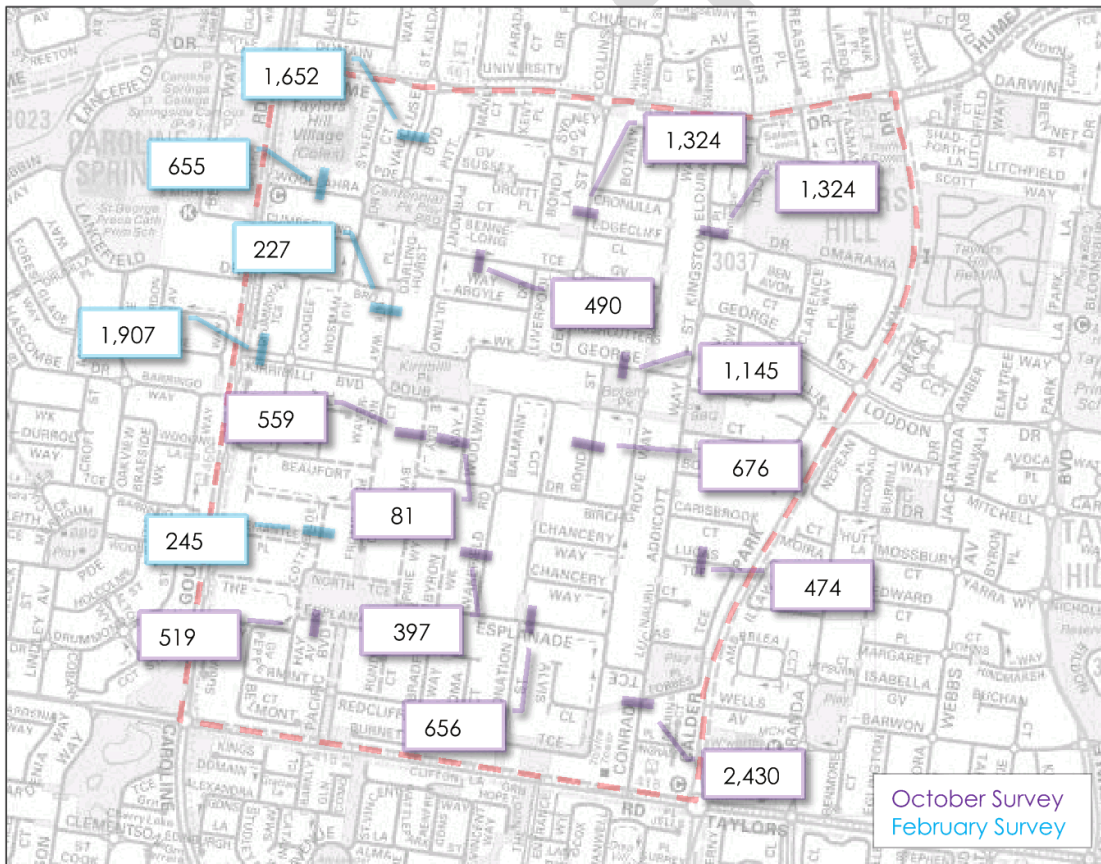
In order to gather information on the existing traffic patterns, and to identify any existing traffic problems, **onemilegrid** arranged for traffic surveys (pneumatic tube counters) to be undertaken across 12 locations between Thursday 15th and Thursday 22nd October, 2015.

Following consultation with local residents, additional counters were placed within the study area between Wednesday 3rd February and Wednesday 10th February 2016.

The surveys aimed to capture daily traffic data, speeds, vehicle classifications and any other relevant information on the local streets within the study area.

The locations for the traffic counts were determined having regard to the concerns raised by residents in the CARs and observations during a site visit of areas likely to attract undesirable driver behaviour. The exact location of the tube counters is illustrated in Figure 4 below, with the surveyed weekday daily traffic volumes identified for each location.

Figure 4 Survey Locations



A detailed summary of each traffic survey is provided in Table 3.



Table 3 Traffic Survey Results – 15th-27th October 2015

Street	Location	Daily Traffic Volumes (Weekday Average)	% of Daily Volumes		85 th Percentile Speed (km/hr)
			AM Peak	PM Peak	
George Street	Btw Cronulla Way & Edgecliff Close	1,324	9.5	9.7	46
Pymont Terrace	Outside No. 13	490	13.1	12.4	52
George Street	Outside No. 49	1,145	12.0	10.7	53
Bond Street	Outside No. 16	676	9.6	9.5	57
Woolwich Place	Outside No. 31	81	12.3	13.6	47
Double Bay Drive	Outside No. 19	559	11.8	10.6	49
The Esplanade	Just West of Pacific Blvd	519	8.9	9.2	42
The Esplanade	Outside No. 25	656	8.2	9.5	51
Wakefield Road	Outside No. 11	397	8.6	10.6	55
Conrad Terrace	Outside No. 14	2,430	7.4	8.4	54
Lucas Terrace	Outside No. 45	474	7.6	8.6	48
Eloura Circuit	North of Kingston Drive	413	8.0	9.9	27
Vacliuse Boulevard	Outside No. 11	1,652	11.3	10.2	54
Woollahra Parade	Outside No. 11	655	10.4	8.2	50
Bronte Way	Outside No. 12	227	11.4	9.3	49
Cottesloe Parade	North of Fremantle Parade	245	7.3	8.6	47
Kirribilli Boulevard	Outside No. 5	1,907	9.3	10.7	45

Detailed traffic survey results are provided in Appendix B.



7.3 Existing Traffic Management

A number of LATM measures are currently employed across the study area including; roundabouts, splitter islands, modified T-intersections, speed humps and speed cushions.

Figure 5 below shows the location of each LATM within the study area and immediate surrounds as collated by Melton City Council. It is noted that a portion of the study area in the south-west is not completely mapped.

Figure 5 Existing LATM Treatments



Further discussion on the configuration and location of these are provided in the following sections.



7.3.1 Splitter Islands

Splitter Islands have been employed on numerous intersections and bends in the subject area. This form of traffic control prevents vehicles from cutting into opposing traffic lanes, either on a 90-degree bend, or at one of the many t-intersections within the study area. Consequently, they assist in reducing vehicle speeds around corners, and minimise opportunity for conflict between vehicles around curves with limited sight distance.

An example of a splitter island treatment employed in the study area is illustrated in Figure 6 and Figure 7 below.

Figure 6 Splitter Island LATM Treatment – 90 Degree Bend



Figure 7 Splitter Island LATM Treatment - T Intersection





7.3.2 Modified T-Intersections.

Modified T-Intersections are used to affect a change in the vehicle travel path, thereby slowing traffic via deflection of traffic movements and/or reassignment of priority.

When used to change priority, the terminating leg of the intersection is connected to one 90-degree intersection leg to become the new priority carriageway.

An example of a modified T-intersection in the subdivision is shown in Figure 8 below

They are most effective in reducing vehicle speeds when employed in conjunction with splitter islands on each leg of the intersection.

Figure 8 Modified T-Intersection LATM Treatment





7.3.3 Flat Top Road Hump

A flat-top road hump or raised table is a raised surface approximately 75-100 mm high and typically with a 2 to 6 m long platform ramped up from the normal level of the street. The raised section (or platform) is flat instead of being curved as is the case with a round profile road hump.

Flat top road humps are utilised in only four locations within the study area, largely within the south-eastern portion.

Figure 9 below shows a speed hump currently installed in the Taylors Hill West subdivision.

Figure 9 Flat Top Road Hump LATM Treatment





7.3.4 Road Cushion

Road cushions are another type of vertical deflection device that occupies only a part of the roadway. It is designed to be more sympathetic to cyclists, buses, and commercial vehicles than a standard full-width road hump.

Speed cushions have been placed at only two locations within the northern portion of George Street. It is understood that these have only been relatively recently been installed, following previous speed investigations undertaken by Council.

Figure 10 illustrates a pair of speed cushions on George Street.

Figure 10 Road Cushions LATM Treatment



7.4 Crash History

VicRoads provide road crash statistics data from all casualty accidents on Victorian roads.

A review of this data, sourced from Victoria Police and maintained by VicRoads, from the five years prior to this report (i.e. 2010-2014 inclusive), indicates that there has only been one casualty accident within the study area. This accident occurred in June 2012 on Pitt Street and involved a vehicle travelling off the carriageway to the left.

Noting that the study area is relatively new, and that lots are still being developed in the south-western portion, the lack of accident data does not necessarily indicate a lack of safety problems.



8 IDENTIFICATION OF ISSUES - COMMUNITY INPUT

8.1 General

A questionnaire survey was distributed by mail to all dwellings (approximately 1,650) within the study area on the 10th of November 2015 with a reply-paid envelope enclosed requesting responses be returned prior to 30th November. Responses received up to and including the 11th of December 2015 were included in the following analysis.

The questionnaire sought both closed-ended and open-ended responses and specifically requested responses on the following topics:

- The extent of traffic problems in your street (no problem, minor problem, major problem)
 - + Traffic Speed
 - + Traffic Volumes
 - + Heavy Vehicles
 - + Bicycle Facilities
 - + Irresponsible Driving
 - + Street Lighting
 - + Parking
 - + Other (Please Specify)
- Time of day during which (the above) traffic problems occur;
 - + All Times
 - + Day Time
 - + Peak Hours
 - + Night Time
- Traffic problems in the whole study area (open-ended);
- Suggestions to solve these whole-area problems (open-ended); and
- Any other comments or concerns (open-ended).

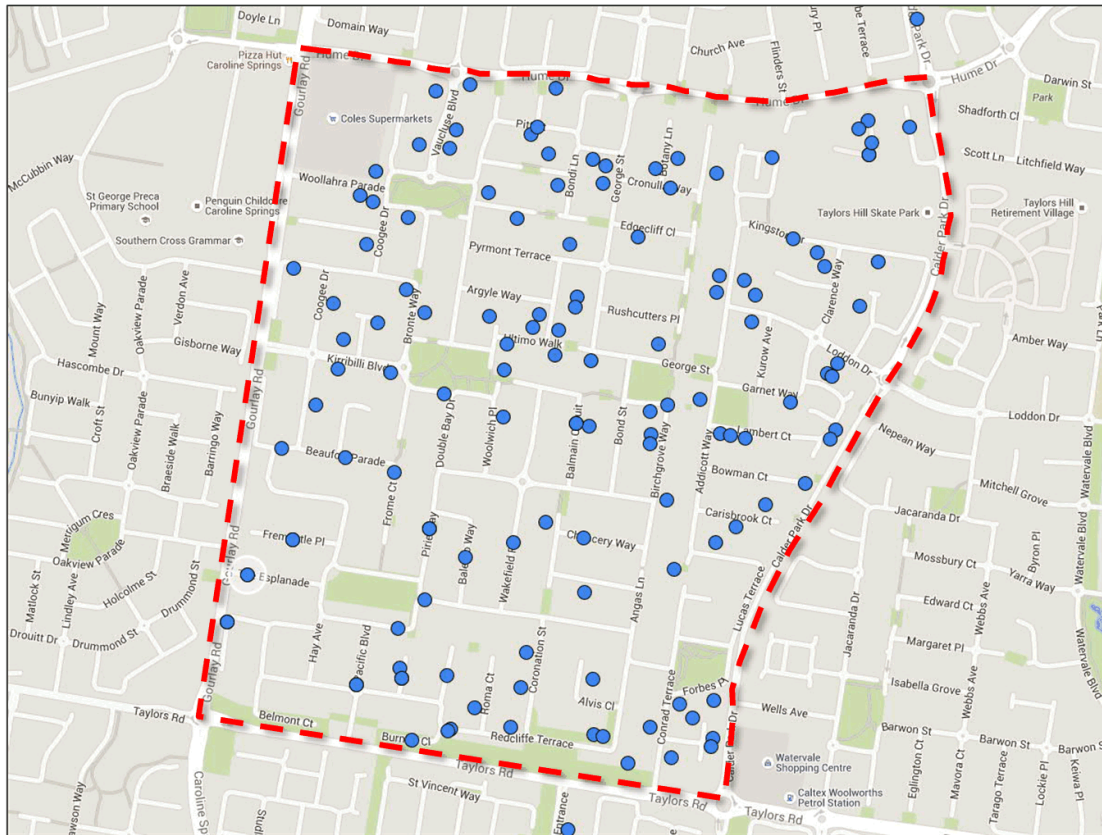
A copy of the questionnaire survey is provided in Appendix C.

A total of 143 responses were received, equating to a response rate of approximately 7.7%. This falls within the typical range of response rates for self-completion surveys and for similar studies undertaken within Melton in the past.

The surveys responses covered a large proportion of the study area, with a slight bias to the northern portion. An illustration of the survey response locations is provided in Figure 11 below.



Figure 11 Survey Response Locations





8.2 Questionnaire Results

8.2.1 Street Specific Results

A summary of the survey results for street-specific issues are identified in Table 4 below.

Table 4 Questionnaire Results - Nature of Problem

Category		Speed	Volumes	Heavy Vehicles	Bicycle Facilities	Irresponsible Driving	Street Lighting	Parking
No Problem	No.	53	75	84	98	43	90	62
	%	37%	52%	59%	69%	30%	63%	43%
Minor Problem	No.	45	22	33	15	42	27	35
	%	31%	15%	23%	10%	29%	19%	24%
Major Problem	No.	30	34	11	12	44	9	34
	%	21%	24%	8%	8%	31%	6%	24%
No Response	No.	15	12	15	18	14	17	12
	%	10%	8%	10%	13%	10%	12%	8%

As shown above, speed and irresponsible driving were nominated by a significant proportion (>50%) of respondents as being a major or minor issue within their street. Parking was also nominated as being a major or minor issue in 48% of responses.

Encouragingly, there still remained a significant proportion of responses who noted that speed (37%), irresponsible driving (30%) and parking (43%) were not a problem in their street.

Heavy vehicles, bicycle facilities and street lighting were not noted as being minor or major concerns for the bulk of responses.

Table 5 Questionnaire Results - Time of Problem

Time of Problem		Speed	Volumes	Heavy Vehicles	Bicycle Facilities	Irresponsible Driving	Street Lighting	Parking
All Times	No.	43	14	5	19	43	6	28
	%	30%	10%	3%	13%	30%	4%	20%
Daytime	No.	5	5	27	10	4	0	3
	%	3%	3%	19%	7%	3%	0%	2%
Peak Hours	No.	13	36	13	4	10	1	5
	%	9%	25%	9%	3%	7%	1%	3%
Night Time	No.	12	3	1	0	26	35	19
	%	8%	2%	1%	0%	18%	24%	13%
No Response	No.	70	85	97	110	60	101	88
	%	49%	59%	68%	77%	42%	71%	62%

Unsurprisingly, traffic volumes were noted as occurring primarily during the peak hours and street lighting concerns were also noted as occurring during the evening.



Irresponsible driving was noted as occurring largely at all times, but with a significant proportion of responses (18%) noting that it often occurs during the night time.

The results were further analysed to determine which particular streets experienced issues with speed, traffic volumes, parking or irresponsible driving. Those streets which received an average ranking of minor or major problem are summarised below.

To avoid results that may not have been representative of all respondents, only streets with more than one response have been included below.

Speed	Traffic Volumes	Parking	Irresponsible Driving
➤ Bronte Way	➤ Bronte Way	➤ Bronte Way	➤ Bronte Way
➤ Conrad Terrace	➤ Conrad Terrace	➤ Callista Crescent	➤ Conrad Terrace
➤ Cottesloe Parade	➤ Coogee Drive	➤ Cottesloe Parade	➤ George Street
➤ Pirie Way	➤ Cottesloe Parade	➤ Marin Court	➤ Pirie Way
➤ Pymont Terrace	➤ Devonport Court	➤ Tasman Court	➤ Vaucluse Boulevard
➤ Vaucluse Boulevard	➤ Marin Court	➤ Woollahra Parade	➤ Woollahra Drive
➤ Woollahra Parade	➤ Pymont Terrace		➤ Street Lighting
	➤ Vaucluse Boulevard		➤ Marin Court

8.2.2 Whole Study Area

A number of recurring themes were identified within responses to the open-ended question regarding the entire study area.

Those responses which were noted greater than 10 times were designated as major issues and any responses noted more than five times as minor issues.

Major Issues	Minor Issues
➤ Irresponsible Driving	➤ Intersection Design
➤ Parking	➤ Crossings
➤ Road Width & Lanes	➤ Cutting Corners
➤ Speed	➤ Detouring
➤ Traffic Congestion	➤ Lighting
	➤ Safety

It is noted that the bulk of responses identified these issues as occurring over the main roads which surround the study area (Gourlay Road, Calder Park Drive, Taylors Road, Hume Drive) despite the questionnaire identifying these roads as external to the traffic study. This would be a recurring theme throughout each phase of community survey.



8.2.3 Suggestions

Residents were prompted to provide suggestions of measures that could be implemented to minimise traffic problems in specific locations and throughout the study area.

A summary of the responses is provided in Table 6 below.

Table 6 Questionnaire Results - Street Specific Suggestions

<i>Location</i>	<i>Suggestion</i>
Addicott Way	Road humps, police presence
Balerno Way	Railing along the street
Beaufort Parade	Parking signs (no parking)
Birchgrove Way	Lighting
Bond Street	Road humps
Bradfield Way	Lighting
Bronte Way	Splitter Islands
Callista Circuit	Increase parking
Carisbrook Court	Transform one footpath into a row of parks, Traffic lights
Conrad Terrace	Road humps (or makeshift indentations)
Coogee Drive	Parking (increase)
Cottesloe Parade	Road humps
Cronulla Way	Police presence
Devonport Court	Allow a northern access from Hume Drive
Double Bay Drive	Increase parking
Druitt Place	Increase parking
Drummoyne Terrace	No parking sign during school times
Eloura Circuit	Parking signage
Garnet Way	Road humps (just before the bend)
George Street	Create alternate exit onto Calder Park Drive, speed humps, traffic lights, police presence
Ingrim Place	Traffic congestion
Kent Place	Road humps
Kingston Drive	Road humps
Liverpool Drive	Increase parking
Lucas Terrace	Road humps to replace existing cushions
Omarama Way	Parking signage (during sports, 3-8pm)
Pacific Blvd	Road humps / Splitter islands
Pitt Street	Police presence
Pymont Terrace	Road humps
Redcliff Terrace	Road humps
Rundle Court	Parking (visitor spaces used by residents)
Subiaco Way	Parking (add more bays into nature strips)
Tasman Court	Parking signage
The Entrance	Road humps
The Esplanade	Signs (reduce speed), speed humps
Ultimo Walk	Police presence, splitter island at cnr of Liverpool and Ultimo (replication of the other island on Ultimo)
Vaucluse Boulevard	Signage 40 or 50km zones, cameras, road width



8.2.4 Additional Comments

Residents were also provided opportunity to provide any other comments or concerns. A summary of each response is provided below.

- Taylors Road congestion a big issue
- No. 44 Redcliffe Terrace having cars driving over nature strip cutting corners
- Inadequate street signage
- Lack of speed signage and white lines at intersections are an issue
- Requested an indent at each stop for buses to avert congestion"
- Requested an increase in police presence
- Serious safety issue for children walking to Taylors Hill Primary school
- Has also requested an increase in police presence
- Stated that once building in the neighbourhood is complete, heavy vehicles won't be a problem
- No bicycle facilities in neighbourhood
- Requested a roundabout on the intersection at Taylors Road and Pacific Boulevard or provide entry/exit lanes from the four border roads into roads within the study area
- Safety concerns for children crossing Calder Park Drive. Traffic lights suggested to replace the Loddon Drive roundabout to avert this
- The speed cushions on Lucas Terrace are insufficient and need to be replaced by speed humps
- Believes vehicles are reaching speeds of up to 100km/h on Addicott Way
- Suggested stronger lights be used for street lighting
- Hard to enter and exit Taylors Road
- Parking signage to direct sports traffic to designated sports centre car park
- Taylors Road and Kings road intersection: "Cars Queue 24/7"
- Vehicles cutting corners and driving the wrong way down streets
- Taylors Road congestion
- Safety concerns for pedestrians at boundary road roundabouts
- Roundabouts on the study area boundary roads are not working
- Serious concern raised as parents of sporting children are blocking resident driveways
- Issue permits to residents of Drummoyne Terrace during school times when resident has asked for no parking for parents
- Heavy vehicles are due to construction in the area and won't be a permanent problem
- Clean up vacant land
- Households not cleaning and maintaining front yards and nature strips
- Traffic lights to replace roundabouts on boundary roads
- Safety concerns about the street lighting on the corner of Pacific Boulevard and Taylors Road
- Resident would like to walk kids to school but feels it is unsafe due to lack of pedestrian crossings on Calder Park Drive
- Resident feels speed humps will increase noise due to tradesmen driving in the area



8.3 Traffic Study Group

To assist with undertaking the study, and to provide an understanding of local issues and concerns, a Traffic Study Group (TSG) was established. The TSG would attend meetings and assist in formulating the LATM plan.

The community questionnaire provided opportunity for residents to nominate themselves for inclusion into the TSG, and with consideration given to their responses and the location of each resident, a selection of six residents were invited to form the TRG. In addition to the residents, the TRG would also include Councillors, Council traffic engineers and a member of the Victorian Police.

The members of the TSG are listed within Table 7 below.

Table 7 Traffic Study Group Members

<i>Group</i>	<i>Name</i>	<i>Location</i>
Resident	Tony Baxter	Ultimo Walk
	Cherry Stojanovic	Bronte Way
	Mandy Wilkins	The Esplanade
	Claudine Berrisford	Kingston Drive
	Emma Lobe	George Street
Victorian Police	Sergeant Christopher Stuhldreier	
Councillor	Cr. Renata Cugliari	
	Cr. Lara Carli	
Melton Traffic Engineers	Tom Lay	
	Matthew Hutchinson	
	Voltaire David	

Three meetings were held with the TSG at various stages throughout the project, each of which are described in Section 4.2.

The Traffic Study Group considered the responses to the questionnaire survey and community feedback on the proposed Traffic Management Plan. Final recommendations from the Traffic Study Group are provided in the recommendation section of this report. The agendas and minutes from the various committee meetings are provided in Appendix D.



9 IDENTIFICATION OF ISSUES - ENGINEERING INVESTIGATIONS

9.1 Speed

Traditionally, traffic design philosophy has been to match the desired speed limit of a road to the 85th percentile observed speed of vehicles utilising the roadway, acknowledging that a level of traffic will always exceed the speed limit, and it may be impractical to curb that behaviour.

In this regard, in order to determine where excessive speeds commonly occur, traffic volume data collected as part of this study has been reviewed with particular emphasis given to 85th percentile vehicle speeds.

The traffic volume data indicates that 85th percentile speeds exceed the speed limit (50km/h) on six of the 12 streets, each of which are listed below:

- Bond Street 57 km/h
- Wakefield Road 55 km/h
- Vaucluse Boulevard 54 km/h
- Conrad Terrace 54 km/h
- George Street 53 km/h
- Pymont Terrace 52 km/h
- The Esplanade 51 km/h
- Woollahra Parade 50 km/h

In addition to the above, four of the streets surveyed had 85th percentile speeds above 45km/h.

- Double Bay Drive 49 km/h
- Bronte Way 49 km/h
- Lucas Terrace 48 km/h
- Woolwich Place 47 km/h
- Cottlesloe Parade 47 km/h
- George Street 46 km/h

9.2 Road Network Design

Clause 56.06 of the Melton Planning Scheme outlines the various objectives and design requirements that should be adhered to in the design of residential subdivisions, such as the study area.

With regard to the neighbourhood street network, the clause states that the design of streets and roads should "*provide street blocks that are generally between 120 and 240 metres in length to...control traffic speed*". It is generally accepted that where traffic management measures are installed, the effective length between them should not exceed the distances above.

A review of the study area layout indicates that the vast majority of streets are designed in accordance with the above, however a number of streets within the study area provide lengths equal to or in excess of 240 metres without any traffic controls. The relevant streets are listed below:

- The Esplanade (West) 400 metres
- Bond Street 270 metres
- Pirie Way 260 metres
- Wakefield Road 250 metres
- Conrad Terrace 240 metres
- Pymont Terrace 240 metres
- Coronation Street 240 metres



Notably, a large proportion of the above streets were also identified in Section 9.1 above as having higher vehicle speeds.

A longer street length does not necessarily warrant traffic management works, however should be considered in conjunction with other factors.

9.3 Traffic Volumes

As noted in Section 6.2, an Access Street (Level 1) is generally assumed to have capacity for between 1,000 and 2,000 vehicles per day, whilst an Access Street (Level 2) are nominally assumed to have capacity for between 2,000 and 3,000 vehicles per day.

All streets surveyed, with the exception of Conrad Terrace, currently carry traffic well below the above values and within the ranges identified above. Conrad Terrace was surveyed to carry over 2,400 vehicles per day, which is at the upper levels of preferred traffic volumes, however noting its function as one of only a few entrances to the study area, it is expected that traffic volumes would be higher than those of a typical Access Street (Level 2).

9.4 Rat-Running

A typical 'rule of thumb' for urban residential streets is for peak hour / 24hour volume ratios to be around 10-12%. If ratios are in excess of 14%, it suggests that the street may be being used as a rat-run by significant volumes of non-local traffic during peak periods (*Ogden KW & Taylor SY Traffic Engineering and Management, Department of Civil Engineering, Monash University and Institute of Traffic Studies 1999*).

A review of peak hour traffic volumes for those streets surveyed indicates that peak hour ratios are generally within the acceptable bounds, with only peak hour volumes within Woolwich Place and Pymont Terrace giving any cause for concern. In both cases however, peak hour volumes only slightly exceeded the accepted range and absolute vehicle numbers were low.

9.5 Parking

In addition to the above quantitative metrics of traffic issues, a number of CARs lodged with Council engineers cited car parking as an issue requiring investigation.

The parking issues raised are largely attributable to events held at the sporting ground in the study areas north-east. It is understood that visitors to the ground park along the northern kerb of Kingston Drive and Omarama Way, effectively restricting the flow of traffic to one lane, contributing to congestion and delays during sporting events.

Similarly, on Eloura Circuit (which is understood to be privately owned) residents have raised concerns that a significant proportion of visitors to sporting events park within their street, reducing the supply of parking for residential visitors.

It is understood that Council are seeking to install indented parking bays along Omarama Way, along the frontage of the sports oval.

9.6 Safety

Within the study area, a number of locations were identified (either by inspection or survey responses) as allowing a vehicle to cut the corner, potentially contributing to increased conflicts and head-on collisions.



Key locations included Bronte Way, Lucas Avenue and Woolwich Way.

9.7 Pedestrian Facilities

A lack of pedestrian facilities was not raised in a significant number of surveys responses, nor noted as a concern within Council CARs. The TSG did however note that pedestrian connections were lacking in two key locations; at the intersection of Kirribilli Drive and Bronte Way – particularly along the northern leg of the roundabout, and at Ultimo Walk, adjacent to the park.

9.8 Irresponsible Driving

As noted in Section 8.2.1, irresponsible driving was identified as a major or minor issue in 60% of survey responses and in each of the following streets:

- Bronte Way
- Conrad Terrace
- George Street
- Pirie Way
- Vaucluse Boulevard
- Woollahra Drive
- Street Lighting
- Marin Court

While the Traffic Management Plan can provide engineering solutions to improve road safety and reduce vehicle speeds on average, it may not be feasible or cost-effective to curb the behaviour of the worst hoon drivers.

Victoria Police and Local Councils in conjunction with Crime Stoppers have introduced the 'Hoon Hotline' to assist Victoria Police efforts to deter anti-social or 'irresponsible' driving in the community. In reporting inappropriate driver behaviour, caller's details are confidential and once information is analysed and repeat offenders are identified, the information is given to the police for action.

It is recommended that the Crime Stoppers Hoon Hotline is promoted as part of the Traffic Management Plan, as an effective tool in reducing irresponsible driving. The Crime Stoppers Hoon Hotline number is 1800 333 000.



10 LATM PLAN – DEVELOPMENT

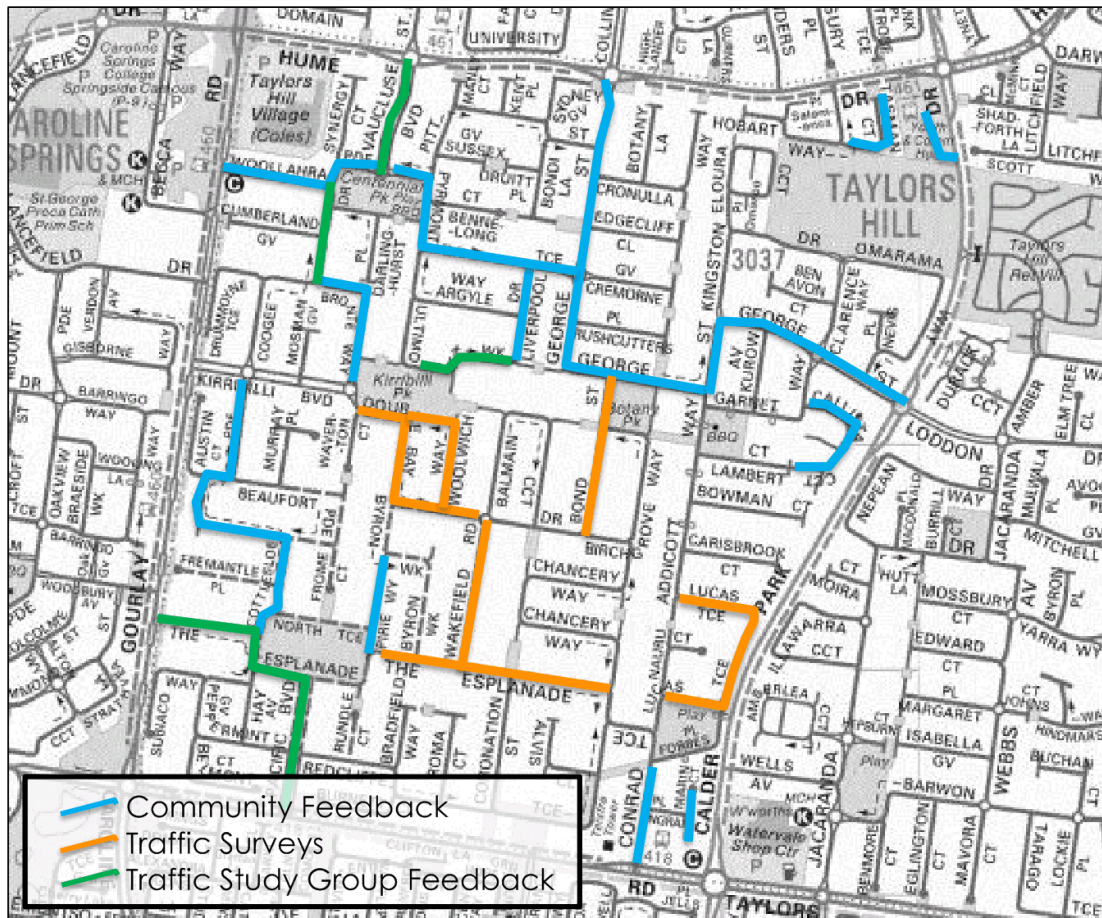
10.1 Areas for Further Investigation

Based upon the outcomes of the traffic surveys, analysis of resident complaints, community questionnaire and the Traffic Study Group meeting, the following locations were identified for potential treatment with LATM measures:

- Bronte Way
- Bond Street
- Callista Crescent
- Conrad Terrace
- Coogee Drive
- Cottlesloe Parade
- Devonport Court
- Double Bay Drive
- George Street
- Liverpool Drive
- Lucas Terrace
- Kirribilli Boulevard
- Marin Court
- Pacific Boulevard
- Pirie Way
- Pymont Terrace
- Tasman Court
- The Esplanade
- Ultimo Walk
- Vaucluse Boulevard
- Wakefield Road
- Woollahra Parade
- Woolwich Way

The locations in context with the entire study area are illustrated in Figure 12.

Figure 12 Areas for potential LATM treatments





10.2 Warrants

In determining which areas, streets and intersections warranted implementation of LATM treatments, a two-step criterion was typically applied.

1. Sufficient engineering justification was available to quantify a traffic problem (e.g. 85th percentile speed, daily traffic volumes, crashes etc.); and
2. Sufficient concern were raised within the community about the problem. (e.g. an average classification of major or minor problem in community survey, raised in TSG meetings, or noted in multiple open-ended survey responses)

In some cases, where traffic volume data had not been sourced, or where an identified issue had not met both criteria, additional consideration was also give to the need and likely effectiveness of any countermeasures proposed by the project team.

Of those streets identified above that may require speed or traffic controls, a number were excluded for not having satisfied the requirements of Council's Traffic Calming Policy. These included:

- Coogee Drive (insufficient length)
- Cottlesloe Parade (insufficient length)
- Pirie Way (insufficient dwellings)
- Pacific Boulevard (insufficient length)
- Pymont Terrace (insufficient speed)
- The Esplanade (insufficient speed)
- Woollahra Parade (insufficient speed)

Others, having been reviewed in detail, were also omitted from further consideration:

- Devonport Court (no observed traffic issues)
- Callista Close (no observed parking issues)
- Liverpool Drive (no observed parking issues)
- Marin Court (no observed parking issues)
- Tasman Court (no observed parking issues)
- Wakefield Road (insufficient community response)

Noting the above, the following streets are considered for LATM treatments:

- Bronte Way (speed, irresponsible driving)
- Bond Street (speed)
- Conrad Terrace (speed, traffic volumes, irresponsible driving)
- Forbes Place (
- George Street (speed, irresponsible driving)
- Lucas Terrace (road safety)
- Kirribilli Boulevard (pedestrians)
- Ultimo Walk (pedestrians)
- Vacluse Boulevard (speed, traffic volumes, irresponsible driving)
- Woolwich Way (speed, road safety)

In addition to the above, the Forbes Place splitter island, identified in Council's Capital Works Program, has also been included in the LATM proposal.



10.3 LATM Plan Proposal

The objectives of the proposed traffic management plan include:

- Reduce the incidence and potential for vehicle and pedestrian crashes in the area;
- Improve the safety of local streets by reducing traffic speeds;
- Discourage through traffic from using the local area;
- Develop proposals that address traffic concerns raised by the community, while maintaining adequate levels of accessibility for local residents, local businesses and emergency services; and
- Maximise the safety benefits of available funding (with priority given to reported crash locations and those streets with the greatest level of community concerns).

In consideration of these, the following LATM plan has been prepared. It is noted that this also includes projects identified within Council's Capital Works Program (Conrad Terrace, Coogee Drive/Bronte Way, Bronte Way, Bond Street, Forbes Place and Woolwich Way).

Figure 13 Proposed LATM Plan



A summary of each treatment is provided in the following sections.



10.3.1 Bronte Way

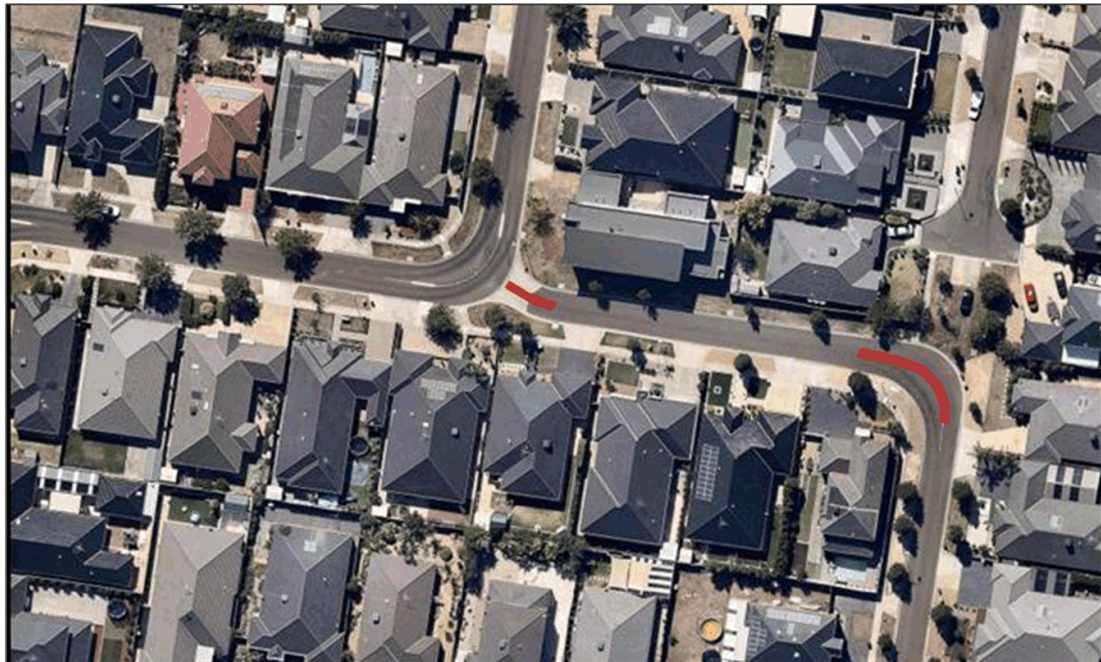
Bronte Way and Coogee Drive were identified in the first community questionnaire as locations where traffic speed, irresponsible driving and traffic volumes were of concern.

A review of on-site conditions indicated that a lack of physical controls on approach to the intersection permitted high speeds and corner-cutting, which are both undesirable.

To limit this, two splitter islands are proposed, with one at the intersection of Bronte Way and Coogee Drive, and one on the adjacent bend of Bronte Way.

A view of these proposed treatments is provided in Figure 14 below.

Figure 14 Bronte Way - Splitter Islands



It is noted that both treatments were identified in Council's Capital Works Program.



10.3.2 Bond Street

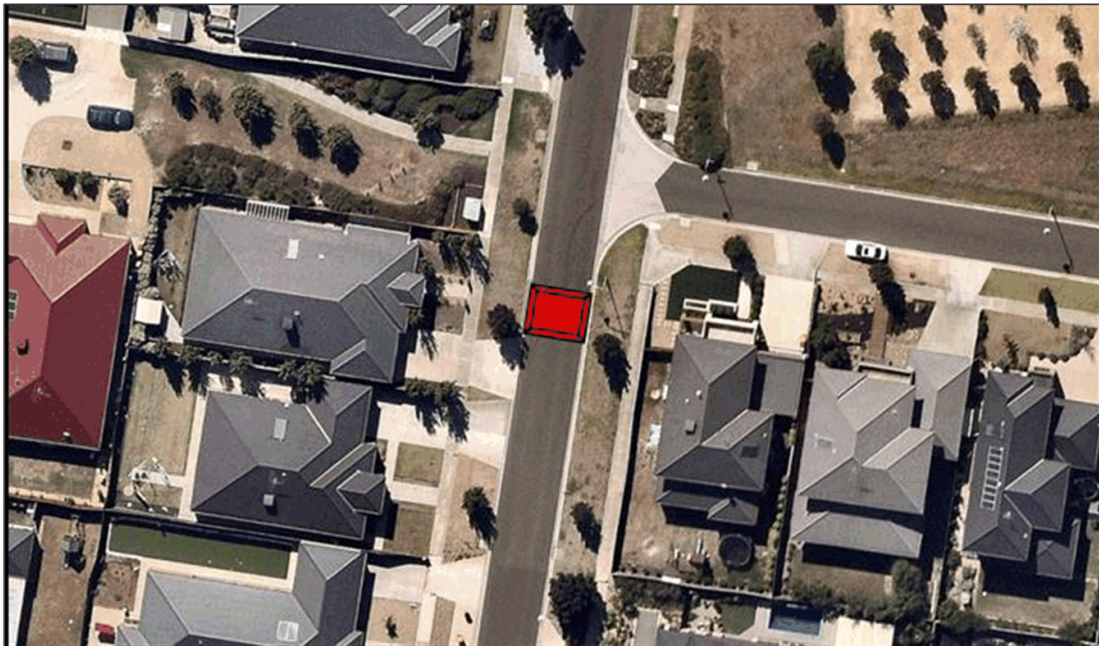
Bond Street was identified in the traffic surveys with the highest 85th percentile speed at 57km/h and was the focus of many comments requesting use of road humps to curb speeding and irresponsible driving.

Noting this, a flat top road hump is proposed adjacent to No. 16 Bond Street, located approximately centrally along the length of Bond Street.

As above, this LATM treatment is identified in Council's Capital Works Program.

A view of the proposed road hump location is provided in Figure 15 below.

Figure 15 Bond Street – Road Hump





10.3.3 Conrad Terrace

Speed, traffic volumes and irresponsible driving were identified by the community as key concerns along Conrad Terrace.

Noting this, a splitter island at its intersection with Forbes Place (shown in Figure 16), a road hump mid-way (Figure 17) and a splitter island at the Taylors intersection are proposed (Figure 18).

All of the Conrad Terrace treatments have already been identified in Council's Capital Works Program.

Figure 16 Conrad Terrace / Forbes Place - Splitter Island



Figure 17 Conrad Terrace – Road Hump





Figure 18 Conrad Terrace / Taylors Road – Splitter Island



10.3.4 Forbes Place

The Forbes place splitter island location is shown in Figure 19 below, which aims to address safety concerns arising from vehicles crossing the dividing white line.

Figure 19 Forbes Place - Splitter Island





10.3.5 George Street

Community feedback indicated that George Street (from Calder Park Drive) and Kingston Drive were prime locations for irresponsible driving and speed.

Noting this, and considering that the warrants for any physical speed control device were not satisfied, a signage and pavement linemarking combination is proposed at the study area entry to reinforce the local street speed limits, and re-iterate the residential nature of the area.

A view of the proposed is shown in Figure 20 below.

Figure 20 George Street – Signage & Linemarking





10.3.6 Lucas Terrace

Lucas Terrace was one of the locations noted to provide no restriction for vehicles cutting the corners into the opposite lanes.

The proposed splitter island treatments on each of the bends will minimise any potential head-on conflicts as shown in Figure 21 and also reduce vehicle speeds.

Splitter islands should be located to as not to impact on driveway access.

Figure 21 Lucas Terrace – Splitter Islands



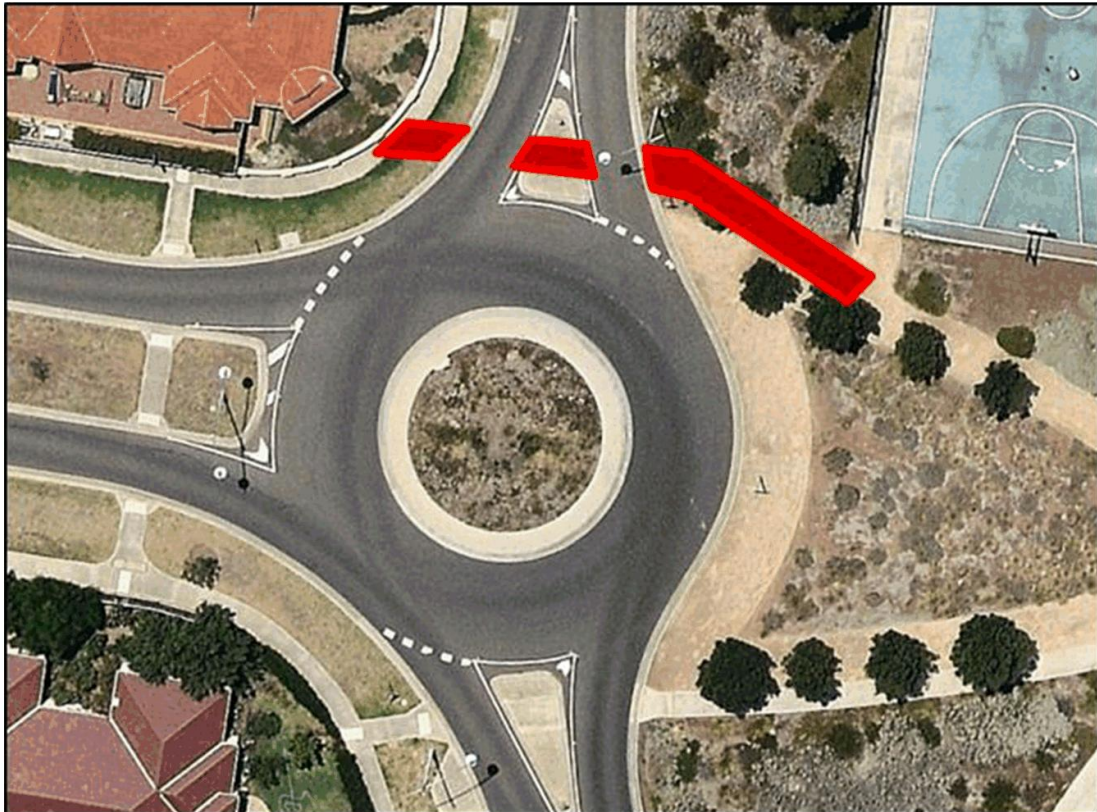


10.3.7 Kirribilli Boulevard

The Kirribilli Boulevard / Bronte Way intersection was identified as one of concern, with no pedestrian facilities provided on the northern leg of the intersection.

A pedestrian cut-through is proposed which will provide connectivity between both sides of Bronte Way as shown in Figure 22.

Figure 22 Kirribilli Drive / Bronte Way – Pedestrian Crossing





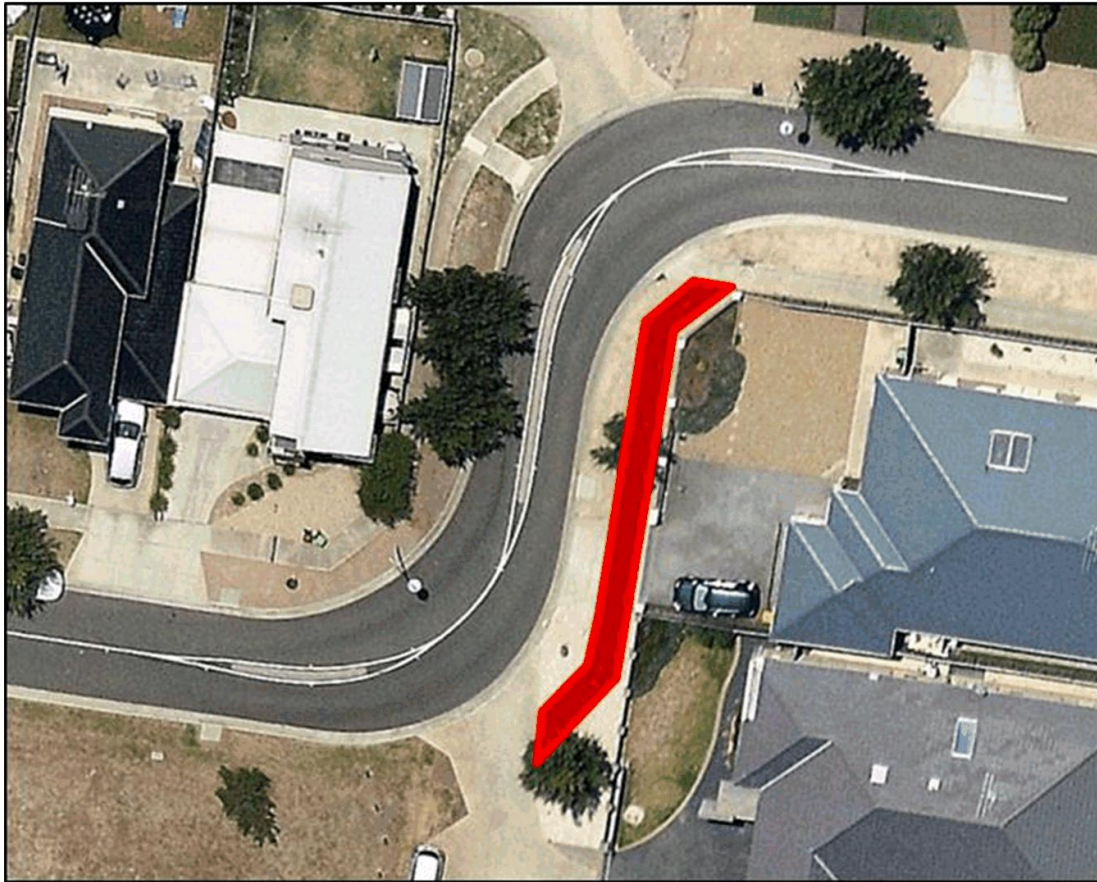
10.3.8 Ultimo Walk

This portion of Ultimo Walk, located adjacent to the Kirribilli Park provides poor pedestrian amenity, requiring pedestrians to cross the road twice to access the park from the eastern end of Ultimo Walk.

It is proposed to provide a north-south connection along the eastern side to provide direct connectivity to the park, avoiding the need for additional road crossings.

This LATM treatment is shown in Figure 23.

Figure 23 Ultimo Walk – Pedestrian Link





10.3.9 Vaucluse Boulevard

Community feedback indicated that Vaucluse Boulevard was a location where vehicle speed was of concern.

Whilst surveys indicated that 85th percentile speeds exceeded the speed limit, they did not quite satisfy the requirements of Council's Traffic Calming Policy.

Considering this, a signage and pavement linemarking combination is proposed at the study area entry to reinforce the local street speed limits, and re-iterate the residential nature of the area.

A view of the proposed is shown in Figure 24 below.

Figure 24 Vaucluse Boulevard - Signage & Linemarking





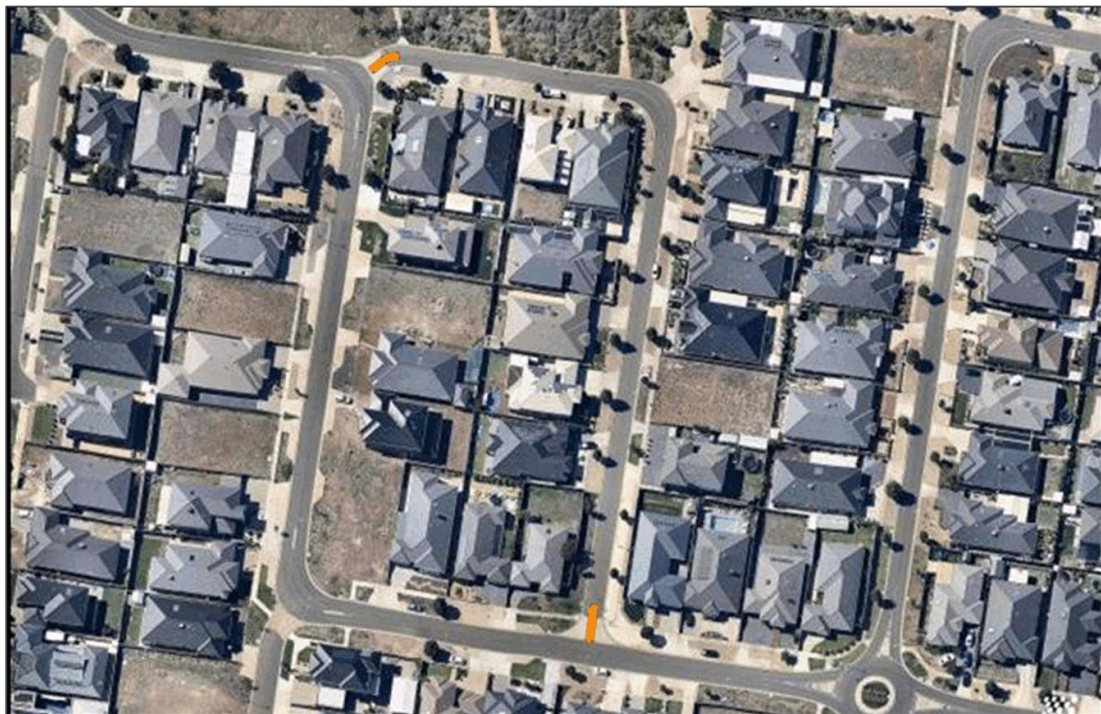
10.3.10 Woolwich Way

Community feedback and traffic volume data indicated that Woolowch Way may be utilised for some rat-tuning behaviour, with no splitter islands provided at each of the intersections with Double Bay Drive.

Noting this, it is proposed to install splitter islands at each end, with a view to reducing vehicle speeds at each of the T-intersections, reducing the attractiveness of the lower-order route, and encouraging more traffic to utilise Double Bay Drive.

A view of the splitter island locations is provided in Figure 25 below.

Figure 25 Woolwich Way / Double Bay Drive - Splitter Islands





11 LATM PLAN - COMMUNITY CONSULTATION

11.1 General

In order to gather community feedback on the proposed LATM treatments presented above, a questionnaire survey was again distributed to residents and business owners within the study area.

The survey was distributed on Monday 11th April 2016 with a reply-paid envelope requesting responses be returned prior to Friday 22nd April 2016, though responses received up to the 28th April were accepted.

The questionnaire listed four closed-ended and open-ended responses and specifically requested the following:

- Are you supporting of the draft LATM plan as a whole (yes, partially, no)
- Provide any comments on the draft LATM plan (open-ended)
- Support or otherwise for each of the proposed treatments (yes, no)
- Feedback regarding any particular treatment (open-ended)

A copy of the questionnaire survey is provided in Appendix E.

A total of 87 responses were received, equating to a response rate of 5.3%. When compared with the previous response rate of 7.7%, it compares poorly, but is still within the range of other self-completion surveys undertaken within Melton in the past.

The surveys covered a large proportion of the study area, with a slight bias to the northern portion. An illustration of the survey response locations in context with the proposed LATM treatments is provided in Figure 11 below.

Figure 26 Survey Response Locations





11.2 Responses

11.2.1 General

The draft LATM plan received 52% support for the plan as a whole, 32% partial support and 8% of respondents did not support the project.

Although the response rate only provides a sample of the general community response to the plan, overall it is considered that the community response to the proposed plan is generally favourable. It is most likely that those who oppose the LATM proposal (all or part) are more likely to respond than those in favour.

The bulk of general comments provided were regarding elements external to the study. A summary of similar comments is provided below:

- Duplicate Calder Park Drive, Taylors Road Hume Drive
- Additional road humps requested (George Street, Pymont Terrace, Pitt Street, Redcliffe Terrace, Calista Crescent, Pirie Way, The Esplanade, Coogee Drive)
- Pedestrian connections across external roads
- Funding better spent elsewhere
- Not supportive of road humps

11.2.2 Each Proposal

For those questions targeted to each proposal, the results of the survey are presented in Table 8 below.

A rating of 60-70% is generally seen as an appropriate target for resident feedback to ensure that the treatments are generally well-received.

Table 8 Survey Results Summary

Location	Proposal	Num. Responses	Yes		No		No Response		Majority in Support?
			Num	%	Num	%	Num	%	
Bronte Way	Coogee Drive Splitter Island	80	68	78%	12	14%	7	8%	Yes
	Bend Splitter Island	79	69	79%	10	11%	8	9%	Yes
Bond Street	Road Hump	79	62	71%	17	20%	8	9%	Yes
Conrad Terrace	Forbes Place Splitter Island	84	73	84%	11	13%	3	3%	Yes
	Road Hump	84	71	82%	13	15%	3	3%	Yes
	Taylors Road Splitter Island	84	64	74%	20	23%	3	3%	Yes
Forbes Place	Bend Splitter Island	79	70	80%	9	10%	8	9%	Yes
George Street	Signage & L/M	80	71	82%	9	10%	7	8%	Yes
Lucas Terrace	Bend Splitter Islands	80	70	80%	10	11%	7	8%	Yes
Kirribilli Blvd.	Ped. Connection	79	71	82%	8	9%	8	9%	Yes
Ultimo Walk	Ped. Connection	78	69	79%	9	10%	9	10%	Yes
Vaucluse Blvd	Signage & L/M	80	71	82%	9	10%	7	8%	Yes
Woolwich Way	Splitter Islands	79	70	80%	9	10%	8	9%	Yes



As shown above, each of the proposals received an approval rating of 71% or greater, indicating generally wide-spread approval for all treatments.

The lowest approval ratings were received for each of the road humps, located on Bond Street and Conrad Terrace. Notably, 75% (3 out of 4) residents who lived in Conrad Street were supportive of the road hump, and the sole respondent from Bond Street was also supportive.



12 LATM PLAN RECOMMENDATIONS

The following section details the ultimate recommendations to be made to Council.

Table 9 Survey Results Summary

Location	Proposal	Level of Support	Community Comments (Negative Only)	onemilegrid Comments / Recommendations
Bronte Way	Coogee Drive Splitter Island	78%	<ul style="list-style-type: none"> Splitter islands are not effective Need road hump instead 	<ul style="list-style-type: none"> When appropriately designed, splitter islands will reduce vehicle speeds and enforce use of correct lanes. Location is not appropriate for road humps. Recommendation: There is a high level of general support for this treatment. Incorporate this treatment into the LATM Plan.
			<ul style="list-style-type: none"> Splitter islands are not effective Islands redundant, people know how to drive 	<ul style="list-style-type: none"> When appropriately designed, splitter islands will reduce vehicle speeds and enforce use of correct lanes. Recommendation: There is a high level of general support for this treatment. Incorporate this treatment into the LATM Plan.
Bond Street	Road Hump	71%	<ul style="list-style-type: none"> Hump not required Try signage first Not convinced road humps work Humps damage suspension 	<ul style="list-style-type: none"> Vehicle speeds indicate a speed control is required on Bond Street. Road humps are a proven tool for reducing vehicle speeds. Hump will be designed for a target speed of 50km/h at which will not damage suspension. Recommendation: There is a high level of general support for this treatment. Incorporate this treatment into the LATM Plan
			<ul style="list-style-type: none"> Linemarking not enough Splitter island already at intersection of Conrad Terrace / Lucas Terrace 	<ul style="list-style-type: none"> A physical concrete barrier will be installed within the centre of the carriageway. Proposed splitter island is in a different location. Recommendation: There is a high level of general support for this treatment. Incorporate this treatment into the LATM Plan.
Conrad Terrace	Forbes Place Splitter Island	84%	<ul style="list-style-type: none"> Linemarking not enough Splitter island already at intersection of Conrad Terrace / Lucas Terrace 	<ul style="list-style-type: none"> A physical concrete barrier will be installed within the centre of the carriageway. Proposed splitter island is in a different location. Recommendation: There is a high level of general support for this treatment. Incorporate this treatment into the LATM Plan.



	<ul style="list-style-type: none"> ➤ Hump not required ➤ Try signage first ➤ Not convinced road humps work ➤ No speeding or traffic issues, hump is an irritant ➤ Traffic flow is enough to slow vehicles ➤ Signage and linemarking probably sufficient ➤ Humps damage suspension ➤ Will create traffic issues ➤ Road humps only annoy residents 	<ul style="list-style-type: none"> ➤ Traffic counts indicate 85th percentile speeds exceed speed limit. ➤ Road humps are a proven tool for reducing vehicle speeds. ➤ Hump will be designed for a target speed of 50km/h at which will not damage suspension. <p>Recommendation: There is a high level of general support for this treatment. Incorporate this treatment into the LATM Plan.</p>	82%	Road Hump
	<ul style="list-style-type: none"> ➤ Will take up space for two queued vehicles 	<ul style="list-style-type: none"> ➤ Splitter island will be only narrow in width and will not restrict queuing space for turning vehicles. <p>Recommendation: There is a high level of general support for this treatment. Incorporate this treatment into the LATM Plan.</p>	74%	Taylors Road Splitter Island
Forbes Place	<ul style="list-style-type: none"> ➤ Road hump would work better 	<ul style="list-style-type: none"> ➤ Splitter island is located between road humps. An additional hump would not be appropriate. <p>Recommendation: There is a high level of general support for this treatment. Incorporate this treatment into the LATM Plan.</p>	80%	Bend Splitter Island
George Street		<p>Recommendation: There is a high level of general support for this treatment. Incorporate this treatment into the LATM Plan.</p>	82%	Signage & L/M
Lucas Terrace	<ul style="list-style-type: none"> ➤ Will impact my household 	<ul style="list-style-type: none"> ➤ Splitter islands will be designed to provide no impact on access to existing driveways or parking. <p>Recommendation: There is a high level of general support for this treatment. Incorporate this treatment into the LATM Plan.</p>	80%	Bend Splitter Islands
Kirribilli Blvd.		<p>Recommendation: There is a high level of general support for this treatment. Incorporate this treatment into the LATM Plan.</p>	82%	Ped. Connection
Ultimo Walk		<p>Recommendation: There is a high level of general support for this treatment. Incorporate this treatment into the LATM Plan.</p>	79%	Ped. Connection



<p>Vaucluse Blvd</p>	<p>Signage & L/M</p>	<p>82%</p>	<ul style="list-style-type: none"> ➤ Need more detail ➤ People do not speed 	<ul style="list-style-type: none"> ➤ More detail provided in follow-up conversation. ➤ Traffic counts indicate 85th percentile speeds exceed speed limit. ➤ Recommendation: There is a high level of general support for this treatment. Incorporate this treatment into the LATM Plan.
<p>Woolwich Way</p>	<p>Splitter islands</p>	<p>80%</p>		<ul style="list-style-type: none"> ➤ Recommendation: There is a high level of general support for this treatment. Incorporate this treatment into the LATM Plan.



13 FUNDING & IMPLEMENTATION

Table 10 below outlines the treatments costs (advised by Council) and recommended priorities for each treatment recommended above. These costs are indicative only, and actual construction costs may vary, however they should be used as a guide for finding allocation in the Council's capital works program.

Installation of each treatment will likely need to be staged over one or more financial years as Council funding becomes available. Staging of works needs careful consideration to minimise the interim impact of treatments on untreated streets.

The table below identifies all relevant treatments, their approximate constructions costs and recommended priority of installation.

Table 10 Treatment Costing & Staging

Location	Proposal	Cost	Priority	
			Higher	Lower
Bronte Way	Coogee Drive Splitter Island	\$10,000	✓	
	Bend Splitter Island			
Bond Street	Road Hump	\$9,000	✓	
Conrad Terrace	Forbes Place Splitter Island	\$25,000	✓	
	Road Hump			
	Taylors Road Splitter Island			
Forbes Place	Bend Splitter Island	\$8,600		✓
George Street	Signage & L/M	\$2,000	✓	
Lucas Terrace	Bend Splitter Islands	\$11,500		✓
Kirribilli Blvd.	Ped. Connection	\$8,000		✓
Ultimo Walk	Ped. Connection	\$7,500		✓
Vaucluse Blvd	Signage & L/M	\$2,000	✓	
Woolwich Way	Splitter Islands	\$11,500		✓

14 MONITORING

An important, and often overlooked, facet of any LATM plan is the ongoing monitoring and evaluation of the LATM scheme.

The purposes and value of monitoring and evaluation include (*Main Roads WA 1990, p. 128*):

- To assess the scheme as a whole and the individual treatments against the adopted objectives – the primary technical measure of success
- To identify any undesirable impacts that might indicate modifications that could be made
- In stage implementation, to assess the impacts of each stage so that subsequent stages can be modified if necessary
- To provide objective information on impacts and effects for the community
- To provide information on the performance of the scheme and individual devices which may be useful in later projects or shared with other councils.

Once each treatment has been installed, it is recommended that a series of traffic and speed surveys be undertaken across key locations within the study area to establish the effectiveness of the proposed treatments, and identify any locations in which unwanted side-effects have occurred as a result of the LATM project.





Appendix A Traffic Calming Policy



	<h2>Traffic Calming Policy</h2>
Version No.	2:0 7 April 2011
Endorsement	Planning & Development December 2010 Executive December 2010 Policy Review Panel 8 March 2011
Authorisation	Council 7 April
Expiry date:	30 June 2013
Responsible officer:	Manager Engineering Services
Policy owner	Design and Traffic Coordinator

1. Purpose

To maintain amenity in local, residential access streets by controlling the speed of traffic and to provide guidance to Council officers when assessing the need for and implementing traffic calming devices.

2. Scope

This policy applies to Engineering Services officers when assessing resident requests for traffic calming.

3. Definitions

Word/Term	Definition
85th percentile	The 85th percentile speed is the speed at which 85% of traffic travel at or below, alternative it can be described as the speed at which 15% of traffic exceeds. For example, if a street has a daily volume of 200 vehicles and an 85th percentile speed of 57km/h, then 30 vehicles per day are exceeding 57km/h.
Traffic calming device	An engineering device used to reduce vehicle speed. Could be a speed hump, pinch point, roundabout etc.
Mean speed	The average speed of vehicles at a specified point on the street

4. Policy

This policy is concerned with the provision of traffic calming treatments on Council roads in urban areas. The types of roads subject to this policy are those in areas usually bounded by arterial roads, sub-arterial or collector roads.

4.1 Policy Objectives

The objectives of this policy are to maintain the amenity of local roads in residential areas by controlling the speed of traffic using these roads. Traffic calming removes speed variability

(especially reduction of higher speeds) and also reduces all vehicle speeds (mean speed), providing a safer environment for vehicle occupant, cyclists and pedestrians.

The implementation of traffic calming on residential streets can also have the following positive outcomes:

- Reduction in the volume of through traffic
- Reduction in unnecessary heavy vehicle traffic
- Reduced desire to use cars by increasing attractiveness of alternatives, e.g. footpaths, cycle path, public transport
- Improved driver discipline (for example vehicle position on turns and curves, observance of controls)
- Improved streetscapes.

The Policy will also provide Council Officers with an adopted procedure for assessment of requests for the implementation of traffic calming devices and the appropriate consultation process for the implementation of these devices.

4.2 Identifying the need for Traffic Calming

The need for Traffic Calming should be triggered by the speed of traffic exceeding acceptable limits. Traffic Calming can also be used to deter through traffic and reduced accidents, however these types of treatments are usually the result of Local Area Traffic Management studies or crash site investigations and therefore will not form part of this policy.

Council will implement traffic calming on streets where three conditions are met.

The road segment being investigated must be greater than 200 metres.

The road must service more than 35 houses/allotments. This is to ensure our traffic calming treatments are targeted at streets with through movement of vehicles. Streets without through movements such as courts have the same people driving on them every day and accordingly driver behaviour issues are often caused by just one or two drivers. These issues are best targeted with the hoon line and enforcement by the Melton Highway Patrol unit.

If the 85th percentile speed exceeds 5km/h above the posted or default speed limit. The 85th percentile speed is the speed at which 85% of traffic travel at or below, alternatively it can be described as the speed at which 15% of traffic exceeds. For example, if a street has a daily volume of 200 vehicles and an 85th percentile speed of 57km/h, then 30 vehicles per day are exceeding 57km/h.

See Appendix 1 : Traffic Calming Device Needs Assessment

4.3 Consultation

If a street is deemed to require the implementation of traffic calming possible treatments and an estimated cost will be added to Council's Capital Works Program for budget consideration. When funding for the treatment is received Council Officers will compile a shortlist of traffic calming devices that would be suitable for implementation at the specification location. This list will be derived from those provided in the AustRoads Guide to Traffic Engineering Practice – Local Area Traffic Management.

All residents within the street will be surveyed to determine the preferred traffic calming devices. Council Officers will then prepare a detailed design of the proposed treatment, incorporating the devices preferred by the residents. This detailed design will then be provided to all residents within the street for comment. Council Officers will consider these comments and respond accordingly before finalising the design.

(see Appendix 2: Consultation Process)

If treatments are proposed on Bus Routes consent from the Department of Infrastructure and the bus operator is required. Emergency Services operators such as Victoria Police, CFA, Ambulance and SES will also be advised of the proposal.

5. Responsibility

5.1	Design & Traffic Coordinator
	<ul style="list-style-type: none"> Responsible for administering and ensuring this policy is complied with.
5.2	Engineering Services officers
	<ul style="list-style-type: none"> Applying this policy when assessing resident requests for traffic calming

6. References and links to other documents

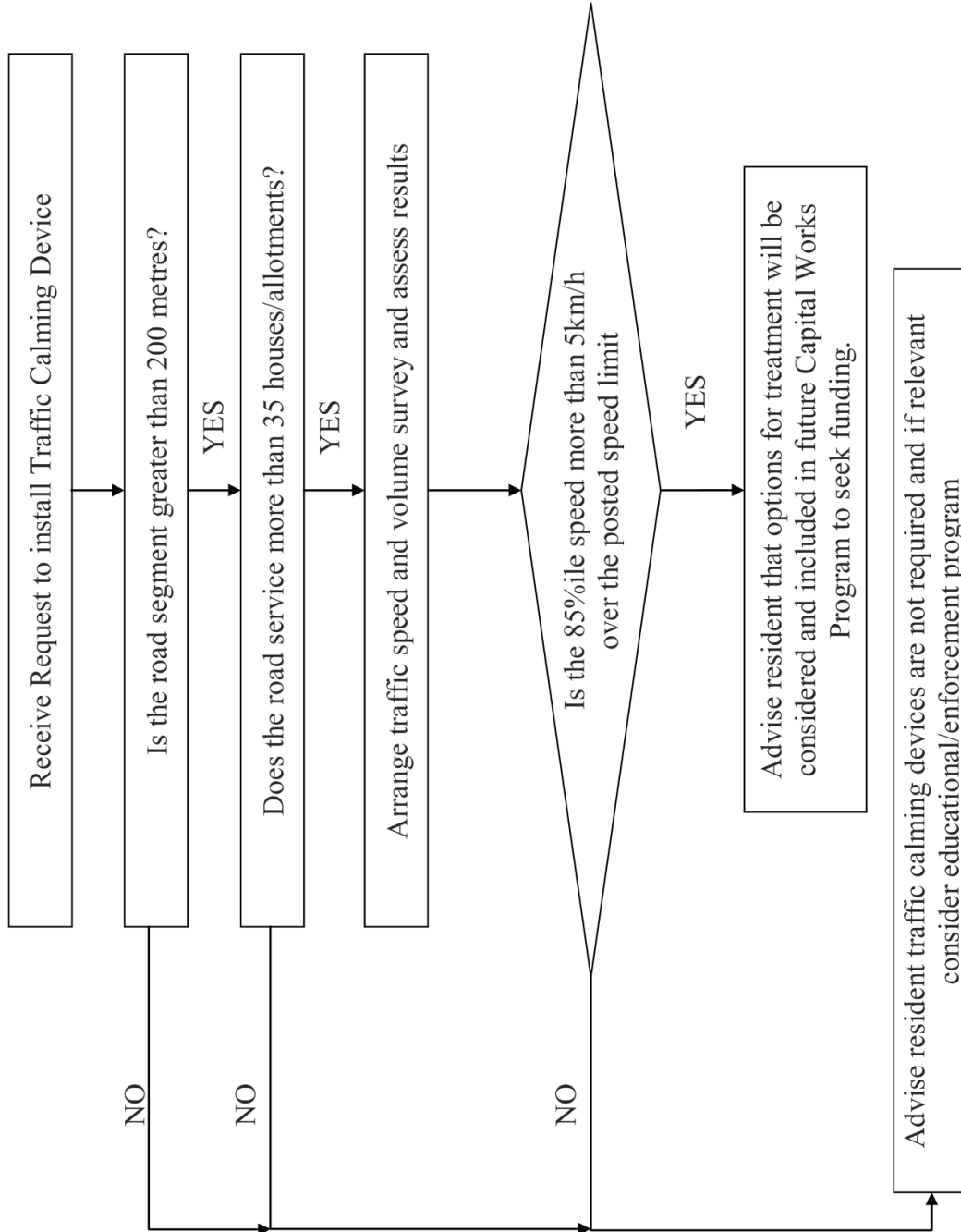
Name	Location
Austrroads – Local Area Traffic Calming	www.austrroads.com.au/.../5_LOCAL_AREA_TRAFFIC_MANAGEMENT_SCHEMES.pdf
VicRoads – Traffic Engineering Manual Volume 2	http://www.vicroads.vic.gov.au/Home/Moreinfoandservices/RoadManagementAndDesign/DesignStandardsManualsNotes/TrafficEngineeringManual/Vol2SignsAndMarkings.htm

7. Appendices

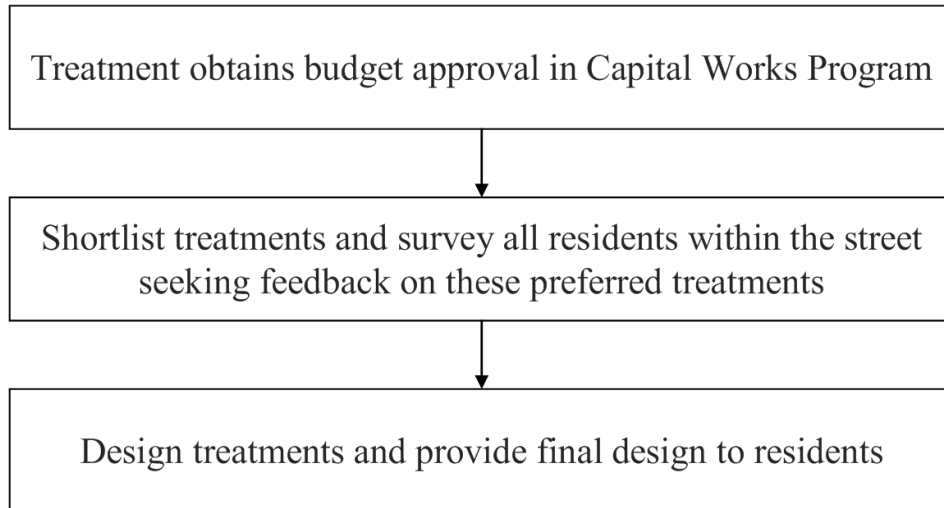
Appendix 1: Traffic Calming Device Needs Assessment

Appendix 2: Consultation Process

Appendix 1: Traffic Calming Device Needs Assessment



Appendix 2: Consultation Process





Appendix B Traffic Survey Results



AUTOMATIC COUNT SUMMARY

Street Name :	Vauluse Blvd	Location :	Btw Hume Drive and Prymont Terrace
Suburb :	Taylors Hill	Start Date :	00:00 Wed 03 Feb 16
Metrocount ID :	N583, Q588	Finish Date :	00:00 Wed 10 Feb 16
Site ID Number :	811	Speed Zone :	50 km/h
Prepared By :	Nationwide Traffic Surveys P/L	Email :	admin@nts-surveys.com.au

	GPS information	Direction of Travel		
		Two-Way	Northbound	Southbound
Traffic Volume : (Vehicles/Day)	Lat 37° 42' 41.11 South Long 144° 44' 38.52 East	1,652	950	702
Weekday	Weekdays Average 7 Day Average	1,577	906	671
Peak hour starts	8:00 AM 15:00 PM	186	135	51
Speeds : (Km/Hr)	85th Percentile Average	54	87	81
Classification % :	Light Vehicles up to 5.5m	95.7%	95.7%	95.7%

Location

GPS Information
(Latitude, Longitude) -37.711420, 144.744034

[Load Google Map \(Internet Required\)](#)

AUTOMATIC COUNT SUMMARY

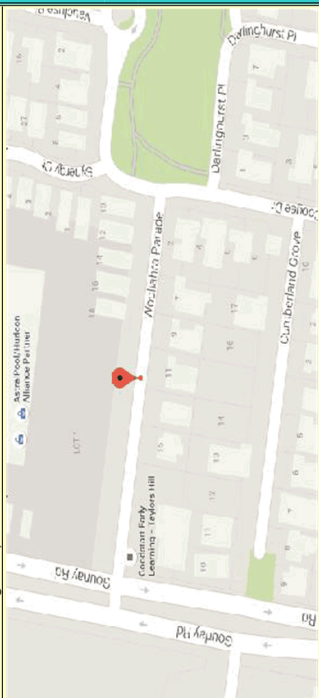
Street Name :	Woolahra Pde	Location :	Btw Gourlay Rd and Coogee Drive
Suburb :	Taylors Hill	Start Date :	06:00 Wed 03 Feb 16
Metrocount ID :	G519	Finish Date :	00:00 Wed 10 Feb 16
Site ID Number :	812	Speed Zone :	50 km/h
Prepared By :	Nationwide Traffic Surveys P/L	Email :	admin@nts-surveys.com.au

	Lat	Long	Direction of Travel	
			Two-Way	Westbound
Traffic Volume : (Vehicles/Day)	Weekdays Average		655	274
	7 Day Average		622	261
Weekday Peak hour starts	AM	8:00	68	18
	PM	17:00	54	27
Speeds : (Km/Hr)	85th Percentile		50	49
	Average		41	40
Classification % :	Light Vehicles up to 5.5m		95.3%	95.6%
				95.1%

Location

GPS Information
(Latitude, Longitude) -37.712529, 144.741531

[Load Google Map \(Internet Required\)](#)



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AUTOMATIC COUNT SUMMARY

Street Name :	Bronte Way	Location :	Outside No. 12
Suburb :	Taylors Hill	Start Date :	00:00 Wed 03 Feb 16
Metrocount ID	JT00	Finish Date :	00:00 Wed 10 Feb 16
Site ID Number :	813	Speed Zone :	50 km/h
Prepared By :	Nationwide Traffic Surveys P/L	Email :	admin@nts-surveys.com.au

	Direction of Travel	
	Northbound	Southbound
Traffic Volume :		
(Vehicles/Day)	227	92
	223	89
Weekday	26	7
Peak hour starts	21	9
Speeds :		
(Km/Hr)	49	49
	39	39
Classification % :	95.5%	96.2%
		94.5%

Location

GPS Information
(Latitude, Longitude) -37.714980, 144.743219

[Load Google Map \(Internet Required\)](#)



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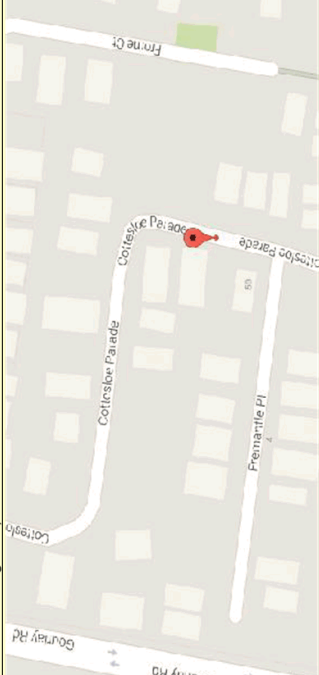
AUTOMATIC COUNT SUMMARY

Street Name :	Cottlesloe Pde	Location :	Just North of Fremantle Place
Suburb :	Taylors Hill	Start Date :	00:00 Wed 03 Feb 16
Metrocount ID :	B043	Finish Date :	00:00 Wed 10 Feb 16
Site ID Number :	814	Speed Zone :	50 km/h
Prepared By :	Nationwide Traffic Surveys P/L Email: admin@nts-surveys.com.au		

	Lat	Long	Direction of Travel		
			Two-Way	Northbound	Southbound
Traffic Volume : (Vehicles/Day)	Weekdays Average		245	151	94
	7 Day Average		232	142	90
Weekday	AM	7:00	18	6	12
Peak hour starts	PM	16:00	21	17	4
Speeds : (Km/Hr)	85th Percentile		47	47	46
	Average		37	37	38
Classification % :	Light Vehicles up to 5.5m		93.6%	95.1%	91.3%

Location

GPS Information
[Load Google Map \(Internet Required\)](#)
 (Latitude, Longitude) -37.718853, 144.741583



AUTOMATIC COUNT SUMMARY

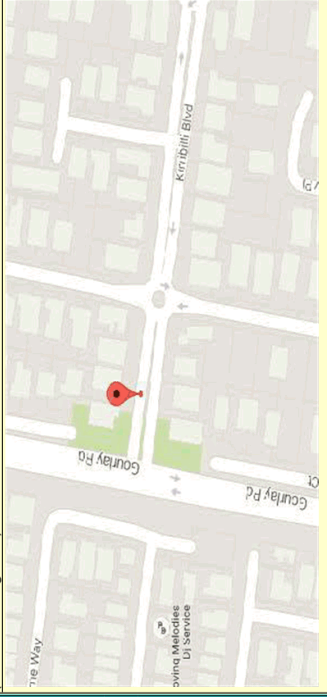
Street Name :	Kirribilli Blvd	Location :	Btw Gourlay Rd and Coogee Drive
Suburb :	Taylors Hill	Start Date :	00:00 Wed 03 Feb 16
Metrocount ID :	EY43, Q701	Finish Date :	00:00 Wed 10 Feb 16
Site ID Number :	815	Speed Zone :	50 km/h
Prepared By :	Nationwide Traffic Surveys P/L	Email :	admin@nts-surveys.com.au

GPS information		Lat	37° 42' 55.94 South
		Long	144° 44' 24.90 East
Traffic Volume : (Vehicles/Day)		Weekdays Average	
		7 Day Average	
Weekday	AM	8:00	
Peak hour starts	PM	15:00	
Speeds : (Km/Hr)		85th Percentile	
		Average	
Classification % :		Light Vehicles up to 5.5m	

Location

GPS Information
(Latitude, Longitude) -37.715546, 144.740249

[Load Google Map \(Internet Required\)](#)



AUTOMATIC COUNT SUMMARY

Street Name :	George St	Location :	Btw Cronulla Way and Edgewell Close
Suburb :	Taylors Hill	Start Date :	00:00 Thu 15 Oct 15
Metrocount ID :	E025	Finish Date :	23:00 Wed 21 Oct 15
Site ID Number :	781	Speed Zone :	50 km/h
Prepared By :	Nationwide Traffic Surveys P/L	Email :	admin@nts-surveys.com.au

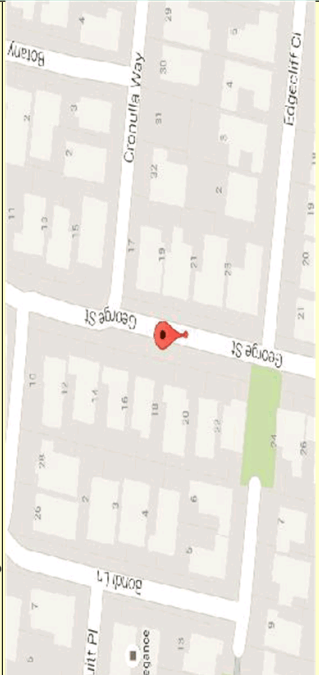
GPS information	Lat	37° 42' 46.26 South
	Long	144° 44' 52.54 East
Traffic Volume : (Vehicles/Day)	Weekdays Average	1,324
	7 Day Average	1,306
Weekday	AM	126
	PM	129
Peak hour starts	85th Percentile	46
	Average	37
Speeds : (Km/Hr)	Light Vehicles up to 5.5m	96.0%
		35
Classification % :		97.9%
		38

Direction of Travel		
Two-Way	Northbound	Southbound
1,324	660	664
1,306	655	652
126	84	42
129	49	80
46	45	47
37	35	38
96.0%	97.9%	94.0%

Location

GPS Information
(Latitude, Longitude-37.712850, 144.747928)

[Load Google Map \(Internet Required\)](#)



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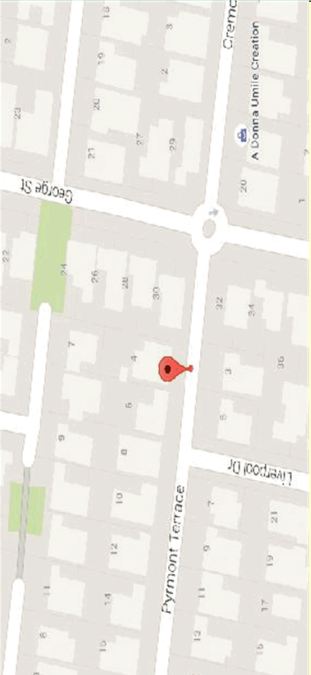
Street Name :	Pymont Tce	Location :	at #13
Suburb :	Taylors Hill	Start Date :	00:00 Thu 15 Oct 15
Metrocount ID :	AJ20	Finish Date :	00:00 Thu 22 Oct 15
Site ID Number :	782	Speed Zone :	50 km/h
Prepared By :	Nationwide Traffic Surveys P/L	Email :	admin@nts-surveys.com.au

GPS information		Lat	37° 42' 50.29 South	
		Long	144° 44' 49.35 East	
Traffic Volume : (Vehicles/Day)	Weekdays Average	Two-Way	Eastbound	Westbound
	7 Day Average	490	249	241
Weekday	8:00	477	244	233
Peak hour starts	AM	64	30	34
	PM	59	36	23
Speeds : (Km/Hr)	85th Percentile	52	52	52
	Average	43	43	43
Classification % :	Light Vehicles up to 5.5m	96.3%	96.6%	96.0%

Location

GPS Information
(Latitude, Longitude-37.713979, 144.747042)

[Load Google Map \(Internet Required\)](#)



AUTOMATIC COUNT SUMMARY

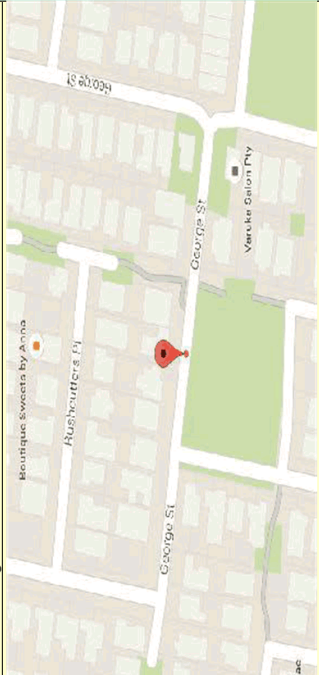
Street Name :	George St	Location :	at #49
Suburb :	Taylors Hill	Start Date :	00:00 Thu 15 Oct 15
Metrocount ID :	N491	Finish Date :	00:00 Thu 22 Oct 15
Site ID Number :	783	Speed Zone :	50 km/h
Prepared By :	Nationwide Traffic Surveys P/L	Email :	admin@nts-surveys.com.au

	Lat	Long	Direction of Travel	
			Two-Way	Westbound
Traffic Volume : (Vehicles/Day)	Weekdays Average		1,145	585
	7 Day Average		1,113	569
Weekday	AM	8:00	137	88
Peak hour starts	PM	15:00	123	61
Speeds : (Km/Hr)	85th Percentile		53	53
	Average		45	45
Classification % :	Light Vehicles up to 5.5m		96.8%	97.6%
				96.0%

Location

GPS Information
(Latitude, Longitude - 37.715819, 144.748860)

[Load Google Map \(Internet Required\)](#)



AUTOMATIC COUNT SUMMARY

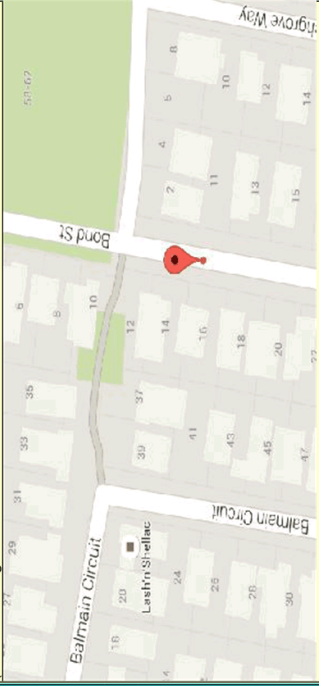
Street Name :	Bond St	Location :	at #11
Suburb :	Taylors Hill	Start Date :	01:00 Thu 15 Oct 15
Metrocount ID :	Q651	Finish Date :	00:00 Thu 22 Oct 15
Site ID Number :	784	Speed Zone :	50 km/h
Prepared By :	Nationwide Traffic Surveys P/L	Email :	admin@nts-surveys.com.au

GPS information	Lat	Long	Direction of Travel		
			Two-Way	Northbound	Southbound
Traffic Volume : (Vehicles/Day)	Weekdays Average		676	341	335
	7 Day Average		672	337	335
Weekday	AM	8:00	65	46	19
Peak hour starts	PM	18:00	64	24	40
Speeds : (Km/Hr)	85th Percentile		57	57	57
	Average		48	48	48
Classification % :	Light Vehicles up to 5.5m		96.9%	96.6%	97.2%

Location

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(Latitude, Longitude: 37.716875, 144.748062)



AUTOMATIC COUNT SUMMARY

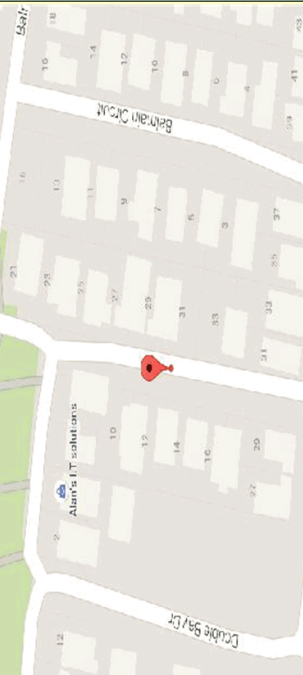
Street Name :	Woolwich PI	Location :	at #31
Suburb :	Taylors Hill	Start Date :	00:00 Thu 15 Oct 15
Metrocount ID :	G646	Finish Date :	21:00 Wed 21 Oct 15
Site ID Number :	785	Speed Zone :	50 km/h
Prepared By :	Nationwide Traffic Surveys P/L	Email :	admin@nts-surveys.com.au

GPS information		Lat	37° 43' 1.63 South	
		Long	144° 44' 42.06 East	
Traffic Volume : (Vehicles/Day)	Weekdays Average	Two-Way	Northbound	Southbound
	7 Day Average	81	29	52
Weekday	8:00	10	3	7
Peak hour starts	PM	11	4	6
Speeds : (Km/Hr)	85th Percentile	47	45	49
	Average	37	34	39
Classification % :	Light Vehicles up to 5.5m	94.3%	96.6%	93.1%

Location

[Load Google Map \(Internet Required\)](#)

(Latitude, Longitude-37.717123, 144.745017)



AUTOMATIC COUNT SUMMARY

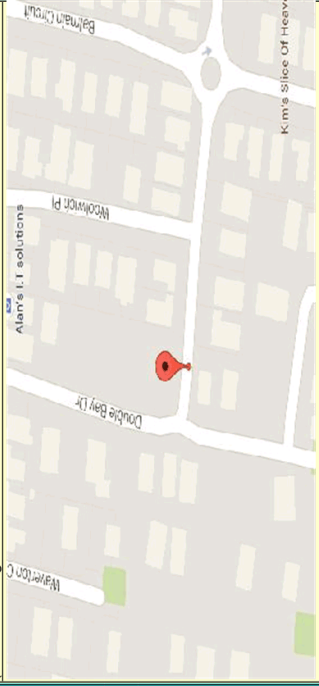
Street Name :	Double Bay Dr	Location :	at #19
Suburb :	Taylors Hill	Start Date :	03:00 Thu 15 Oct 15
Metrocount ID :	AH96	Finish Date :	00:00 Thu 22 Oct 15
Site ID Number :	786	Speed Zone :	50 km/h
Prepared By :	Nationwide Traffic Surveys P/L	Email :	admin@nts-surveys.com.au

GPS information	Lat	Long	Direction of Travel		
			Two-Way	Northbound	Southbound
Traffic Volume : (Vehicles/Day)	Weekdays Average		559	277	282
	7 Day Average		533	266	267
Weekday	AM	8:00	66	41	25
	PM	15:00	59	25	34
Speeds : (Km/Hr)	85th Percentile		49	49	49
	Average		41	41	41
Classification % :	Light Vehicles up to 5.5m		95.1%	95.4%	94.8%

Location

[Load Google Map \(Internet Required\)](#)

(Latitude, Longitude)-37.717870, 144.744165



AUTOMATIC COUNT SUMMARY

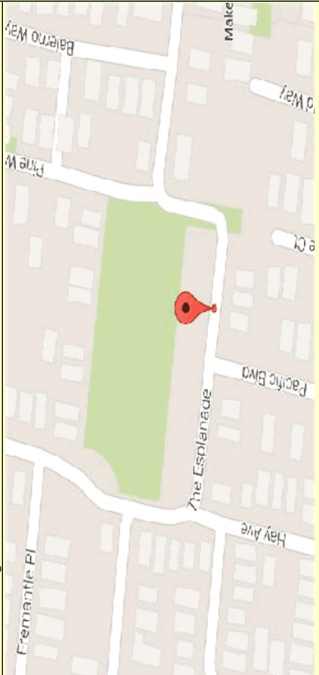
Street Name :	The Esplanade	Location :	Just West of Pacific Blvd
Suburb :	Taylors Hill	Start Date :	00:00 Thu 15 Oct 15
Metrocount ID :	Q701	Finish Date :	23:00 Wed 21 Oct 15
Site ID Number :	787	Speed Zone :	50 km/h
Prepared By :	Nationwide Traffic Surveys P/L Email: admin@nts-surveys.com.au		

	Lat	Long	Direction of Travel		
			Two-Way	Eastbound	Westbound
Traffic Volume : (Vehicles/Day)	Weekdays Average		519	247	273
	7 Day Average		516	242	274
Weekday	8:00		46	29	17
Peak hour starts	PM 16:00		48	19	29
Speeds : (Km/Hr)	85th Percentile		42	42	44
	Average		36	36	36
Classification % :	Light Vehicles up to 5.5m		93.7%	94.3%	93.1%

Location

GPS Information
(Latitude, Longitude-37.720675, 144.742563)

[Load Google Map \(Internet Required\)](#)



AUTOMATIC COUNT SUMMARY

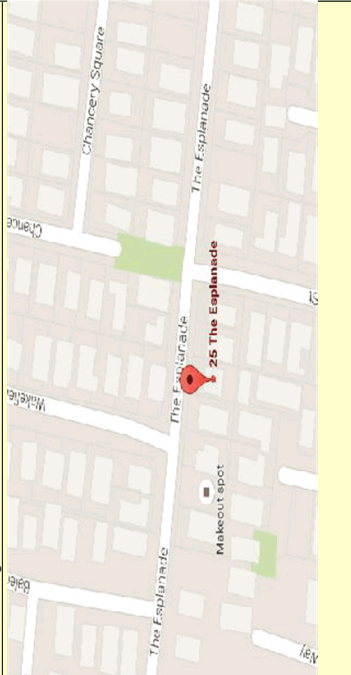
Street Name :	The Esplanade	Location :	at #25
Suburb :	Taylors Hill	Start Date :	00:00 Thu 15 Oct 15
Metrocount ID :	B032	Finish Date :	00:00 Thu 22 Oct 15
Site ID Number :	788	Speed Zone :	50 km/h
Prepared By :	Nationwide Traffic Surveys P/L Email: admin@nts-surveys.com.au		

	Lat	Long	Direction of Travel	
			Two-Way	Westbound
Traffic Volume : (Vehicles/Day)	Weekdays Average		656	345
	7 Day Average		671	321
Weekday	AM	8:00	54	35
Peak hour starts	PM	15:00	62	29
Speeds : (Km/Hr)	85th Percentile		51	50
	Average		42	40
Classification % :	Light Vehicles up to 5.5m		95.8%	96.4%
				95.1%

Location

GPS Information
(Latitude, Longitude - 37.720444, 144.745642)

[Load Google Map \(Internet Required\)](#)



AUTOMATIC COUNT SUMMARY

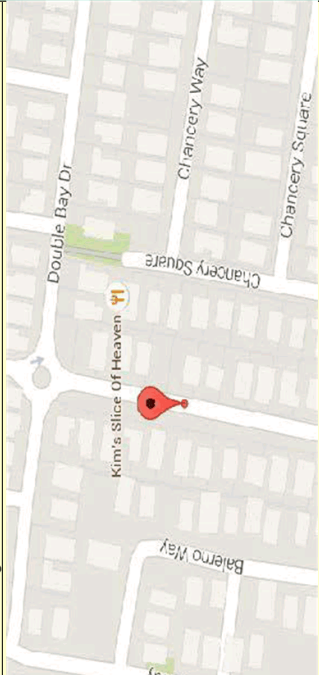
Street Name :	Wakefield Rd	Location :	at #11
Suburb :	Taylors Hill	Start Date :	00:00 Thu 15 Oct 15
Metrocount ID :	AJ16	Finish Date :	00:00 Thu 22 Oct 15
Site ID Number :	789	Speed Zone :	50 km/h
Prepared By :	Nationwide Traffic Surveys P/L	Email :	admin@nts-surveys.com.au

GPS information	Lat	Long	Direction of Travel	
			Two-Way	Southbound
Traffic Volume : (Vehicles/Day)	Weekdays Average		397	214
	7 Day Average		408	218
Weekday	AM	8:00	34	22
Peak hour starts	PM	15:00	42	19
Speeds : (Km/Hr)	85th Percentile		55	55
	Average		45	45
Classification % :	Light Vehicles up to 5.5m		95.4%	95.3%
				95.4%

Location

GPS Information
(Latitude, Longitude-37.719048, 144.745587)

[Load Google Map \(Internet Required\)](#)



AUTOMATIC COUNT SUMMARY

Street Name :	Conrad Terrace	Location :	at #14
Suburb :	Taylors Hill	Start Date :	00:00 Thu 15 Oct 15
Metrocount ID :	P707	Finish Date :	00:00 Thu 22 Oct 15
Site ID Number :	790	Speed Zone :	50 km/h
Prepared By :	Nationwide Traffic Surveys P/L	Email :	admin@nts-surveys.com.au

GPS information		Lat	37° 43' 20.71 South	
		Long	144° 44' 56.53 East	
Traffic Volume : (Vehicles/Day)	Weekdays Average	Two-Way	Northbound	Southbound
	7 Day Average	2,430	1,178	1,252
Weekday	8:00	2,452	1,193	1,258
Peak hour starts	AM	180	44	136
	PM	205	129	76
Speeds : (Km/Hr)	85th Percentile	54	54	54
	Average	46	46	47
Classification % :	Light Vehicles up to 5.5m	97.9%	98.0%	97.7%

Location

GPS Information
(Latitude, Longitude -37.722424, 144.749037)

[Load Google Map \(Internet Required\)](#)

AUTOMATIC COUNT SUMMARY

Street Name :	Lucas Terrace	Location :	at #45
Suburb :	Taylors Hill	Start Date :	00:00 Thu 15 Oct 15
Metrocount ID :	T883	Finish Date :	20:00 Wed 21 Oct 15
Site ID Number :	791	Speed Zone :	50 km/h
Prepared By :	Nationwide Traffic Surveys P/L	Email :	admin@nts-surveys.com.au

GPS information	Lat	Long	Direction of Travel	
			Two-Way	Westbound
Traffic Volume : (Vehicles/Day)	37° 43' 9.91 South	144° 45' 1.52 East	Weekdays Average	238
			7 Day Average	240
Weekday	AM	8:00	36	16
			PM	15:00
Speeds : (Km/Hr)	85th Percentile	Average		
			40	39
Classification % :	Light Vehicles up to 5.5m		95.5%	97.5%
				93.6%

Location

[Load Google Map \(Internet Required\)](#)

(Latitude, Longitude: -37.719423, 144.750421)

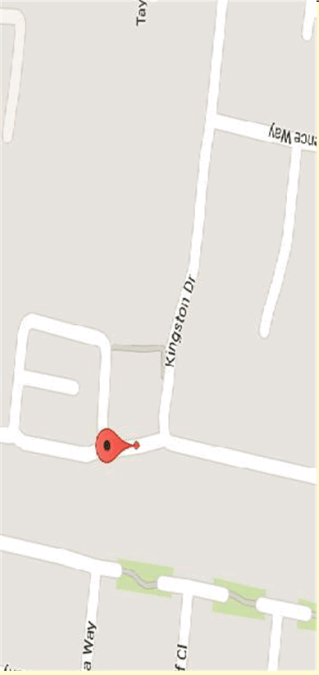
AUTOMATIC COUNT SUMMARY

Street Name :	Eloura Circuit	Location :	Just North of Kingston Dr
Suburb :	Taylors Hill	Start Date :	00:00 Thu 15 Oct 15
Metrocount ID :	G696	Finish Date :	00:00 Thu 22 Oct 15
Site ID Number :	792	Speed Zone :	50 km/h
Prepared By :	Nationwide Traffic Surveys P/L Email: admin@nts-surveys.com.au		

	Lat	Long	Direction of Travel		
			Two-Way	Northbound	Southbound
Traffic Volume : (Vehicles/Day)	Weekdays Average		413	215	198
	7 Day Average		398	209	189
Weekday		8:00	33	11	22
Peak hour starts		PM 18:00	41	25	16
Speeds : (Km/Hr)	85th Percentile		27	28	24
	Average		22	23	20
Classification % :	Light Vehicles up to 5.5m		93.2%	98.4%	87.5%

Location

Load Google Map (Internet Required)



GPS Information
(Latitude, Longitude) -37.713046, 144.750776



Appendix C Questionnaire Survey No. 1



27 October 2015

[PostStreet]

[SUBURB], [STATE], [PCODE]

Taylors Hill West

Local Area Traffic Management (LATM) Study

Dear Resident,

The City of Melton has engaged **onemilegrid** a specialist traffic and transport engineering consultancy to undertake a review of the local traffic management conditions in your neighbourhood; Taylors Hill West through the preparation of a Local Area Traffic Management (LATM) Study.

The Taylors Hill West area is bound by Hume Drive to the north, Calder Park Drive to the east, Taylors Road to the south and Gourlay Road to the west as shown in the map provided overleaf. It is noted that the boundary roads named are not included in this study, however if there are concerns about conditions along these roads, please do not hesitate to contact Council directly.

Council is committed to understanding concerns and address key traffic issues that are important to local residents within the study area. To assist with the study and ensure that your concerns are heard, we request that you complete the attached questionnaire by **Monday 30 November 2015**. The questionnaire can be completed either: -

- online at <https://www.surveymonkey.com/r/9HJKBGW>
- submitted via post using the provided reply paid envelope (no stamp required)
- or email to latm@onemilegrid.com.au

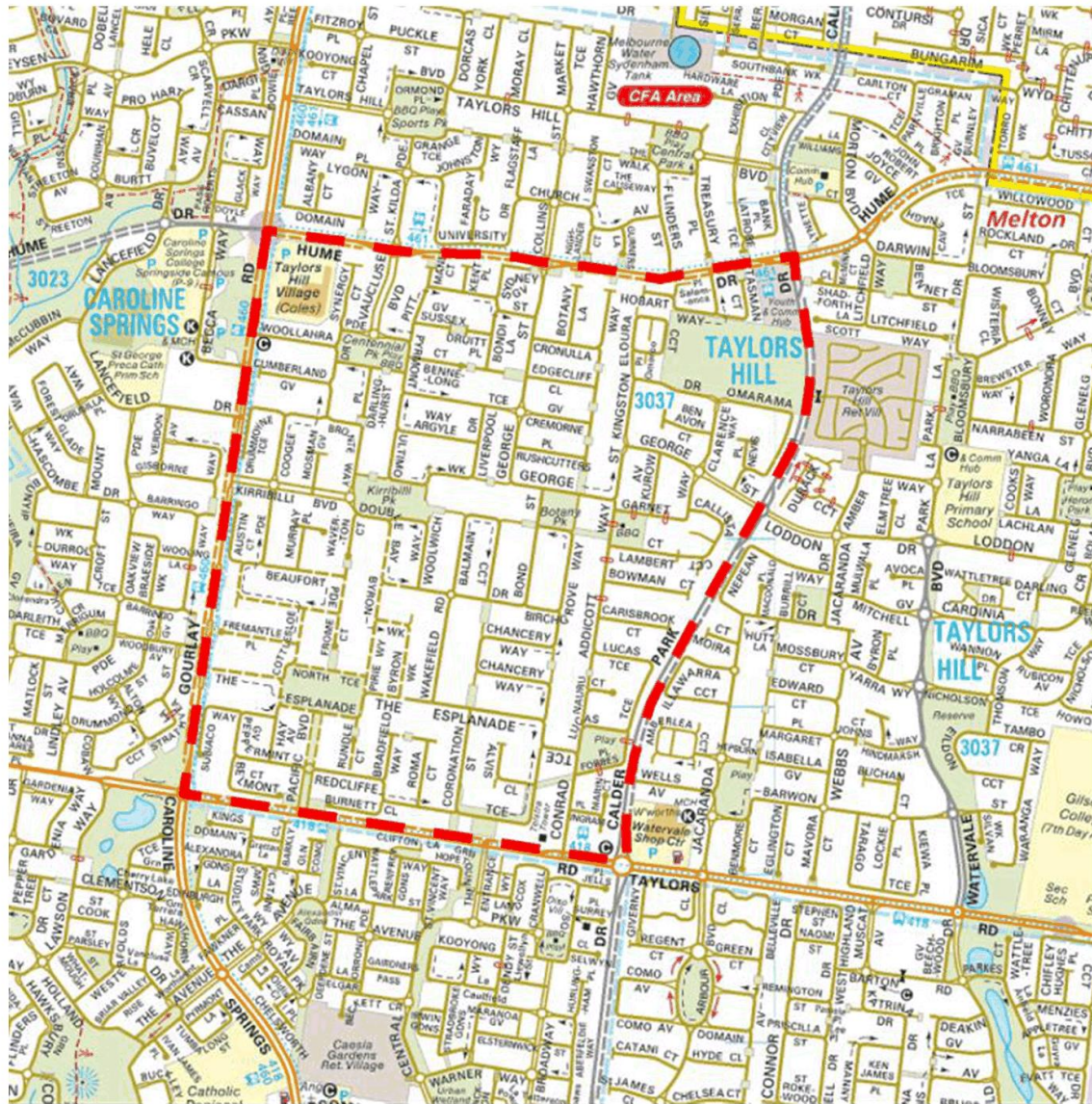
A key part to this study is the establishment of a Traffic Study Group which will comprise of community representatives, Ward Councillors, Council officers, consultants from **onemilegrid** and representatives from Victoria Police. Council are seeking interested residents to act as a contact for the local community and assist in the preparation of the LATM. The Traffic Study Group will meet on three occasions in total from December 2015 to February 2016, with residents encouraged to be involved collaboratively within the team. If you are interested in joining the Traffic Study Group, please tick the appropriate nomination box within the questionnaire form.

If you have any questions, please do not hesitate to contact James Dear at **onemilegrid** on (03) 9939 8250 or Tom Lay at Council on (03) 9747 7200.

We thank you for your cooperation.

onemilegrid and Melton City Council

Taylors Hill West Local Area Traffic Management Study Area



Copyright Melway Publishing

Study Area does not include Hume Drive to the north, Calder Park Drive to the east, Taylors Road to the south and Gourlay Road.



	<h2 style="margin: 0;">Taylors Hill LATM Study</h2>	<h2 style="margin: 0;">Questionnaire Survey</h2>
---	---	--

Please complete and return this questionnaire by **Monday 30th November 2015**. A reply-paid envelope has been provided for your convenience (i.e. no stamp required). Alternatively, this form can be completed and submitted online <https://www.surveymonkey.com/r/9HJKBGW> or emailed to latm@onemilegrid.com.au

Contact Details

Name:

Email:

Address:

Phone:

Yes, I would like to nominate myself to be a community representative on the Traffic Study Group.

1. Traffic problems in your street

(please cross the box along each row which best applies)

	No Problem	Minor Problem	Major Problem
Traffic Speed			
Traffic Volume			
Heavy Vehicles			
Bicycle Facilities			
Irresponsible Driving			
Street Lighting			
Parking			
Other (specify)			

2. Do any of these problems occur at a particular time of day?

(please cross the box along each row which best applies)

	All Times	Day Time	Peak Hours	Night Time
Traffic Speed				
Traffic Volume				
Heavy Vehicles				
Bicycle Facilities				
Irresponsible Driving				
Street Lighting				
Parking				
Other (specify)				

3. Traffic problems in the whole study area

What are the biggest problems in any part of the whole study area? List the location and the nature of the problem.

- a) _____
- _____
- b) _____
- _____
- c) _____
- _____

4. Suggestions to solve the traffic problems?

a) In your street

b) In the whole study area

5. Please state any other comments or concerns you may have



Appendix D Traffic Study Group Agenda & Minutes



Taylors Hill West LATM Study  onemilegrid

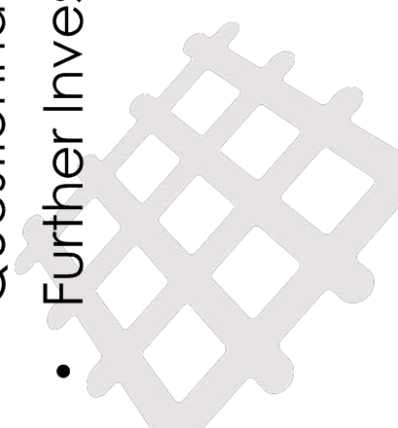
Traffic Study Group – Meeting 1

James Dear & Valentine Gnanakone



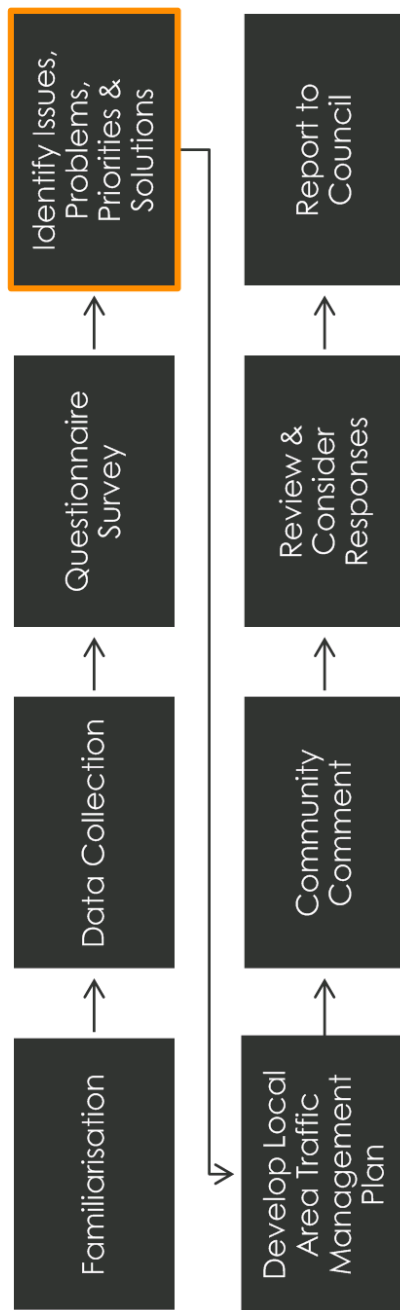
Agenda

- LATM Study Overview
- LATM Explained
- Traffic Study Group
- Existing Conditions Review
- Questionnaire Survey
- Further Investigation





LATM Study Overview



Traffic Study Group



- Details within Traffic Study Group Terms of Reference
- Three meetings – Jan, Feb & March
- Your role:
 - Provide local information to assist with key issue identification
 - Provide feedback on LATM plans
 - Represent the interests of residents and businesses within the study area
 - Act as a contact person for residents and businesses within the study area

Understanding LATM

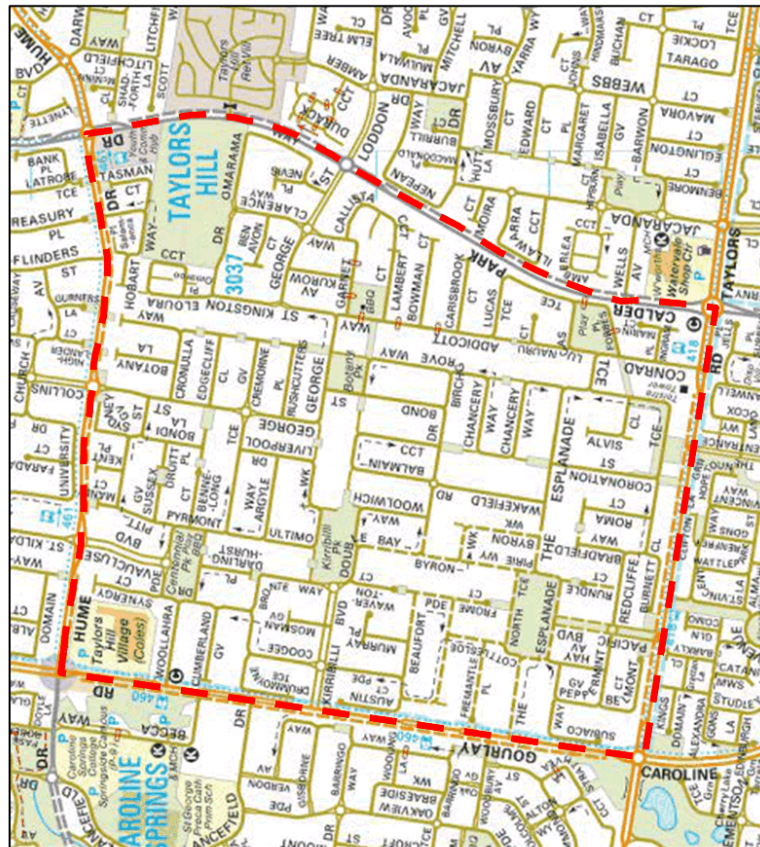


- Planning and management of road usage in a defined area. An LATM Plan is concerned with increasing the safety of drivers, pedestrians and cyclists
- Physical devices, streetscaping treatments and other measures to influence vehicle operation and driver behaviour, in order to create safer and more pleasant streets in local areas

Study Area



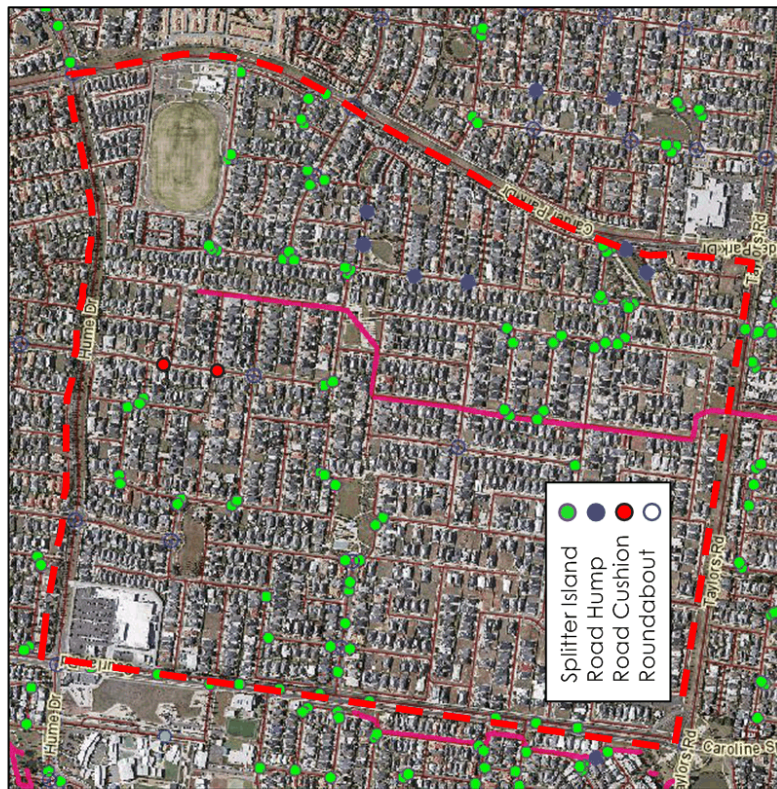
- Bounded by:
 - Hume Drive
 - Calder Park Drive
 - Taylors Road
 - Gourlay Road
- Includes:
 - 1,850 residences
 - 82 local streets





Existing Conditions Review – Existing LATM

- Splitter Islands
- Modified T-Intersection
- Road Humps
- Road Cushion
- Roundabout



Existing Conditions Review – Existing LATM 

Modified T-Intersection



Splitter Island



Existing Conditions Review – Existing LATM 

Flat Top Road Hump

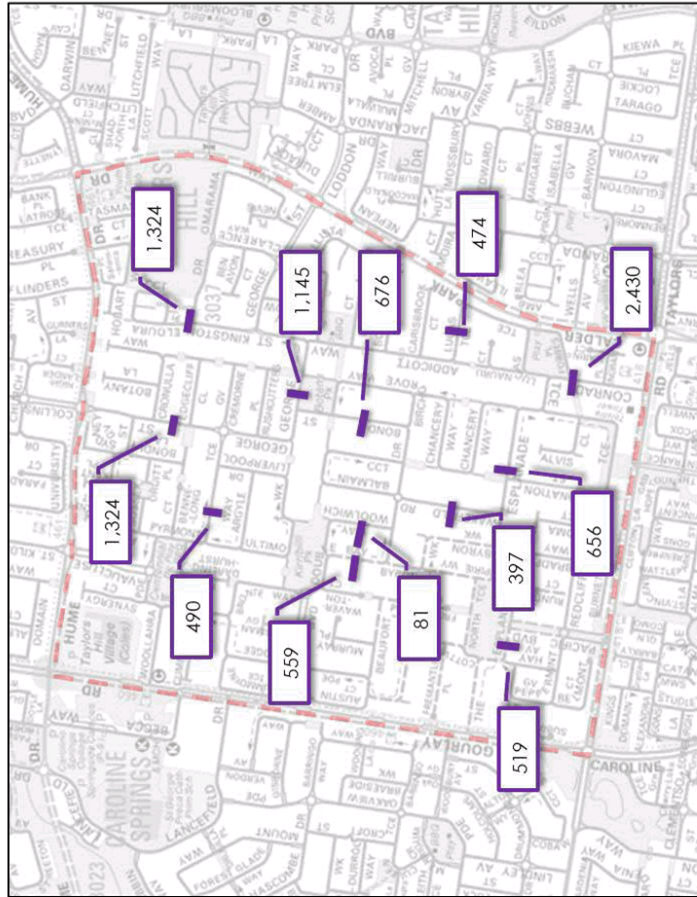


Speed Cushion



Existing Conditions Review – Traffic Volumes 

- Traffic counters placed in 12 locations between Thursday 15th and Thursday 22nd October, 2015
- Gathered daily traffic volumes, speed and vehicle types
- Location guided by resident complaints in Council database



Existing Conditions Review



Street	Location	Daily Traffic Volumes (Weekday Average)	% of Daily Volumes		85 th Percentile Speed (km/hr)
			AM Peak	PM Peak	
George Street	Btw Cronulla Way & Edgecliff Close	1,324	9.5	9.7	46
Pymont Terrace	Outside No. 13	490	13.1	12.4	52
George Street	Outside No. 49	1,145	12.0	10.7	53
Bond Street	Outside No. 16	676	9.6	9.5	57
Woolwich Place	Outside No. 31	81	12.3	13.6	47
Double Bay Drive	Outside No. 19	559	11.8	10.6	49
The Esplanade	Just West of Pacific Blvd	519	8.9	9.2	42
The Esplanade	Outside No. 25	656	8.2	9.5	51
Wakefield Road	Outside No. 11	397	8.6	10.6	55
Conrad Terrace	Outside No. 14	2,430	7.4	8.4	54
Lucas Terrace	Outside No. 45	474	7.6	8.6	48
Eloura Circuit	North of Kingston Drive	413	8.0	9.9	27

Traffic Issues



- Speed
 - Bond Street 57 km/h
 - Wakefield Road 55 km/h
 - Conrad Terrace 54 km/h
 - George Street 53 km/h
 - Pymont Terrace 52 km/h
 - The Esplanade 51 km/h
 - Double Bay Drive 49 km/h
 - Lucas Terrace 48 km/h
 - Woolwich Place 47 km/h
 - George Street 46 km/h
- Road Network Design
 - The Esplanade 400m
 - Bond Street 270m
 - Pirie Way 260m
 - Wakefield Road 250m
 - Conrad Terrace 240m
 - Pymont Terrace 240m
 - Coronation Street 240m

Questionnaire Survey - Overview



- 1,850 questionnaire surveys distributed to residents
- 143 responses (8% response rate)

Problems within the whole study area

- Major
 - Irresponsible Driving
 - Parking
 - Road Width & Lanes
 - Speed
 - Traffic Congestion
- Minor
 - Intersection Design
 - Crossings
 - Cutting Corners
 - Detouring
 - Lighting
 - Safety



Questionnaire Survey – Results

Problems in your street

	Speed	Volumes	Heavy Vehicles	Bicycle Facilities	Irresponsible Driving	Street Lighting	Parking
No Problem	41%	57%	66%	78%	33%	71%	47%
Minor Problem	35%	17%	26%	12%	33%	21%	27%
Major Problem	20%	24%	9%	10%	33%	7%	25%

Questionnaire Survey – Major Issues



- Speed
 - Bronte Way
 - Conrad Terrace
 - Cottesloe Parade
 - Pirie Way
 - Pymont Terrace
 - Vauclose Boulevard
 - Woolahara Parade
- Traffic Volumes
 - Bronte Way
 - Conrad Terrace
 - Coogee Drive
 - Cottesloe Parade
 - Devenport Court
 - Marin Court
 - Pymont Terrace
 - Vauclose Boulevard

Questionnaire Survey – Results

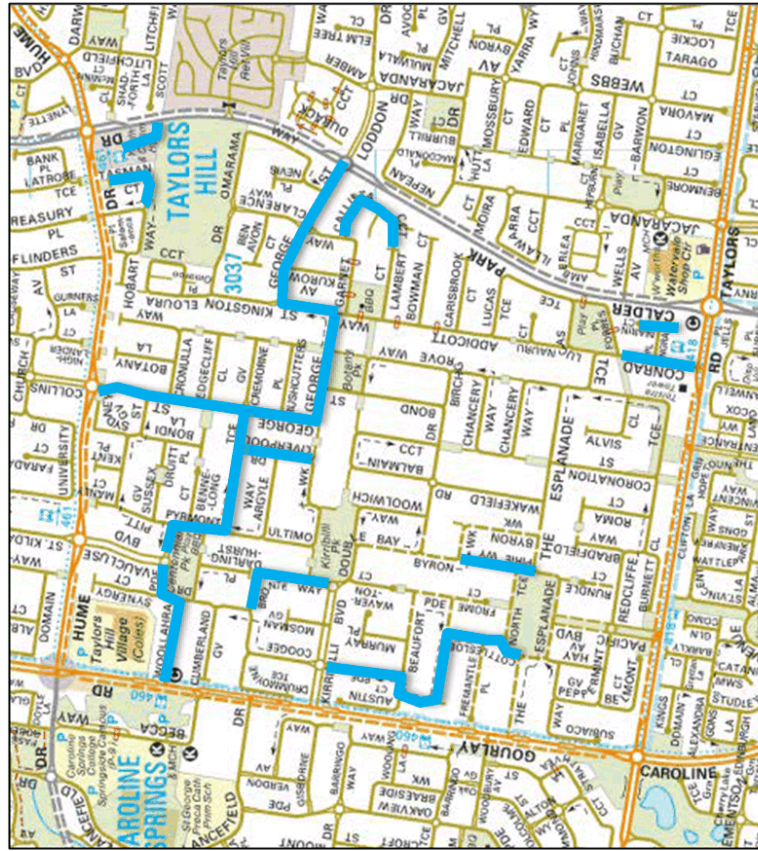


- Bicycle Facilities
 - Liverpool Drive
 - Marin Court
- Parking
 - Bronte Way
 - Callista Crescent
 - Cottesloe Parade
 - Marin Court
 - Tasman Court
 - Woolahara Parade
- Irresponsible Driving
 - Bronte Way
 - Conrad Terrace
 - George Street
 - Pirie Way
 - Vauclose Boulevard
 - Woolahara Drive
- Street Lighting
 - Marin Court



Areas for Further Investigation

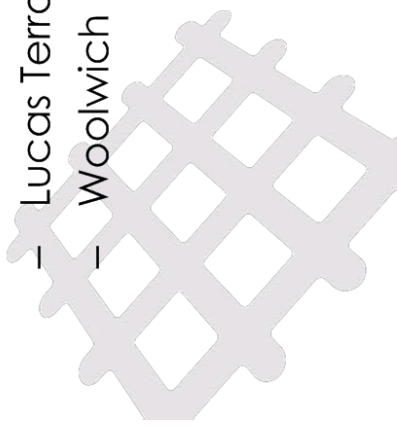
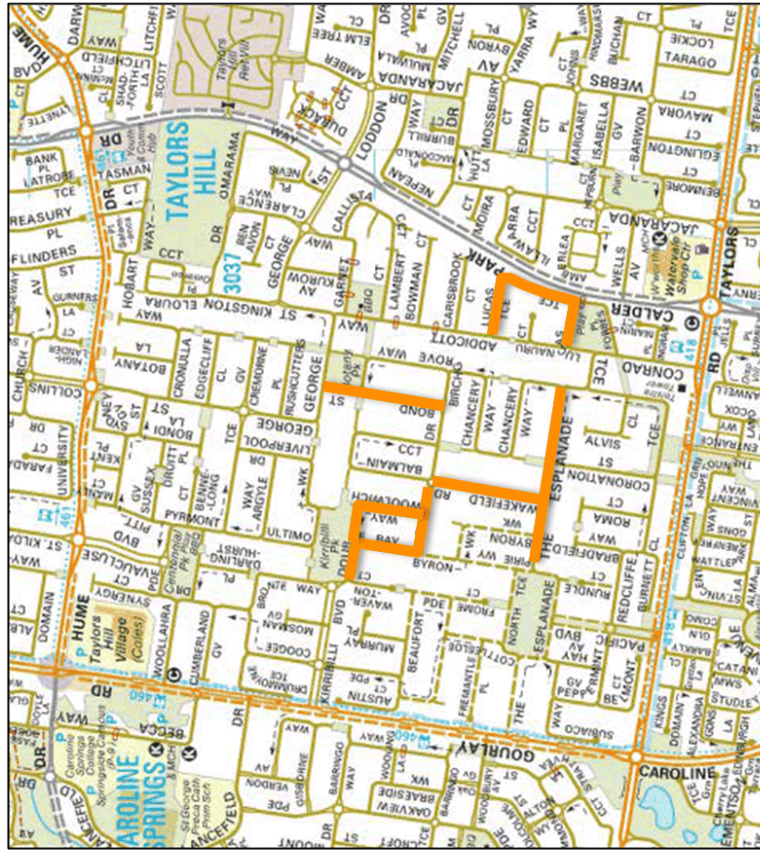
- Questionnaire Survey
- Bronte Way
- Callista Crescent
- Conrad Terrace
- Coogee Drive
- Cottlesloe Parade
- Devenport Court
- George Street
- Liverpool Drive
- Marin Court
- Pirie Way
- Pymont Terrace
- Tasman Court
- Woolahara Parade





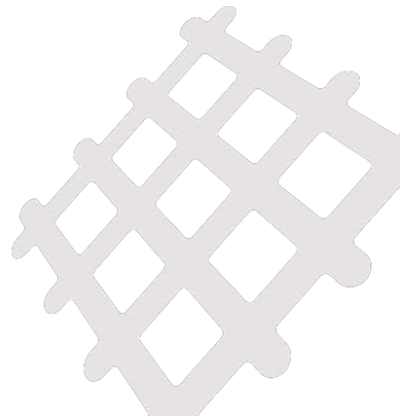
Areas for Further Investigation

- Traffic Surveys
 - Bond Street
 - Wakefield Road
 - George Street
 - The Esplanade
 - Double Bay Drive
 - Lucas Terrace
 - Woolwich Place





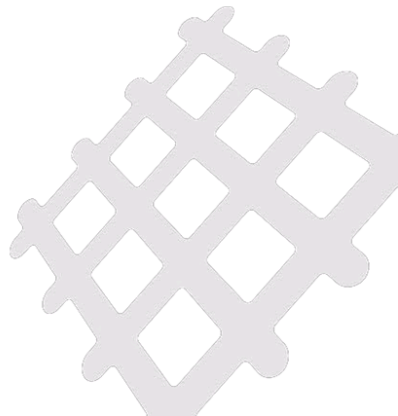
Questions





Traffic Study Group Meetings

- Meeting 2 - Monday 22 February 2016
- Meeting 3 - Thursday 24 March 2016





MINUTES

Project Name	Taylors Hill LATM	No.	15293
Subject	Traffic Study Group – Meeting 1		
Date	Thursday 28 th Jan 2016	Time	6:30PM
Location	Taylors Hill Youth and Community Centre	By	JD

Table 1 Attendance

<i>Name</i>	<i>Company</i>	<i>Name</i>	<i>Company</i>
James Dear	onemilegrid	Sgt. Chris Stuhldreier	Victoria Police
Valentine Gnanakone	onemilegrid	Tony Baxter	Resident
Tom Lay	Melton CC	Cherry Stojanovic	Resident
Matthew Hutchinson	Melton CC	Mandy Wilkins	Resident
Voltaire David	Melton CC	Claudine Berrisford	Resident
Cr. Renata Cugliari	Melton CC	Emma Lobb	Resident
Cr. Lara Carli	Melton CC	Stuart Ciopicz	Resident

Table 2 Minutes/Site Notes

<i>Details/Notes</i>
Cr. Cugliari welcomed study group
Mr Hutchinson provided background on the LATM project
Mr Dear ran through presentation
Mr Dear opened the floor for discussion
Residents identified a number of additional issues within the study area including:
<ul style="list-style-type: none"> ➤ Rat-running through Vacluse Boulevard and Woollahra Drive ➤ Pedestrian connectivity concerns on Ultimo Walk and Kiribilli Boulevard ➤ Issues around George Street / Kingston Drive intersection ➤ Rat-running through Pacific Boulevard, Cottesloe Parade, The Esplanade ➤ Traffic volumes and speeds in southern part of Conrad Terrace ➤ Speed cushions along George Street (north) are not effective ➤ Parking along bends ➤ Landscaping at parks impacts on sight distances ➤ Parking around perimeter of soccer oval is used in preference to formal car park
Sgt. Stuhldreier noted that there were no injury accidents within the study area
onemilegrid to undertake additional traffic and speed surveys at the following locations:
<ul style="list-style-type: none"> ➤ Vacluse Boulevard ➤ Woollahra Parade ➤ Kiribilli Boulevard ➤ Cottesloe Parade
Next meeting to occur Thursday 10 th March

Taylors Hill West LATM Study  onemilegrid

Traffic Study Group – Meeting 2

James Dear

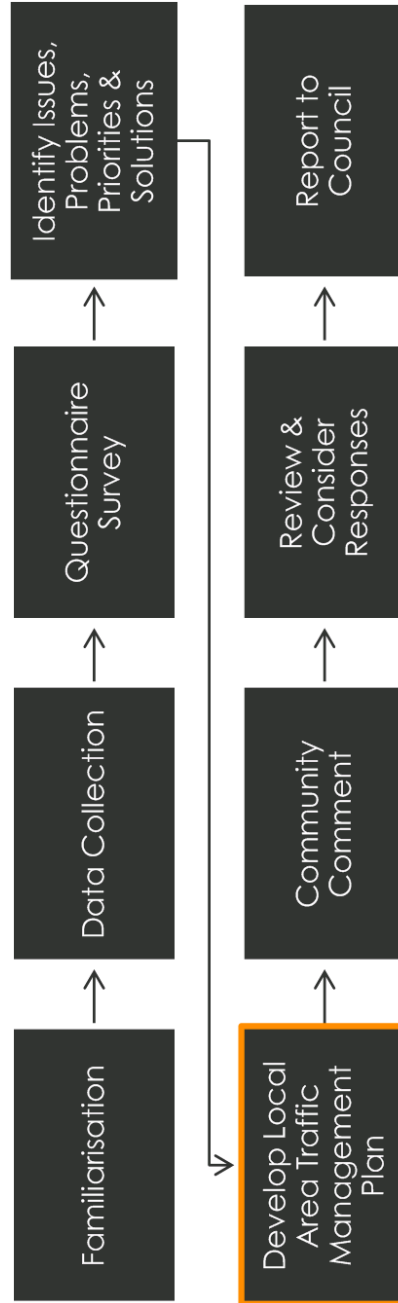
Agenda



- Traffic Study Group & Meeting 2 Objectives
- Recap of Meeting 1
- Ongoing Investigations
- Considerations for LATM Treatments
- Refining LATM Treatments
- Council Traffic Calming Policy
- Potential LATM Treatments Locations & Configuration



LATM Study Overview



Traffic Study Group

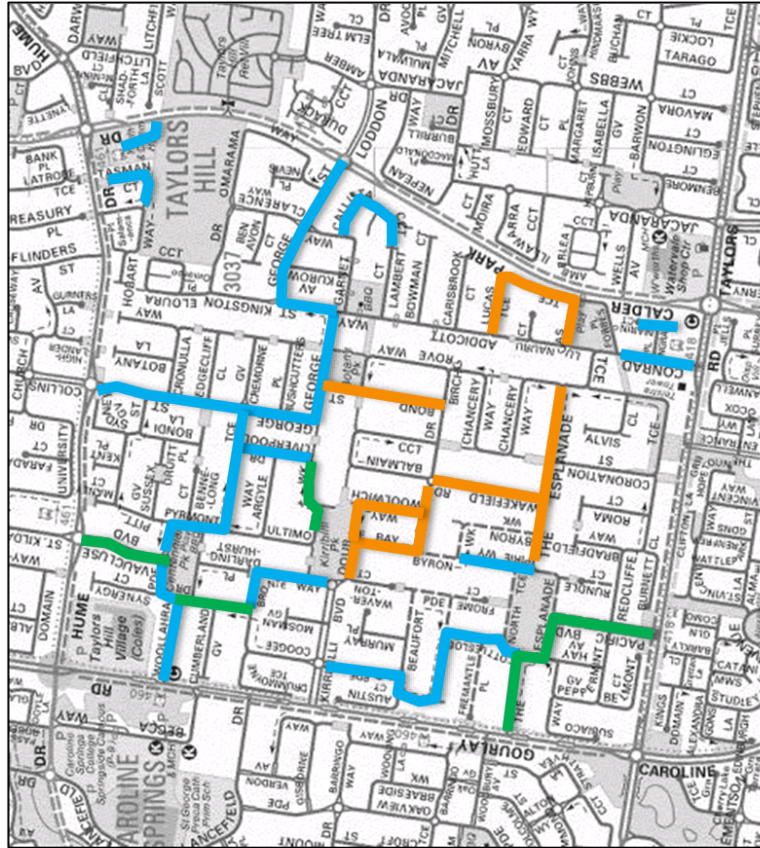


- **Your Role:**
 - Provide local information to assist with key issue identification
 - Provide feedback on LATM plans
 - Represent the interests of residents and businesses within the study area
 - Act as a contact person for residents and businesses within the study area
- **Today's Objective**
 - Provide feedback and local knowledge regarding the proposed Traffic Management Plan prepared by the Consultant



Recap of Meeting 1

- Areas designated for potential treatments and further investigation
 - Community Feedback (Blue)
 - Surveys (Orange)
 - Traffic Study Group Feedback (Green)



Existing Conditions Review

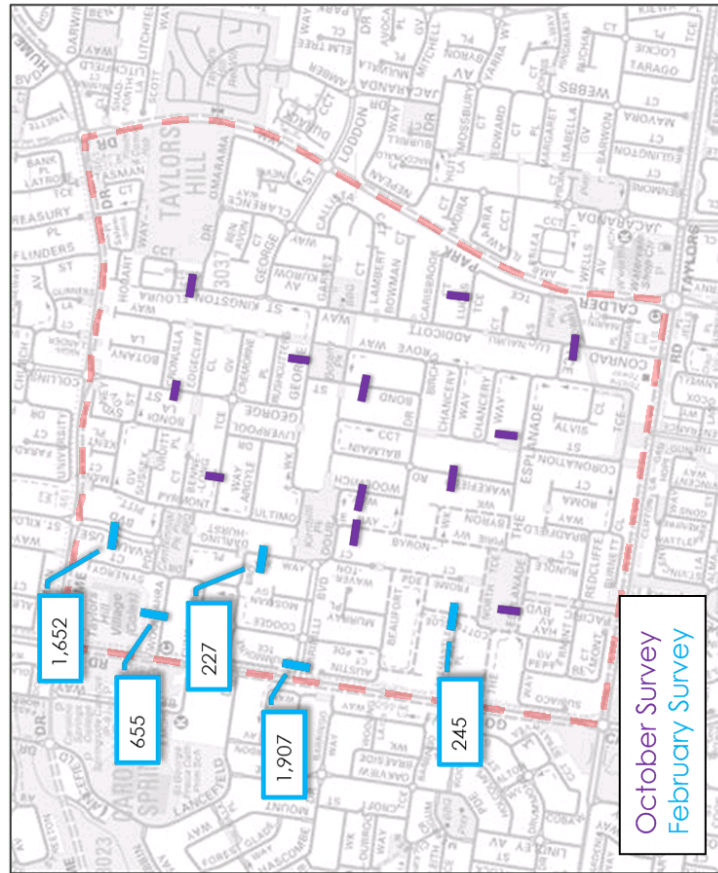


Street	Location	Daily Traffic Volumes (Weekday Average)	% of Daily Volumes		85 th Percentile Speed (km/hr)
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The Esplanade	Outside No. 25	656	8.2	9.5	51
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Lucas Terrace	Outside No. 45	474	7.6	8.6	48
Eloura Circuit	North of Kingston Drive	413	8.0	9.9	27



Ongoing Investigation

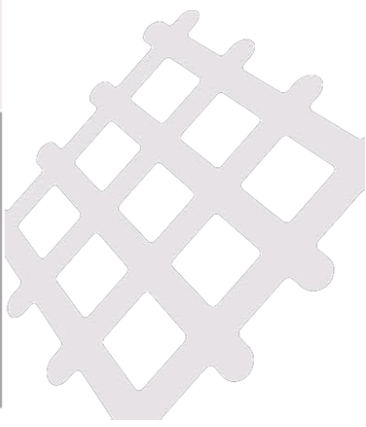
- Traffic Surveys Commissioned from 3rd–10th February
 - Vaucluse Boulevard
 - Woollahra Parade
 - Bronte Way
 - Kirribilli Boulevard
 - Cottesloe Parade



Ongoing Investigation



Street	Location	Daily Traffic Volumes (Weekday Average)	% of Daily Volumes		85 th Percentile Speed (km/hr)
			AM Peak	PM Peak	
Vaucluse Boulevard	Outside No. 11	1,652	11.3	10.2	54
Woollahra Parade	Outside No. 11	655	10.4	8.2	50
Bronfe Way	Outside No. 12	227	11.4	9.3	49
Cottesloe Parade	North of Fremantle Parade	245	7.3	8.6	47
Kirribilli Boulevard	Outside No. 5	1,907	9.3	10.7	45



Considerations for LATM Treatments

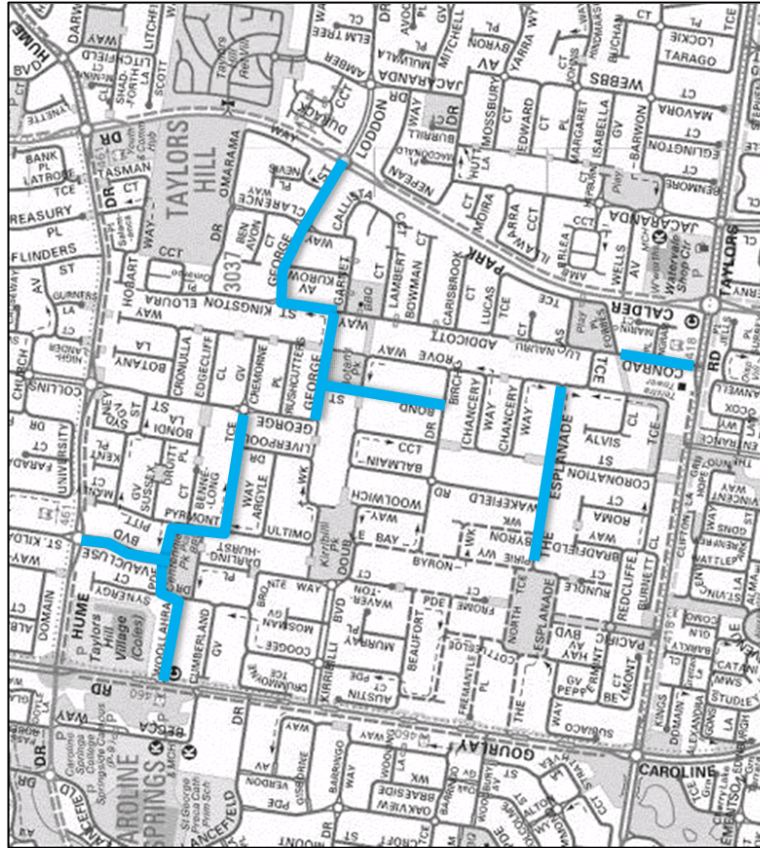


- Quantitative
 - 85th Percentile Speed
 - >50 km/h
 - Daily Traffic Volumes
 - > 1,000 vpd
 - ‘Rat Running’
 - >12% peak hour traffic
 - Crash History
- Qualitative
 - Observations
 - Site Inspection
 - Local Perception
 - Minor/Major Issue
 - Costs / Funding



Refining LATM Locations

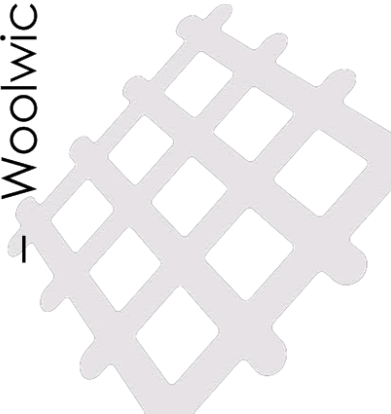
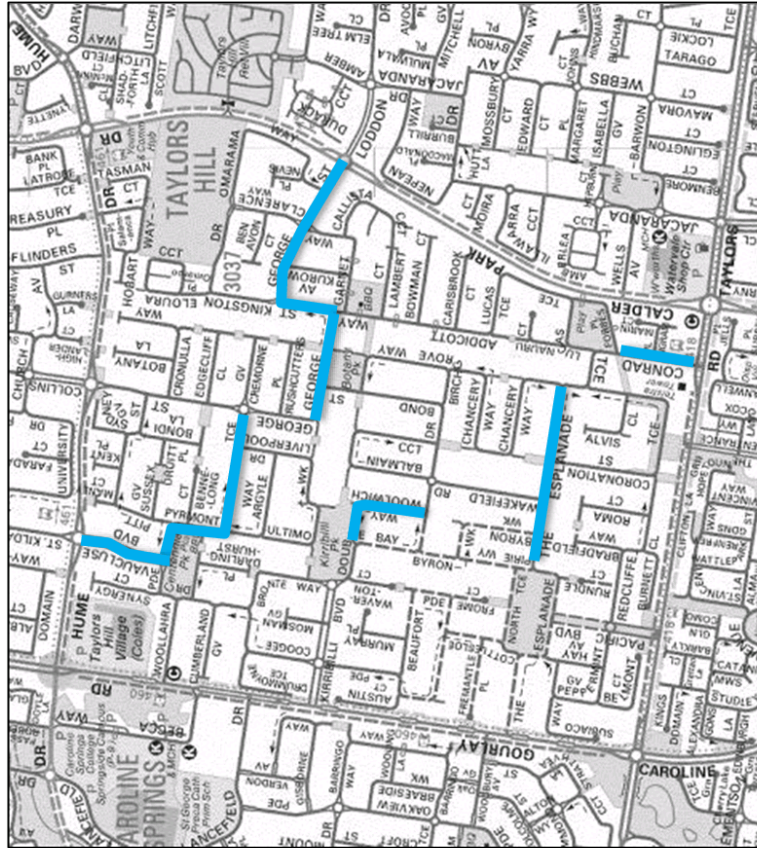
- Speed
 - Bond Street
 - Conrad Terrace
 - George Street
 - Pymont Terrace
 - The Esplanade
 - Vaucluse Blvd
 - Woollahra Pde





Refining LATM Locations

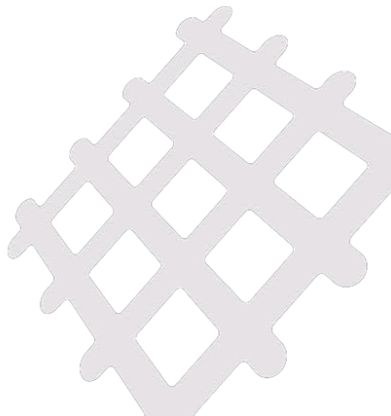
- Traffic Volume / 'Rat Running'
 - Conrad Terrace
 - George Street
 - Pymont Terrace
 - Vaucluse Boulevard
 - Woolwich Way





Refining LATM Locations

- Speed / Safety
 - Lucas Terrace
 - Ultimo Walk
 - Bronte Way
 - Kirribilli Boulevard



Council Traffic Calming Policy

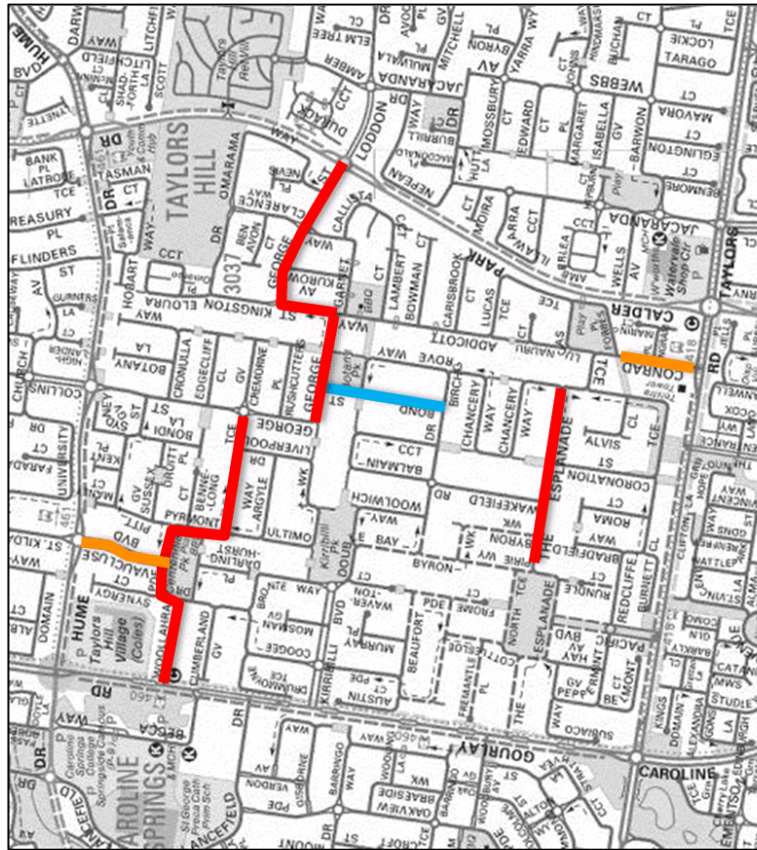


- Adopted in 2011
- Provides guidance to Council officers when assessing the need for and implementing traffic calming
- Traffic Calming Device – Purely used to reduce vehicle speed
- Distinct from deterrents for through-traffic and safety
- Three conditions:
 1. Road segment > 200 metres
 2. Road must service > 35 houses
 3. 85th percentile speed 5km/h above the speed limit.



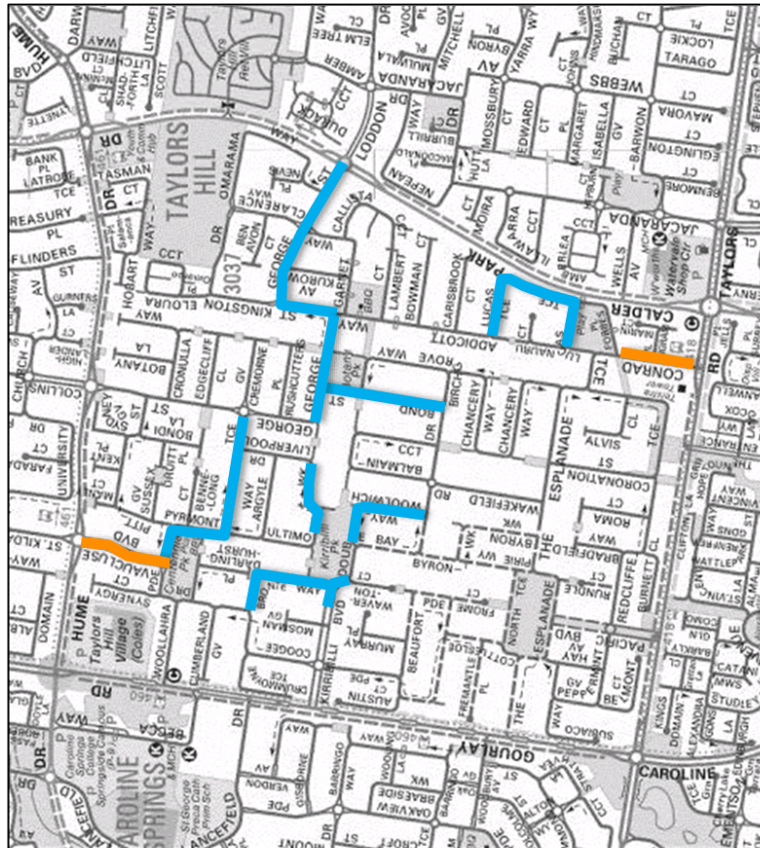
Council Traffic Calming Policy

- Speed
 - Bond Street (57km/h)
 - **Conrad Terrace (54km/h)**
 - George Street (53km/h)
 - Pymont Terrace (52km/h)
 - The Esplanade (51 km/h)
 - **Vaucluse Blvd (54km/h)**
 - Woollehra Pde (50km/h)





Areas for LATM Treatments



Location	Speed	Traffic	Safety
Conrad Terrace	✓	✓	
George Street		✓	
Pyrmont Terrace		✓	
Vaucluse Boulevard	✓	✓	
Woolwich Way		✓	
Bond Street	✓		✓
Lucas Terrace			✓
Ultimo Walk			✓
Bronte Way			✓
Kirribilli Boulevard			✓



Capital Works Program

- LATM projects already identified by Council
- To be constructed 2016-2018
 - Conrad Terrace
 - Coogee Drive
 - Bronte Way
 - Bond Street
 - Forbes Place
 - Woolwich Way



LATM Options – Vertical Deflection 

Flat Top Road Hump



Speed Cushion



LATM Options – Vertical Deflection



Road Hump



Raised Pavement



LATM Options – Horizontal Deflection 

Splitter Islands



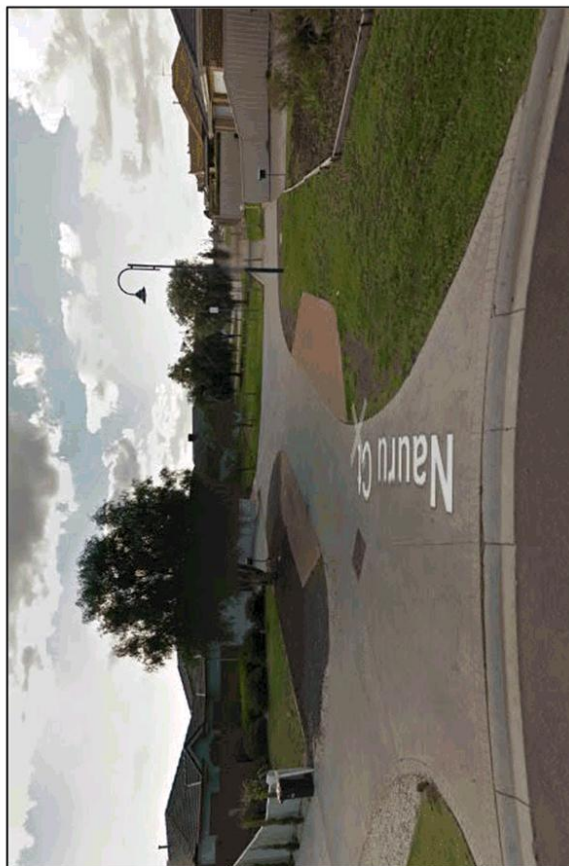
Slow Points



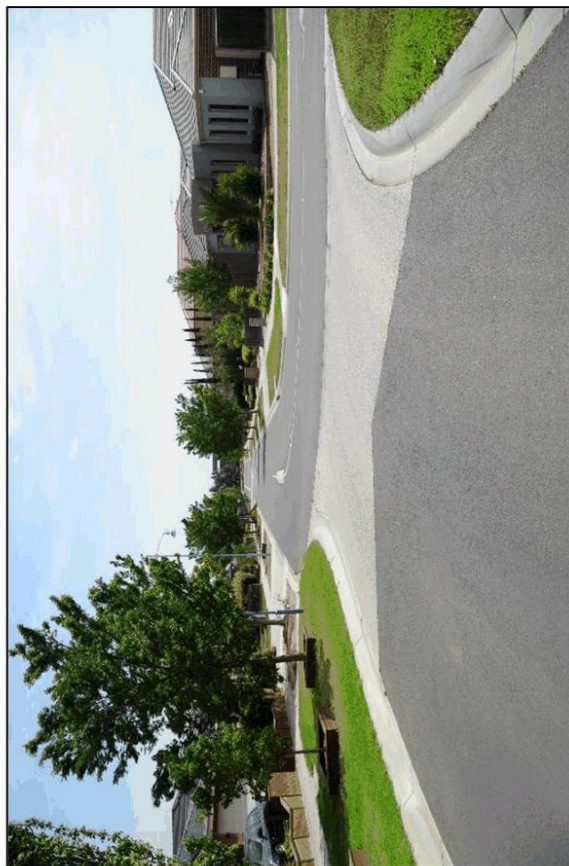
LATM Options – Diversion



Road Closure



Modified T-Intersection

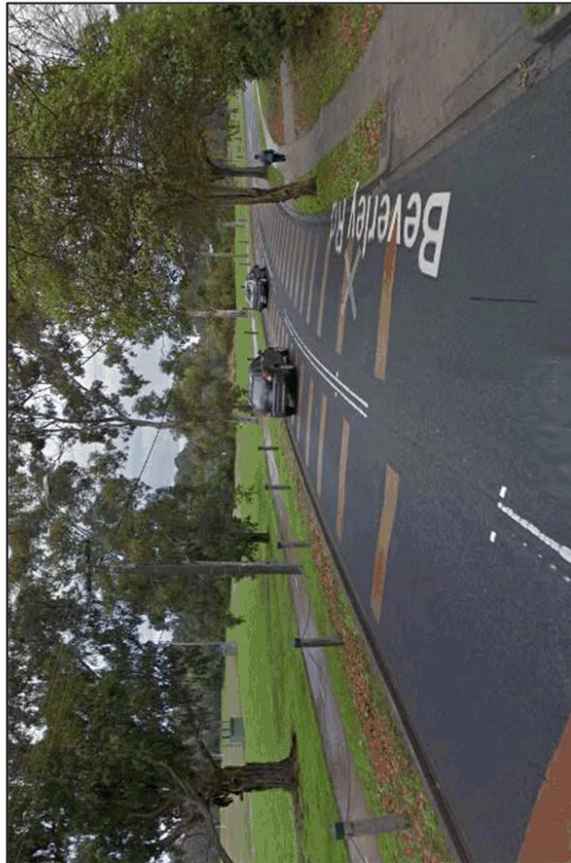


LATM Options – Signs & Linemarking 

Signage & Linemarking

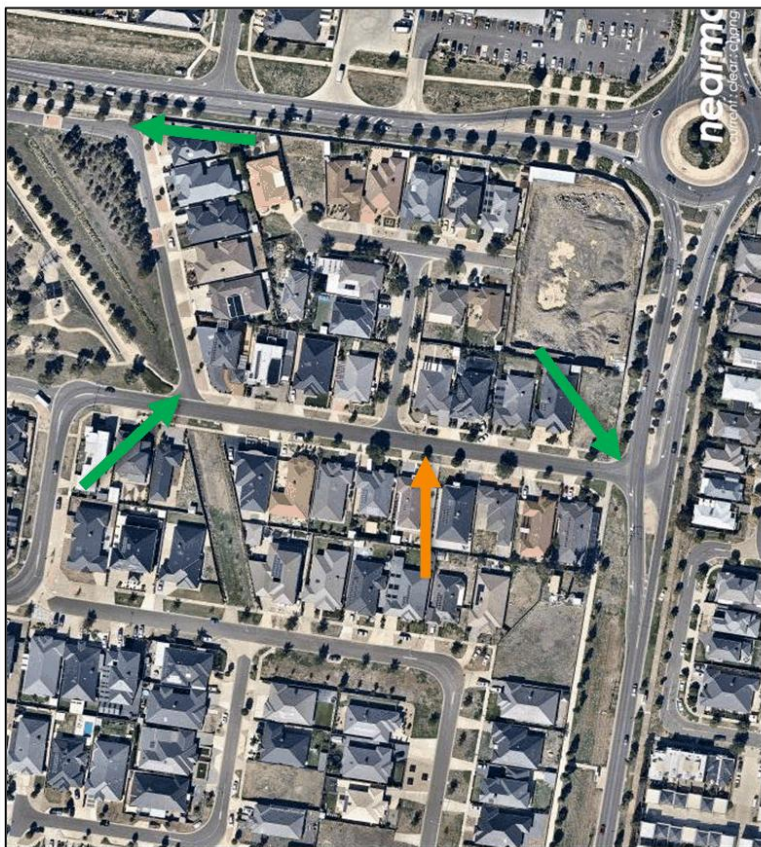
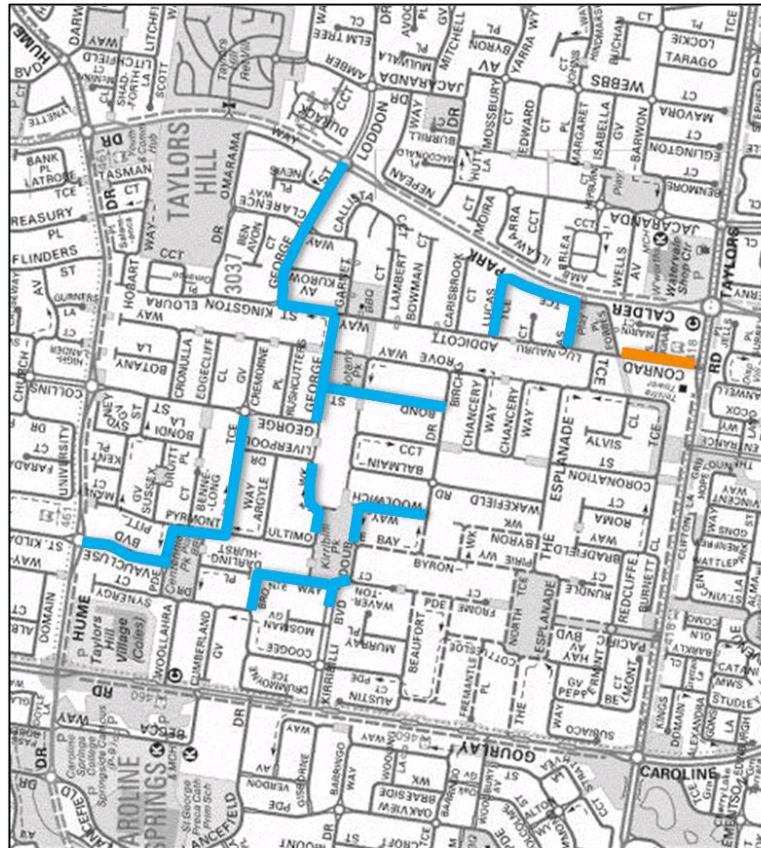


Rumble Strips



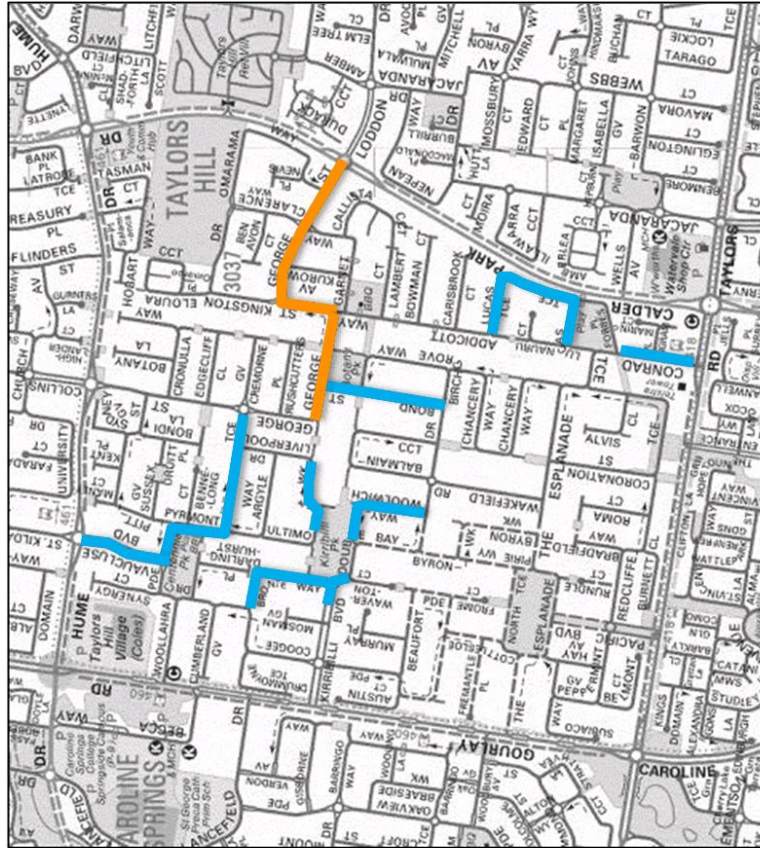


LATM Treatments – Conrad Terrace



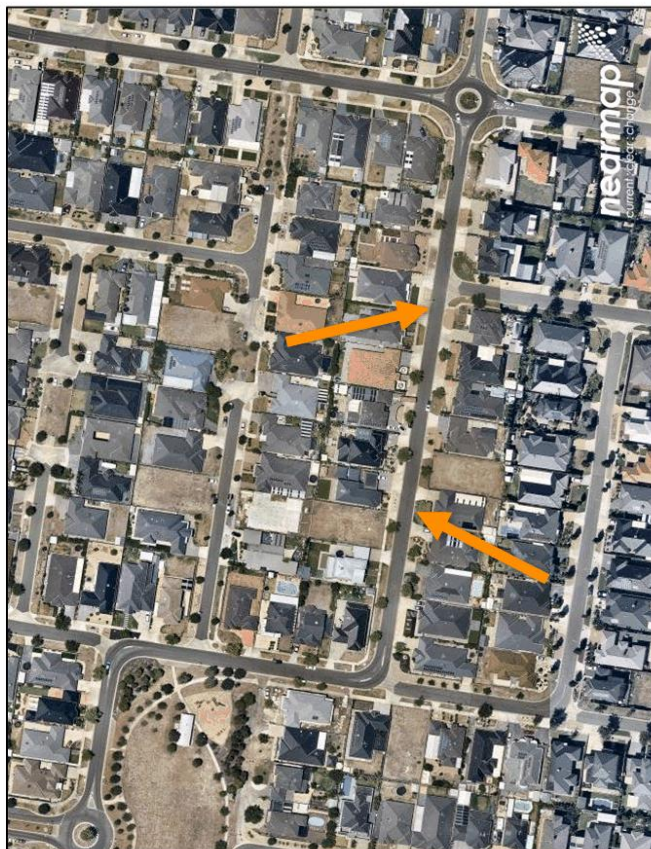
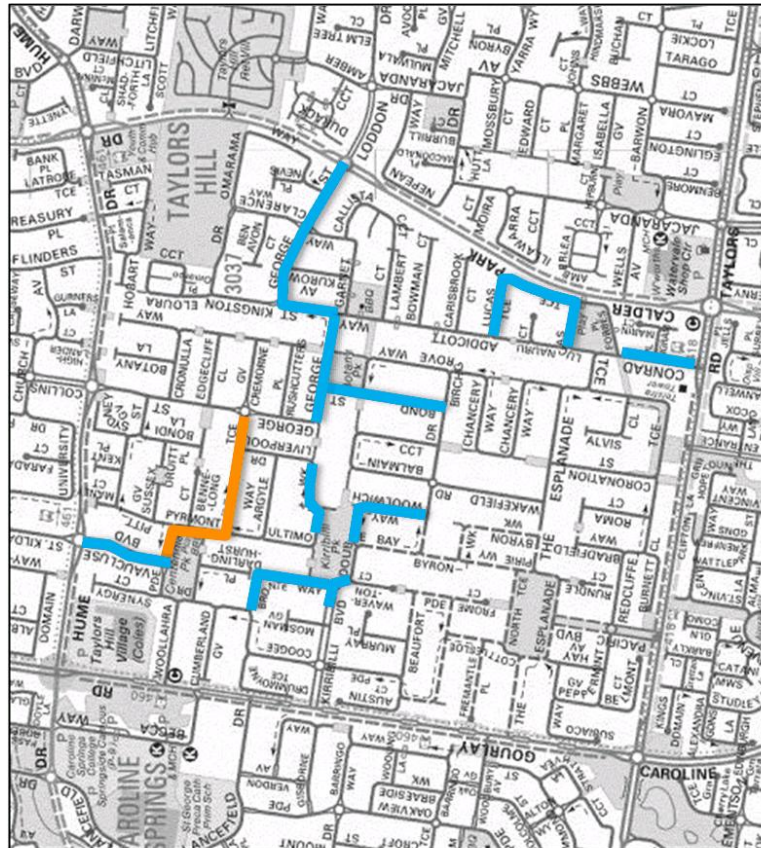


LATM Treatments – George Street



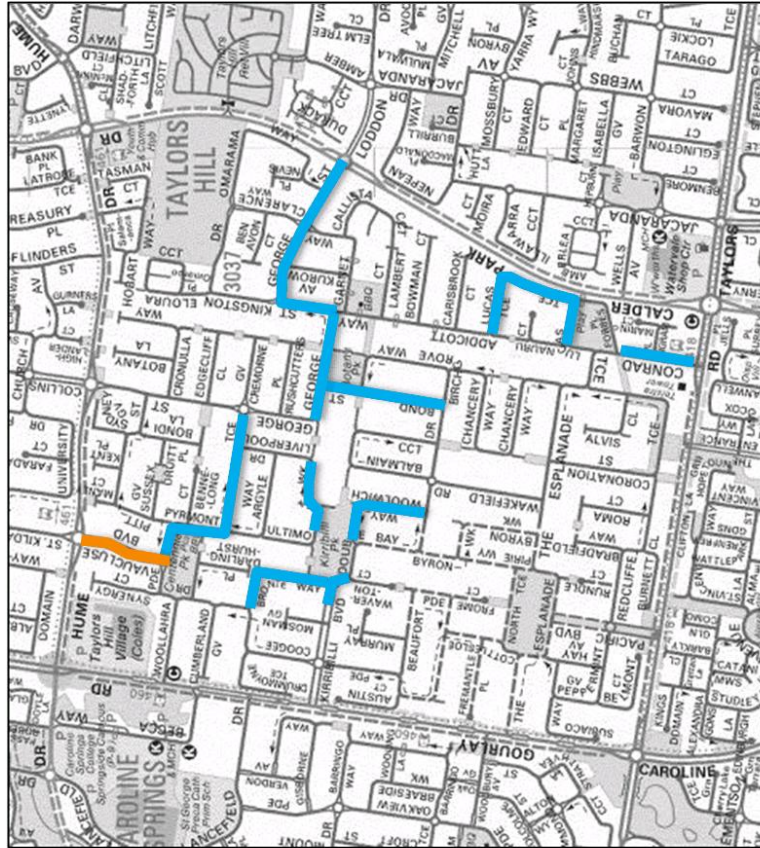


LATM Treatments – Pymont Terrace



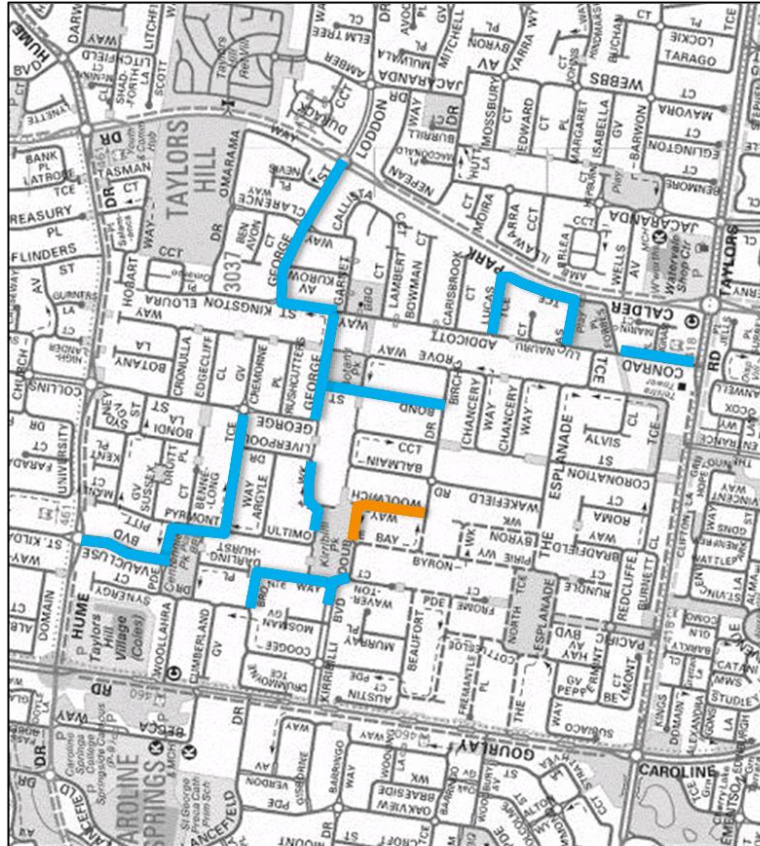


LATM Treatments - Vaucluse Boulevard



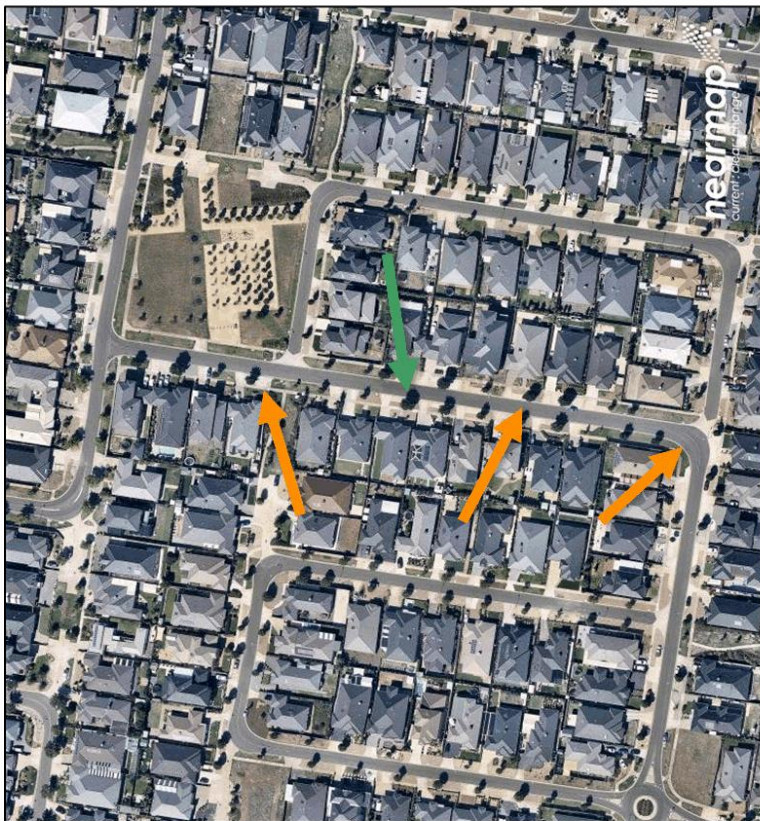
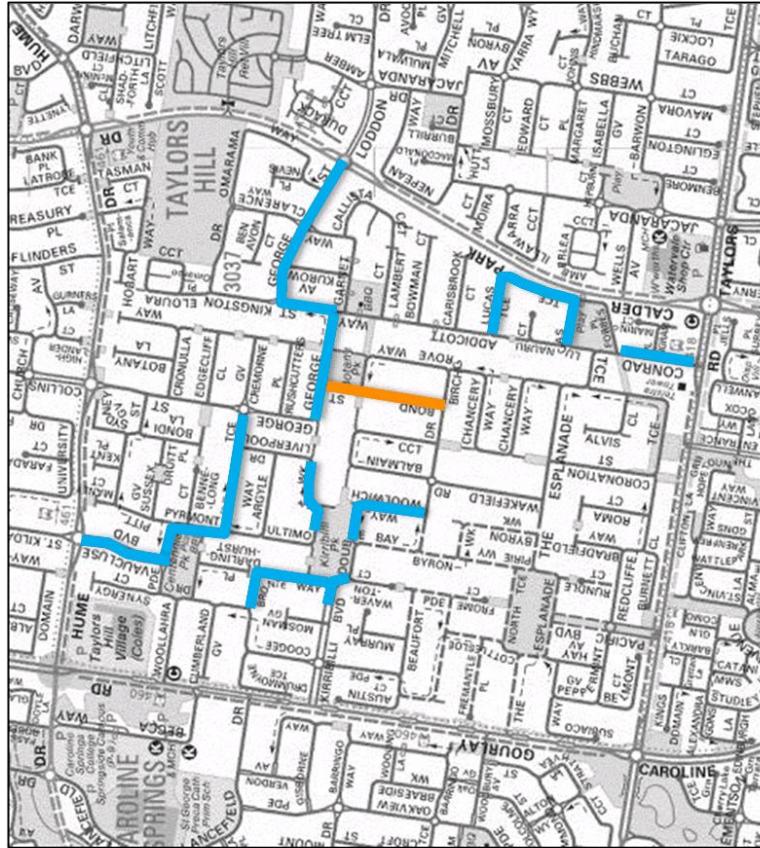


LATM Treatments - Woolwich Way



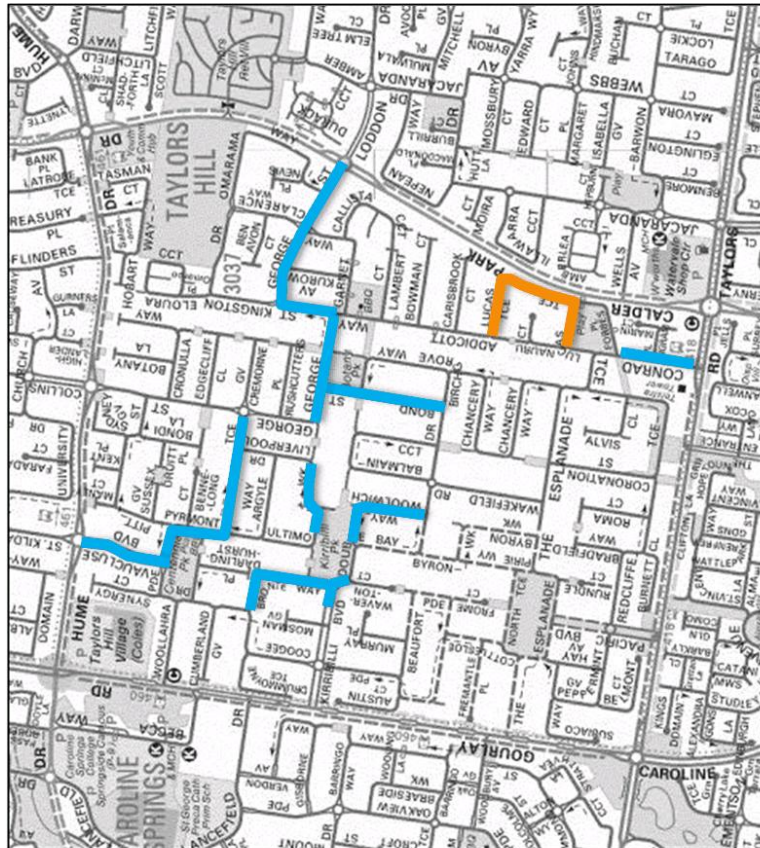


LATM Treatments – Bond Street



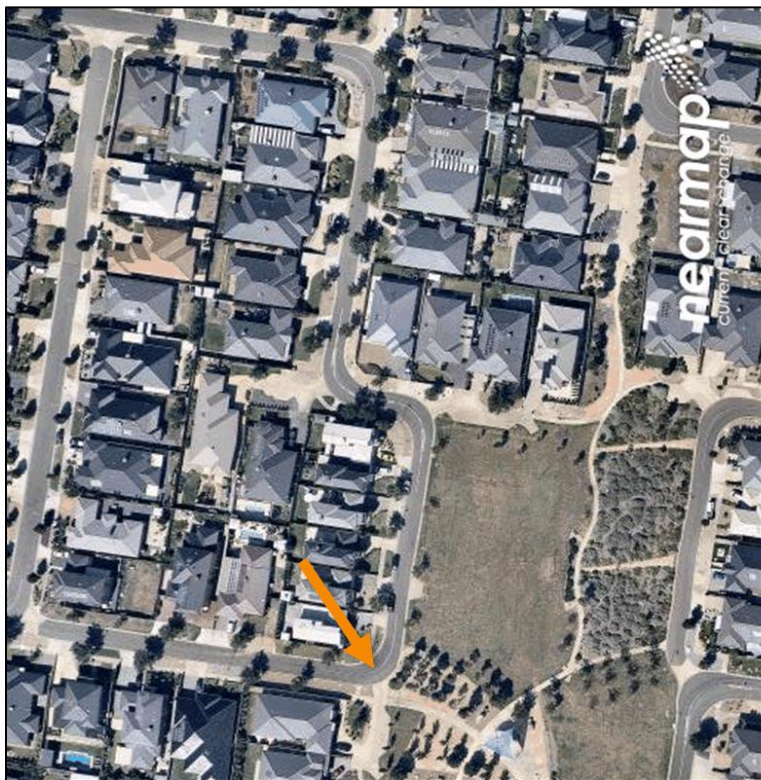
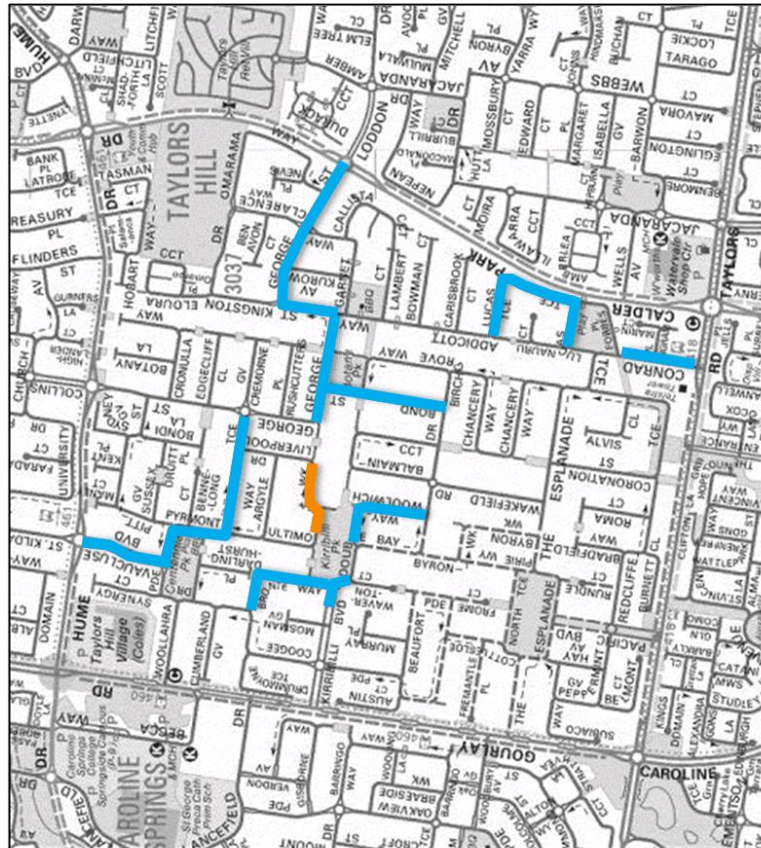


LATM Treatments – Lucas Terrace



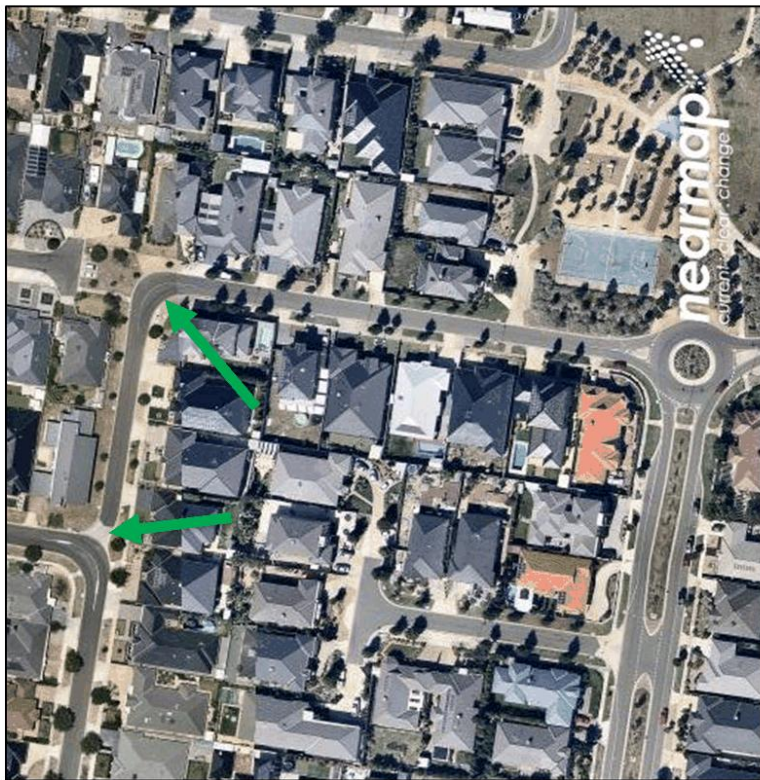
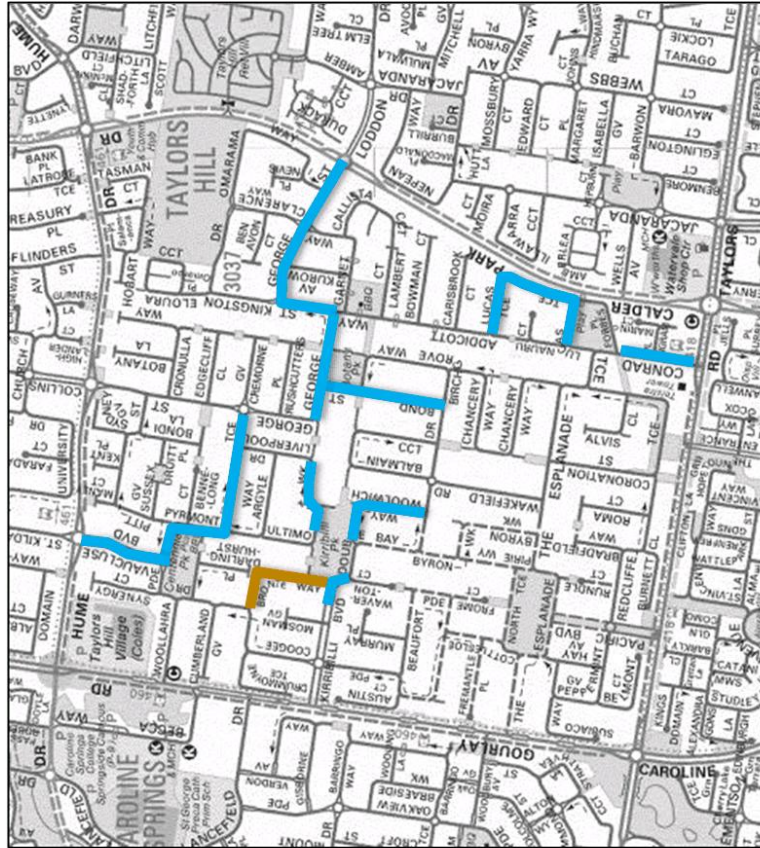


LATM Treatments - Ultimo Walk



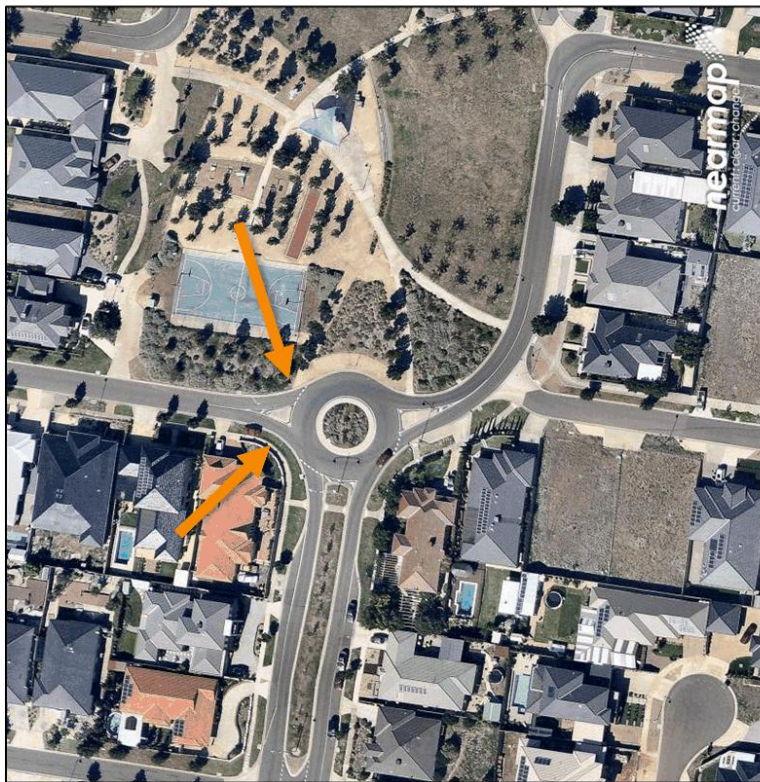
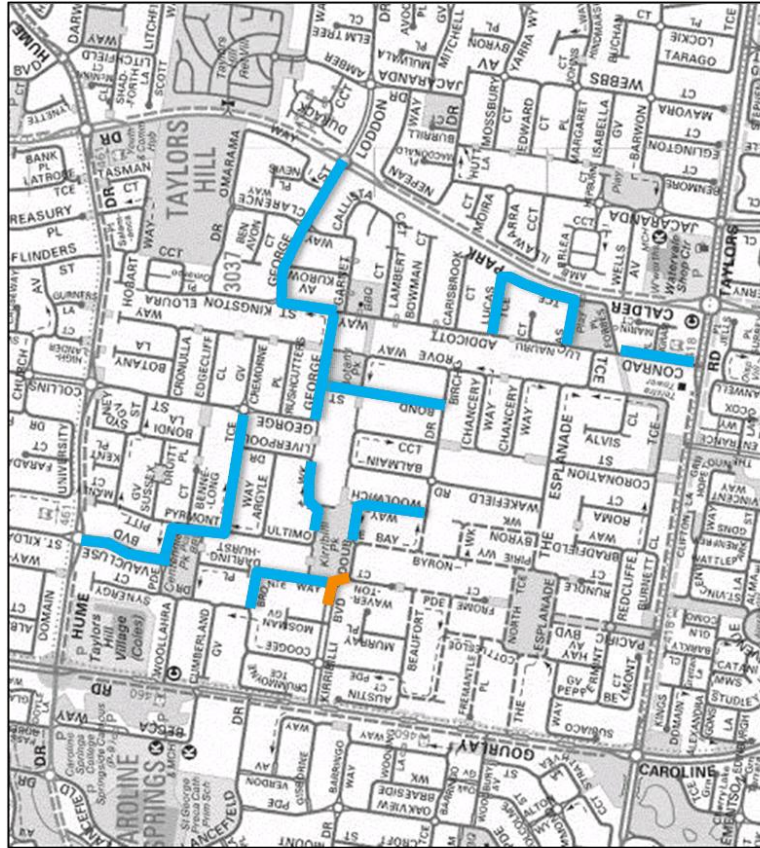


LATM Treatments – Bronte Way



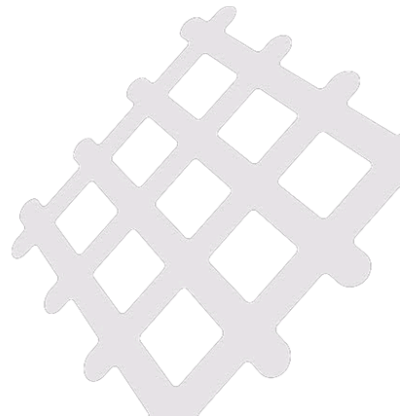


LATM Treatments – Kirribilli Boulevard





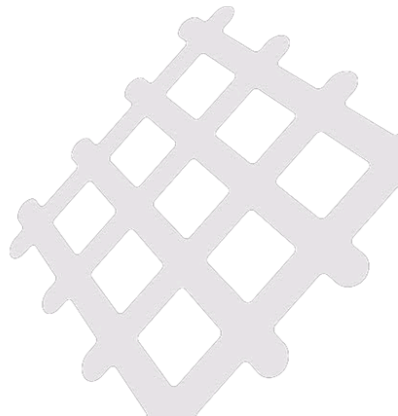
Questions & Comments



Traffic Study Group Meetings



- Meeting 3 - Thursday 31st March 2016
- Consider the community's response to the proposed Traffic Management Plan





MINUTES

Project Name	Taylors Hill LATM	No.	15293
Subject	Traffic Study Group – Meeting 2		
Date	Thursday 10 th March 2016	Time	6:30PM
Location	Taylors Hill Youth and Community Centre	By	JD

Table 1 Attendance

Name	Company	Name	Company
James Dear	onemilegrid	Sgt. Chris Stuhldreier	Victoria Police
Valentine Gnanakone	onemilegrid	Tony Baxter	Resident
Tom Lay	Melton CC	Cherry Stojanovic	Resident
Matthew Hutchinson	Melton CC	Mandy Wilkins	Resident
Voltaire David	Melton CC	Claudine Berrisford	Resident
Cr. Renata Cugliari	Melton CC	Emma Lobb	Resident
Cr. Lara Carli	Melton CC	Stuart Ciopicz	Resident

Table 2 Minutes/Site Notes

Details/Notes
Cr. Cugliari welcomed study group
Mr Dear ran through presentation
The group discussed in further detail the results of the new round of surveys undertaken and noted that traffic volumes, speed and peak hour percentages were in the acceptable range
Council engineers provided background on the traffic calming policy
Mr Dear noted that only Bond Street triggered the criteria for traffic calming, though Conrad Terrace and Vaucuse Boulevard
Council engineers provided more information on the capital works program
The pros and cons of various LATM options were discussed
Each location was discussed with the following outcomes:
<ul style="list-style-type: none"> ➤ Conrad Terrace – TSG satisfied with works outlined in CWP ➤ George Street – A road hump would be preferred opposite park ➤ Pymont Terrace – Only one road hump would likely be required mid-block ➤ Vaucuse Boulevard – Favourable response to signage and linemarking. Mr Ciopicz suggested use of rumble strips ➤ Woolwich Way – Splitter island likely not required on bend ➤ Bond Street – One road hump mid-block probably sufficient, no need for treatment at Double Bay Drive ➤ Ultimo Walk – Alternatives discussed including alternate location for crossing, signage or a refuge. Noting limited width in roadway for refuge it agreed that extending pedestrian path along eastern side of park was best outcome ➤ Bronte Way – No comments ➤ Kiribilli Boulevard – Provide ped. connection along northern leg
Meeting closed and next meeting scheduled for 14 th April subject to confirming final outputs of project

Taylors Hill West LATM Study  onemilegrid

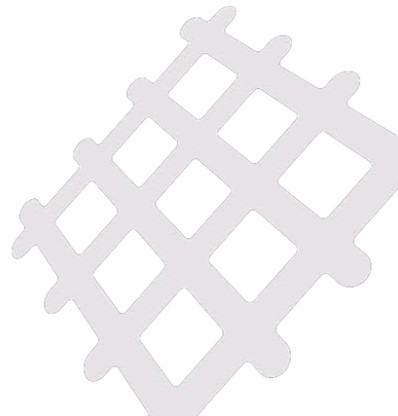
Traffic Study Group – Meeting 3

James Dear



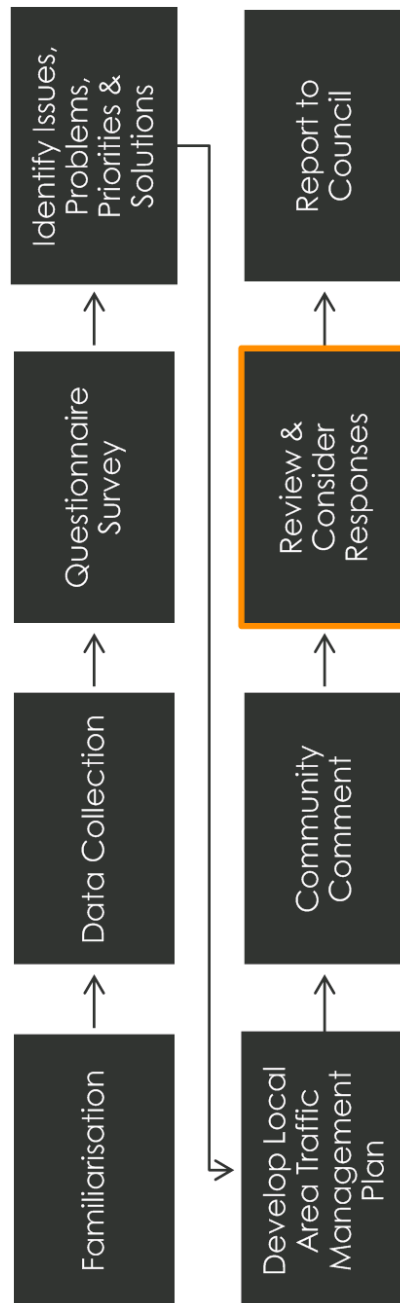
Agenda

- Traffic Study Group & Meeting 2 Objectives
- Recap of Meeting 2
- Questionnaire Survey
- Final Recommendations





LATM Study Overview



Traffic Study Group



- Your role:
 - Provide local information to assist with key issue identification
 - Provide feedback on LATM plans
 - Represent the interests of residents and businesses within the study area
 - Act as a contact person for residents and businesses within the study area
- Today's Objective
 - Make recommendations for LATM works



Recap of Meeting 2

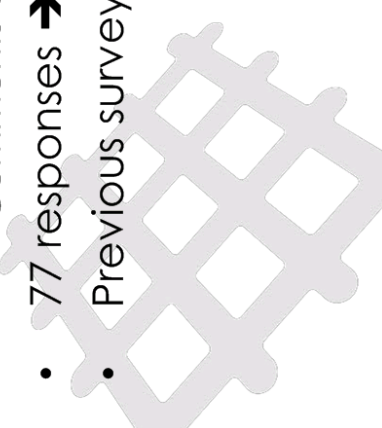
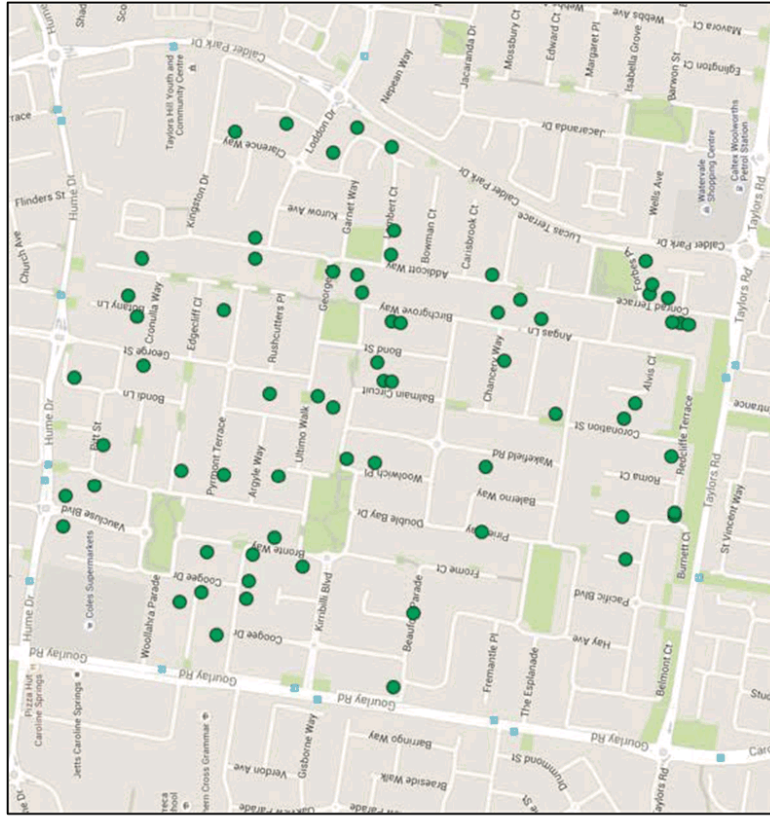


Vauluse Boulevard	Signage and Linemarking (outside No. 3 Vauluse Blvd)
Coogee Drive	Splitter Island (at intersection with Bronte Way)
Bronte Way	Splitter Island (at bend)
Bronte Way	Pedestrian Link (across Bronte Way to Kirribilli Park)
Ullimo Walk	Pedestrian Link (along eastern side to Kirribilli Park)
George Street	Signage and Linemarking (outside No. 104 George Street)
Double Bay Drive	Splitter Island (at intersection with Woolwich Way North)
Double Bay Drive	Splitter Island (at intersection with Woolwich Way South)
Bond Street	Road Hump (outside No. 16 Bond Street)
Lucas Terrace	Splitter Islands (on each of northern bends)
Forbes Place	Splitter Island (at bend)
Conrad Terrace	Splitter Island (at intersection with Forbes Place)
Conrad Terrace	Road Hump (outside No. 14 Conrad Terrace)
Conrad Terrace	Splitter Island (at intersection with Taylors Road)



Questionnaire Survey - Overview

- 1,850 questionnaire surveys distributed to residents
- Feedback Sought:
 - Support for LATM plan as a whole
 - Comments on LATM plan as a whole
 - Support for each treatment
 - Comments on each treatment
- 77 responses → 4% response rate
- Previous survey → 8% response rate



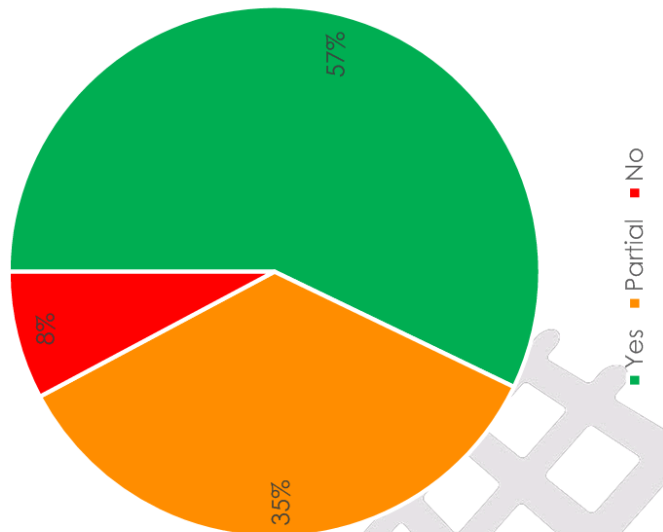


Questionnaire Survey – Results

Support for LATM plan

Comments:

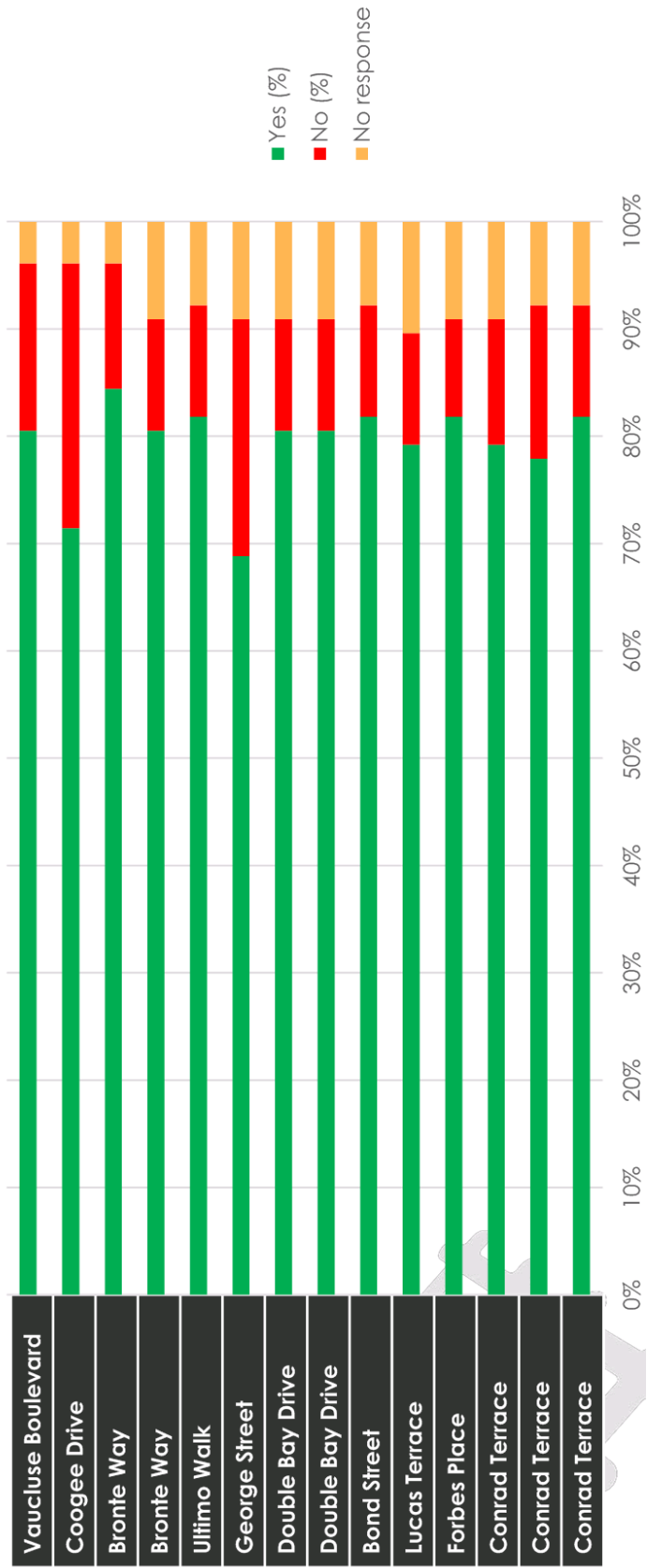
- Duplication of external roads (Taylors, Hume, Calder Park)
- Additional road humps requested
- Pedestrian crossings over Taylors Road, Hume Drive
- Other priorities for funds





Questionnaire Survey – Results

Support for each treatment





LATM Treatments – Vaucluse Boulevard

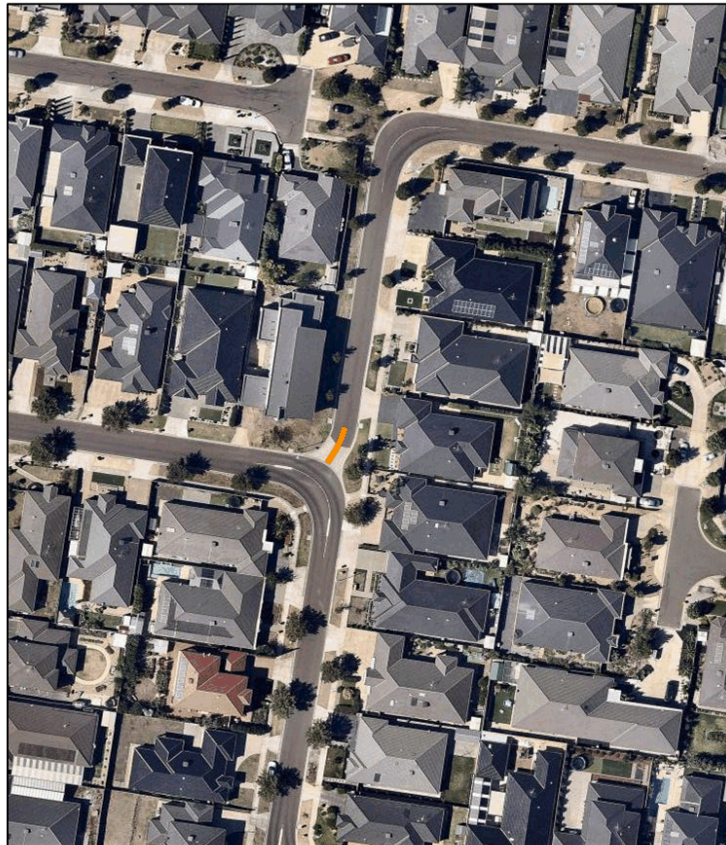


- All: 82% Yes / 10% No
- Res. (2): 50% Yes / 50% No
- Comments:
 - More detail requested

LATM Treatments – Coogee Drive

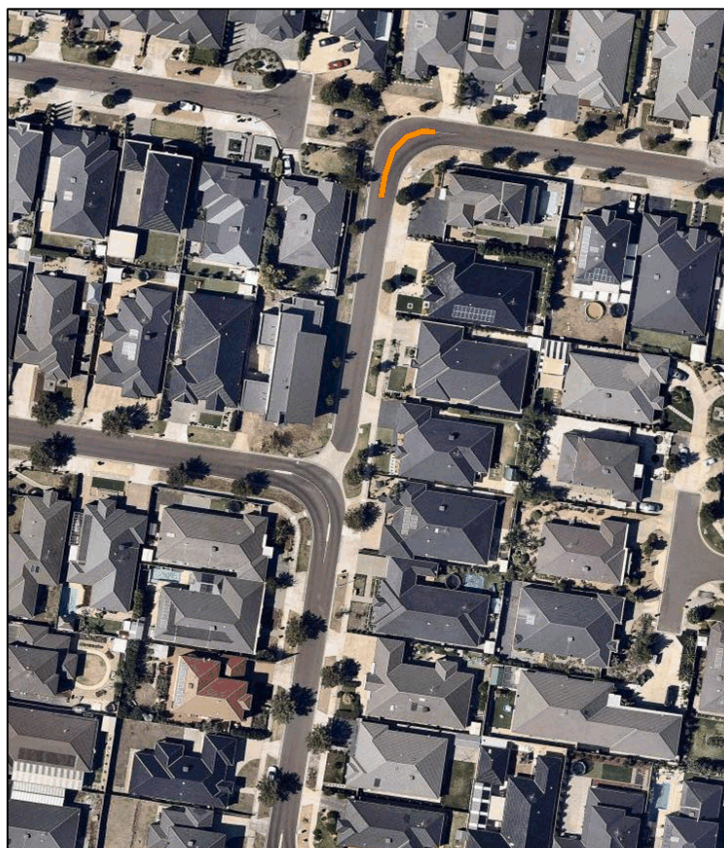


- All: 78% Yes / 14% No
- Res. (6): 50% Yes / 50% No
- Comments:
 - Road hump instead on Coogee Drive
 - Splitter islands not effective
 - Increase length of line marking





LATM Treatments – Bronte Way

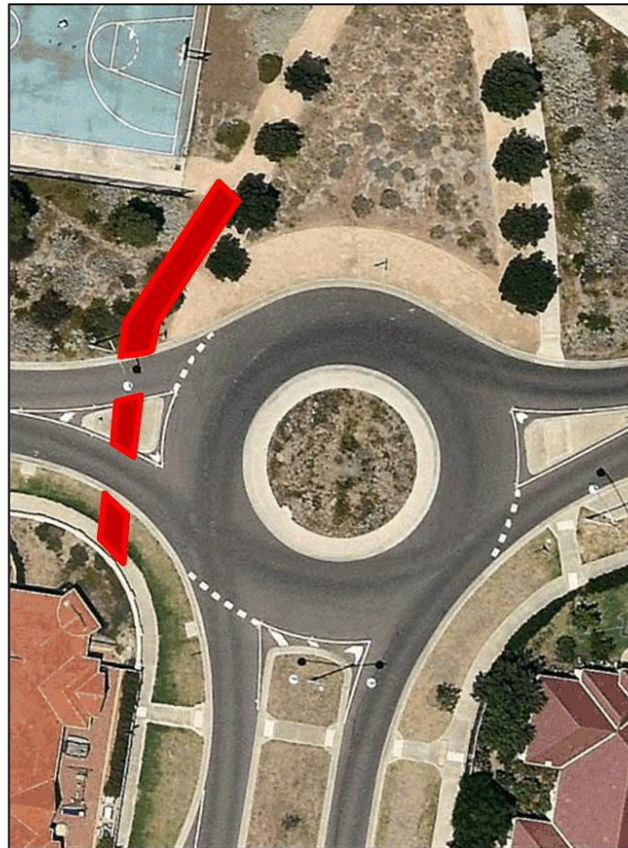


- All: 79% Yes / 12% No
- Res. (4): 75% Yes / 25% No
- No comments



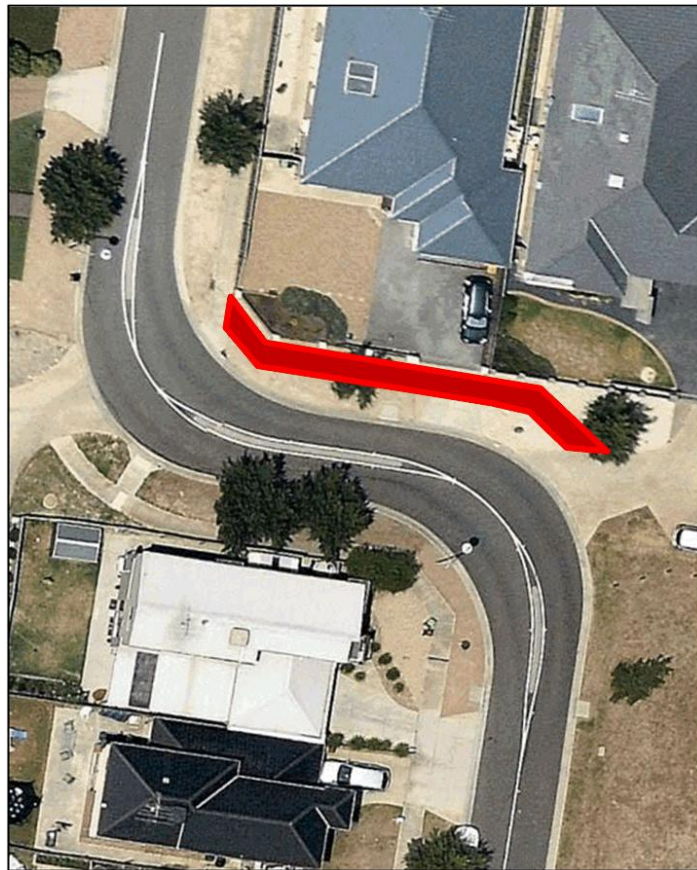
LATM Treatments – Bronte Way

- All: 82% Yes / 9% No
- Res. (4): 75% Yes / 25% No
- No comments



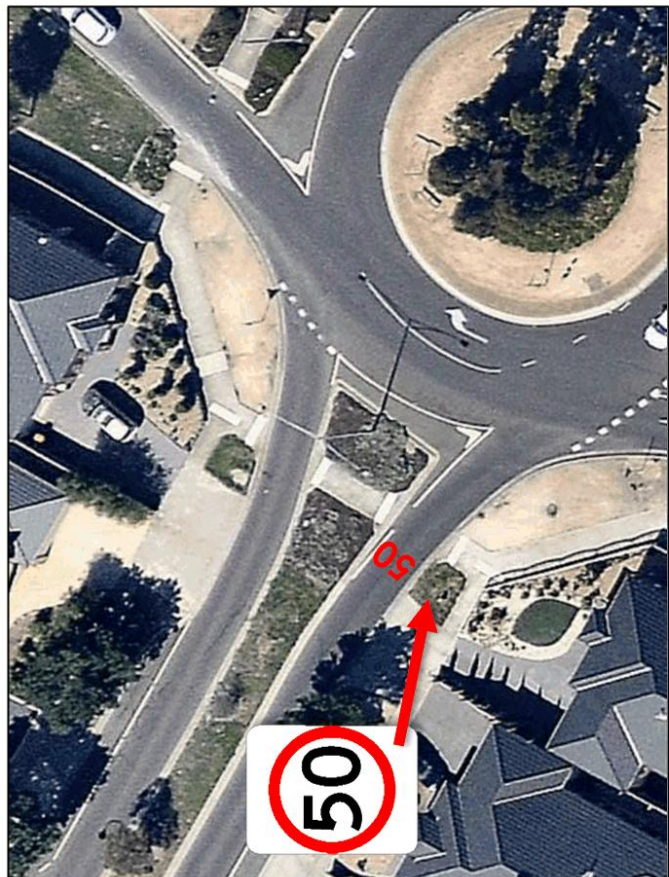


LATM Treatments - Ultimo Walk



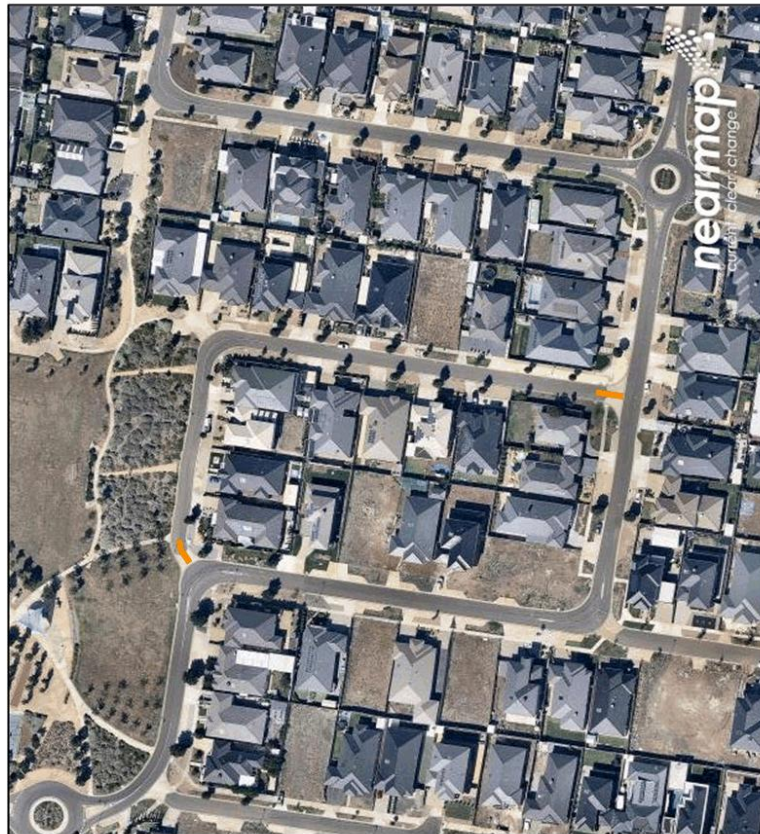
- All: 79% Yes / 10% No
- Res. (2): 50% Yes / 50% No
- No comments

LATM Treatments – George Street 



- All: 82% Yes / 10% No
- Res. (3): 100% Yes / 0% No
- No comments

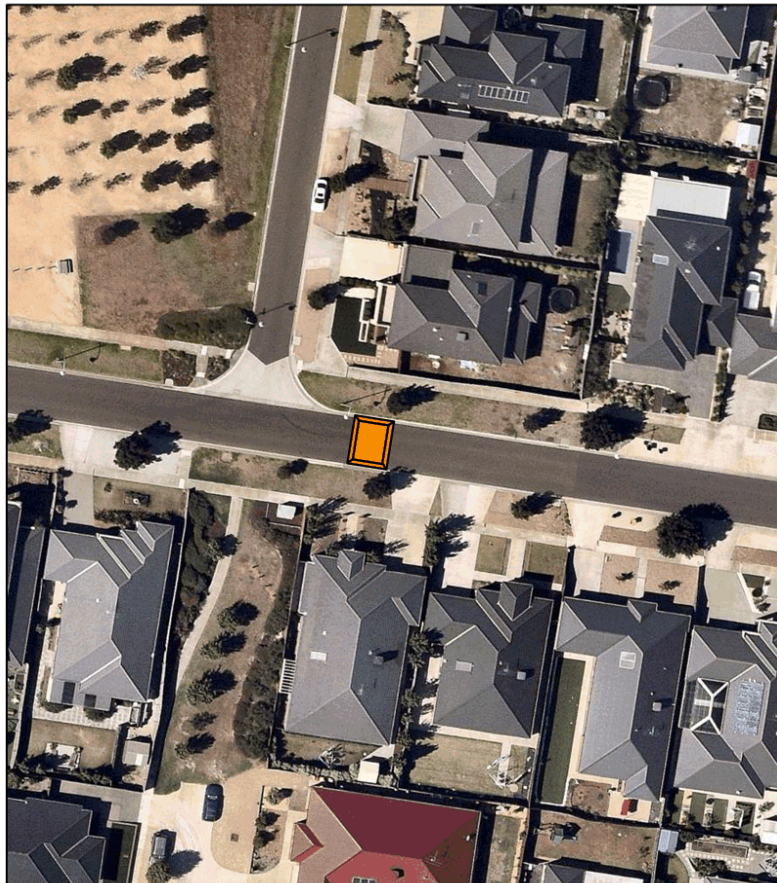
LATM Treatments – Double Bay Drive



- All: 81% Yes / 10% No
- Res. (2): 100% Yes / 0% No



LATM Treatments – Bond Street

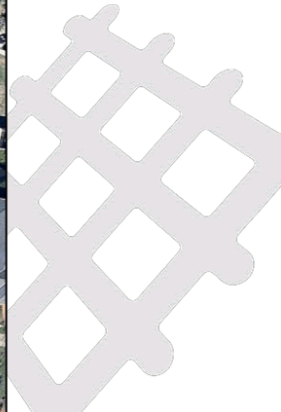
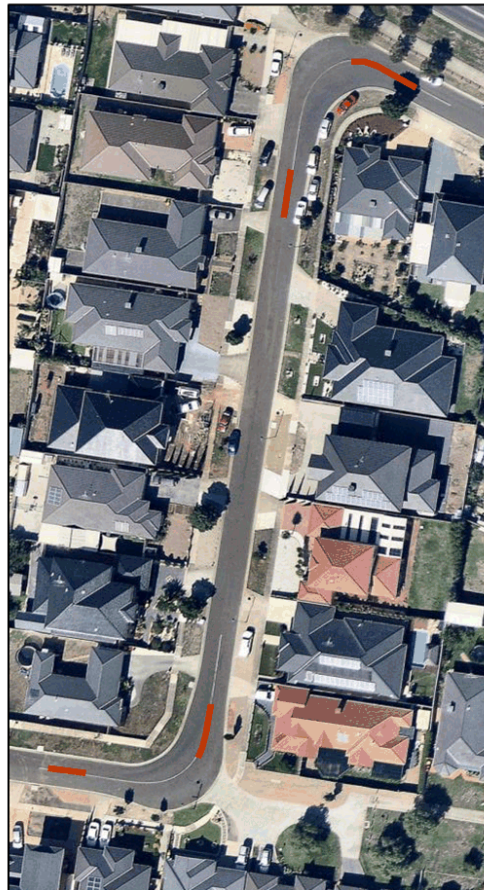


- All: 69% Yes / 22% No
- Res. (1): 100% Yes / 0% No
- Comments:
 - Hump not required
 - Try signage first
 - Humps will damage suspension
 - Humps are a blight



LATM Treatments – Lucas Terrace

- All: 82% Yes / 10% No
- Res. (1): 100% Yes / 0% No
- Comments:
 - Not necessary





LATM Treatments – Forbes Place

- All: 81% Yes / 10% No
- Res. (2): 100% Yes / 0% No
- Comments:
 - Road hump would work better
 - Supportive



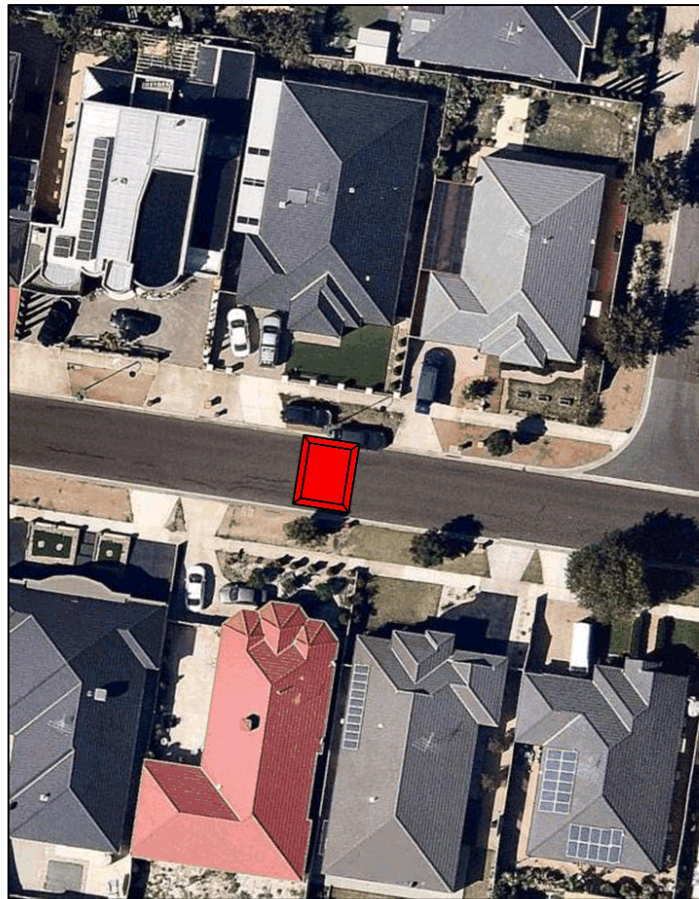
LATM Treatments – Conrad Terrace



- All: 84% Yes / 12% No
- Res. (5): 80% Yes / 20% No
- No comments



LATM Treatments – Conrad Terrace



- All: 71% Yes / 25% No
- Res. (5): 80% Yes / 20% No
- Comments:
 - Hump not required
 - Street no long enough
 - No speeding or traffic issues
 - Traffic flow slows down vehicles
 - Signage and line marking probably sufficient

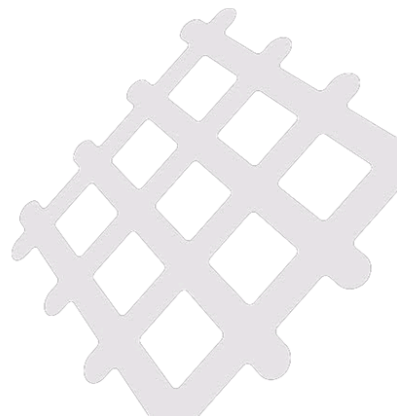
LATM Treatments – Conrad Terrace 



- All: 81% Yes / 16% No
- Res. (5): 60% Yes / 40% No
- Comments:
 - Will take up space for left/right turning vehicles
 - Will make entrance too tight



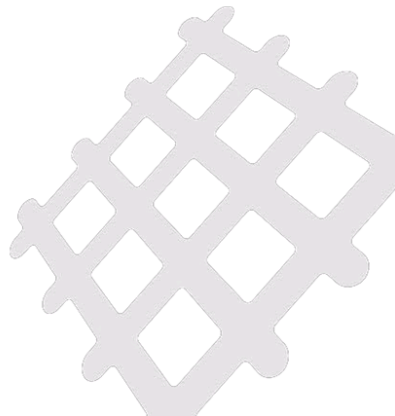
Questions & Comments



Next Steps



- One Mile Grid to prepare final report detailing findings of LATM study





Appendix E Questionnaire Survey No. 2



30 March 2016

«Address»

TAYLORS HILL, VIC, 3037

Taylors Hill West

Local Area Traffic Management (LATM) Study

Dear Resident,

The City of Melton has engaged **onemilegrid**, a specialist traffic and transport engineering consultancy, to undertake a review of the local traffic management conditions in your neighbourhood; Taylors Hill West through the preparation of a Local Area Traffic Management (LATM) Study.

The Taylors Hill West area is bound by Hume Drive to the north, Calder Park Drive to the east, Taylors Road to the south and Gourlay Road to the west. It is noted that the boundary roads named are not included in this study, however if there are concerns about conditions along these roads, please do not hesitate to contact Council directly.

The study commenced in September 2015, and a questionnaire survey was distributed to all residents within the study area in November 2015. In conjunction with the collection of traffic and speed data, and ongoing consultation with a community representative group, information collected from this initial survey has informed the preparation of a draft LATM plan. A copy of the draft plan is provided overleaf.

We are seeking your feedback on the appropriateness of the plan as a whole and any feedback you may have on the specific treatments proposed.

To assist with the final phases of this study and ensure that your views are heard, we request that you complete the attached questionnaire by **Friday 15th April 2016**. The questionnaire can be completed either: -

- online at www.surveymonkey.com/r/MCSP28T
- submitted via post using the provided reply paid envelope (no stamp required)
- or email to latm@onemilegrid.com.au

If you have any questions, please do not hesitate to contact James Dear at **onemilegrid** on (03) 9939 8250.

We thank you for your cooperation.

onemilegrid and Melton City Council

Taylors Hill West DRAFT Local Area Traffic Management Plan





	Taylors Hill LATM Study	Questionnaire Survey
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Please complete and return this questionnaire by Friday 15th April 2016. A reply-paid envelope has been provided for your convenience (i.e. no stamp required). Alternatively, this form can be completed and submitted online www.surveymonkey.com/r/MCSP28T or emailed to latm@onemilegrid.com.au

Contact Details

Name: _____ Email: _____
 Address: _____ Phone: _____

1. Are you supportive of the draft LATM plan as a whole?

- Yes
- Partially
- No

2. Please provide any comments you may have regarding the draft LATM plan in its entirety. Please note you will get the opportunity to comment on each particular treatment separately.

3. Are you supportive of each of the proposed treatments?

Ref No.	Location	Treatment	Yes	No
1	Vaucluse Boulevard	Signage and Linemarking (outside No. 3 Vaucluse Boulevard)	<input type="checkbox"/>	<input type="checkbox"/>
2	Coogee Drive	Splitter Island (at intersection with Bronte Way)	<input type="checkbox"/>	<input type="checkbox"/>
3	Bronte Way	Splitter Island (at bend)	<input type="checkbox"/>	<input type="checkbox"/>
4	Bronte Way	Pedestrian Link (across Bronte Way to Kirribilli Park)	<input type="checkbox"/>	<input type="checkbox"/>
5	Ultimo Walk	Pedestrian Link (along eastern side to Kirribilli Park)	<input type="checkbox"/>	<input type="checkbox"/>
6	George Street	Signage and Linemarking (outside No. 104 George Street)	<input type="checkbox"/>	<input type="checkbox"/>
7	Double Bay Drive	Splitter Island (at intersection with Woolwich Way North)	<input type="checkbox"/>	<input type="checkbox"/>
8	Double Bay Drive	Splitter Island (at intersection with Woolwich Way South)	<input type="checkbox"/>	<input type="checkbox"/>
9	Bond Street	Road Hump (outside No. 16 Bond Street)	<input type="checkbox"/>	<input type="checkbox"/>
10	Lucas Terrace	Splitter Islands (on each of northern bends)	<input type="checkbox"/>	<input type="checkbox"/>
11	Forbes Place	Splitter Island (at bend)	<input type="checkbox"/>	<input type="checkbox"/>
12	Conrad Terrace	Splitter Island (at intersection with Forbes Place)	<input type="checkbox"/>	<input type="checkbox"/>
13	Conrad Terrace	Road Hump (outside No. 14 Conrad Terrace)	<input type="checkbox"/>	<input type="checkbox"/>
14	Conrad Terrace	Splitter Island (at intersection with Taylors Road)	<input type="checkbox"/>	<input type="checkbox"/>

4. If you answered no to any of the above, please provide your comments/feedback regarding the specific treatment.
