

8.4. Response to Mayoral Minute - Gerard Street and Macpherson Street - Road Safety Near Middle Harbour School

AUTHOR: Michaela Kemp, Manager Traffic & Transport Operations

ENDORSED BY: Duncan Mitchell, Director Engineering Services

ATTACHMENTS:

1. Extract of Traffic Committee Minutes 30 January 2009 [8.4.1 - 3 pages]

PURPOSE:

This report has been prepared in response to the Mayoral Minute MM04 “Road Safety Near Middle Harbour School” considered at the Council meeting on 28 September 2020. The Mayoral Minute considered concerns regarding pedestrian safety at the pedestrian crossing at the intersection of Gerard Street and Macpherson Street, particularly school children and elderly residents and Council’s proposal to address the safety concerns by replacing the crossing with traffic signals which TfNSW did not support. The Mayoral Minute suggested:

“If traffic lights are not currently an option, and moving the crossing increases the risk of jaywalking, we need to look for other measures we can take to protect our residents. These could include traffic calming measures such as speed cushions, the installation of a roundabout, concrete barriers, line markings, increased signage and more.”

EXECUTIVE SUMMARY:

A Mayoral Minute MM04 “Road Safety Near Middle Harbour School” was tabled at the Council meeting on 28 September 2020 concerning road safety near Middle Harbour School, and specifically community concerns about pedestrian safety at the intersection of Gerard Street and Macpherson Street, Cremorne.

There have been numerous reports to the Traffic Committee on this intersection in the past 20 years. Invariably, the preferred option for Council has been to signalise the intersection to improve safety for pedestrians crossing at the intersection. Over the past 18 months the matter has been a Standing Item on the North Sydney Traffic Committee and Council has obtained traffic signal plans for the intersection, however these were not supported by TfNSW due to the number of pedestrians currently using the crossing not complying with the TfNSW numerical warrants for traffic signals.

Subsequently at the Council meeting on 28 September 2020 it was resolved (Min. 127):

- 1. THAT Council staff prepare a report investigating the options and efficacy of various traffic calming measures to increase safety at the pedestrian crossing at Gerard and Macpherson Street in Cremorne.*
- 2. THAT the Mayor and a member of Council staff meet with the Member for North Shore, Ms Felicity Wilson MP, for a site visit at this intersection.*

This report outlines further investigations by Council officers in response to the resolution of Council.

FINANCIAL IMPLICATIONS:

Traffic signals at the intersection would cost in the order \$400,000-\$500,000. Council has a limited budget for implementation of LATM projects. If signals were approved by Transport for NSW, implementation would be dependent on the availability of funding, including potential TfNSW grants and a contribution from Mosman Council.

RECOMMENDATION:

- 1. THAT** Council write to the Minister for Transport and Roads requesting special consideration for installation of traffic signals at the intersection of Gerard Street and Macpherson Street on the basis of pedestrian safety and amenity, with reference to this report.
- 2. THAT** the following signage changes be referred to the Traffic Committee for installation under delegation of the Manager Traffic & Transport Operations:
 - a. an additional pedestrian crossing sign installed in front of the tree on the southern side of Gerard Street facing west.
 - b. the Give Way sign on the left-hand side of Macpherson Street at Gerard Street be removed so as not to obstruct the pedestrian crossing sign.
- 3. THAT** all line marking associated with the pedestrian crossing including, zebra markings and zig zag markings on approaches, be maintained and refreshed to ensure visibility to the crossing is adequate.

LINK TO COMMUNITY STRATEGIC PLAN

The relationship with the Community Strategic Plan is as follows:

- 2. Our Built Infrastructure
 - 2.1 Infrastructure and assets meet community needs
 - 2.3 Sustainable transport is encouraged
 - 2.4 Improved traffic and parking management

BACKGROUND

The pedestrian crossing at the intersection of Gerard Street and Macpherson Street was originally installed in the 1970's and has been discussed on numerous occasions over the past 20 years at the North Sydney Traffic Committee. The extract from a report to the Traffic Committee on 30 January 2009 is attached and outlines the history of the pedestrian crossing and previous investigations.

More recently, the following recommendations were made at the Traffic Committee meeting on 25 February 2019 Council subsequently resolved:

- 1. THAT pedestrian signals on Gerard Street at Macpherson Street be expedited as a high priority project and funding be brought forward to progress the project to construction.*
- 2. THAT Council continue to lobby for funding for Gerard Street/Macpherson Street signals through 'Walking for the Communities' Program.*
- 3. THAT the RMS be given background information on the Gerard Street/Macpherson Street matter.*
- 4. THAT the Mayor continue to lobby for the Gerard Street/Macpherson Street signals, including a letter to Roads Minister once the signal design is submitted to the RMS.*
- 5. THAT the Gerard Street/Macpherson Street signals be completed by the end of the 2019/20 financial year.*

A traffic signal plan was commissioned by Council and referred to Transport for NSW (formerly RMS) for review. Transport for NSW provided the following advice:

"The likelihood to differ from the standard Traffic Signal Design warrants is low. If a certain location does not meet the signal warrants then it is difficult for TfNSW to support the proposal."

Numerical vehicle and pedestrian counts for the intersection were subsequently provided to TfNSW and Council received the following response:

"Transport for NSW cannot provide an alteration/variance to the required traffic signal warrants at this location."

A Mayoral Minute MM04 "Road Safety Near Middle Harbour Public School" was tabled at the Council meeting on 28 September 2020 concerning community concerns

about pedestrian safety at the intersection of Gerard Street and Macpherson Street, Cremorne. Subsequently at the Council meeting on 28 September 2020 it was resolved (Min. 127):

- 1. THAT Council staff prepare a report investigating the options and efficacy of various traffic calming measures to increase safety at the pedestrian crossing at Gerard and Macpherson Street in Cremorne.*
- 2. THAT the Mayor and a member of Council staff meet with the Member for North Shore, Ms Felicity Wilson MP, for a site visit at this intersection.*

CONSULTATION REQUIREMENTS

Community engagement will be undertaken in accordance with Council's Community Engagement Protocol.

DETAIL

Current Road Conditions

Gerard Street and Macpherson Street are classified as regional roads which fall under the control of Council. Macpherson Street also forms the boundary of North Sydney and Mosman local government areas. Traffic volumes along this route are in the order of 24,500 vehicles per day. The road is situated to the north of and parallel to Military Road. Cremorne village centre is located 150 metres to the south. Adjacent land uses along the route consist mostly of medium-density residential properties. Middle Harbour Public School is located 400 metres to the north. Bus route 243 (Spit Junction to City) operates along this route.

Gerard and Macpherson Street meet at a T-intersection and Macpherson Street continues into Gerard Street at a 90-degree right-hand bend. Gerard Street and Macpherson Street have four lanes, two in each direction. Clearways apply in the south/west-bound kerb-side lane in the AM peak (6am-10am Mon-Fri) and in the north/east-bound kerb-side lane in the PM peak (3pm-7pm Mon-Fri). Parking is permitted in the kerb-side lanes outside of clearway times.

A marked (zebra) pedestrian crossing is located on Gerard Street immediately west of Macpherson Street. The road width at the crossing is approximately 15 metres and the crossing extends across four traffic lanes. Parking is prohibited within 30 metres on approach and departure of the crossing.



Figure 1 Locality Map – Gerard Street/Macpherson Street pedestrian crossing

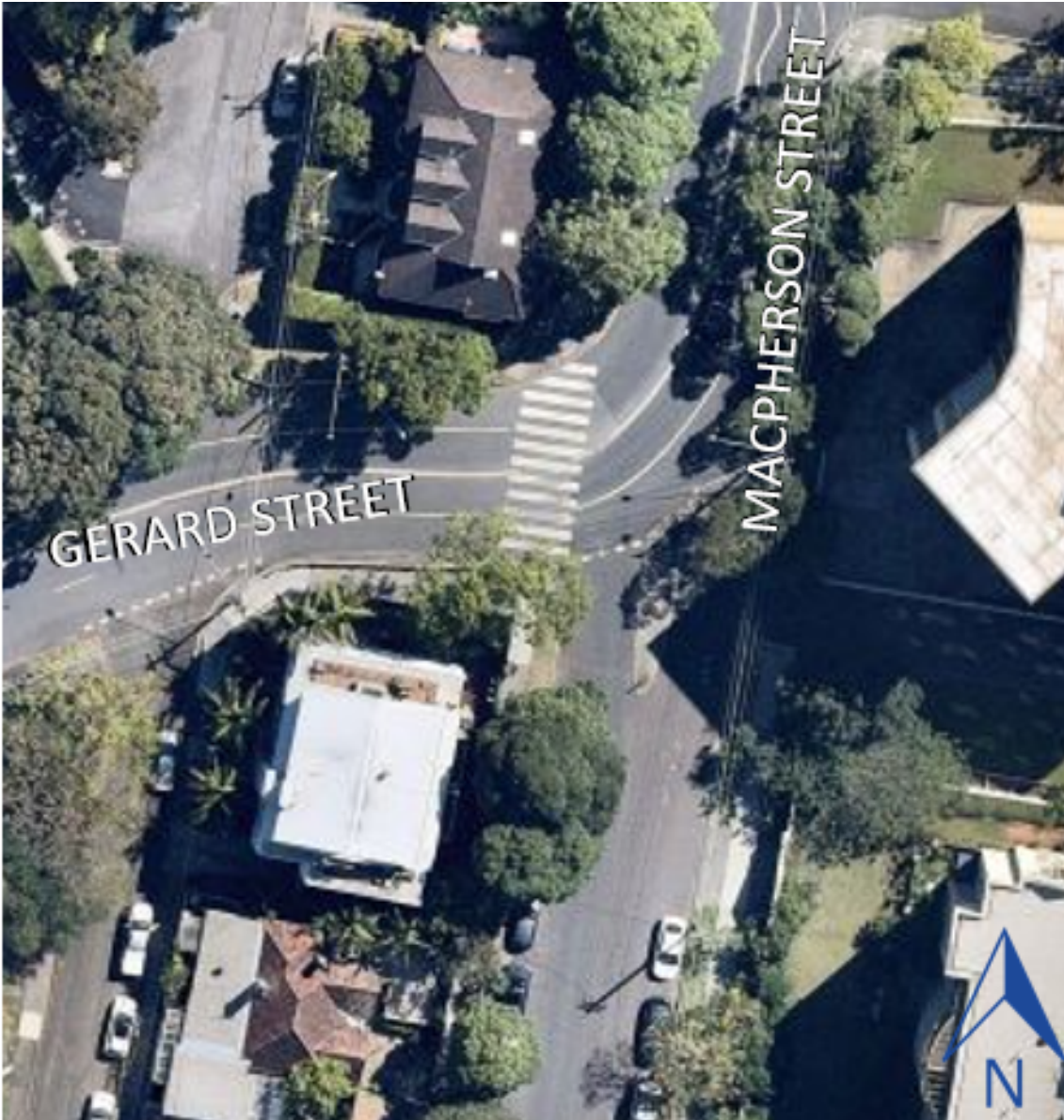


Figure 2 Aerial view of pedestrian crossing at the intersection of Gerard Street and Macpherson Street

This pedestrian crossing at the intersection of Gerard Street and Macpherson Street was originally installed in the 1970s.



Figure 3 View of pedestrian crossing from Gerard Street



Figure 4 View of pedestrian crossing from Macpherson Street

Crash Summary

A review of the most recent 5 years of available Transport for NSW crash data to December 2019 revealed 1 crash at the intersection of Gerard Street and Macpherson Street in 2019 involving a car that travelled off the end of the T-intersection. One person was injured in the crash and speed was noted as a factor in the crash. There were no crashes involving pedestrians recorded at the intersection.

Considering the high volume of vehicles on Gerard Street, and the geometric layout of this intersection on a regional road, crashes are unfortunately somewhat anticipated. Less than one crash per year is generally considered low.

Current Standards for Pedestrian Crossings

RMS guidelines have changed since the pedestrian crossing was first installed in the 1970's and, since 2007, new pedestrian zebra crossings are not permitted where there is more than one travel lane in one direction. This is primarily to address safety and ensure that sight lines between approaching motorists and pedestrians at the crossing are maintained. Therefore, any modifications to the pedestrian crossing must comply with the current standards.

Traffic lanes on urban roads typically have a functional capacity of 900 vehicles per hour. Given the peak-hour traffic flow in either direction on Gerard Street and Macpherson Street is in the order of 1300 to 1600 vehicles per hour, reducing the number of lanes from 4 to 2 is likely to have unacceptable impacts on the traffic level of service for Gerard Street and Macpherson Street. As such it is not feasible to modify the existing pedestrian crossing to comply with the current standards.

Signalised Pedestrian Crossings

Traffic signals on any road can only be approved by TfNSW. The TfNSW Traffic Signal Design guidelines includes general warrants for the installation of traffic signals, however it is noted that these are a guide only.

For pedestrian safety the general warrants are:

For each four one-hour periods of an average day:

- i) The pedestrian flow crossing the major road exceeds 150 persons/hour; and*
- ii) The major road flow exceeds 600 vehicles/hour in each direction....*

Council obtained traffic and pedestrian counts at the intersection of Gerard Street and Macpherson Street in February 2020 between 6.30am-9.30am and 3.00pm-6.30pm on Thursday 8/2/20 and 10am-1pm on Saturday 6/2/20. The weekday peak hourly pedestrian and vehicle volumes at the pedestrian crossing are shown in Table 1.

Table 1 Vehicle and pedestrian hourly volumes – at existing pedestrian crossing – February 2020

Time	Pedestrians	Vehicles	
		Eastbound	Westbound
7.30am-8.30am*	89	664	1,797
8.30am-9.30am*	54	600	1,631
3.15pm-4.15pm	51	1,164	809
5.30pm-6.30pm	65	1,458	601

* Peak hour pedestrian volume is between 7.45am-8.45am (96 pedestrians per hour)

While the hourly pedestrian volumes are 26-64% of the general warrant, the traffic volumes regularly exceed 600 vehicles per hour in each direction throughout the day. The hourly traffic volume profile for Gerard Street is shown in Figure 5.

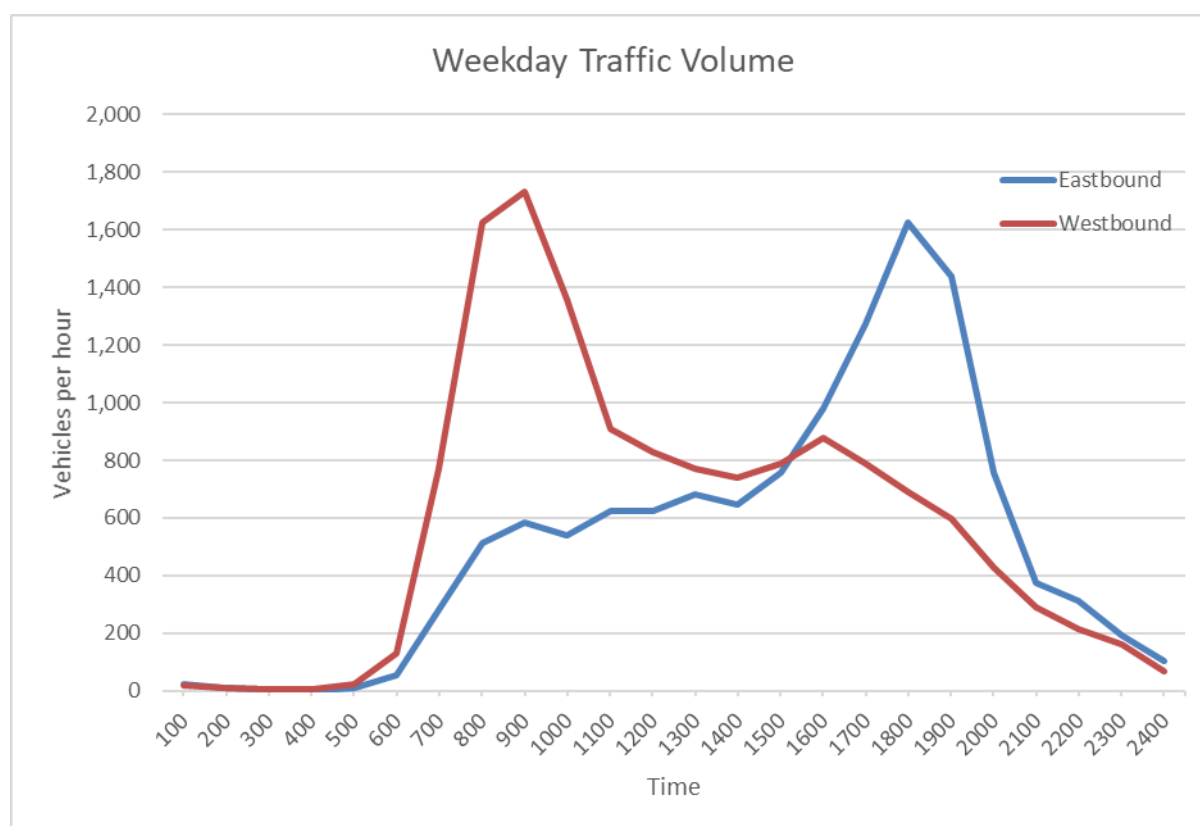


Figure 5 Weekday hourly traffic volume – Gerard Street between Benelong Road and Langley Avenue (August 2013)

These relatively high traffic volumes, combined with the adverse road geometry can create an intimidating road environment for pedestrians. A signalised intersection would provide a dedicated phase for pedestrians to cross the road with traffic in all directions stopped.

Despite TfNSW indicating that traffic signals are not supported at this intersection based on the general warrants, an application has been submitted to the Transport for NSW 2021/22 Safer Roads Program for this proposal.

Investigation of Alternatives

The Mayoral Minute of 28 September 2020 referred to consideration of alternatives including traffic calming, such as speed cushions, a roundabout, concrete barriers, linemarking, and signage.

Signage/Linemarking

An audit of the pedestrian crossing was undertaken in November 2020. The linemarking is satisfactory and is routinely maintained. There are also zig zag markings in all lanes on approach to the pedestrian crossing to alert motorists. All required signage is in place, however some signage is slightly obstructed and could be relocated. There is also a fair amount of signage in Macpherson Street on approach to the intersection so additional signage should be carefully considered.

There is only one pedestrian crossing sign visible to eastbound traffic on Gerard Street (see Figure 3). It is recommended that an additional pedestrian crossing sign is placed in front of the tree on the southern side of Gerard Street facing west. For vehicles turning left from Macpherson Street into Gerard Street, the Give Way sign obstructs the pedestrian crossing sign. There is another Give Way sign on the median as well as give way linemarking at the intersection. Therefore, it is recommended that the Give Way sign on the left-hand side of Macpherson Street at Gerard Street (as shown in Figure 6) be removed so as not to obstruct the pedestrian crossing sign.



Figure 6 Macpherson Street at Gerard Street - signage

Traffic Calming

Conventional traffic calming consists of vertical deflection devices - such as speed cushions and raised thresholds; and horizontal deflection devices – such as kerb extensions, chicanes and slow points. Due to the sheer volume of traffic on Gerard Street and Macpherson Street horizontal deflection devices would not be suitable as it would result in a reduction of traffic lanes which would impact capacity and traffic flow as mentioned previously. Similarly, vertical deflection devices are not recommended for streets with very high traffic volumes such as Gerard Street and Macpherson Street due to noise generation when vehicles, including heavy vehicles, traverse over the devices. The need to accommodate buses along this route would also limit the traffic calming effect for general traffic.

The width of the travel lanes can influence traffic speeds, however the lane widths on Gerard Street and Macpherson Street are approximately 3.2 metres wide which are the desirable widths for bus routes and as such it is not feasible to further reduce the lane widths.

Roundabout

As outlined above, traffic lanes on urban roads typically have a functional capacity of 900 vehicles per hour. The peak-hour traffic flow in either direction on Gerard Street and Macpherson Street is in the order of 1300 to 1600 vehicles per hour. To achieve an acceptable level of service, a two-lane roundabout would be required at Gerard Street and Macpherson Street. However, there is inadequate space to install a two-lane roundabout at the intersection (without significant road widening and property acquisition), and this does not negate the issue of the pedestrian crossing spanning two traffic lanes in the same direction.

Therefore, a roundabout is not recommended.

Conclusion

This report has considered alternative options to improve pedestrian safety at the intersection of Gerard Street and Macpherson Street. The option which will provide the safest crossing facility for pedestrians is a signalised crossing. Therefore, this report recommends that the signalised crossing continue to be pursued with the Minister for Transport and Roads and Transport for NSW.

In the meantime, minor changes to signage near the intersection are recommended to improve motorist awareness of the pedestrian crossing.

13. (4.8) City of Sydney Spring Cycle 2009

Report of Traffic Planning Officer, Fiona Frost, 19 January 2009

Council has received correspondence (Dataworks 4405439) from Bicycle NSW requesting approval for the 2009 Spring Cycle event to be held on Sunday 27 September 2009. This annual event had 9,000 riders in 2008. It is understood that the North Sydney start point will be in St Leonards Park and will finish at Sydney Olympic Park.

A full Traffic Management Plan is expected to be submitted before the event.

Standard or Guideline Used: AS 1742.3

Signs & Lines Priority: N/A

Recommending:

THAT Council raise no objection to the Sydney Spring Cycle event on 27 September 2009, in principle, subject to a traffic and pedestrian management plan being submitted, as per AS 1742.3 and no objections being received from the RTA or Police.

Resolved to recommend:

THAT the report be adopted.

Voting: Unanimous

14. (4.9) Gerard Street, Cremorne – Pedestrian Crossing – Late Item

Report of Traffic Engineer, Cathy Edwards-Davis 28 January 2009

The NSW Police and Pedestrian Council have raised concerns about the pedestrian crossing on Gerard Street, Cremorne, near Macpherson Street. The NSW Police have noted that this crossing is located on a four lane road, close to the bend in the road near Macpherson Street.

There is significant history regarding this crossing, which will be discussed below.

An examination of the RTA's accident database reveals that between 1996 and 2007 there were eight accidents on Gerard Street, near Macpherson Street. None of these accidents involved a pedestrian. Considering the high volume of vehicles on Gerard Street, and the geometric layout of this intersection on a regional road, accidents are unfortunately somewhat anticipated. Less than one accident per year is generally considered acceptable. It is understood that many years ago the RTA did some preliminary investigation into the installation of traffic signals at this intersection. They had a concept layout and signal plan. It is understood that this included the possible compulsory acquisition of a property at this location in order to improve the geometry. It is unknown by Council staff what happened with this earlier plan.

High visibility diamond grade "yellow" pedestrian crossing signage was installed by Council several years ago. This was to replace the old "orange" pedestrian crossing signage which is less visible.

In early 2007 the linemarking was repainted with cold applied plastic linemarking. At the time, the linemarked "bars" were extended to improve the line of sight. The "zig zag" linemarking was also repainted.

In March 2007 Council undertook a review of the crossing. Given the volume of vehicles in Gerard Street (AADT >15,000 per day), Council did not consider it appropriate to make this a raised pedestrian crossing. Council submitted a concept diagram to the RTA, seeking to move the existing crossing approximately 15m to the west and install pedestrian safety fencing. The intention of this was to increase sight

distance for vehicles approaching from the east/Macpherson Street. A copy of this diagram is attached. The RTA did not generally support this proposal.

The RTA suggested that Council investigate pedestrian desire lines and vegetation near the crossing. Council's Open Space and Environmental Section inspected the site at the time, and continue to regularly inspect the site for maintenance of the street trees and to help ensure that pedestrian sight lines are not obscured by vegetation.

Consideration has been given to removing this pedestrian crossing altogether and encouraging pedestrians to walk along the eastern footpath of Macpherson Street (which is continuous) or walking down to the traffic signals at the intersection of Gerard Street and Benelong Road. With regard to pedestrian desire lines, as the Committee would be well aware, it is difficult to get pedestrians to walk more than about 10 metres from the most direct route that they wish to take. Most of the pedestrians crossing Gerard Street at this point are walking from Military Road up to the School or residential properties north of Gerard Street or vice versa. Council felt that removing the pedestrian crossing would just result in pedestrians choosing to "run" across the road at this same location. This would therefore not improve pedestrian safety at this location.

In April 2007, the RTA advised Council that they were investigating all pedestrian crossings located on four lane roads, with a view to replacing them with signalised pedestrian crossings. In response, Council requested that the RTA investigate the installation of a signalised pedestrian crossing at the Gerard Street crossing.

In May 2007, the RTA responded with the following, "... the pedestrian crossing on Macpherson Street and Gerard St, Cremorne and Councils request to have this facility included in the Pedestrian Crossing Upgrade Program. This program was initiated by the Roads and Transport Minister in May 2006 to replace existing pedestrian crossing on multi-lane State Government roads with signalised pedestrian facilities. As Macpherson and Gerard Streets are classified as Regional roads they do not meet the criteria for exclusive funding. However, the RTA encourages North Sydney Council to submit an application for joint funding with the RTA to upgrade this facility under the Local Government Pedestrian Facilities Programme."

Council is under severe budgetary constraints. Traffic projects are planned on an annual basis. As part of its Traffic Strategy, Council undertakes a review of the priorities for traffic projects each year. The traffic strategy implementation procedure adopts a methodology that allows the high priority traffic projects to be ranked according to a number of criteria, including safety, residential amenity, pedestrian amenity, cyclist amenity, through traffic control, public transport benefits and equity. Unfortunately the installation of pedestrian signals at this intersection has been unsuccessful in attracting funding to date. As you can imagine Council receives many requests for funding of various traffic devices in numerous locations and is constrained by a very limited budget.

For many years Council has been lobbying the RTA to approve a concept design for traffic signals on Christie Street, St Leonards, near Atchison Street/Sergeants Lane. The RTA gave approval in August 2007. For the past few years, North Sydney Council has been applying to the RTA for partial funding for the installation of these pedestrian signals. This has been the prioritised pedestrian signal project as there is currently up to 860 pedestrians crossing at this location in the peak hour, without the benefit of any type of pedestrian facility. These pedestrians currently generally "weave" amongst the vehicles which are queued whilst waiting for the traffic signals at the intersection of the Pacific Highway and Christie Street. This is currently Council's top pedestrian signals priority project. Once this project has been funded, Council may be in a financial position to consider other pedestrian signals, including those at Gerard Street.

Standard or Guideline Used: AS 1742.10

Signs & Lines Priority: As outlined in the report.

Recommending:

THAT the information be received.

THAT Council lobby the RTA to 100% fund the installation of traffic signals, including a signalised pedestrian crossing on Gerard Street, near Macpherson Street.

Sgt Sweeney (North Sydney Police) referred to concerns regarding the pedestrian crossing and described instances of pedestrians whilst crossing.

The RTA representative raised the matter of a pedestrian survey, particularly during AM/PM peak periods, to gain up-to-date information. He referred to a current program for State roads and advised that Regional roads may be added to the list in the future. The subject crossing may therefore be included.

Resolved to recommend:

THAT the report be adopted.

Voting: Unanimous

(This item was raised under “Business Without Notice (Matter of Urgency)” - via Minute No 21.)

INFORMAL ITEMS CONSIDERED**15. (5.1) Falcon Street – Pedestrian & Cyclist Facilities – Informal Item**

Report of Traffic Engineer, Cathy Edwards-Davis 20 January 2009

The Minister for Roads, the Hon Eric Roozendaal MLC, announced on 14 June 2006 that additional pedestrian and cyclist facilities would be provided at Falcon Street.

Recommending:

THAT the information be received.

Resolved to recommend:

1. **THAT** the report be adopted.
2. **THAT** photographs be attached to future reports for the Traffic Committee’s information.

Voting: Unanimous

16. (5.2) List of Standing Items – Informal Item

Report of Traffic Engineer, Cathy Edwards-Davis 20 January 2009

At the 422nd Traffic Committee meeting it was resolved to have a list of Standing Items placed on future Traffic Committee agendas.

Attached is a list of recommendations made for standing items.

Recommending:

THAT recommendations made for the standing items be adopted.

Item No 27: Military Road, Neutral Bay

In reply to a question from Ms M Mackenzie (representing Ms J Skinner, MP), the RTA representative advised that the traffic signals in Military Road, at Wycombe Road, now provides a longer pedestrian phase.