



Princes Highway and Lawrence Hargrave Drive Intersection reconstruction

Submissions Report

November 2007

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I Introduction and background

This *Submissions Report* relates to the community consultation undertaken for the proposed reconstruction of the Princes Highway and Lawrence Hargrave Drive intersection.

The proposal involves the construction of a single northbound lane from George Avenue that is aligned west of the existing Princes Highway and spans over Woodlands Creek and Bulli Pass connecting with Lawrence Hargrave Drive. This work would remove the existing right turn movement from the Princes Highway to Lawrence Hargrave Drive.

The proposal would provide a range of benefits including improved road safety, reduced peak hour delays and queuing, reduced vehicle operating costs through improved traffic flow, greater travel efficiency and a small footprint minimising the impacts on the existing environment.

The Roads and Traffic Authority (RTA) prepared display material to inform the community of the proposal and seek feedback. The display was held between 29 November and 21 December 2006 at four locations (refer to Table 1.1). Community information sessions were also held at Thirroul Plaza on the 2 December and 9 December 2006. Reference material was made available for review at the nominated locations and on the RTA's website. Submissions were received up until Friday 22 December 2006.

Table 1.1: Locations of where the display material was displayed

Location	Address
Corrimal Motor Registry	Shop 1 Corrimal Park Mall 204 Princes Highway, Corrimal
RTA Southern Regional Office	Level 4, 90 Crown Street, Wollongong
Body Dynamics	249 Princes Highway, Bulli
Oasis Coffee Lounge	Thirroul Plaza Lawrence Hargrave Drive, Thirroul

The RTA received 36 submissions and Table 1.2 lists all respondents to the public display and each respondent's allocated submission number. The table also indicates where each of the issues has been addressed in this report.

Table I.2: List of Respondents

Surname	Given Name(s)	Organisation	Representation No.	Section Where Issues Are Addressed
More	Robert	Individual	1	2.2.2, 2.4.1
MacFarlane	Alaister	Individual	2	2.4.1
McLean	Arnold	Individual	3	2.2.2, 2.4.1
Hatton	Daniel	Individual	4	2.1.1, 2.2.1
Lowcock	Ivor	Individual	5	2.1.1, 2.2.1
Misios	Rose & Athanasios	Individual	6	2.4.1
Smith	Pauline	Northern Illawarra Chamber of Commerce	7	
Cameron	Wayne	Individual	8	2.4.2, 2.6.1
Tracey	Dennis	Individual	9	2.4.2, 2.5.1, 2.5.2
Hodgson	Peter	Individual	10	2.4.1, 2.5.3
Nichols	Paul	Individual	11	2.4.1
Rizzo	Michele	Individual	12	2.2.2, 2.4.1
Hinge	Kerry	Individual	13	2.4.1
Murray	Geoff	Individual	14	2.4.2
Roach	Tony	Individual	15	2.4.1, 2.5.3
Sims	Colin	Individual	16	2.4.1
Foreman	Ian	Individual	17	2.4.1
Cropje	Mr	Individual	18	2.4.1
Bartlett	Rod	Individual	19	2.2.2, 2.4.1
Mangan	Olive	Individual	20	2.5.2
Mannix	Jill	Individual	21	2.4.2, 2.5.2, 2.6.1
Wood	Brian	Motorcycle Council of NSW Incorporated	22	2.4.2
Anderson	A	Individual	23	2.4.1
Spagnolo	Aldo & Joan	Individual	24	2.4.1, 2.5.1, 2.5.2, 2.6.1
Turner	Joyce	Individual	25	2.4.1, 2.5.1
Mumford	Greg	Individual	26	2.2.2, 2.4.1
Fitch	David	Individual	27	2.4.1
Woods	Aston & Josh	Individual	28	2.4.1
Titcume	John	Individual	29	2.4.1, 2.5.2
Bitzios	Adrian	Wollongong City Council	30	2.4.1, 2.5.2
Hines	David	Individual	31	2.6.2
Simpson	Craig	Individual	32	2.4.1
Jackson	Bruce	Individual	33	2.4.1
Clark	Rowen	Individual	34	2.4.1
Coleman	Bruce	Individual	35	2.4.1
Laird	Philip	Individual	36	2.4.1

2 Summary of issues and responses to the display

2.1 Proposal justification

2.1.1 Proposal justification

Submission(s) Number

4, 5

Issue description

In summary, the respondents raised the following issues:

- The proposed works satisfies a real traffic need.

Response

The support for the proposal contained in the submissions has been noted.

2.2 Support for the selected proposal

2.2.1 Support for the selected proposal – entire

Submission(s) Number

4, 5

Issue description

In summary, the respondents raised the following issues:

- The proposed intersection reconstruction is great. It's a fantastic, simple and efficient way of fixing the current risks and problems associated with the intersection.

Response

The support for the proposal contained in the submissions has been noted.

2.2.2 Support for the selected proposal – component

Submission(s) Number

1, 3, 12, 19, 26

Issue description

In summary, the respondents raised the following issues:

- The simple, cost effective solution for the northbound traffic from Georges Avenue to Lawrence Hargrave Drive

Response

The support for the proposal has been noted.

2.3 Objection to the selected proposal

2.3.1 Object to selected proposal

Submission(s) Number

Nil

Issue Description

In summary, the respondents raised the following issues:

- There was no objection to the proposal as a whole however there were comments regarding further enhancements to the proposal which are listed in section 2.4.

Response

The absence of objections to the proposal as a whole has been noted.

2.4 Design

2.4.1 Design options

Submission(s) Number

1, 2, 3, 6, 10, 11, 12, 13, 15, 16, 17, 18, 19, 23, 24, 25, 26, 27, 28, 29, 30, 32, 33, 34, 35, 36

Issue description

In summary, the respondents raised the following issues:

- The proposal does not go far enough to cater for all turning movements particularly right turning traffic from Lawrence Hargrave Drive to Bulli Pass.
- Proposal does not cater for run away vehicles. Accessing the existing safety ramp requires vehicles to cross the path of those travelling south from Lawrence Hargrave Drive and is an “accident waiting to happen”.
- Provision of a pedestrian walkway/cycleway on the western side of the Princes Highway.
- Motorists should have their own lane to turn into Lawrence Hargrave Drive from Bulli Pass rather than give way as proposed as this could cause queuing on Bulli Pass.
- The RTA consider whether the breakdown lane is wide enough to accommodate two way traffic in the event of an emergency when Woodlands Creek is flooded.
- The installation of a roundabout at the intersection of George Avenue and the Princes Highway to reduce the risk of future accidents at this intersection.
- Consideration be made to replace the bus stop at the corner of Georges Avenue and the Princes Highway.

Response

The proposed changes to the intersection would provide a significant improvement for the right turn movement from Lawrence Hargrave Drive to Bulli Pass. Motorists wishing to undertake this turning movement would only have one lane of traffic travelling down Bulli Pass to give way to. They would have their own traffic lane on Bulli Pass to safely accelerate and merge with northbound traffic from the Princes Highway (as per the current arrangement). Traffic modelling has been undertaken using existing traffic volumes as well as considering the growth of traffic volumes at 10 and 20 years into the future. The results of this study have shown that the proposed intersection layout will accommodate the anticipated growth in traffic with minimal queuing. The RTA reviewed the option to provide grade separation for the right turn movement from Lawrence Hargrave Drive onto Bulli

Pass that involved the construction of an additional lane on the overpass that subsequently looped back onto the Princes Highway. Concept designs were prepared to determine its feasibility. Project costs would increase by 50% and there would be considerable social disruption to adjoining residents as there is insufficient room to construct the lane in the existing road corridor and further property acquisition would be required.

Following the community consultation process, a risk workshop was held in February 2007 to resolve how run away vehicles down Bulli Pass could be managed. A number of stakeholders including the local council and the emergency services participated in the workshop. The preferred option is the construction of a containment wall that would act as a stopping mechanism for run away vehicles as they would make contact with the barrier at a negligible angle, then travel along the wall using friction and angle to guide and slow the vehicle. The wall would also separate southbound traffic from Lawrence Hargrave Drive and motorists travelling down Bulli Pass thereby eliminating the conflict point that exists with the current arrangement.

The issue of providing a pedestrian walkway on western side of the Princes Highway will be considered in the detail design stage. A walkway under the proposed overpass would maintain the pedestrian access on western side of the Princes Highway without having to cross traffic.

The option of providing an extra lane for the left turning movement into Thirroul from Bulli Pass has not been considered due to the impact it would have on adjoining properties. Due to the limited space available, a considerable amount of private land would have to be resumed which increases project costs and social disruption. Traffic modelling has confirmed that there would not be significant queuing on the left turn off ramp that would extend onto Bulli Pass.

The total width of the overpass is 6 metres, and as such could be configured with the appropriate controls in place to accommodate two way traffic in the event of an emergency. The RTA would work closely with the emergency services and Council to ensure the existing emergency plans for this area are updated and include the overpass as an alternative access route for both north and southbound traffic.

The installation of a roundabout at the intersection of the Princes Highway and George Avenue has been considered and found not to be suitable due to the existing road geometry. Instead it has been decided, for safety reasons, to restrict the traffic movements at George Avenue to a left in only. This decision negates the need for a roundabout at this location.

There is an existing bus stop on the Princes Highway, adjacent to Bulli Primary School. The bus stop referred to in the submissions is regarded as an informal bus stop that has been used by bus drivers to drop off local residents. There are no current issues to justify the construction of a new bus bay with another bay within 250 metres.

2.4.2 Road design

Submission(s) Number

8, 9, 14, 21, 22

Issue Description

In summary, the respondents raised the following issues:

- The proposal would not improve the road alignment or geometry at the intersection of George Avenue and the Princes Highway. Existing conditions lead to head on collisions.
- The proposal would impact sight distance and visibility at the bottom of Bulli Pass.

Response

The proposed work is aimed at improving the intersection of the Princes Highway and Lawrence Hargrave Drive. Improving the road alignment and geometry at the intersection of George Avenue and the Princes Highway is beyond the scope of this work. Restricting traffic movements to left in only at George Avenue would improve traffic safety.

The proposal conforms to the RTA design guidelines and sight distance has been considered in the development of this project. Good visibility for all travel paths and turning movements has been achieved.

2.5 Operation

2.5.1 Traffic speed

Submission(s) Number

9, 24, 25

Issue description

In summary, the respondents raised the following issues:

- Traffic calming measures should be considered to reduce the traffic speed in the area including the installation of a fixed speed camera.

Response

The opportunity to introduce traffic calming measures in this section of the Princes Highway is limited due to the geometry of the road. The option of a fixed speed camera outside Bulli Primary Public School is not possible as the program for their installation is currently on hold. This will be reviewed once the program has been re-established. The RTA has a strict set of criteria for selection of fixed speed camera sites.

2.5.2 Local traffic access

Submission(s) Number

9, 20, 21, 24, 29, 30

Issue description

In summary, the respondents raised the following issues:

- Should George Avenue be closed this would force traffic to use the un-named laneway between George Avenue and William Street. This is very narrow and not suitable for any increase in traffic flow. To avoid congestion around the school, the vacant land held by the RTA should be utilised.
- The residents living on the Princes Highway find it difficult to get in and out of their driveways and this situation would get worse.

Response

A decision has been made to restrict traffic movement to left in only at George Avenue for road safety reasons. As a result, local residents will need to use the un-named laneway between George Avenue and William Street. The laneway will be of sufficient width to accommodate two way traffic provided that no parking is allowed. The option to use the vacant land held by the RTA was considered not to be suitable as it is the corridor for the possible future extension of the Northern Distributor.

The proposed work would not physically impact the access of residents living on the Princes Highway. Improving access to these properties is considered to be beyond the scope of this project.

2.5.3 Traffic congestion

Submission(s) Number

10, 15

Issue description

In summary, the respondents raised the following issues:

- The proposal would push the congestion to the first set of traffic lights in Thirroul ie. at Phillip Street.
- The proposal should consider providing an extra northbound lane on Lawrence Hargrave Drive to the centre of Thirroul during peak times to ease congestion.

Response

The proposed work is aimed at improving traffic movements at the intersection of the Princes Highway and Lawrence Hargrave Drive. Traffic modelling undertaken shows that traffic flows will become more consistent with overall vehicle operating costs improving.

The removal of the parking lane to provide for an additional northbound lane on Lawrence Hargrave Drive is beyond the scope of this project. This suggestion could be considered in the future, following traffic analysis of Thirroul's local road network.

2.6 Safety

2.6.1 Pedestrian safety

Submission(s) Number

8, 21, 24

Issue description

In summary, the respondents raised the following issues:

- Consideration should be made to pedestrians and their safety particularly those wishing to cross the Princes Highway.

Response

The RTA has undertaken studies of the pedestrian movements in the area and has found that the majority of pedestrian traffic is on the eastern side of the Princes Highway. As such the provision of pedestrian facilities for those wishing to cross the Princes Highway is not warranted.

2.6.2 Bicycle safety

Submission(s) Number

31

Issue description

In summary, the respondents raised the following issues:

- From a cyclist's perspective, the greatest danger posed by vehicles to cyclists with the current proposal is those turning right from Lawrence Hargrave Drive onto the Bulli Pass cutting across cyclists travelling down Bulli Pass. There is also the issue of cyclists having to cross the path of southbound motorists from Lawrence Hargrave Drive at the bottom of Bulli Pass.

Response

Motorists turning right from Lawrence Hargrave Drive onto Bulli Pass would be required to stop at the intersection and give way to vehicles and cyclists travelling down Bulli Pass. The proposal has been designed to provide good sight distance and ensure that all traffic can be seen. The decision to construct a containment wall at the bottom of Bulli Pass as a means of managing run away vehicles would also have incorporated in its design a shoulder which cyclists can use as an area of refuge whilst waiting to merge with southbound traffic from Lawrence Hargrave Drive.

3 Main issues raised in submissions

The information below provides a summary of the main issues raised in submissions during the community consultation period:

- Not providing grade separation for the right turn movement from Lawrence Hargrave Drive onto Bulli Pass.
- The potential conflict of southbound motorists from Lawrence Hargrave Drive with vehicles travelling from Bulli Pass.
- Not providing left turners from Bulli Pass onto Lawrence Hargrave Drive their own lane.
- The road alignment and geometry at the intersection of George Avenue and the Princes Highway.
- Property access for those living on the Princes Highway.
- Provision for pedestrians.

4 Modifications to the proposal

As a result of submissions and subsequent RTA responses, a modification is to be included as part of the proposal:

- Limiting access to George Avenue to left turn in only.

However, in response to submissions the following commitments would be included as part of the proposal.

- The option to construct a containment wall that would be used to manage run away vehicles travelling down Bulli Pass.

5 References

Kepner Tregoe 2007. RTA Decision Analysis Report Princes Highway and Lawrence Hargrave Drive Intersection, Kepner Tregoe, Sydney

RTA 2001. RTA Design Guide, RTA, Sydney