LIVING STREETS Canberra

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TO: Eurobodalla Shire Council

CC. Councillor Danielle Brice

Traffic lights at North and Perry Streets intersection

We commend the Council for inviting public comments on this proposal, and thank Councillor Danielle Brice for inviting us to comment.

We recommend that the Council:

1. work with the NSW and ACT Governments to educate the more than one-in-three drivers who don't know the rules for giving way at intersections. This will improve the safety and predictability of vehicle and pedestrian traffic flows at all unsignalised intersections in the Shire.
2. consider whether its principal objective for this intersection is traffic flow (which forms the bulk of the discussion in the reports) or safety.
3. consider a staged approach at this intersection, comprising:

Stage 1:
* 40 km/h speed limit on North and Perry Streets
* zebra crossing across North Street, immediately east of Perry Street;
* signs to remind drivers that they must give way to pedestrians who are crossing the street the drivers are entering;
* kerb extensions to (a) reduce pedestrian crossing distances and (b) prevent parking spaces from being used as extensions of the traffic lanes when they are free of parked cars.

Stage 2:
* 30 km/h speed limit on North and Perry Streets
* zebra crossing across the north end of Perry Street
* move on-road car parking spaces to off-street areas, so that street space can be used for mini-parks, pavement cafes or similar purposes.

Stage 3: traffic signals, with marked and signalised pedestrian crossings, programmed to minimise delays for both pedestrians and vehicles.

The following attachments contain discuss these recommendations in more detail.

Yours Faithfully

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Attachments in following pages:

1. Detailed discussion of recommendations.
2. North Street/Perry Street Safety issues identified in the 2010 Batemans Bay Traffic and Transport Study.

Attachment 1: Detailed discussion of recommendations

Recommendation 1: Driver education

Driver education can improve safety and traffic flows at this intersection, and at all other intersections in the Shire.

Driver education is the shared responsibility of the Council, of NSW Government agencies including Roads and Maritime Services, the Police and the Department of Education, and of the ACT Government which has primary responsibility for educating Canberra drivers who come to the Eurobodalla Shire.

Pedestrians play “intersection roulette” whenever they cross an intersection in the presence of competing motorised traffic. If they cross in the path of a driver who is required to give way to them, there is a one in three risk that the driver is not even aware that he or she must give way.

Road Rules 68 to 73[1] clearly identify the situations in which drivers must give way to pedestrians, at intersections such as that of Perry and North Streets. Despite these rules, Section 4.4 of the The 2010 Batemans Bay Traffic and Transport Study noted that, in the area of this intersection, “*Pedestrians were observed attempting to pre-empt traffic turning movements at this location so as to select appropriate gaps in which to cross*.” This indicates that, rather than take the risk of expecting drivers to give way, pedestrians waited for gaps in the traffic before attempting to cross.

These rules are among New South Wales' top ten most misunderstood road rules: http://www.nsw.gov.au/news/top-10-misunderstood-road-rules

The extent of the misunderstanding is demonstrated by the fact that the NSW Government's “top ten misunderstood road rules” advice initially omitted to mention that the rules at roundabouts are different from the rules at other intersections.

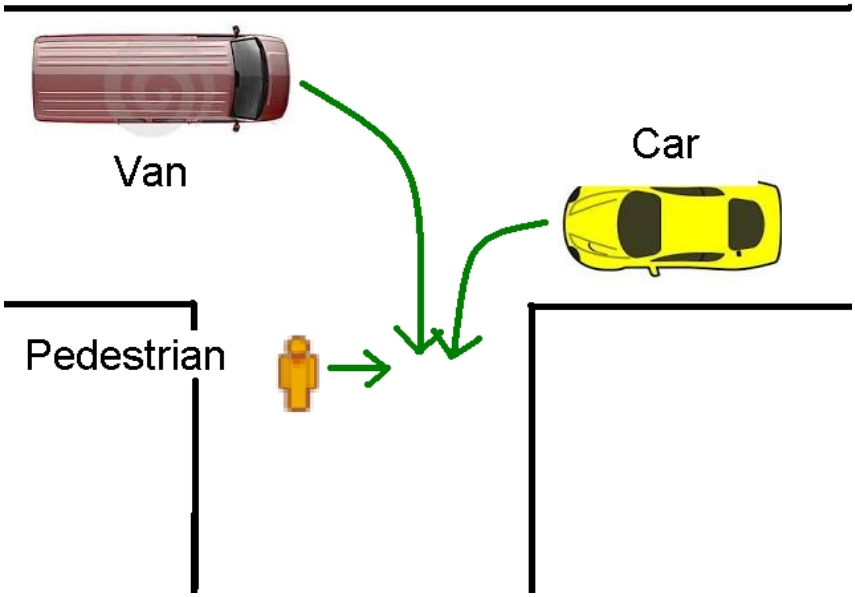

Figure 1: an unsignalised T-intersection, like that of Perry and North Streets.

To test knowledge of the road rules, ask yourself and a few friends which of the following

1 NSW Road Rules can be accessed at http://www.legislation.nsw.gov.au/maintop/view/inforce/subordleg+179+2008+cd+0+N

answers is the correct answer to the question, "*who must give way in the circumstances shown in Figure 1 above*?"

A) The van must give way.

B) The car must give way.

C) The pedestrian must give way.

D) It's a Mexican stand-off. All must give way. Nobody may proceed until the pedestrian and/or a driver waves them through.

E) The van and the car must both give way.

A 2010 survey by the Canberra Pedestrian Forum found that between one-third and two-thirds of drivers gave incorrect answers, when asked whether a driver must give way to a pedestrian, in a range of circumstances.

The correct answer can be found Road Rule 73.

Recommendation 2: Objectives

What is Council's primary objective for this exercise?

- Safety?
- Pedestrian traffic flow?
- Vehicle traffic flow?

Councillor Brice describes this exercise as "a pedestrian safety issue."

The Bitzios presentation states that "*Pedestrian (and traffic) safety is the key concern.*"

The 2010 Batemans Bay Traffic & Transport Study focused on traffic flows, but identified safety issues (see the following Attachment 2) that relate specifically to the North Street/Perry Street intersection.

The project description on the Council website is concerned primarily with traffic flows, and makes no mention of safety.

Recommendation 3: Staged approach

Living Streets recommends that Council consider a staged approach at this intersection, comprising:

Stage 1:
* 40 km/h speed limit on North and Perry Streets
* zebra crossing across North Street, immediately east of Perry Street;
* signs to remind drivers that they must give way to pedestrians who are crossing the street the drivers are entering;
* kerb extensions to (a) reduce pedestrian crossing distances and (b) prevent parking spaces from being used as extensions of the traffic lanes when they are free of parked cars.

Stage 2:
* 30 km/h speed limit on North and Perry Streets
* zebra crossing across the north end of Perry Street
* move on-road car parking spaces to off-street areas, so that street space can be used for mini-parks, pavement cafes or similar purposes.

Stage 3: traffic signals, with marked and signalised pedestrian crossings, programmed to minimise delays for both pedestrians and vehicles.

Stage 1

- 40 km/h speed limit on North and Perry Streets
- zebra crossing across North Street, immediately east of Perry Street;
- signs to remind drivers that they must give way to pedestrians who are crossing the street the drivers are entering;
- kerb extensions to (a) reduce pedestrian crossing distances and (b) prevent parking spaces from being used as extensions of the traffic lanes when they are free of parked cars.

40 km/h speed limits are becoming increasingly common in Australian shopping streets, from Canberra to Cygnet. Compared with a higher speed limit, a 40 km/h speed limit provides more opportunities for people to negotiate their way and avoid collisions, and also reduces the severity of collisions. Both North and Perry Streets are relatively short and provide little opportunity for cars to travel at more than 40 km/h. So a 40 km/h speed limit will have little impact on car travel times.

Locating a **zebra crossing** to the east of the Perry Street intersection will encourage people to cross there, rather than to cross the busier section between Perry Street and the Princes Highway.

In the absence of a marked pedestrian crossing, people who walk across North Street have no priority over people who drive along North Street.

Drivers turning right from Perry Street into North Street must give way to pedestrians who are crossing North Street. A zebra crossing will serve as a reminder to those drivers that they must give way to those pedestrians.

Signs should:

- remind drivers turning left from Perry Street into North Street that they must give way to pedestrians who are crossing North Street;
- remind drivers turning left from North Street into Perry Street that they must give way to pedestrians who are crossing Perry Street; and
- remind drivers turning right from North Street into Perry Street that they must give way to pedestrians who are crossing Perry Street.

The zebra crossing should be a sufficient reminder, to drivers turning right from Perry Street into North Street, that they must give way to pedestrians crossing North Street.

Kerb extensions, that extend into the roadway to the same level as parked cars, provide pedestrians with safe places to wait until it is safe to cross. They reduce the amount of time that pedestrians must spend on the road from nine seconds (to cross two traffic lanes plus two rows of parked cars) to five seconds.

They also prevent cars from using parking spaces as an extra traffic lane when parking bays are unoccupied. Without kerb extensions the road would appear wider – and would indirectly encourage drivers to travel at more than 40 km/h – when parking bays are unoccupied.

Stage 2

- 30 km/h speed limit on North and Perry Streets
- zebra crossing across the north end of Perry Street
- move on-road car parking spaces to off-street areas, so that street space can be used for mini-parks, pavement cafes or similar purposes.

A **30 km/h speed limit** is more suitable than a 40 km/h limit, for an area of high pedestrian activity.

A **zebra crossing** across the north end of Perry Street will provide safe pedestrian travel across Perry Street, and will provide access to the Stage 1 zebra crossing of North Street, to the east of Perry Street. It will reduce the number of pedestrians who cross the section of North Street between Perry Street and the Princes Highway.

Moving **car parking** to off-street areas will free up street space for uses such as pocket parks, pavement cafes and pop-up street stalls. This will provide an ambiance similar to that of a pedestrian mall, while still providing for through-traffic.

Stage 3

- traffic lights, with marked and signalised pedestrian crossings, programmed to minimise delays for both pedestrians and vehicles.

Traffic lights can reduce vehicle waiting times, if pedestrian traffic on the zebra crossings becomes sufficiently constant that cars find it difficult to get through.

Marked and signalised pedestrian crossings, as part of the traffic light installation, will offer the safety benefits of a visual reminder that turning vehicles must give way to pedestrians.

It is difficult to program traffic signals for efficient vehicle and pedestrian movements at a T-intersection. The following approaches may permit more efficient traffic movement:

- A “pedestrian scramble” phase, in which pedestrians may cross the intersection in any direction. This takes slightly longer than a phase for a single direction of crossing, but avoids the need to have a separate pedestrian phase for each direction of travel.
- A four-way intersection, as foreshadowed in the Bitzios Intersection Assessment.

It is common practice to program pedestrian lights with unnecessary delays, that increase danger by making it more likely that people will cross (legally or illegally[2]) away from the traffic lights rather than detour to a signalised pedestrian crossing, or will cross illegally against red lights. International research shows that crossing against red, or crossing away from a marked crossing, carries eight times as much risk of collision as crossing at a green pedestrian signal.

Unnecessary and potentially dangerous pedestrian delays can be avoided by:

- Programming the pedestrian signals to operate whenever it is safe to cross, irrespective of whether or not the pedestrian button has been pressed. At times of little or no pedestrian traffic, this arrangement may add several seconds to the traffic light cycle. This issue only arises if the pedestrian green phase is significantly longer than the green phase for parallel vehicles. If there are people living nearby and the signals are sound-enabled for vision-impaired pedestrians, residents may object to the persistent

2 A pedestrian may legally cross a road either at a marked pedestrian crossing, or at least twenty metres from the nearest marked crossing.

noise. In that case the automatic green signal can be retained, while the sound can be programmed to occur only if the pedestrian button is pressed.

- Automatic detection of pedestrians, so that the pedestrian signals show green if an approaching pedestrian is detected before the pedestrian phase is due to start.
- Pedestrian late start: the pedestrians lights go green if a pedestrian presses the button after the normal starting time of the pedestrian phase, provided there is sufficient time available for the pedestrian to cross.
- Programming the lights to commence the yellow phase for competing vehicles immediately after the pedestrian button is pressed and the minimum green phase for competing vehicles has completed. In this context, the now superseded Austroads 2003 *Guide to Traffic Engineering Practice – traffic signals* recommended illogical delays, based on the theory of pedestrians forming “platoons” rather than crossing individually. Such delays are unnecessary at times of high pedestrian activity, because “platoons” have probably already formed during the red pedestrian phase. Such delays are pointless at times of low pedestrian activity, when it is unlikely that any other pedestrian will arrive to form a “platoon” during the several seconds of the delay period.

Attachment 2: North Street/Perry Street Safety issues identified in the 2010 Batemans Bay Traffic and Transport Study

Section 4.4: "*There is a considerable volume of pedestrians attempting to cross the road in the vicinity of this intersection (give-way controlled) but there is no crossing facility provided. There is a strong desire line between parking areas in/near Perry Street and destinations surrounding North Street. It must be noted that more pedestrians cross the road at this location compared to the Beach Road/Perry Street junction and that less safe crossing points exist around the North Street area. … Pedestrians were observed attempting to pre-empt traffic turning movements at this location so as to select appropriate gaps in which to cross, of which there are relatively few in peak times."*

Section 6.2.3: "*The intersection of Perry Street/North Street operates under a give-way arrangement. Despite a considerable number of pedestrians using this area and crossing either Perry Street or North Street at this location, no crossing facilities are currently provided. This results in a safety issue (see Figure 6.8) which will be exacerbated as both traffic and pedestrian volumes increase in the area in the future*."

Section 6.3, Table 6.1: "*North Street/Perry Street Intersection - Installation of traffic signals at the Perry Street/North Street intersection. - This is to provide for safe pedestrian movements of North and Perry Streets.*"

Section 6.5: "*The Option B model introduces a left turn lane from Perry Street to North Street separating movements and queues and reducing the impacts back into the roundabout. The entry/exit to Bridge Plaza has been included in the signalised intersection allowing easier access and less interference to North St. The intersection also allows for safe pedestrian movements.*"

Section 7.3.3: the report recommends the installation of traffic signals, by 2020, at the Perry Street/North Street intersection.

Table 10.1: – Pedestrian and Cycling Improvement Suggestions – the report recommends "*North Street and Perry Street Intersection – signalisation to cater for future heavy demands by pedestrians*."