

5.8. REQUEST FOR TRAFFIC CONTROL SPEED BUMP AT MARLIN DRIVE, WONGA

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DEPARTMENT Infrastructure

RECOMMENDATION

That Council resolves to:

- 1. Undertake an engineering assessment to determine the best location for a series of raised speed platforms in Marlin Drive;**
- 2. Complete community engagement to gain feedback on the proposal;**
- 3. Advise the principal petitioner in writing of Council's decision in this matter; and**
- 4. Consider funding this project in the 2020/2021 capital budget.**

EXECUTIVE SUMMARY

At the Ordinary Meeting of Council held 25 September 2018, Council received a petition for the installation of traffic control 'speed bump' at or close to 30 Marlin Drive – Wonga Beach. The petition highlighted that 'Marlin Drive is poorly designed – long wide straights with vehicles constantly exceeding the 50km/hr speed limit, endangering children and all residents.

Council Officers have carried out traffic surveys in 2 locations along Marlin Drive and conducted site inspections. The traffic surveys were conducted using 'MetroCount' automatic traffic counters over a 2-month period, between 8 June – 8 August 2019. The data collected included measurements of the vehicle speed, time of travel, direction of travel and number of vehicles. Location 1 was positioned along the southern section of Marlin Drive, between Mossman-Daintree Road and Oleander Drive and Location 2 was positioned along the northern section of Marlin Drive, between Oleander Drive and the dead-end road.

Marlin Drive functions as a Minor Collector and has an environmental capacity of between 750 – 2,990 vehicles per day and a design speed of 50km/hr. From the traffic survey data, it is clear that Marlin Drive is operating within its environmental capacity however, the vehicle speeds are higher than the design speed for a Minor Collector.

This report recommends Council finalise a Local Area Traffic Management Plan, complete community engagement, and if feedback is positive, consider funding the construction in the 2020/2021 financial year.

BACKGROUND

At the Ordinary Meeting of Council held 25 September 2018, Council received a petition for the installation of traffic control 'speed bump' at or close to 30 Marlin Drive – Wonga Beach. The petition highlighted that 'Marlin Drive is poorly designed – long wide straights with vehicles constantly exceeding the 50km/hr speed limit, endangering children and all residents'.

The petition was signed by 20 residents in Marlin Drive, between Mossman-Daintree Road and Oleander Drive, a distance of about 750 metres (refer to Figure 1).



Figure 1: Marlin Drive general layout

COMMENT

Council Officers have carried out traffic surveys in 2 locations along Marlin Drive and conducted site inspections. The traffic surveys were conducted using 'MetroCount' automatic traffic counters over a 2-month period, between 8 June – 8 August 2019. The data collected included measurements of the vehicle speed, time of travel, direction of travel and number of vehicles. Location 1 was positioned along the southern section of Marlin Drive, between

Mossman-Daintree Road and Oleander Drive and Location 2 was positioned along the northern section of Marlin Drive, between Oleander Drive and the dead-end road. The results are summarised in Table 1 below.

Table 1: Summary of Traffic Survey Data

Vehicle Parameter	Location 1	Location 2
Vehicles per day	304	204
Average speed	44.6 km/hr	42.0 km/hr
85% percentile speed	54.7 km/hr	51.8 km/hr
Maximum Speed	108.5 km/hr	111.3 km/hr

The 85th percentile speed is the speed at, or below which 85% of cars are observed to travel under free flowing conditions. Eighty five percent of car drivers will travel at or below this speed and 15% will travel faster. This is commonly used in traffic engineering as a guide for determining whether vehicle speed is an issue on a length or road.

Marlin Drive functions as a Minor Collector within the road network of Wonga Beach. Minor Collectors have an environmental capacity of between 750 – 2,990 vehicles per day and a design speed of 50km/hr (FNQROC Development Manual). From the traffic survey data it is clear that Marlin Drive is operating within its environmental capacity however the vehicle speeds (85th percentile) are higher than the design speed for a Minor Collector.

Austroads Guide to Traffic Management (Local Area Traffic Management) provide examples of typical devices to help manage traffic in local streets across Australia. There are two basic types of devices: horizontal deflections (such as chicanes and roundabouts) and vertical deflections (such as speed humps and raised platforms).

Both types of devices perform well under specific circumstances. Horizontal deflections work well to reduce average vehicle speeds but due to the geometric design requirements often reduce or eliminate on-street parking opportunities. Additionally, they are often seen by some motorists as a 'challenge' and can increase hooning and anti-social behaviour.

Vertical deflections such as speed humps and raised platforms reduce average vehicle speeds and allow on-street parking. Emergency services vehicles, buses and delivery vehicles often do not like them. Sometimes they can increase traffic noise as vehicles break, negotiate the platform and then accelerate away. They are easy and quick to construct and when installed in series (about 100 metres apart) are very effective at reducing the average vehicle speeds.

As previously mentioned, the section of Marlin Drive between Mossman-Daintree Road and Oleander Drive is about 750 metres long. This section experiences the highest vehicle speeds and for a successful LATM project, 6 raised platforms is proposed. An example of the type of platform proposed is attached to this report.

It is not recommended that one (1) LATM is installed in isolation as this will not reduce the average speed along a length of road and can be a hazard in the road by surprising road users.

PROPOSAL

That Council resolves to:

1. Undertake an engineering assessment to determine the best location for a series of raised speed platforms in Marlin Drive;
2. Complete community engagement to gain feedback on the proposal;
3. Advise the principal petitioner in writing of Council's decision in this matter; and
4. Consider funding this project in the 2020/2021 capital budget.

FINANCIAL/RESOURCE IMPLICATIONS

This project will be considered for inclusion in the 2020/2021 capital budget. Council may choose to fund the entire project in 1 financial year or stage over a number of financial years. If the project is staged, it is important to install 2 or 3 in series to avoid isolated LATM's. Each raised platform will cost approximately \$25,000 which includes materials, labour, traffic control and upgrades to streetlighting.

RISK MANAGEMENT IMPLICATIONS

Local Streets are controlled by Local Government. Poorly design and constructed streets can lead to hazardous road conditions such as substandard vertical and horizontal alignment or an inappropriate speed environment that does not maintain vehicle speeds at a level appropriate for the safe use of the street by all.

Council has a number of options in dealing with this type of issue; police enforcement, driver education or engineering speed controls into the road environment. Previously, Council used its mobile Variable Message Board (VMS) to measure vehicle speeds and display a message to alert motorists of their speeds. This had limited effect and only works when the VMS is in place.

SUSTAINABILITY IMPLICATIONS

Economic: Any infrastructure to help reduce and control traffic speeds will be considered as 'new' assets for the asset sustainability ratio. New assets require maintenance but given the simple nature of the raised speed platforms, this is not considered to be a large cost.

Environmental: Reducing the speed of vehicles in residential areas will help to reduce incidence of wildlife strike in this street. Slower vehicle speeds will lead to lower road noise from vehicles. On the other hand, the deceleration and acceleration of vehicles may lead to increased road noise at the raised platform locations.

Social: Residential streets are designed for transport, services, pedestrians and cyclists. Wide, high speed streets detract from an aesthetically pleasing street and may increase the risk of injury.

CORPORATE/OPERATIONAL PLAN, POLICY REFERENCE

This report has been prepared in accordance with the following:

Corporate Plan 2019-2024 Initiatives:

Theme 1 - Celebrating Our Communities

Douglas Shire Council embraces the diversity of our communities and values the contribution that all people make to the Shire. We recognise that it is a core strength of the region. We acknowledge our past so that it may guide us in the future. We recognise the wrongs done to our Indigenous community and we actively seek to reconcile so that we may all benefit from and enjoy our Shire. We acknowledge early European settlers who forged an agricultural base for our economy and we welcome all new arrivals as part of our broader community.

Goal 1 - *We will celebrate the diversity of our community and ensure that all infrastructure, programs, and services are underpinned with inclusiveness and accessibility.*

Goal 2 - *We will deliver programs and services that protect and enhance the liveability of our beautiful Shire.*

Goal 3 - *We will develop programs that promote health, well-being and safety in the community.*

COUNCIL'S ROLE

Council can play a number of different roles in certain circumstances and it is important to be clear about which role is appropriate for a specific purpose or circumstance. The implementation of actions will be a collective effort and Council's involvement will vary from information only through to full responsibility for delivery.

The following areas outline where Council has a clear responsibility to act:

Builder/Owner	Council makes a significant investment every year in the infrastructure that underpins the Shire through its capital works program. Council will manage its assets with appropriate frameworks and deliver its projects through robust project management.
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CONSULTATION

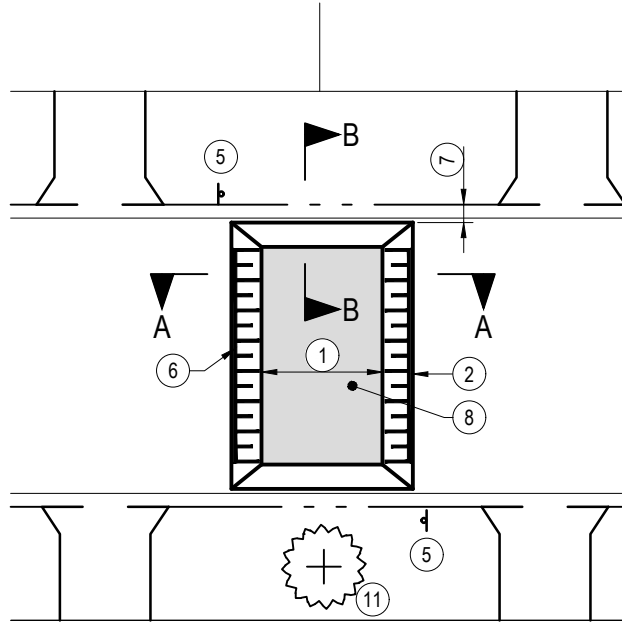
Internal:	Nil
External:	Nil

COMMUNITY ENGAGEMENT

The next step in the development of this project is to finalise a concept layout plan to identify the locations for a series of raised speed platforms. The concept layouts will then be distributed to the residents in Marlin Drive, emergency services and public transport providers to gauge the community appetite for this type of traffic calming.

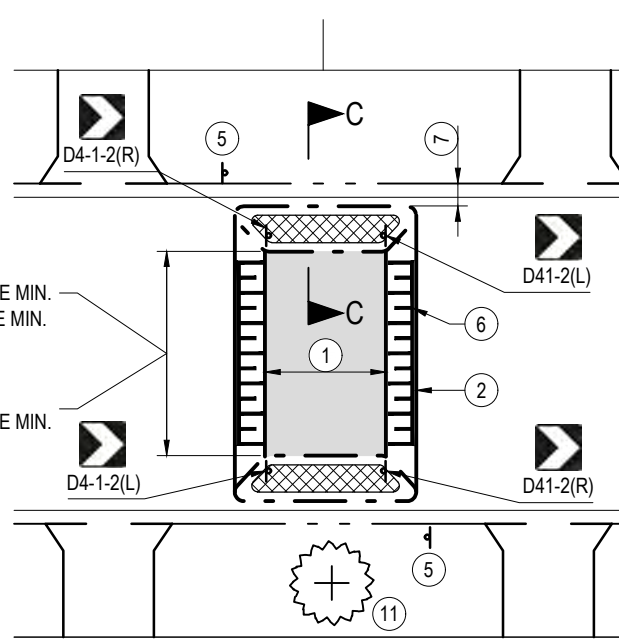
ATTACHMENTS

1. Example LATM Raised Platform [5.8.1 - 1 page]



SPEED PLATFORM

SCALE 1:250

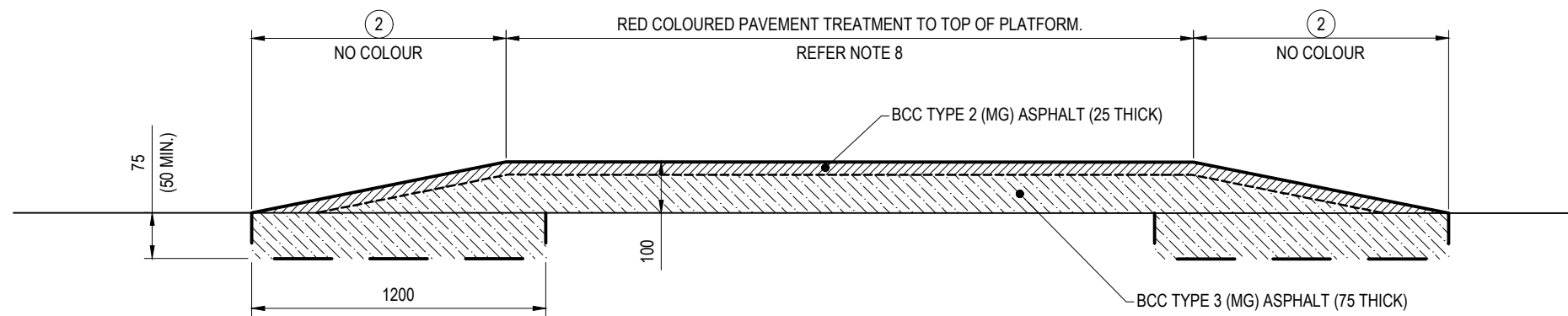


SPEED PLATFORM
WITH LANDSCAPED ISLANDS

SCALE 1:250

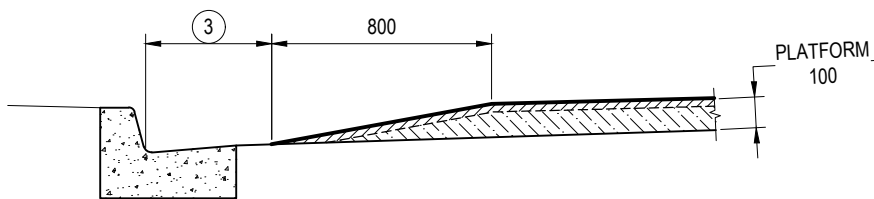
NOTES:

- MINIMUM 4.0m FOR GENERAL TRAFFIC USE (INCLUDING REFUGE VEHICLES). MINIMUM 6.0m FOR BUSES (8.0m FOR ARTICULATED BUSES).
- RAMP 1 in 10 FOR GENERAL TRAFFIC USE (INCLUDING REFUSE VEHICLES). RAMP 1 in 15 FOR BUSES (INCLUDING ARTICULATED BUSES).
- LONGITUDINAL DRAINAGE GAP 600mm DESIRABLE (450mm MINIMUM). DESIGNER TO CONSIDER EFFECT OF LOCALISED ROADWAY FLOODING ON ADJACENT PROPERTIES.
- SIDE RAMP MAXIMUM SLOPE 1 in 8 FOR KERBSIDE PARKING.
- FOR RECOMMENDED USE OF WARNING SIGNS, REFER TO:
 - AS1742.13, FIGURE 3.3, NOTE 2;
 - AS1742.13, FIGURE 3.6, NOTE 1; AND
 - THE QUEENSLAND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) (HARMONISED).
- ROAD HUMPS MARKINGS AS PER AS1742.13, CLAUSE 4.6.6 AND FIGURE 4.3 AND THE QUEENSLAND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) (HARMONISED)
- LONGITUDINAL DRAINAGE GAP 750mm DESIRABLE (600mm MINIMUM). DESIGNER TO CONSIDER EFFECT OF LOCALISED ROADWAY FLOODING ON ADJACENT PROPERTIES.
- COLOURED PAVEMENT TREATMENT TO TOP OF PLATFORM (IF SPECIFIED) TO REFERENCE SPECIFICATION FOR CIVIL ENGINEERING WORKS S155 TRAFFIC SIGNS AND PAVEMENT MARKING.
- NOTE REMOVED FROM DRAWING.
- THIS PLAN TO BE READ IN CONJUNCTION WITH AS1742.13, FIGURES 3.3, 3.6 AND APPENDIX C, CLAUSE C2 AND THE QUEENSLAND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PART 13 (HARMONISED).
- STREET TREES, AS SPECIFIED, TO PROVIDE NOISE AND VISUAL BUFFERING WHERE REQUIRED.
- BACKFILL WITH CONCRETE OR ASPHALT AS DIRECT BY THE SUPERINTENDENT.
- FOR DESIGN NOTES, CONSTRUCTION NOTES AND LEGEND REFER TO BSD-3201.
- ALL DIMENSIONS IN MILLIMETRES (U.N.O.)



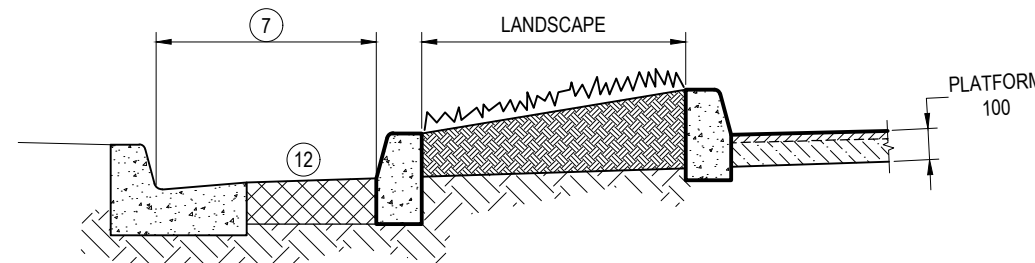
SECTION A-A

NOT TO SCALE



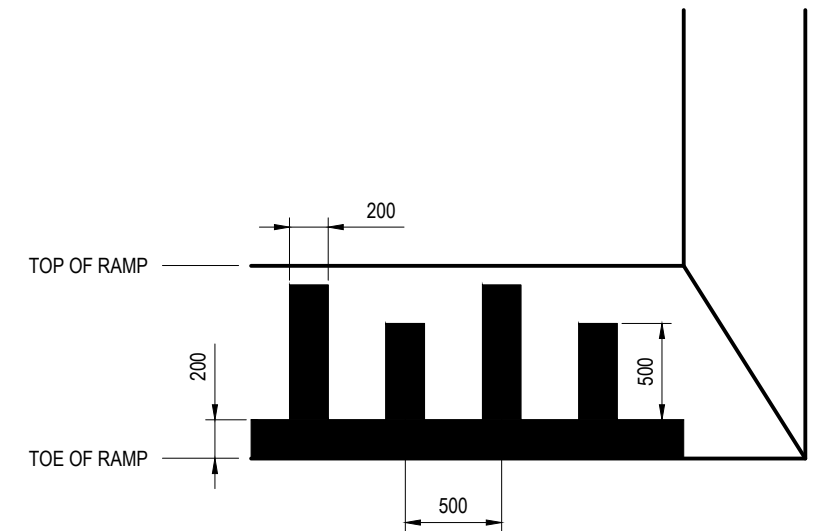
SECTION B-B

NOT TO SCALE



SECTION C-C

NOT TO SCALE



DETAIL A

PAVEMENT MARKINGS TO RAMP

ISSUE	AMENDMENT	DRAWN DATE	CHK'D DATE	APPR'D DATE
C	Note 9 & Armour Stud Req. Rem., Notes 5, 6 & 10 Ref. Updated to AS1742, Signs Reviewed & Updated	NOV '18	APR '19	APR '19
B	Drawing Title Amended	JAN '16	JUL '16	JUL '16
A	Drawing Converted from UMS Series April 2014	APR '14	APR '14	APR '14

DRAWING AUTHORISED FOR PUBLICATION			
P COTTON SIGNATURE ON ORIGINAL DATED 06/09/06			
DESIGN	STANDARD WORKING	DATE	May '06
DRAWN	CITY DESIGN	DATE	May '06
CHECKED	D Maher	DATE	June '06
DRAWING FILENAME	BSD-3216 (C) Local traffic area - Speed platform - Mid Block - General design criteria.dwg		
DESIGN APPROVED			
V NASH SIGNATURE ON ORIGINAL			
SENIOR PROGRAM OFFICER ROAD NETWORK			
Ordinary Council Meeting 3 December 2019			

BRISBANE CITY COUNCIL STANDARD DRAWING	
LOCAL TRAFFIC AREA SPEED PLATFORM - MID BLOCK GENERAL DESIGN CRITERIA	
SCALE	NOT TO SCALE
DWG No.	BSD-3216
ORIGINAL SIZE	A3
REVISION	C