



Traffic Impact Assessment

**Proposed Industrial Shed
3-7 Mogo Place, Billinudgel.
Lot 1372, DP 253095**

For: Ted Kabbout
Report no: 24404-TIA-A
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Summary

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1. Introduction

Greg Alderson and Associates have been engaged by Ted Kabbout to prepare a Traffic Impact Assessment (TIA) for a proposed industrial development at Lot 1372 DP 253095, 3-7 Mogo Place, Billinudgel.

1.1 Scope of Report

The TIA will be prepared in general accordance with the requirements of *Byron Shire Council Development Control Plan (DCP)*, *Australian Standard AS2890 Parking Facilities*, *RMS Guide to Traffic Generating Developments* and *Austrroads Guide to Traffic Management*.

This Traffic Impact Assessment will consider the following:

- Assessment of vehicle access sight distances and sight lines to pedestrians
- Assessment of potential development related traffic generation and impact
- Assessment of parking demand and supply of the development
- Analysis of the operation of the access and parking arrangements

1.2 Site Description

A locality plan of the proposed development is given below in Figure 1.

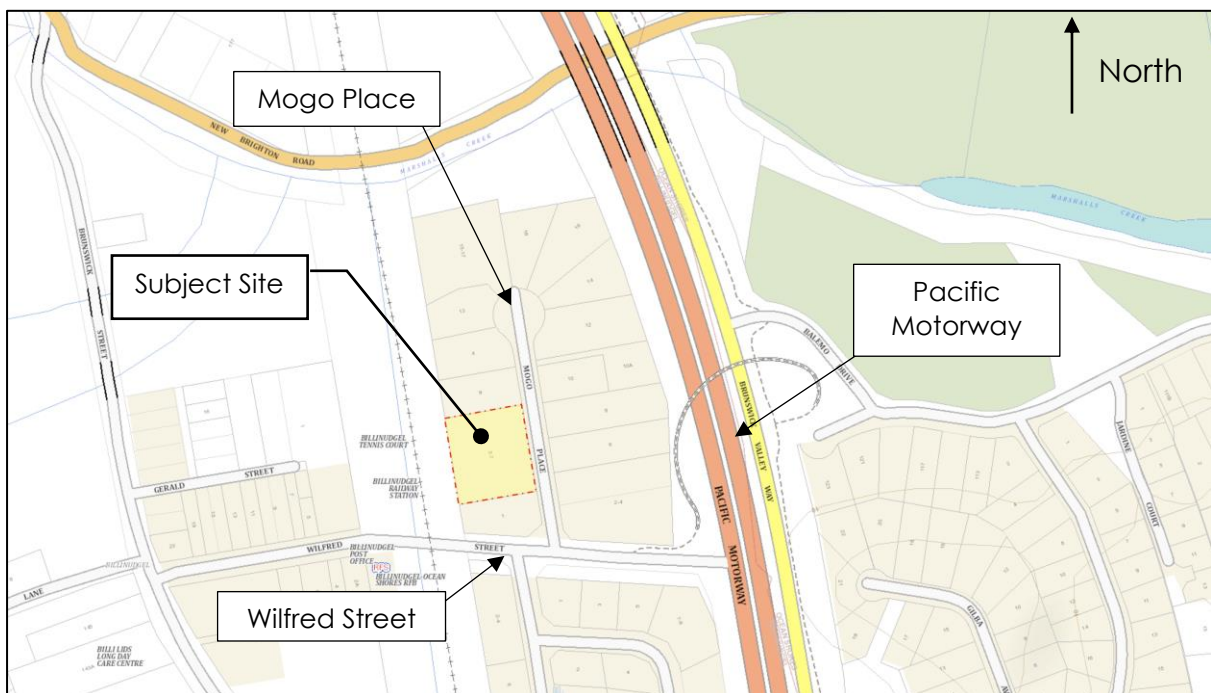


Figure 1 – Site Locality (Six Maps)

The subject site is located on the western side of Mogo Place and is currently occupied by a large industrial building in the centre of the property, a small, blockwork shed in the south-west corner of the property, and two, open storage systems with a metal roof. The property is surrounded by industrial developments to the north and south and across Mogo Place to the east. The land to the west of the property is crown land.

Mogo Place is a cul-de-sac that intersects with Wilfred Street approximately 130m west of the Pacific Motorway. This T-intersection is staggered with a secondary T-intersection 25m to the west between Wilfred Street and Bonanza Drive. Due to the proximity of the two intersections, they function as a 4-way intersection.

1.2.1 Existing Access

The site contains two existing access driveways servicing the existing industrial building with the southern access acting as an entryway to the site and the northern access acting as an exit as shown below.



Figure 2 – Existing Northern Access to the Site



Figure 3 – Existing Northern Access to the Site

2. Proposed Development

2.1 Development Summary

The proposed development comprises of a 12-unit industrial development with two access ways to the north and south of the development and a central carpark. A site plan of the proposed development can be seen in Appendix A of this Traffic Impact Assessment report.

2.1.1 Proposed Access route

The proposed access route for the industrial development will use a similar configuration to the existing access route, with minor relocation of the existing driveway locations as shown on the proposed site plan. The proposed access route will use the southern driveway as the entrance point for the site. The route will then circulate through the site around the central carpark where it will meet with the northern driveway which is to be used as the exit point for the site, with the internal aisles being designated one-way.

3. Existing Road Description



Figure 4 – Locality Aerial (Six Maps)

3.1 Mogo Place

Mogo Place is a cul-de-sac that is 194m in length and is a local access road standard. The road provides access to 15 industrial properties including a car towing service and holding yard, bus depot, storage facility, funeral home and church, and others.

The road consists of an 11m sealed formation with a 16m radius cul-de-sac. There is formalised drainage with layback kerbs along both sides of the road and kerb inlet pits.

The posted speed limit of the road is 50km/h.

There are no parking restrictions on Mogo Place in the vicinity of the subject site.

3.1.1 Mogo Place Traffic Load

The traffic information for Mogo Place pertaining to the site was collected via a traffic counter installed 28m North from the Wilfred Street and Mogo Place intersection, as seen in Figure 4.



Figure 5 – Traffic Count Locality

A full data report can be found in Appendix B and the provided data can be summarised as follows:

- 7-day ADT: 920 veh/day
- 85%ile Speed Combined: 30.4 km/hr
- Installed on 13/05/2024 at 11am and collected on 21/05/2024 at 10am

4. Traffic Generation

4.1 Site Traffic Generation

The potential development related traffic generation from the development was determined using the traffic generation rates provided in the RTA GTGD.

4.1.1 Existing Use Traffic

The site currently has a single industrial building. In accordance with the RTA GTGD a warehouse development generates 4.0 daily vehicle trips per $100m^2$ and 0.5 peak hour vehicle trips per $100m^2$. The existing industrial building space has a total GFA of $1250m^2$.

Therefore, the total traffic generated from the existing site is as follows:

- ADT: $4 * (1250/100) = 50$ daily vehicle trips
- Peak hour traffic: $0.5 * (1250/100) = 6$ peak hour vehicle trips

4.1.2 Proposed Development Traffic

The proposed development is also an industrial development and uses the same parameters as above to calculate the daily vehicle trips and peak hour vehicle trips. The new industrial building space has a total area of $1735m^2$.

Therefore, the total traffic generated from the new development is as follows:

- ADT: $4 * (1735/100) = 69$ daily vehicle trips
- Peak hour traffic: $0.5 * (1735/100) = 9$ peak hour vehicle trips

4.1.3 Traffic Impact

The increase in traffic resulting from the development is 19 veh/day. The current ADT on Mogo Place is 920 veh/day. Despite effectively functioning as a local street, the 11m carriageway means Mogo Place is designed to have capacity for 3000 veh/day as per NRLG standards. Therefore, 920 veh/day is within capacity of the road. Additionally, the proposed development is calculated to only contribute $(19/920) = 2\%$ increase to the traffic in Mogo Place, which would be expected to generate negligible impacts.

Based on the above statistics, the proposed development has a negligible impact on traffic on Mogo Place.

5. Access Driveway Compliance

5.1 AS2890 Compliance

5.1.1 Access Driveway Position

In accordance with AS2890.1, the access points are outside of the prohibited 6m zone either side of the tangent point of an intersection. Therefore, the proposed access locations comply with the requirements of Section 3.2.3 of AS2890.1.

5.1.2 Proposed Access Layout Design

According to AS2890.1, the parking facilities are a user class 3 based on table 1.1 and a category 2 access facility based on table 3.1. Therefore, using table 3.2, it is determined that the entry width requirements are 6.0m to 9.0m combined. As each access way is 8.0m wide, they are in compliance with AS2890.1 standards.

5.1.3 Access Circulation Road Way

The access circulation roadway for the development is a one-way movement entering from the southern access way and exiting from the northern access way. The minimum width of the roadway is 8.3m which is in compliance with AS2890.1 minimum aisle width standards.

5.1.4 Access Sight Distance

Available sight distances along Mogo Place frontage for the development have been assessed with respect to their compliance with Figure 3.2 of AS2890.1 standard.

The posted speed limit in the vicinity of the site is 50km/hr.

The existing access was inspected and sight distance measured in accordance with AS2890.1. The available and required SSD from the existing access has been summarised in Table 1 below.

Table 1 – SSD Summary for Existing Access using AS2890.1

Access Way	Direction	Minimum (m)	Required (m)	Available (m)
Southern	Northbound	45.0	69.0	124
	Southbound			57
Northern	Northbound	45.0	69.0	80
	Southbound			100

As seen above, the sight distance available from the existing access driveways complies with the required minimum sight distance in AS2890.1 for all directions.

5.1.5 Pedestrian Sight Lines

The pedestrian sight line was assessed in accordance with AS2890.1. The areas specified in the AS2890.1 standard were free from obstruction. The proposed driveway complies with pedestrian sight lines for AS2890.1.

6. Parking and Service Vehicle

6.1 Parking Requirements

As per Chapter B4 of the *Byron Shire Council Development Control Plan (DCP)*, the parking requirements for the facility are 1 space per 100m² or 2 spaces per factory unit which ever is greater. As the industry space is 1735m² this would be 17 parking spaces. There is, however, 12 units which would require a total of 24 spaces. Therefore, the minimum requirement would be 24 parking spaces total.

The development contains 25 parking spaces including 1 disabled space as per AS2890.1. Therefore, the development meets all parking requirements.

6.2 Waste Vehicle Movement

Based on the Site Waste Minimisation and Management Plan, all waste collection will occur on street along Mogo Place. Therefore, there will be no waste vehicle movement onsite through the access circulation roadway.

6.3 Service Area

Based on Chapter B4 of the *Byron Shire Council Development Control Plan (DCP)*, the requirement for a loading bay is a single loading bay for a Medium Rigid Vehicle (MRV). Based on AS2890.2, the loading bay meets the required dimensions. A turn path was also conducted to ensure the clear movement of an MRV through the site and has been included in Appendix A of the report.

7. Pedestrians, Cyclists and Public Transport

7.1 Pedestrians and Cyclists

There is no formalised footpath on Mogo Place and there is some minor pedestrian and cyclist movement along Mogo Place, typically pertaining to the surrounding businesses.

7.2 Public transport

There is access to public transport within 5-minutes walking distance from the site, located on Bonanza Drive with a bus stop located 100m from the Wilfred Street Intersection.

8. Conclusion

This TIA has been prepared in accordance with the requirements of Chapter B4 of the *Byron Shire Council Development Control Plan, RTA Guide to Traffic Generating Developments and Australian Standard AS2890 Parking Facilities*.

The proposed development consists of a proposed industrial building which includes 12 units, a central carpark and a one-way circulation roadway entering the site from the south and exiting from the north. The predicted traffic generated from the site as a result of the development is an increase of 6 to 9 peak hour vehicle trips and an additional 19 daily vehicle trips. The estimated increase in traffic equates to a 2% increase in daily traffic along Mogo Place. The proposed development has a negligible impact on traffic on Mogo Place.

The existing driveway complies with the requirements of AS2890.1 in terms of location and sight distance. As can be seen in Appendix A of this report, the existing driveways have been reinstated and widened, both complying with AS2890.1. The largest design vehicle accessing the facility is a Medium Rigid Vehicle which has been accounted for in the swept path plan of the proposed site plans.

The circulation road width for the development is 8.3m minimum to allow for ample circulation space for the one-way circulation movement and aisle width for parking, in accordance AS2890.1 standard.

Car parking spaces are to comply with AS2890.1 and Byron Shire council requirements. 24 parking spaces are required on the site for normal passenger cars which has been met by the development.

The development service area is to be designed and constructed in accordance in AS2890.2 standard.

Appendix A – Proposed Site Plan

Appendix B – Traffic Count Data

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