



TRAFFIC IMPACT ASSESSMENT
RESIDENTIAL SUBDIVISION

LOT 158 IN DP 7554330
6 FLIRTATION HILL LANE, GULGONG

PREPARED FOR: JAN AND LEE CUNNINGHAM

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REF: 22/065

**TRAFFIC IMPACT ASSESSMENT
RESIDENTIAL SUBDIVISION****LOT 158 IN DP 755433
6 FLIRTATION HILL LANE, GULGONG**

Intersect Traffic Pty Ltd (ABN: 43 112 606 952)

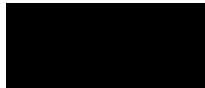
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APPENDICES

APPENDIX 1

CONCEPT PLANS



1. INTRODUCTION

Intersect Traffic Pty Ltd (Intersect Traffic) was engaged by Jan and Lee Cunningham to prepare a traffic impact assessment (TIA) for a proposed 5 lot residential subdivision on Lot 158 in DP 755433 –6 Flirtation Hill Lane, Gulgong. The development is proposed as a large lot residential subdivision with a minimum lot size of 6,000 m². The proposed subdivision plan is provided within **Appendix 1**. Access to the 4 new lots of the proposed subdivision will be via new rural road vehicular access to Grimshaw Lane, Gulgong

The aim of this TIA is to determine the likely impact of the traffic generated by the development on the adjacent local and state road network and allow the Mid-Western Regional Council to assess the merits of the development in an informed manner.

This report presents the findings of the traffic assessment and includes the following:

1. An outline of the existing situation near the site.
2. An assessment of the traffic impacts of the proposed development including the predicted traffic generation, trip distribution and its impact on existing road and intersection capacities.
3. An assessment of the proposed subdivision access and layout.
4. A review of parking, public transport, pedestrian, and cycle way requirements for the proposed development, including assessment against Council, Austroads and TfNSW standards and requirements.
5. A presentation of conclusions and recommendations.

2. SITE DESCRIPTION

The existing development is located at the northwest corner of the intersection of Flirtation Hill Lane and Grimshaw Lane and the southwest corner of the intersection of Grimshaw Lane and Zimmer Lane, amidst large rural properties. It lies approximately 1 kilometre south of the business area of Gulgong. At the northern end of the development site the property contains a large residential dwelling, a large shed and other site structures that front and are accessed via Flirtation Hill Lane. The vacant cleared lane, the majority of the property, lies to the south of the site structures and has frontages to Grimshaw Lane to the west and Zimmer Lane to the south. The eastern boundary of the site adjoins a large rural residential property. **Figure 1** below shows the site location from a local context within the surrounding development and roads.

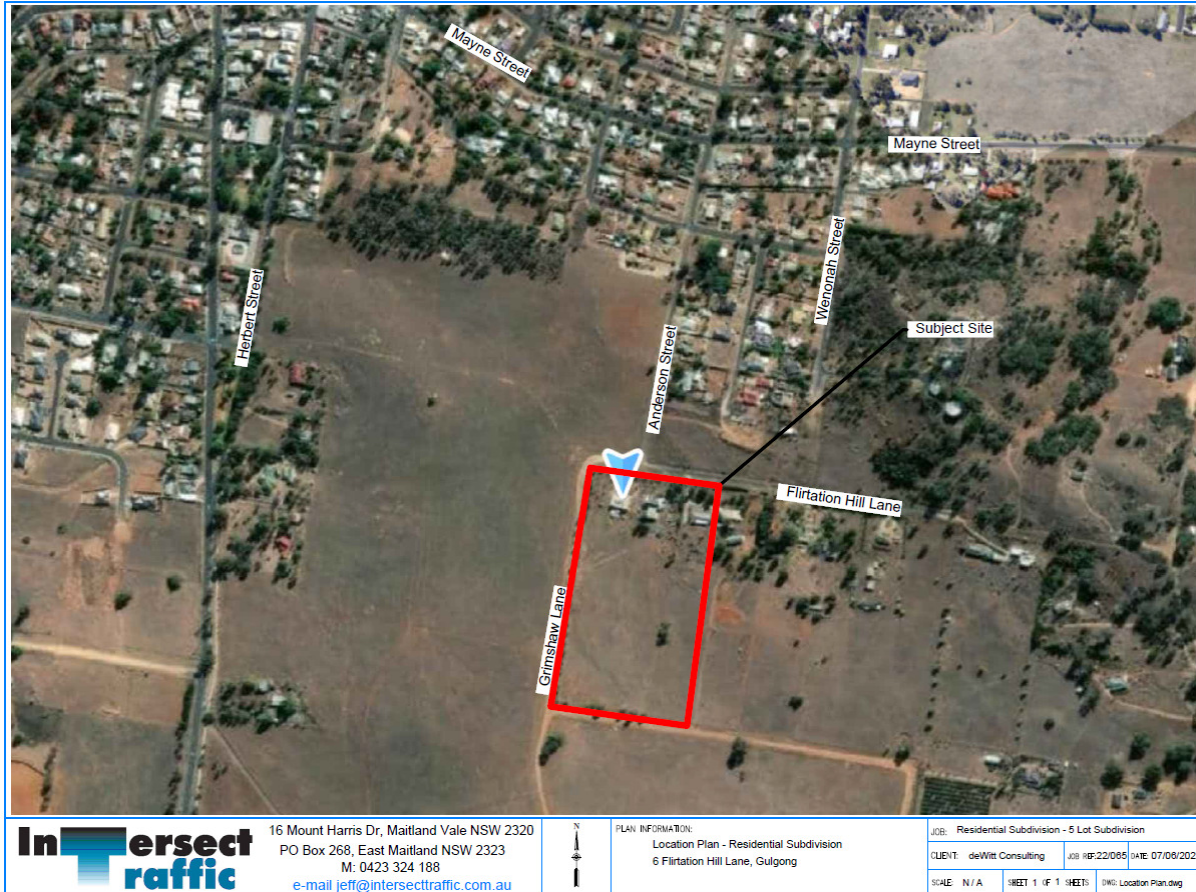


Figure 1 – Site Location

The development site has the following property descriptors:

- ◆ Formal land title of Lot 158 in DP 755433,
- ◆ Street address of 6 Flirtation Hill Lane, Gulgong,
- ◆ Site area – approximately 4.05 ha, and
- ◆ Zoning – R1 General Residential – pursuant to the Mid-Western Regional Council LEP (2012).

Access to the site is currently via two sealed rural vehicular accesses at Flirtation Hill Lane and a gravel rural vehicular access at Grimshaw Lane. **Photographs 1 – 4** below show some of the site structures and accesses.



Photograph 1 – Existing residential building and access – Flirtation Hill Lane



Photograph 2 – Existing site shed and access – Flirtation Hill Lane



Photograph 3 – Existing site from Zimmer Lane



Photograph 4 – Existing site access at Grimshaw Lane

3. ALTERNATE TRANSPORT MODES

There are no public bus services however Eastend Bus Services provide school bus services from and to adjoining areas of Blue Springs, Goolma, Laheys Creek, Tucklan and Yarrawonga, and within Gulgong, for the local Gulgong primary and secondary schools.

Near the site only grassed verges exist on Flirtation Hill Lane and Grimshaw Lane fronting the site. These are reasonably well maintained and are relatively evenly graded and therefore suitable for use by pedestrians. The nearest hardstand footpaths are located approximately 1 kilometre north of the site in the Gulgong Business District in Mayne Street, full width concrete on both sides of the road. There are no formal on-road cycleways near the site. Being a small population rural town, the footpaths (verges) near the site are considered satisfactory as pedestrian and bicycle facilities for a small demand. **Photographs 5 and 6** shows the grassed verges along two of the site's property road frontages.



Photograph 5 – Well maintained grassed verge (footpath) on Flirtation Hill Lane



Photograph 6 – Well maintained grassed verge (footpath) on Grimshaw Lane

4. DEVELOPMENT PROPOSAL

The proposed development involves the subdivision of the 4.05 hectare rural property (Lot 158 in DP 755433 –6 Flirtation Hill Lane, Gulgong) into five (5) large lot residential allotments. The concept subdivision plan is provided in **Appendix 1**.

The specific details of the development are:

- ◆ Subdivision of the rural lot into 4 large lot residential lots each 6,000 m² with one residual lot of 1.65 ha,
- ◆ Site earthworks,
- ◆ Provision of utilities and services,
- ◆ Road upgrading works including sealing of existing gravel roads as required by Mid-Western Regional Council via conditions of consent;
- ◆ Vehicular accesses to the residual rural style lot with an existing occupied dwelling, shed and structures are to be maintained via the existing vehicular accesses at Flirtation Hill Lane,
- ◆ Drainage and landscape works, and
- ◆ Subdivision construction to Council's DCP requirements and road standards.

5. TRAFFIC IMPACTS

5.1 Traffic Volumes and Generation

The number of vehicles travelling on the 5.5 metre wide sealed Flirtation Hill Lane and gravelled Grimshaw Lane during the AM or PM peak hour periods is less than 100 vtpd, based on observations and the number of residential properties that the two roads service. This mid-block two-way peak hour traffic volumes would be equivalent to a level of service (LoS) A, the highest level of service for motorists.

The RTA's *Guide to Traffic Generating Development's* and TfNSW's *RMS Technical Direction TDT 2013/04* provides specific advice on the traffic generation potential of various land uses. Regarding large lot rural residential dwellings, the following advice is provided within the TDT for regional areas.

Rates:

Daily vehicle trips = Average 7.4 per dwelling in regional areas.

PM peak (1) hour = Average 0.78 per dwelling in regional areas.

AM peak (1) hour = Average 0.71 per dwelling in regional areas.

The additional traffic generated onto the nearby road network by the proposed subdivision can be calculated as shown below, rounded up.

| | |
|---------------------------|-------------------------------------|
| Daily trips | = 4 x 7.4 vtpd = 30 vtpd. |
| PM peak hour trips | = 4 x 0.78 vtpd = 4 vtpd. |
| AM peak hour trips | = 4 x 0.71 vtpd = 3 vtpd. |

5.2 Road Capacity

The technical two way mid-block road capacity for roads with a single lane road in each direction would normally be 1,800 vtp (LoS C). However as both Flirtation Hill Lane and Grimshaw Lane, as local roads near the site, provide direct access to residential dwellings the environmental capacity goals for the road network are also relevant. Table 4.6 of the TfNSW's *RTA Guide to Traffic Generating Developments* provides guidance on the environmental capacity goals for local streets. This table is reproduced below.

Table 4.6
Environmental capacity performance standards on residential streets

| Road class | Road type | Maximum Speed (km/hr) | Maximum peak hour volume (veh/hr) |
|------------|------------|-----------------------|-----------------------------------|
| Local | Access way | 25 | 100 |
| | Street | 40 | 200 environmental goal |
| | | | 300 maximum |
| Collector | Street | 50 | 300 environmental goal |
| | | | 500 maximum |

Note: Maximum speed relates to the appropriate design maximum speeds in new residential developments. In existing areas maximum speed relates to 85th percentile speed.

As both streets are local roads, the environmental capacity, being the relevant capacity threshold for Flirtation Hill Lane and Grimshaw Lane is a maximum of 300 vtp.

5.3 Road and Intersection Impacts

The two-way mid-block peak hour traffic volumes travelling on Flirtation Hill Lane and Grimshaw Lane during the AM or PM peak hour periods would be less than 100 vtp and the increase of a maximum additional 4 vtp due to the development would have an unnoticeable and insignificant impact on the current mid-block level of service (LoS A). The increase in traffic due to the development would also have a minimal effect on the operation of any nearby intersections. Therefore, the impact on the operation and effectiveness of any intersection would be unnoticeable and insignificant.

Overall, there is no need to upgrade the roads or intersections on the local and state roads due to the increase in traffic caused by the subdivision development.

6. ACCESS AND PARKING

Sight distance for single residential vehicular accesses for domestic properties is required to be provided in accordance with Australian Standard *AS 2890.1:2004* which is 55 metres for a speed zoning of 60 km/h, and 40 metres if the speed zoning was considered to be 50 km/h. It was observed that the provision of the four accesses can be provided in accordance with the standard at the time of residential dwelling construction.

The development as a residential subdivision does not generate an immediate on-site parking demand however future development of the individual allotments will generate such a demand. The allotments with a minimum size of 6,000m² are large enough to ensure on-site parking provisions can be easily accommodated within the lots. Future development on the individual allotments will need to comply with the Mid-Western Regional Council DCP regarding the provision of on-site car parking.

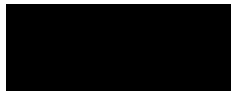
7. CONCLUSIONS

This traffic impact assessment for a proposed 5 lot residential subdivision on Lot 158 in DP 755433 –6 Flirtation Hill Lane, Gulgong has concluded.

- ◆ The existing road network around the site is operating below its environmental capacity and has capacity to accommodate additional traffic from the subdivision.
- ◆ Using rates contained within the TfNSW's *TDT 2013/04* it is estimated that the development will generate up to a maximum of an additional 4 vtpm in the AM peak and PM peak on the road network.
- ◆ There is sufficient spare capacity within the immediate road network to cater for the proposed residential subdivision without the need to upgrade the adjoining local and state road network.
- ◆ The impact of the additional traffic created by the development would be unnoticeable on any intersection near the site, nor would it have any significant impact on any other intersection.
- ◆ Future vehicular accesses for the additional vacant lots created can comply with Australian Standard *AS 2890.1:2004*.
- ◆ The development as a residential subdivision does not generate an immediate on-site parking demand however future development of the individual allotments will generate such a demand. The allotments with a minimum size of 6,000 m² are large enough to ensure on-site parking provisions required by Council can be accommodated.
- ◆ The additional alternative transport demand from this relatively small residential development is not considered sufficient for there to be a nexus for the provision of public transport services to the site or the provision of external pedestrian and cycle way infrastructure.
- ◆ The subdivision road requirements of the Council can be complied with, when designed, and can be conditioned on the consent.

8. RECOMMENDATION

On the basis of this traffic impact assessment for a proposed 5 lot residential subdivision on Lot 158 in DP 755433 –6 Flirtation Hill Lane, Gulgong, it is recommended that the subdivision can be supported from a traffic impact perspective as the local road network has sufficient capacity to cater for the additional demand generated by the development. Therefore, the subdivision, appropriately conditioned, will not adversely impact on the local road network and complies with the relevant requirements of the Mid-Western Regional Council, Austroads and TfNSW.



JR Garry BE (Civil), Masters of Traffic
Director
Intersect Traffic Pty Ltd

APPENDIX 1

Concept Plans

