traffic + transport
antonreisch@optusnet.com.au
+61 427 995 160
19 canoon road, south turramurra nsw 2074
www.arctt.com.au

13/09/2023

Cloud Carrier
Suite 201
20A Lexington Drive
Bella Vista NSW 2153

Attention: Felix Bigeni

249 – 271 Railway Terrace, Schofields Traffic Review

Dear Felix,

1 Introduction

1.1 The Proposal

Further to our recent discussions, arc traffic + transport has undertaken a **Review** of the potential traffic impacts arising from a proposed increase in dwelling numbers at 249 – 271 Railway Terrace, Schofields (the **Site**).

Based on the information you have provided, the current planning controls relevant to the Site provide for the development of approximately 900 high density residential dwellings. However, the Site was recently selected by the Department of Planning & Environment (**DPE**) under the auspices of the State Assessed Planning Proposal (**SAPP**) pilot program, which is designed to fast-track developments which DPE consider have considerable merit further to appropriate planning considerations.

Moreover, and as identified by DPE, the Site has the potential for increased density (further to height/FSR revisions) such that the current **Proposal** that this Review supports provides for the development of 1,751 dwellings.

We understand that full details of the Proposal have been submitted to DPE under the SAPP assessment pathway.

1.2 Information Request

A Traffic Impact Assessment dated 23 August 2023, prepared by The Traffic Planner (**TIA 2023**), was submitted to DPE along with the broader SAPP documentation. At or around the same time, Premise (on behalf of Cloud Carrier) also discussed the Proposal with Transport for NSW (**TfNSW**) and – we understand – offered to provide intersection modelling (SIDRA) of a number of intersections along Railway Terrace to further support the Proposal; these intersections included:

- Schofields Road & Railway Terrace;
- Railway Terrace & Site Access 1; and
- Railway Terrace & Site Access 2.

In response to the additional assessment tasks identified by Premise, TfNSW advised that additional information was required for TfNSW (the **TfNSW RFI**) to properly assess the Proposal; an email dated 7 September 2023 prepared by Mr Brendan Pegg, Senior Manager Strategic Land Use at TfNSW (the **TfNSW RFI**) states the following:

> *After review of the below, TfNSW advises that it is preferable that the traffic counts and associated analysis be undertaken at a minimum prior to public exhibition of the Planning Proposal (Proposal).*
>
> *The Applicant has the option of obtaining some traffic counts for Railway Terrace using SCATS data from the existing signalised intersections on Railway Terrace. They can request this data via SCATS.Traffic.Signal.Data@transport.nsw.gov.au and the standards fees would be payable.*
>
> *Additionally, as Railway Terrace is under the care and control of Blacktown Council, the Applicant also has the option of approaching Council for any traffic count data as they may have some, given the recent road and signal works that were undertaken on Railway Terrace.*
>
> *We also note that the proponent's consultant (Rennie Sounds) is seeking confirmation on the scope of the analysis required and has marked up the below highlighting the intersections proposed to be modelled (i.e. the intersection of South Street/Schofields Road & Railway Terrace and the 2 proposed road intersections of the site). It is recommended that the signalised intersection of Railway Terrace and Manchester Drive be included in the traffic analysis for the Proposal*.

This Review provides a specific response to the TfNSW RFI.

1.3 Reference Documents

In preparing this Review, arc traffic + transport has referenced the following documents:

- Guide to Traffic Generating Development Update 2015, Roads & Maritime Services (**RMS Guide**);
- North West Growth Centre Traffic + Transport Model 2009, prepared by Road Design Solutions (**TTM 2009**);
- Alex Avenue Precinct planning documents, cited as necessary.

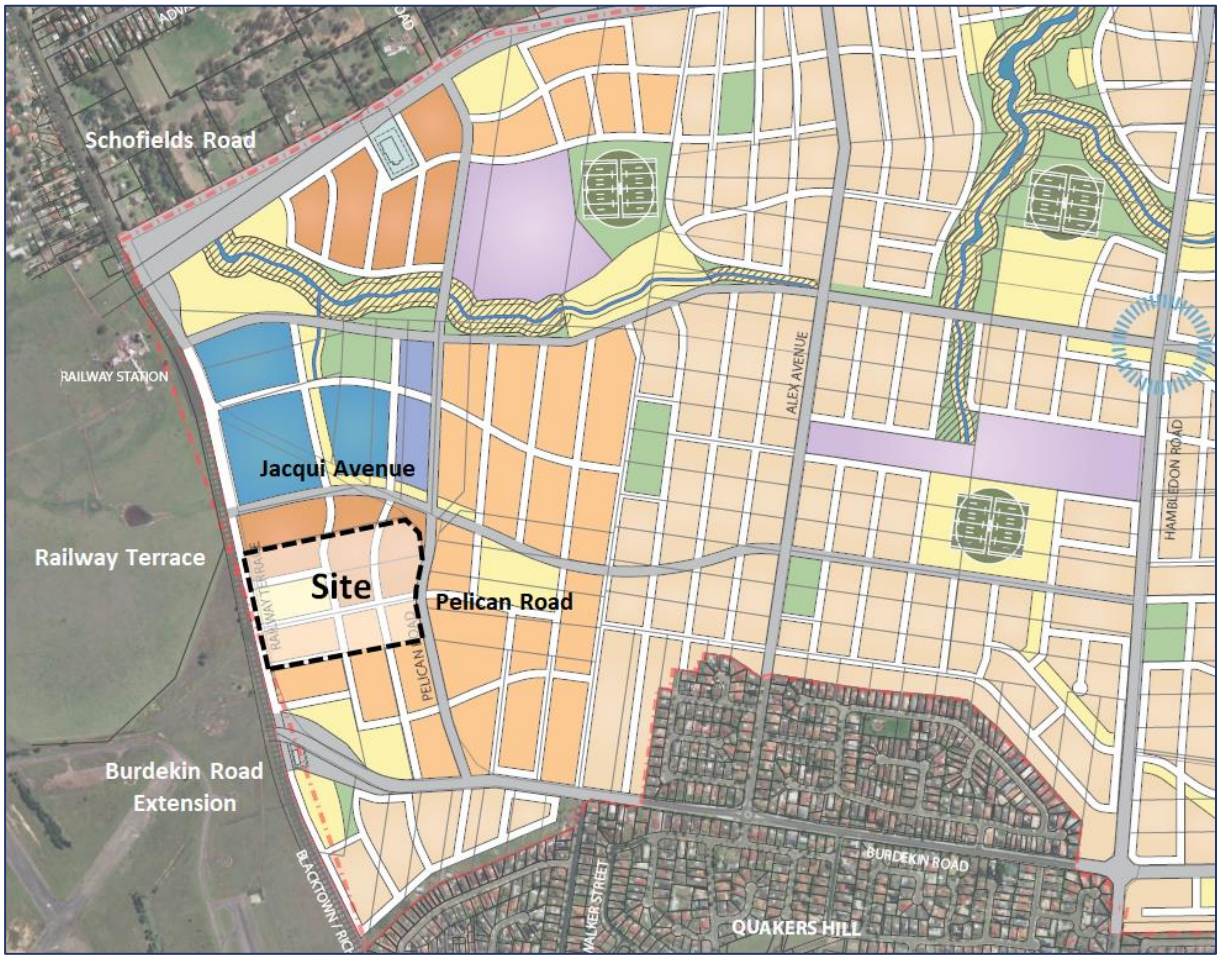
From the outset, it is noted that there is very little information available in regard to future traffic conditions in the Alex Avenue Precinct (**AA Precinct**) in which the Site lies; nonetheless, it is our opinion that the potential for the Proposal to impact the intersections identified by TfNSW for analysis is remote, as detailed further in sections below.

2 Alex Avenue Precinct

2.1 Location

As discussed, the Site is located within the AA Precinct, one of numerous precincts to be developed within the broader North West Growth Area (**NWGA**). The AA Precinct is bordered by Schofields Road to the north, Burdekin Road to the south, Ridge Road to the east and Railway Terrace (and the railway line) to the west. The Site's location within the AA Precinct is shown in Figure 1.

Figure 1: Site Location within the Alex Avenue Precinct



Source: AA Precinct Map

2.2 Road Network

As shown in Figure 1, the road network in the vicinity of the Site will change from the existing road network over time. While Schofields Road will remain a key east-west distributor, other east-west connectors will include a future realignment and extension of Jacqui Avenue (which runs along the northern boundary of the Site); and a future extension of Burdekin Road to the west over the railway line.

Pelican Road will also be realigned to run north-south to a new intersection with Junction Road at Schofields Road, as will other north-south roads including Alex Avenue and Hambledon Road.

2.3 Future Traffic Volumes

Importantly in the context of this Review, existing (2023) traffic volumes in the vicinity of the Site, and indeed across the AA Precinct and adjacent NWGA precincts, are unrepresentative of future traffic volumes; this is simply because significant lands in the broader area have yet to commence construction, such that it is likely that current traffic volumes in key roads (such as Schofields Road) represent only a percentage of future volumes, while upgrades of other roads (such as Jacqui Avenue, Pelican Road and Burdekin Road) have yet to commence, noting that traffic will in turn be redistributed to these new roads.

As such, and in response to the TfNSW RFI, there is no value in undertaking traffic surveys or sourcing SCATS data, as 2023 data (and analysis based on this data) would simply not represent future conditions, including traffic volumes and the distribution of that traffic to future upgraded roads.

Further in this regard, intersection analysis could be undertaken if the forecast volumes at these intersections was available; however, based on our best endeavours, the only forecast volumes available are provided in TTM 2009, and then only 2036 northbound and southbound volumes in Railway Terrace in the vicinity of the Site. It may be possible to source more detailed data from TfNSW, noting – for example – that detailed traffic analysis must have been undertaken prior to recent intersection upgrades along Schofields Road (including the intersection with Railway Terrace). Again however, arc traffic + transport has not been able to source these traffic forecasts.

Reference is therefore made to the data that is available in TTM 2009, which provides a number of different model scenarios (based, it appears, on different NWGA precinct development options and infrastructure projects). With reference Figure 5 through Figure 30 of TTM 2009, the average 2036 traffic volumes in Railway Terrace adjacent to the Site are forecast to be:

AM Peak Hour

- Northbound volumes ranging from 416 vehicle trips per hour (**vph**) to 514vph; and
- Southbound volumes ranging from 74vph to 94vph.

PM Peak Hour

- Northbound volumes ranging 304 vph to 412vph; and
- Southbound volumes ranging from 234vph to 261vph.

Further to the above, the minimum and maximum volumes for these through movements in both peaks are not significantly different; this is not surprising given that this section of Railway Terrace does not provide any significant benefit as part of a longer travel route though the AA Precinct, i.e. the majority of trips in the vicinity of the Site would be generated by development in the immediate area.

arc traffic + transport acknowledges that these volumes may have been revised in subsequent modelling undertaken by TfNSW, but again no additional information is available in this regard.

Further to the above, there is also no information available in regard to future intersection volumes at any intersections within the AA Precinct; this means that future turn volumes, which are essential to SIDRA modelling, are not also available.

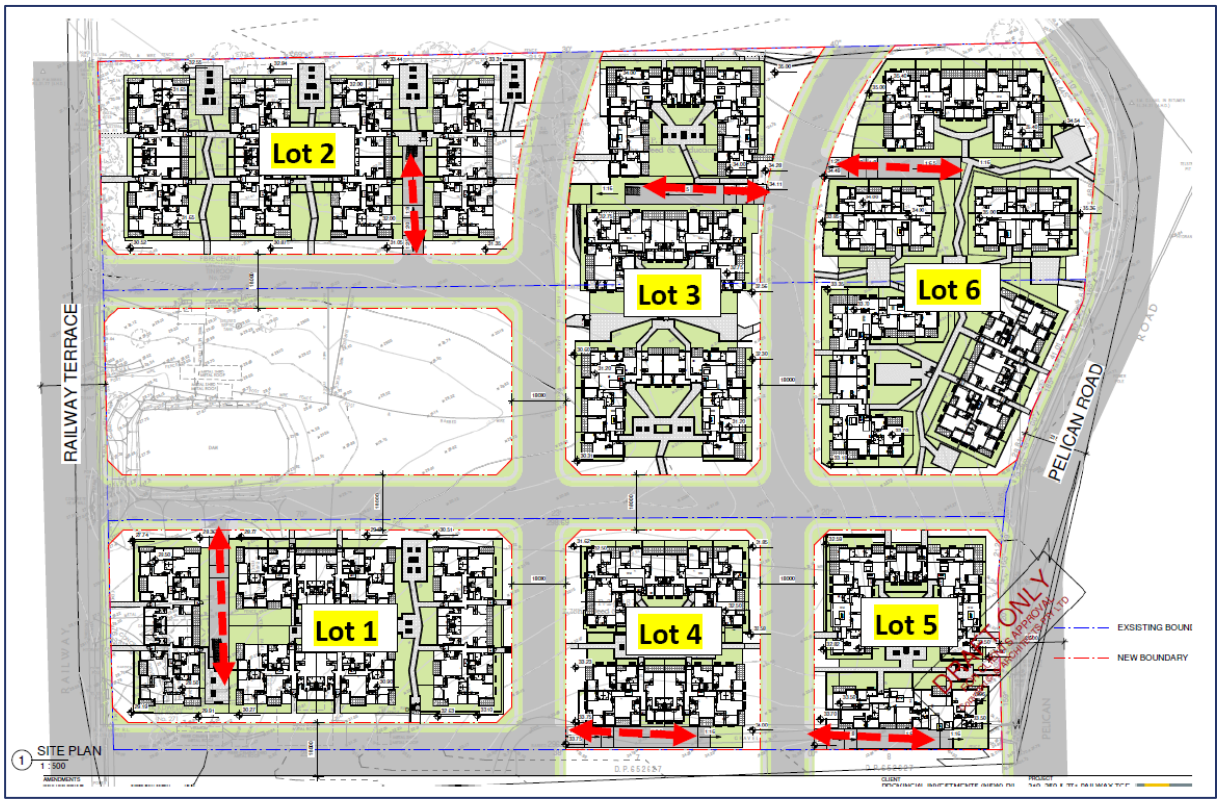
Notwithstanding, even if forecast volumes in Railway Terrace and at the intersection of Schofields Road & Railway Terrace were available, there is little if any potential for the Proposal to impact the operation of the local road network in any significant way, as discussed in sections below.

3 Site Traffic: Current Planning Controls

3.1 Site Plan

A Concept Plan for the Site further to consideration of current planning controls would not be significantly different to that Proposed, particularly in regard to the internal [public] roads that would be provided adjacent to and through the Site. A previously developed Concept Plan based on current planning controls is shown below.

Figure 2: Concept Plan – Current Planning Controls



Source: JS Architects

3.2 Dwelling Yields

As discussed, the application of the current planning controls at the Site would provide for the construction of approximately 900 high density dwellings.

3.3 Trip Generation

The trip generation of the Site as determined in TIA 2023 references trip rates provided in the RMS Guide for high density residential development, being 0.19 and 0.15 trips per hour in the AM and PM peaks respectively. It is noted that a significant percentage of dwellings would be allocated to social, affordable and build to rent, all of which have lower trip rates, but the application of the standard high density trips rates provides for a conservative assessment.

Further to these trip rates being applied to the 900 dwellings, the Site would generate approximately 171vph and 135vph in the AM and PM peaks respectively.

3.4 Trip Distribution

TTM 2009 does not provide a comprehensive distribution profile for the broader NWGA or the AA Precinct, and as such it is not possible to specifically determine the trip distribution used in the TTM 2009 model.

However, based on information available in regard to the distribution of trips from other NWGA precincts, as well as our past assessments of numerous NWGA precincts including Tallawong, Box Hill, Marsden Park, North Kellyville and Riverstone, it is estimated that:

- At least 70% of trips would be generated to/from the south and south-east based on the location of major local and regional centres and employment lands. These trips would use Pelican Road to Burdekin Road (noting that this intersection will be upgraded), or Jacqui Avenue and Alex Avenue (south to Burdekin Road).
- Approximately 10% of trips would be to the east and north-east. These trips would use Jacqui Avenue to Hambledon Road and then north to Schofields Road.
- Approximately 20% of trips would be to the west. These trips would use Railway Terrace and Schofields Road, or Pelican Road and the extension of Burdekin Road over the railway line.

3.5 Traffic Impacts

Further to the above, there is little if any potential for the Site to generate any significant number of trips to the intersections identified by TfNSW for further assessment along Railway Terrace other than those to/from the west via Schofields Road, noting again that the Burdekin Road extension (best accessed via Pelican Road) provides more direct access to sub-regional centres and employment lands to the west (and south-west) of the Site.

With reference to the estimate of 171vph being generated by the Site in the AM peak, consideration of the above suggests that no more than 25% of the trips to/from the west would travel via Schofields Road; in turn, the Site's trip generation of the Schofields Road & Railway Terrace intersection would be approximately 9vph. In the PM peak, this number would reduce to only 7vph.

As also discussed, the most efficient route to the south and south-east will be via Pelican Road; to the east and north-east via Jacqui Avenue; and the west via Pelican Road and the Burdekin Road extension. This means that the Site's trip generation to Railway Terrace itself will essentially be the same as that generated to the Schofields Road & Railway Terrace intersection, i.e. the Site would generate less than 10vph to Railway Terrace in both peaks.

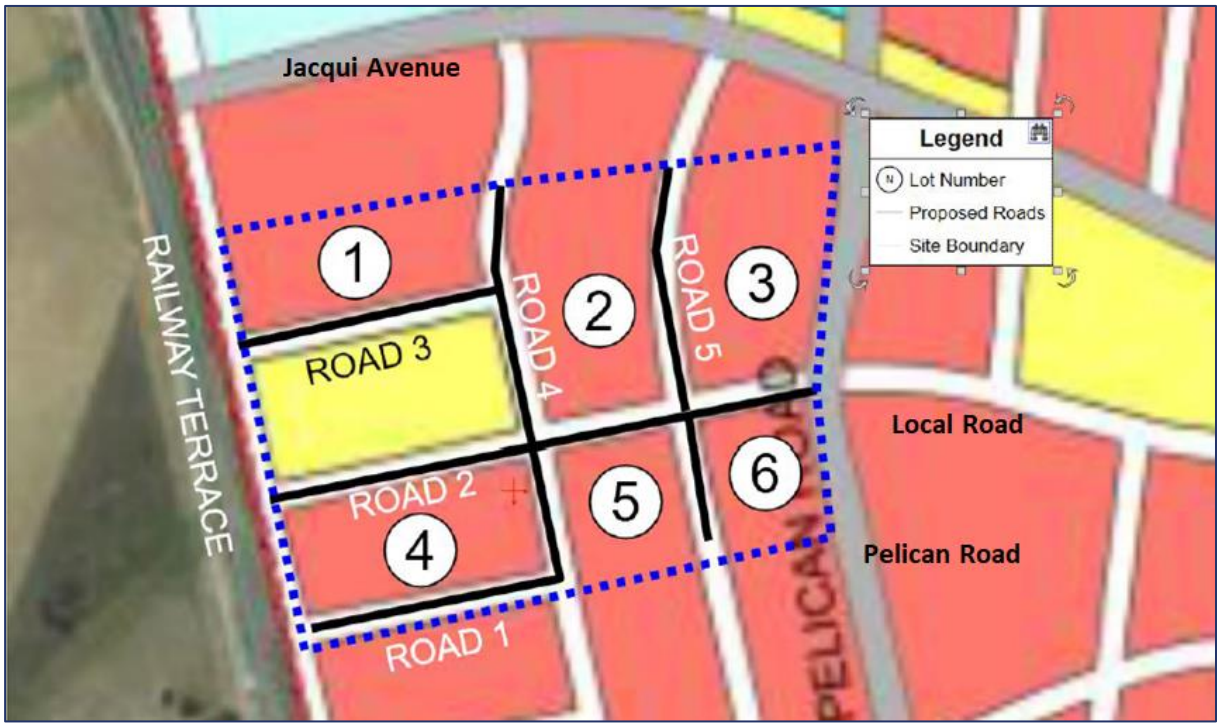
In summary, the traffic generated by the Site to the intersections identified by TfNSW for SIDRA analysis would be very minor. These trips could in no way be considered to have the potential to impact the operation of the local road network, regardless of what future traffic volumes have been determined by TfNSW in Schofields Road and Railway Terrace.

4 Site Traffic – The Proposal

4.1 Concept Plan

As discussed, the Proposal's Concept Plan is very similar to that prepared for the Site under current planning controls, again with key east-west through links between Pelican Road and Railway Terrace, with access to the internal buildings provided via these roads. The Proposal's Concept Plan is shown below.

Figure 3: Concept Plan – The Proposal



Source: Cloud Carrier

4.2 Dwelling Yields

As discussed, the Proposal would provide for an increase in density at the Site which in turn could provide for up to 1,751 dwellings.

4.3 Trip Generation

Referencing again the RMS Guide trip rates for high density residential development, the Proposal would generate some 333vph and 263vph in the AM and PM peaks respectively.

4.4 Trip Distribution

There is no information available to indicate that the trip distribution of the Site would be any different further to the Proposal than it would be based on the Site being developed in accordance with current planning controls. With specific consideration of the Railway Terrace intersections, the Site's trip generation to Railway Terrace would increase from 9 vph to 17vph and from 7vph to 14vph in the AM and PM peaks respectively.

4.5 Traffic Impacts

With reference to the above, the Proposal would result in a minor increase in traffic volumes to the Railway Terrace intersections. Noting that these Railway Terrace trips would be generated via 3 Site intersections, there is essentially no potential for the trips generated by the Proposal to impact any of the intersections along Railway Terrace identified by TfNSW for SIDRA analysis.

The Proposal would also increase the number of trips via the Schofields Road & Railway Terrace, but again to a total of no more than 17vph and 14vph in the AM and PM peaks respectively, or a maximum (in the AM peak) of 8vph more than if the Site were developed under current planning controls.

In summary therefore, arc traffic + transport would fully support the Proposal further to traffic considerations without any need for additional traffic analysis.

5 Summary Response to TfNSW Information Request

With specific reference to the TfNSW RFI, arc traffic + transport has determined that:

- There is no benefit in undertaking 2023 traffic surveys or sourcing 2023 SCATS traffic counts as the current (2023) traffic volumes in Schofields Road and Railway Terrace are unrepresentative of future volumes further to the development of the AA Precinct and other adjacent precincts in the NWGA.
- The Proposal will result in additional trips being generated by the Site when compared to the development of the Site in accordance with current planning controls. However, the majority of trips will be generated to the east of the Site, with only a minor number being generated to Railway Terrace. Further, few trips would be generated to the intersection of Schofields Road & Railway Terrace given the better east-west access across the railway line which will be provided by the future extension of Burdekin Road and its intersection with Pelican Road.
- Regardless of the future through traffic volumes in Railway Terrace at the 3 Site intersections, the extremely minor number of trips being generated to/from these Site intersections means that they would likely operate at a Level of Service A.
- Regardless of the future traffic volumes at the intersections of Schofields Road & Railway Terrace, and Railway Terrace & Manchester Drive, the extremely minor number of trips being generated by the Site through these intersections would have no impact on the future Level of Service.
- Finally, even if additional trips were generated to the Railway Terrace intersections north of the Site further to a revised trip distribution, it is difficult to see how the Site could generate any more than 10vph – 20vph more than would be generated by the Site being developed in accordance with current planning controls. Again, even if this were the case, these trips – at worst being 1 additional trips every 3 minutes – could in no way impact the operation of these intersections.

In summary, arc traffic + transport would fully support the Proposal based on all available information, and moreover we see no need for any additional modelling of the Railway Terrace intersections.

We trust that the information provided in this Review will assist Cloud Carrier, TfNSW and DPE in their assessment of the Proposal.

If you or any TfNSW or DPE officers require any further information or wish to discuss the information provided in this Review further, please do not hesitate to contact the undersigned.

Yours sincerely,

Anton Reisch
Director, arc traffic + transport