

By email
5 October 2023

Bec Mahoney
Project Manager
Essence Project Management Pty Ltd

Our ref 244326

Lourdes Retirement Village

Response to Submissions – Department of Planning and Environment

Arup has been commissioned by Levande to assess the transport and traffic impacts of the planning proposal for Lourdes Retirement Village. The planning proposal and *Lourdes Retirement Village Transport Assessment* (Arup, 2022) were exhibited in August and September 2022.

In August 2023, Department of Planning and Environment requested for the following to be reviewed and reconsidered:

Traffic generation: Noting Council's submission and potential amendments to the master plan, please demonstrate that the trips generated by the proposed private dwellings can be adequately accommodated on the internal road lay and Stanhope Road without a significant impact on existing level of service and not adversely impacting the amenity of adjoining residential dwellings (to the west of the site).

This letter includes the following:

- Summary of the changes to the master plan since exhibition of the planning proposal.
- Assessment of the road capacity of the internal site road network and impacts on amenity of adjoining residential dwellings (to the west of the site).
- Review of the impact of trips generated by the proposal on the level of service of Stanhope Road.

Amended master plan

Following exhibition, the master plan was amended to include the following changes. These changes are shown graphically in Figure 1.

- Loading and servicing vehicle access has been amended such that access is proposed via the eastern-most entry to the site, with a dedicated ramp to the loading dock. This change would minimise heavy vehicle movements within the site.
- The road layout has been adjusted to segregate vehicles accessing the aged care facility parking from vehicles accessing the independent living units (ILUs) parking and town houses parking. This change would reduce vehicle movements on the access road near the adjoining property at 91 Stanhope Road.

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Furthermore, the number of town houses in the amended master plan has reduced from 63 to 59.



Figure 1 Revised access points in the amended master plan

Traffic generation and Ku-ring-gai Council submission

Table 5 of the Transport Assessment outlines the traffic generation rates for land uses in the site (including service and visitor vehicles).

For the peak period from 11:30am to 12:30pm, the amended master plan is expected to generate:

- Aged care facility / apartments – 51 trips.
- Town houses – 39 trips. This equates to a reduction of 2 trips when compared to the planning proposal, due to the reduction in the number of town houses from 63 to 59 in the amended master plan.

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In November 2022, Ku-ring-gai Council (Council) provided the following comments with regard to traffic generation:

Arup Transport Assessment (June 2022) estimates the traffic generation of the proposal. For the townhouses, the RTA traffic generation rate for medium density residential flat building was used (0.5-0.65 vehicle trips per hour in the peak hour) to derive total and peak hour traffic generation.

While the building typology of the townhouses is that of medium density residential flat buildings, the location factor (>1.3km from transport and services/facilities) is likely to result in the townhouses generating traffic similar to low density residential dwellings (0.85 trips per dwelling during the peak hour), as townhouses are likely to be located in a “missing middle” configuration.

The RTA (now TfNSW) *Guide to Traffic Generating Developments* (RTA, 2002) does not state that the rates for medium density residential flat buildings are based on sites located close to a retail/transport core. Therefore, we believe that the traffic generation rates used are the most appropriate. It is noted that using the rates for low density residential dwellings yields a relatively low increase in traffic generation of the townhouses from 39 trips per hour to 50 trips per hour.

Internal site road network capacity and impacts on amenity of adjoining residential dwellings

The *Guide to Traffic Generating Developments* provides guidance on the environmental capacity of roads for residential amenity. Section 4.3.5 of the guide suggests a maximum of 100 vehicles per hour for a local access way (maximum speed limit of 25 km/h).

To estimate the potential peak hour traffic volumes within the internal site road network, the traffic generation of the amended master plan has been distributed amongst the access points shown in Figure 1. Assuming a 50/50 split of traffic allocated to the aged care facility and apartments, and a 75/25 split between the western and eastern access points, the following vehicle movements are expected at each access point:

- Western ILU / town house access (adjacent to adjoining residential properties) – 48 trips
- Aged care facility access – 26 trips
- Eastern ILU access – 6 trips
- Eastern town house access – 10 trips

Traffic generated by the site is expected to be distributed among various access points and less than the environmental capacity of a local access way. Furthermore, the speed limit of internal roads is expected to be low to discourage high speeds (such as 10 kilometres per hour in line with existing speed limits). Therefore, the amenity impact of traffic within the site and on adjoining residential properties is expected to be low.

Stanhope Road – road capacity and level of service

An updated road network analysis for the amended master plan is shown in Table 1.

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Table 1 Intersection modelling results with the amended master plan

Scenario		Level of Service	Average Delay (s)	Degree of Saturation
AM peak hour	Existing	B	28	0.660
	Existing + development	C	29	0.688
PM peak hour	Existing	B	24	0.547
	Existing + development	B	25	0.567
Saturday peak hour	Existing	B	26	0.488
	Existing + development	B	26	0.519

The intersection modelling identified that the impacts of additional trips generated by the amended master plan at the assessed Werona Avenue / Stanhope Road intersection are expected to be minimal, with trips expected to generally occur outside of the network peak hours.

As the number of town houses in the amended master plan has reduced from 63 to 59, it is expected that the impacts of the amended master plan on the Werona Avenue / Stanhope Road intersection are expected to remain minimal and lower than the impacts assessed in the planning proposal.

Summary

The amended master plan includes three access points to the site. Traffic generated by the site is expected to be distributed among these various access points and less than the environmental capacity of a local access way. Furthermore, the speed limit of internal roads is expected to be low to discourage high speeds (such as 10 kilometres per hour in line with existing speed limits). Therefore, the amenity impact of traffic within the site and on adjoining residential properties is expected to be low.

The number of town houses in the amended master plan has reduced from 63 to 59. Accordingly, impacts on the Werona Avenue / Stanhope Road intersection are expected to remain minimal, with trips expected to generally occur outside of the network peak hours.

The *Guide to Traffic Generating Developments* does not state that the rates for medium density residential flat buildings are based on sites located close to a retail/transport core. Therefore, we believe that the traffic generation rates used are the most appropriate. It is noted that using the rates for low density residential dwellings yields a relatively low increase in traffic generation of the townhouses from 39 trips per hour to 50 trips per hour, with impacts on amenity and intersection level of service expected to remain low.