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11 October 2022

Fran Liao
Principal Civil Engineer
Stantec
Via email: fran.liao@cardno.com.au

RE: Traffic Noise Assessment – Proposed residential development fronting Monaro Highway and Polo Flat Road, Cooma

Dear Fran,

Todoroski Air Sciences has assessed the potential for road traffic noise impacts upon the proposed residential development located between the Monaro Highway and Polo Flat Road (hereafter referred to as the Project).

This study has been conducted per the Department of Planning and Environment guidelines contained in their document *Development Near Rail Corridors and Busy Roads – Interim Guideline* (Interim Guideline) (**NSW Department of Planning, 2008**).

Project setting

The Project site is located approximately 2.7 kilometres (km) from the Cooma town centre and approximately 1km north of the Polo Flat industrial precinct. The area surrounding the site is predominately comprised of a mix of residential and rural farmland.

The Project site comprises of two precincts, identified as Precinct 2 and Precinct 3, and is proposed to house a mixture of single dwellings, duplexes, social and affordable housing as well as key worker housing.

Figure 1 presents the location of the Project.

The section of the Monaro Highway at the frontage of the two precincts is straight, essentially level, with no intersections, cuttings or significant terrain in the vicinity. This is an ideal stretch of road in terms of reliably determining traffic noise levels, and as such it presents no feature that would warrant taking direct traffic noise measurements. Polo Flat Road would carry much less traffic and at a lower speed, and it too is a relatively uncomplicated stretch of road.

The acoustic environment at this location would clearly be dominated by traffic along the Monaro Highway.

For these reasons this report applies the screening tests as intended per the Interim Guideline.

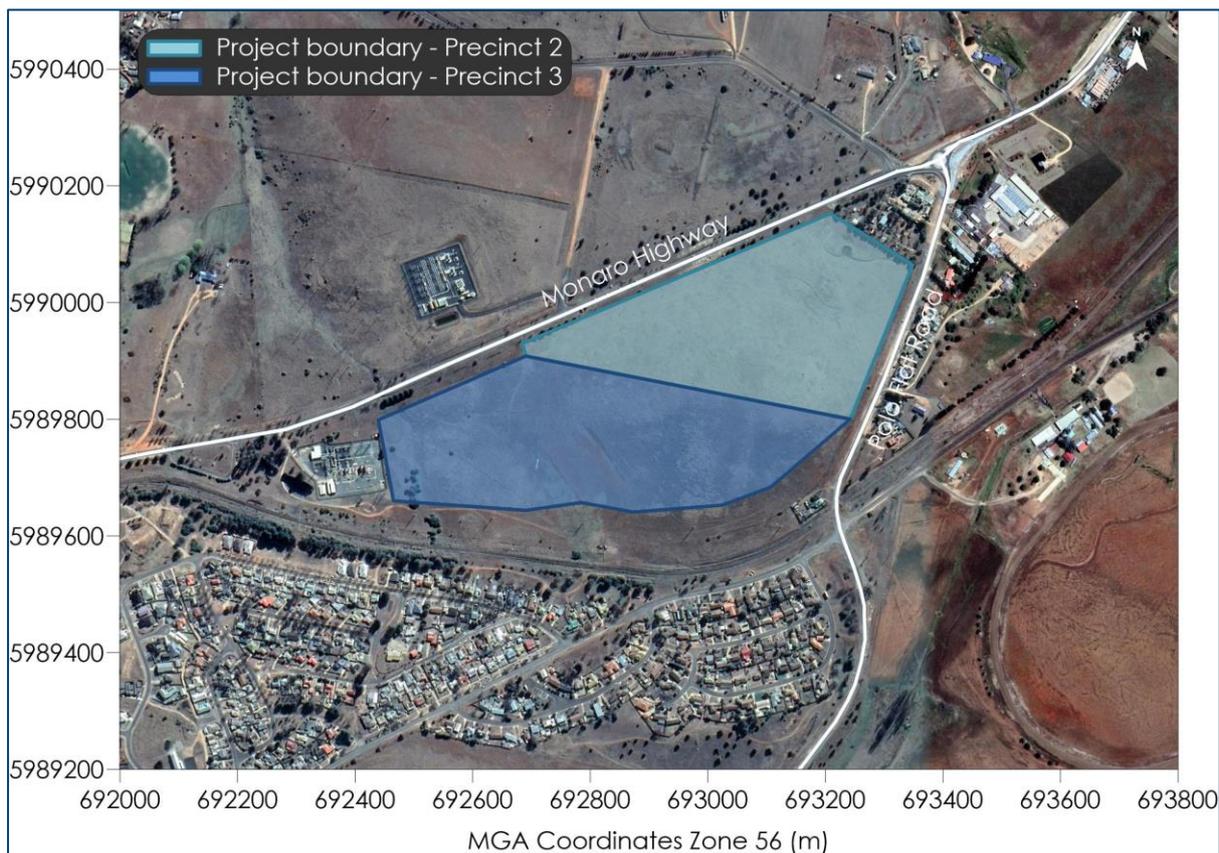


Figure 1: Project setting

Screening level assessment

A screening level test for road traffic noise impacts from the nearby roadways (Monaro Highway and Polo Flat Road) was conducted per the screen tests in the Interim Guideline (**NSW Department of Planning, 2008**). The screen tests apply only to areas of a development which are exposed to traffic noise, and which have a direct line-of-sight. The screen tests identify an appropriate level of acoustic treatment depending on the traffic volume of the road and the distance from the kerb to the exposed façade and the speed of the traffic.

The Interim Guideline screen tests for traffic speeds of 60/70 kilometres per hour (km/h) and 100/110km/h are shown in **Figure 2**. The signposted speed on the Monaro Highway passing the Project site is 80km/h and for Polo Flat Road is 60km/h. Screen test 1(a) is used for Polo Flat Road and 1(b) for the Monaro highway.

The distance from the nearest road curb on the Monaro Highway to the Precinct 2 boundary is approximately 17 metres (m) and to the Precinct 3 boundary is approximately 36m. The distance from the nearest road curb on Polo Flat Road to the Precinct 2 and Precinct 3 boundary is 24m.

Daily traffic volumes for the Monaro Highway were obtained from the NSW Road and Maritime Services (RMS) Traffic Volume Viewer (**NSW RMS, 2022**). A summary of the last five years of annual average daily traffic (AADT) volumes for the Monaro Highway counter, which is located approximately 400m east of the intersection with Polo Flat Road, is presented in **Table 1**.

The maximum AADT volume for the Monaro Highway is 5,779 vehicles. It was conservatively assumed that the proposed development and future growth will see traffic volumes increase by 20% resulting in an AADT of 6,935 vehicles. There are no vehicle counters available for Polo Flat Road, thus it has been assumed to have an AADT approximately 20% of the Monaro Highway, i.e. 1,387vehicles.

Table 1: Summary of AADT volumes for Monaro Highway

Year	AADT
2017	5,390
2018	5,471
2019	5,779
2020	4,780
2021	4,915
Max	5,779

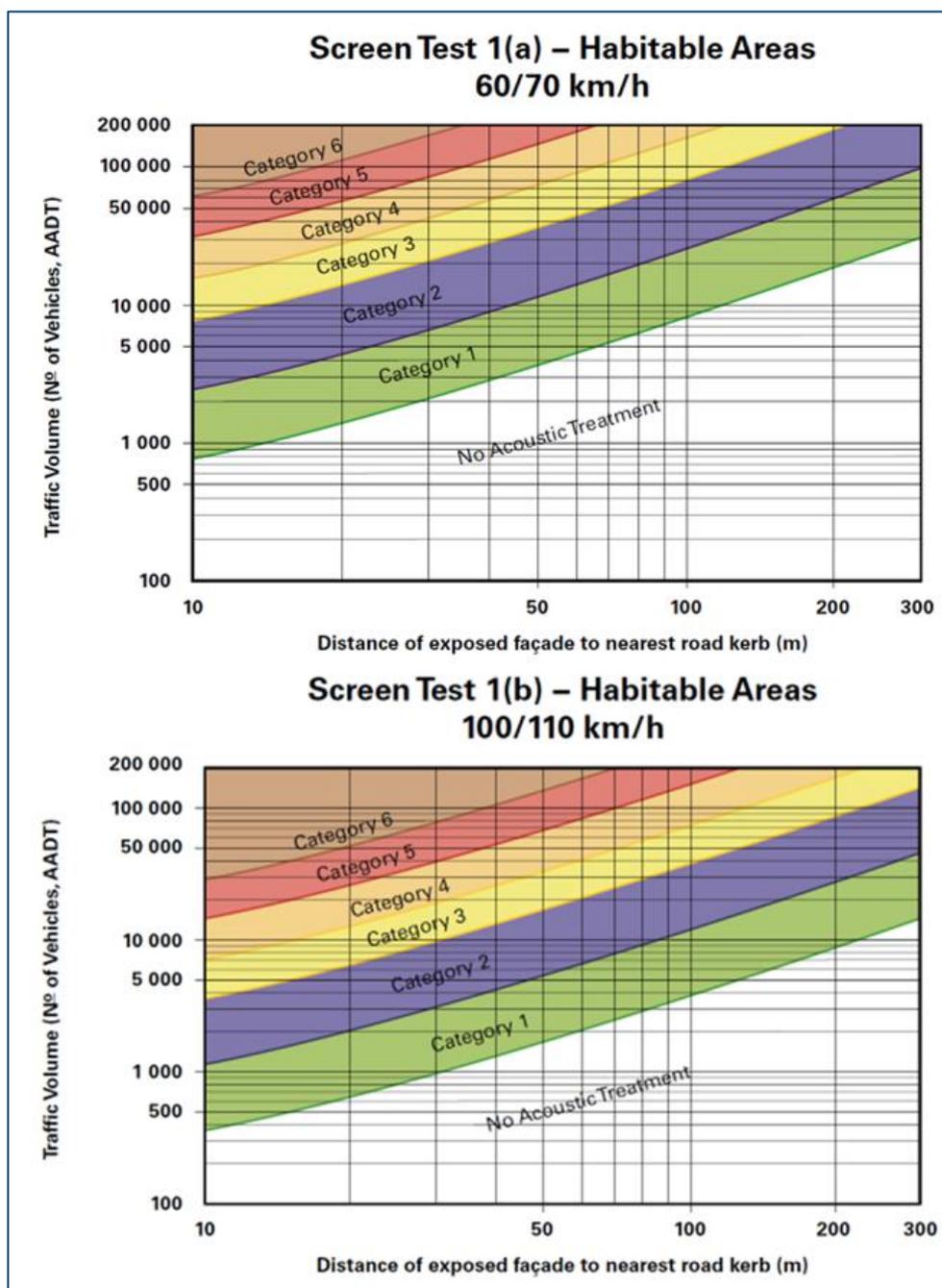


Figure 2: Screen tests for habitable areas of single/dual occupancy dwellings (if any exposed façade is direct line-of-sight)

A summary of the screen test variables and results for the Project is presented in **Table 2**. The test indicates that for dwellings located along the Monaro Highway, acoustic mitigation measures would be required for Precinct 2 and Precinct 3. For dwellings along Polo Flat Road, no acoustic treatment is required.

Table 2: Summary of screen test variables and results

Parameter	Precinct 2	Precinct 3	Precinct 2	Precinct 3
Roadway	Monaro Highway		Polo Flat Road	
AADT	6,935		1,387	
Distance (m)	17	36	24	24
Speed (km/h)	80	80	60	60
Screen Test Result	Category 3	Category 2	No acoustic treatment	No acoustic treatment

Mitigation measures

The following mitigation measures in **Table 3** are recommended to be implemented to minimise noise impacts on the Project area due to traffic on the Monaro Highway, commensurate with application of the Interim Guideline which resulted in recommendations for no treatment, Category 2 or 3 treatment.

Table 3: Summary of acoustic treatments for dwelling construction along Monaro highway - Category 2 and Category 3

Building element	Category 2 (Precinct 3 and second house row Precinct 2)	Category 3 (Precinct 2)
Window/ Sliding doors	Openable with minimum 6mm monolithic glass and full perimeter acoustic seals.	Openable with minimum 6mm laminated glass and full perimeter acoustic seals
Frontage Facade	Timber Frame or Cladding Construction: 6mm fibre cement sheeting or weatherboards or plank cladding externally, 90mm deep timber stud or 92mm metal stud, 13mm standard plasterboard internally with minimum R2 insulation in wall cavity.	N/A
	Brick Veneer Construction: 110mm brick, 90mm timber stud frame or 92mm metal stud, minimum 50mm clearance between masonry and stud frame, 10mm standard plasterboard internally.	Brick Veneer Construction: 110mm brick, 90mm timber stud or 92mm metal stud, minimum 50mm clearance between masonry and stud frame, 10mm standard plasterboard internally.
	Double Brick Cavity Construction: 2 leaves of 110mm brickwork separated by 50mm gap.	Double Brick Cavity Construction: 2 leaves of 110mm brickwork separated by 50mm gap
Roof	Pitched concrete or terracotta tile or metal sheet roof with sarking, 10mm plasterboard ceiling fixed to ceiling joists, minimum R2 insulation batts in roof cavity.	Pitched concrete or terracotta tile or sheet metal roof with sarking, 1 layer of 13mm sound-rated plasterboard fixed to ceiling joists, minimum R2 insulation batts in roof cavity.
Entry door	40mm solid core timber door fitted with full perimeter acoustic seals.	45mm solid core timber door fitted with full perimeter acoustic seals
Floor	1 layer of 19mm structural floorboards, timber joist on piers.	N/A
	Concrete slab floor on ground.	Concrete slab floor on ground

Note that additional insulation may be used.

Please feel free to contact us to clarify any aspect of this report.

Yours faithfully,
Todoroski Air Sciences



Aleks Todoroski



Philip Henschke

References

NSW Department of Planning (2008)

"Development Near Rail Corridors and Busy Roads – Interim Guideline", NSW Government, Department of Planning

NSW RMS (2022)

"Traffic Volume Viewer", Roads and Maritime Services NSW, accessed June 2022.

<https://roads-waterways.transport.nsw.gov.au/about/corporate-publications/statistics/traffic-volumes/aadt-map/index.html#/?z=6>