

Doc Ref: TD261-14F01 (rev 0) Noise Assessment

Date: 11 October 2010

To: Catylis Pty Ltd

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From: Michael Chung

**RE: C&A MIDDLE CAMP (CHB) DEVELOPMENT – ROAD TRAFFIC NOISE
ASSESSMENT FOR EXISTING RESIDENCES**

A review of the potential noise impacts to existing residential properties along Flowers Drive, Middle Camp has been undertaken following the revision of the proposed concept plan for the proposed Coal & Allied development at Middle Camp. The concept plan has been revised as follows:

- Deletion of the proposed Bypass Road; and
- Reduction in the number of proposed dwellings from 300 to 222; ie. deleting development sites C and D from the concept plan.

In addition to the concept plan revisions above, revised future 2012 traffic volumes were provided by Hyder Consulting. The revised traffic volumes for Flowers Drive through Middle Camp are presented below and are based on vehicle speeds of 40km/h due to the proposed implementation of Local Area Traffic Management (LATM) measures (eg. speed bumps, etc) in the future year 2012.

Table 1 – Future 2012 Traffic Volumes and Speeds on Flowers Drive, Middle Camp

Road	Average 7 Days Daily Traffic	Hourly Volume ¹		Vehicle Speed ³
		Day ²	Night ²	
Flowers Drive, Middle Camp	1,575	152	40	40km/h

Notes: 1. Hourly volume represents traffic volume for the busiest hour during the applicable period
2. Day represents the period from 7am to 10pm; Night represents the period from 10pm to 7am
3. Future posted speed limit taking into account the use of LATM measures

Based on the revised concept plan and the revised future 2012 traffic volumes, road traffic noise predictions were undertaken for the affected residential properties along Flowers Drive through Middle Camp. Three receiver locations were assessed representing the location of the

nearest affected facades of dwellings in various areas of Middle Camp. The receivers were as follows and are also shown in Figure 1.

- **Receiver R1** – Representing the north western side of Middle Camp
- **Receiver R2** – Representing the north eastern side of Middle Camp
- **Receiver R3** – Representing the south western side of Middle Camp

In assessing the potential for road traffic noise impacts to existing residences in Middle Camp due to the proposed Coal & Allied residential development, the following road traffic noise criteria have been established based on the NSW Environmental Criteria for Road Traffic Noise (ECRTN).

Table 2 – Applicable Noise Criteria for Existing Residences on Flowers Drive

Type of Development	Criteria		
	Day, dB(A)	Night, dB(A)	Where Criteria are Already Exceeded
Land use developments with potential to create additional traffic on collector road	$L_{Aeq(1hr)}$ 60	$L_{Aeq(1hr)}$ 55	Where feasible and reasonable, existing noise levels should be mitigated to meet the noise criteria. Examples of applicable strategies include appropriate location of private access roads; regulating time of use; using clustering; using 'quiet' vehicles; and using barriers and acoustic treatments. In all cases, traffic arising from the development should not lead to an increase in existing noise levels of more than 2 dB

Notes: Day represents the period from 7am to 10pm; Night represents the period from 10pm to 7am

From the above table it is noted that should existing noise levels already exceed the criteria, then traffic arising from the development should not lead to an increase in existing noise levels of more than 2dB(A).

Table 3 below presents the existing noise levels at the nominated receiver locations.

Table 3 – Existing 2007 $L_{Aeq(1hr)}$ Road Traffic Noise Levels, dB(A)

Receiver	Existing Noise Levels	
	Day	Night
Receiver R1	53	45
Receiver R2	54	45
Receiver R3	57	49

From the above table it can be seen that existing noise levels do not exceed the applicable criteria for the day and night periods. Therefore, the criteria of $L_{Aeq(1hr)}$ 60 for the day period and $L_{Aeq(1hr)}$ 55 for the night period will be assessed against from herein.

Table 4 below presents the predicted road traffic noise levels at all receiver locations based on the revised concept plan, the revised traffic volumes and speeds and the applicable road traffic noise criteria.

Table 4 – Predicted Future 2012 $L_{Aeq(1hr)}$ Road Traffic Noise Levels, dB(A)

Receiver	Day Period			Night Period		
	Criteria	Noise Level	Comply?	Criteria	Noise Level	Comply?
Receiver R1	60	56	YES	55	47	YES
Receiver R2		56	YES		47	YES
Receiver R3		60	YES		51	YES

Results indicate that road traffic noise levels would comply with the relevant criteria stipulated in the ECRTN for both the day and night periods. Therefore, no noise mitigation measures are required for the existing residences located on Flowers Drive.



DOCUMENT CONTROL

Date	Revision History	Non-Issued Revision	Issued Revision	Prepared By (initials)	Instructed By (initials)	Reviewed & Authorised by (initials)
11/10/2010	Report generation	-	0	MCH	-	MCH

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