



Environmentally Sustainable Engineering

To	Geoff Smyth Consulting		
Job	BEE0055 – Moonee Community Title Subdivision		
Date	16/03/2010	Pages	2 inclusive
Reference	Response to <i>Council Comments</i>		

1.0 Context

Coffs Harbour City Council have referred the application for development to relevant Government Authorities and advertised the application for public comment. As a result of that process issues with respect to noise have been raised that require clarification or additional information. In total, three main issues with regard to noise were raised. The three issues can be summarised below as:

1. Discussion of noise generated by the proposed collector road,
2. Consideration of the inclusion of glazing for windows within stage 2 buildings,
3. Consideration of specific building specifications for Stage two dwellings within the 55 dBA to 60 dBA range.

The supplementary information provided herein responds to and clarifies the matters raised with regard to potential noise impact.

2.0 Response to Matters Raised

2.1 Discussion of noise generated by proposed collector road.

The Traffic Impact Assessment prepared by GHD dated December 2008 identifies the predicted use of the collector road by the development on completion as being 50% of generated traffic and split 50/50 heading north and south. Additional future traffic using the collector road cannot be accurately determined as the size and location of additional developed areas is not known. However, given the traffic data provided for Moonee Road and the Pacific Highway intersection, it could be assumed that a proportion of this traffic is local traffic that would utilise a new collector road if constructed. A proportional break down of local vs highway traffic of 40/60 has been adopted for use. This would result in an estimated traffic flow in the order of 840 vpd using the collector road. Assuming:

- speed limit of 60 km/hr,
- smooth asphalt pavement,
- 5% percent commercial vehicle use (heavy vehicles would use the Pacific Highway),
- sound absorbing fraction for ground cover of 0.5,
- 20m setback from road centre line,

the resultant noise impact from the collector road on the adjacent Stage two dwellings would be in the order of:

Day (7am – 10pm)	53 dBA
Night (10pm – 7am)	47 dBA

The likely impact from the collector road is therefore less than the prescribed noise goals for new residential developments affected by freeway noise.

The measures prescribed to mitigate the impacts of highway noise will therefore be more than sufficient to mitigate against any noise impact created by the future development of a collector road.

2.2 Double glazing for all stage two buildings.

The Acoustic Impact Assessment by Black EARTH Environmental (dated March 2009) specifies that "All stage two dwellings are upgraded to include minimum 6mm laminated windows on all bedroom windows with mechanical ventilation to allow adequate ventilation when all bedroom windows are closed." Furthermore the report states that "day time noise impacts have been assessed to be marginal". The provision of 6mm laminated windows for all windows within the stage two dwellings would ensure that day time highway noise impacts do not cause undue internal noise impact. It is therefore proposed that the recommendation of the noise impact assessment be modified to include:

- *The provision of 6mm laminated glass windows throughout all Stage two dwellings*

2.3 Demonstrated insulation for Stage two lots.

It is recommended that the minimum requirements for dwellings construction within stage two of the development comply with the following building standards:

- *Rendered brick veneer construction ensuring no apertures, or other features that may degrade transmission loss, including relative to underside of the floor.*
- *6mm laminated glass windows throughout*
- *Mechanical ventilation provided*
- *Quality construction is provided to ensure that gaps, or other, do not degrade sound transmission loss through the building exterior.*
- *6mm villaboard, or equivalent, is provided for eaves*
- *R3.0 ceiling insulation is provided to all living and bedroom areas and R1.5 wall insulation is provided for all external walls.*

3.0 Conclusion

The review period has raised a number of matters with regard to future acoustic impact. The main issues raised included impact of proposed collector road and the provision of additional mitigation measures for stage two dwellings.

Black EARTH Environmental has responded by clarifying the impact of the collector road, and providing a detailed discussion of the requirements for additional mitigation measures to be included for all Stage two dwellings.

Additional measures considered includes 6mm laminated glass windows for all stage 2 dwellings and the specification of minimum building requirements for Stage two dwellings to ensure noise mitigation is achieved internally.

With Regards,



Cameron Black
16th March 2010