



Acoustics
Vibration
Structural Dynamics

4 March 2014

TG131-01F05 (Rev 0) Acoustic Fences

Australian Christian College
C/- Lippmann Partnership
Ed Lippmann

Australian Christian College, Riverstone - Acoustic Fences (DA-13-634)

Renzo Tonin & Associates attended a meeting at Blacktown Council offices on 20 February 2014 to discuss the draft consent conditions for the Australian Christian College at Riverstone. Draft Condition 4.2.3 states as follows;

All side and rear property boundaries are to be provided with 2.1m solid lapped and capped timber fencing. Fencing is to be erected on top of any retaining walls at full cost to the developer.

We understand that the purpose of these fences is to mitigate noise from outdoor play, particularly from the rear of the property where the main play area is located. It was proposed in the meeting that fencing on all boundaries of the college property is an excessive requirement as there are only two nearby neighbouring residences affected by play noise, one to the east and one to the south west.

We understand that Council is in agreement that only the following two sections of fencing are required:

1. 2.1m high lapped and capped timber fence along eastern boundary. The existing 1.8m high fence is to be removed and replaced by this new fence. The length of the fence is to be the same as the existing fence. This length is suitable for screening the eastern residence from both the junior play area (located north of the multi-purpose hall) and the rear sports oval. There is a white demountable building adjacent to the sports oval that assists with screening of the sports oval.
2. 2.1m high lapped and capped timber fence along the western boundary of the sports oval, commencing at the south western corner and extending north for the full length of the grassed playing oval, a distance of approximately 100m. This fence is to be located on top of the existing retaining wall where possible.



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With regard to Item 1, we understand that the current fence is not in the correct position according to boundary lines and this fence replacement will correct this. Assuming the base of the fence in its new location is at the same level as the current fence, the increase in height from 1.8m to 2.1m will provide approximately 1dB(A) improvement in the acoustic performance of the fence. Extending the length of the fence to the south is unlikely to provide any additional noise reduction as the resident is already shielded from the sports oval by the current fence and the demountable.

With regard to Item 2, we have conducted noise measurements at the school for the current situation (as reported in Renzo Tonin report *TG131-01F04 (rev 0) Noise Monitoring Addendum* dated 2 September 2013). Although Council does not specify a noise goal for schools with their planning requirements, we understand that in this case Council considers a noise goal of 46dB(A) for outdoor play to be appropriate, which is 10dB(A) above the background noise level measured on site, as presented in the aforementioned addendum report.

The current assessed noise level for the residence to the west is 56dB(A). The assessment location is at a point within 30m of the residence in accordance with the NSW Industrial Noise Policy. Allowing for future growth to 600 students and noise mitigation from the fence described above in Item 2, we predict a noise level on the residential property to the west of 50dB(A).

Whilst the predicted noise level of 50dB(A) does not strictly achieve the noise goal, it is an improvement on the current situation. That is, with the proposed 2.1m fence on top of the retaining wall, the future noise level will be 6dB(A) less than the current noise level of 56dB(A). If the 46dB(A) goal was to be achieved, the fence would need to be approximately 3m high.

We trust the above information is helpful in clarifying the issues and assisting the JRPP.

Sincerely,

RENZO TONIN & ASSOCIATES (NSW) PTY LTD

Michael Gange

Senior Engineer / Team Leader

Document Control

Date	Revision History	Non-Issued Revision	Issued Revision	Prepared	Instructed	Authorised
04.04.2014	First issue		0	MG		MG

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Traffic Management Plan
March 2014

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Background

This Traffic Management Plan has been prepared in response to a meeting with the Joint Regional Planning Panel on February 13th and a subsequent meeting with planning staff at Blacktown Council on February 20th. The Plan informs traffic and queuing arrangements for the drop-off and pick-up of children from the school when the construction of the proposed new building is operational.

Future Expansion

The Australian Christian College plans to purchase the neighbouring residential property to the east of the subject site (Lot 8) to enable future expansion to take place. This future expansion will accommodate classrooms, a library and other student and staff facilities. The neighbouring Lot will provide space for an increased student and staff population, beyond the 600 students currently catered for via this Development Application.

The purchase of the neighbouring Lot will enable expansion of the proposed traffic arrangements, further improvement and better access for student pick-up and drop-off in the event of increased traffic. Prior to approval of further development and construction of any future facilities, the current proposed traffic queuing will be expanded, provide increased off-street queuing and parking of more vehicles and buses than what is currently proposed.

Queuing and Vehicular Movement

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The accompanying drawing indicates a refurbished driveway off Farm Road turning east into a 3 lane driveway which accommodates 22 cars moving east. At the eastern end of this driveway, a staff member will chorelate the 3 lanes of vehicles into a single row of cars, 6 deep, that will stop at the kerb adjacent to the school entry doors to drop off or pick up.

The school mini-buses will enter the drop off/pick-up area via a separate driveway along the eastern boundary. Separate provision for mini-bus stopping has been made at the western end of the concourse.

Student pick-up

At the end of the school day, students will be managed using the following strategies:

1. Students leaving the campus by private car will be organised by last name and marshalled to specific points in the drop off/pick up zone.
2. A staff member will direct students who are entering vehicles.
3. A staff member will direct queuing traffic into the drop off/pick up zone.
4. A staff member will direct students who are departing via public transport and school transport to increase efficiency.

The net result is that the time for a vehicle to stop and wait will be reduced and therefore the traffic flow and overall capacity will be increased.

