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Dinuka McKenzie - M5 Planning Submission

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Date: 5/30/2011 10:57 PM
Subject: M5 Planning Submission
Attachments: Submission on Expansion of M5 June 2011.doc

Please see attachments for M5 Submission due by June 2011
Thanking You
Michael Russell
7 Buckland Rd
Casula 2170

Submission on Expansion of M5
To Planning NSW

Attention

Planning NSW Major Projects Submissions Officer

Please accept the following submission for more design and planning of sound mitigation on the expansion of the M5 through the Georges River West Bridge residential receivers areas which have been overlooked by the Noise Mitigation Report.

In the extract below please note there has been no assessment for noise mitigation on the bridge either up or down side along the Georges River, into the surrounding non residential areas. Due to the natural formation of this unique area ie natural amphi-theatre sound generated by traffic on the bridge travels unabated for hundreds of metres reflecting of the trees and embankments of the river into our homes. Recent testing by RailCorp have indicated levels above 40db in bedrooms in the 9pm to 5 am time frame. As can be seen in the two portions of the different sides of the Georges River bridge residential areas with no natural mitigation are receiving noise now from the bridge and this noise has not been taken into account in either the 2013 or 2023 predicted noise levels.

3.3 Noise Catchments

- CVW_HH_S – Camden Valley Way to east of Hume Highway intersection, on the southern side of the motorway. Mainly residential and includes Daruk Park, located some 100m from the motorway. A number of potential new dwellings have been identified in a new area to the west and south of Flame Street and have been included in the assessment.
- M7_HH_N – Westlink M7 to east of Hume Highway intersection, on the northern side of the motorway. Mainly residential and includes Prestons Public School. A number of potential new dwellings have been identified in the area to the east of Beech Road and have been included in the assessment.
- MA_HLD_S – West of Moorebank Avenue to the Hammondville Toll Plaza, south of the motorway. Residential area and including Hammondville Public School.

Section 4
From this section of the report it can bee seen that again this area along the foreshore of the Georges River has been omitted from any Noise Monitoring equipment measurements. 4.1 and 4.2 cannot verified noise modeling results because this area is completely different from all other areas of the M5 and have been neglected by RTA and Heggies noise studies. The monitors were placed some 1500m apart one in an industrial area and the other in residential close to the M5. There has been no attempt to measure the effect of noise along the banks and parklands around the Georges River West bridge. This is to the detriment of all the receivers who endure the sudden breaking of large trucks with air brakes endeavoring to exit at Moorebank Avenue or cars accelerating exhaust noises whilst trying to beat the trucks leaving.

4 EXISTING NOISE ENVIRONMENT

4.1 Noise Monitoring Process

The results of recent ambient noise monitoring carried out by others late in 2009 under a separate commission have been provided by the RTA for use in this project. The results are contained within the Heggies report entitled "M5 Motorway, Operational Noise Monitoring, November – December 2009" (Appendix B). These data have been used to set construction noise objectives for the project, and to verify the noise modelling results.

Figure 4-1 Aerial Showing Noise Monitoring Locations - CVW_M7_W, CVW_HH_S and M7_HH_N

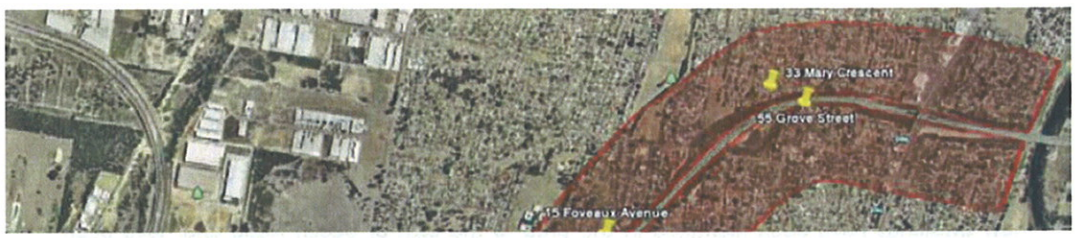


Figure 4-2 Aerial Showing Noise Monitoring Locations - HR_HLD_N, MA_HLD_S, Commercial_HR_HLD_N and Commercial_MA_HLD_S

Section 5.
Note " For all noise-sensitive locations considered in this project, the proposal would be classified as a " redevelopment of existing freeway/arterial road."" This same criteria was used in the initial building of the bridge and we residents were advised that if the noise was to go above 2dba then noise mitigation measures would be applied. So we have already endured increased levels of 2dba and now will again be subjected to an additional 2dba increase yet have not received the necessary mitigation as required.

5 ROAD TRAFFIC NOISE CRITERIA

5.1 Noise Criteria for Residences

Criteria for assessment of road traffic noise are set out in the NSW Government's *Environmental Criteria for Road Traffic Noise (ECRTN),* (EPA, 1999). The RTA has also published the *Environmental Noise Management Manual (ENMM),* (RTA, 2001) to assist in implementing the *Environmental Criteria for Road Traffic Noise.*

Under the *ECRTN,* road developments are classified as either "new road" or "redevelopment of an existing road". Practice note (i) of the *ENMM* describes the circumstances under which each of these applies. For all noise-sensitive locations considered in this project, the proposal would be classified as a *"redevelopment of existing freeway/arterial road".* The criteria set out in Table 5-1 would therefore apply. The criteria in columns 2 and 3 of the table are referred to as "base" criteria. These should be met in all cases, where possible. Criteria in the fourth column of the table are referred to as "allowance" criteria.

Table 8.1 and 8.2 and 8.3 and 8.4
Please NOTE WELL that the section M-4 has the biggest numbers of traffic and increases more than any other section to be re-developed in this and similar tables. It has the most expected traffic yet has nil noise mitigation in this very small section of the total redevelopment. Why is the busiest section of the redeveloped areas being ignored and not receiving any noise mitigation. Planning has planned Nil, Zilch, Nothing and this in a section with very close residential receivers that a never received any noise mitigation.

Table 8-1 Traffic Volumes, November / December 2009

ID	Location	Period	Daily			
			Westbound		Eastbound	
			Light	Heavy	Light	Heavy
M-3	M5, West of Hume Highway	Day	33,578	3,871	34,220	3,699
		Night	6,232	465	7,946	1,110
M-4	M5, W of Moorebank Road	Day	47,151	4,140	47,542	4,050
		Night	8,751	653	11,040	1,215
M-5	M5, W of Heathcote Road	Day	41,014	3,186	39,364	2,715
		Night	7,611	568	9,141	814

Table 8-2 Traffic Volumes, 2009 9.00 pm to 5.00 am (non-congested flows)

ID	Location	9.00 pm to 5.00 am			
		Westbound		Eastbound	
		Light	Heavy	Light	Heavy
M-3	M5, West of Hume Highway	4855	344	4159	815
M-4	M5, W of Moorebank Road	6817	484	5778	892
M-5	M5, W of Heathcote Road	5929	421	4784	598

Table 8-3 Traffic Volumes, 2013

ID	Location	Period	Daily			
			Westbound		Eastbound	
			Light	Heavy	Light	Heavy
M-1	M5 / M7 connection	Day	3152	2537	3059	2276
		Night	468	388	696	660
M-2	M5, west of M7 connection	Day	24644	3356	22511	2711
		Night	3663	513	24644	3356
M-3	M5, West of Hume Highway	Day	37915	6089	35275	5318
		Night	5635	931	8020	1543
M-4	M5, W of Moorebank Road	Day	53018	6534	48685	5856
		Night	7880	999	11069	1699
M-5	M5, W of Heathcote Road	Day	46472	4918	39836	4210
		Night	6907	752	9058	1222

Table 8-4 Traffic Volumes, 2023

ID	Location	Period	Daily			
			Westbound		Eastbound	
			Light	Heavy	Light	Heavy
M-1	M5 / M7 connection	Day	4803	5643	4956	5066
		Night	714	862	1127	1470
M-2	M5, west of M7 connection	Day	32136	5448	28414	4427
		Night	4776	833	6461	1285
M-3	M5, West of Hume Highway	Day	49381	11395	47562	9971
		Night	7339	1742	10814	2894
M-4	M5, W of Moorebank Road	Day	65864	12248	61797	10845
		Night	9789	1872	14051	3147

Section 8.2.2
Dot point four is not correct.

The northern city entry ramp from Hume Highway towards the Georges River Western bridge has an entry speed of 80klms into a section of 100klms eastbound. Clashing speeds of vehicles traveling past Moorebank Ave. doing 100klms/hr, and entry vehicles doing 80klms/hr clash again with vehicles exiting at Moorebank Ave slowing from 100klms to 40klms are the cause of much more braking and acceleration noise, of which none have been mentioned in any reports.

Many B's and Double B's run this gauntlet every hour and the noise from the Air brakes travels for 100's of metres. In the early hours of the morning and even late at night, this has the effect of sounding as if they are outside the bedroom windows.

The M5 entry ramp from Moorebank Ave has a 100klms/hr speed, not 80ks. Again we have trucks entering the m5 down the ramp trying to speed up to 100ks to get up the hill and match the speed of existing vehicles either traveling straight along the M5 towards Campbelltown or heading to the exit of the Hume highway at Casula.
The Exit ramp speed does not change from 100k/h till the last few metres before the Hume Highway at which it changes to 70klms.
Again we have a gauntlet of vehicles either traveling at 100k/h across the bridge, OR speeding up to get to 100k/h from the entry ramp, OR traveling at 100k/r to get off at the exit ramp to the Hume Hway. Again a cacophony of noises, air braking or heavy acceleration. All this on one small section of the M5. being a bridge with no noise mitigation, therefore all this noise travels and is amplified along the foreshores of the Georges River and main tourist attraction to Liverpool. Peace Park and the Casula Powerhouse Arts Centre. The noise is not that noticeable under the bridge but further along it is very objectionable especially early morning and late night

8.2.2 Posted Traffic Speed

The posted traffic speeds used for the purpose of noise modelling are:

- **Main Carriageway:** King Georges Road to Georges River East Bridge (both east bound and west bound) – 110 km/hr;
- **Main Carriageway:** Georges River East Bridge to 200 metres west of Hammondville Toll Plaza (both east bound and west bound) – 70 km/hr;
- **Main Carriageway:** From 200 metres west of Hammondville Toll Plaza to Camden Valley Way (both east bound and west bound) – 100 km/hr;
- **Entry and Exit Ramps**: All entry and exit ramps – 70 km/hr; and
- **Intersecting Roads:** All intersecting secondary roads – 70 km/hr.

This last sentence in the section below makes the comment that Congestion reduces vehicle speed which in turn reduce noise emission, This is not factual. Vehicles slowing down quickly can squeal their brakes by locking them up or in the case of B or B doubles operate their very noisy Air Brakes. Just taking the foot of the accelerator cause air brakes to operate and create much more noise.

Based on inspection of the unattended logging results and comparison with predicted noise levels it was evident, as discussed above, that different sections of the M5 have different amounts of congestion within each hour of the day and night time periods. The congestion reduces vehicles speeds to lower than the posted speed limits which in turn reduce noise emission.

Section 8.6.
George River west bridge has noise mitigation on both the east and west areas of the M5 around the Bridge. There are noise mitigation barriers between the Moorebank Rd end and the Hume highway end of the bridge. This is the bridge area and as this section stipulates "For all residences requiring mitigation, the process adopted to mitigate the noise is as follows:" See Dot Point One " New Noise barriers (where existing gaps in the barriers exist) Therefore the M5 bridge which has a gap in the noise mitigation must receive new noise barriers because it is also reasonable and feasible.

8.6 Process for Noise Mitigation for Residences

There are a relatively high number of residences identified for mitigation where predicted increases in noise level exceed criteria by only a small amount. For all residences requiring mitigation, the process adopted to mitigate the noise is as follows:

- new noise barriers (where existing gaps in barriers exist);

Through this report these areas beside the Georges River surrounding the river foreshore have not been inspected as indicated below " a resident may qualify for treatment if, during and inspection, it can be confirmed that there are habitable zones."
These areas and habitable zones must be inspected before this report can be accepted.

A residence may qualify for treatment if, during an inspection, it can be confirmed that there are 'habitable zones' as defined by the Building Code of Australia along noise affected facades. This will depend on the individual building layout, orientation of each residence and verification of the residence in the noise model.

Section 8.9
New Casula Peace Park and Casula Powerhouse Arts Centre and parklands including Georges River foreshores and embankments currently under restoration by Liverpool City council have been neglected by the report in contradiction of these results.

8.9 Other Sensitive Land Uses

Table 8-11 presents calculated noise levels within parks and recreation areas. In the case of parks, golf courses and reserves, noise was calculated approximately 10% of the way into the area, or at a location within the area considered most likely to be used by patrons, whichever distance was the greater.

Table 8-11 Noise Levels in Outdoor Recreation Areas

Location	Noise Criterion, $L_{Aeq(15hr)}$ (dBA)	Future Existing Noise Level, $L_{Aeq(15hr)}$ (dBA)	Future Noise Level, $L_{Aeq(15hr)}$ (dBA)	Future Noise Level Exceeds Target? (Yes/No)	Increase in Noise Level, (dBA)	Increase Exceeds Allowance criteria (>2dBA)? (Yes/No)

This section below recommends testing for "maximum noise events". Has this been conducted at any of the residential receivers along the Georges River areas on either side of the west Georges River M5 Bridge

The issue of sleep disturbance is addressed within the *ENMM* in a similar manner. It is suggested that the assessment of sleep disturbance should include an examination of "maximum noise events": A "maximum noise event" is defined as any single event where the L_{Amax} noise level exceeds 65 dBA and the L_{Amax} noise level exceeds the $L_{Aeq,1hour}$ noise level by more than 15 dBA.

"Maximum noise event" characteristics to be assessed at nearest residential receivers include their occurrence throughout the 10.00 pm to 7.00 am night time period and their magnitudes.

Due to the absence of a definitive qualitative correlation between sleep disturbance and noise level, the *ENMM* suggests that the above nominated noise levels and guidelines should not be taken to as stringent criteria, but should be taken into consideration when determining noise mitigation measures to address general road traffic noise.

Section 11.2
Last paragraph "Before Upgrade etc" mentions increase levels over 2db. Residents of Casula Links were advised when bridge was built that increases of this amount would qualify house to be noise mitigated along these guidelines. Has this report taken into account the increase in noise levels since inception of the M5 bridge at Casula which has affected receivers in the "Links estate". Based on these figures listed below, if not already eligible for noise mitigation, then in the very near future will be and based on the facts then it would be prudent to constructed noise mitigation now during M5 expansion works and not have to gear up to do such works when further testing is conducted in 12 months time under DGR's.

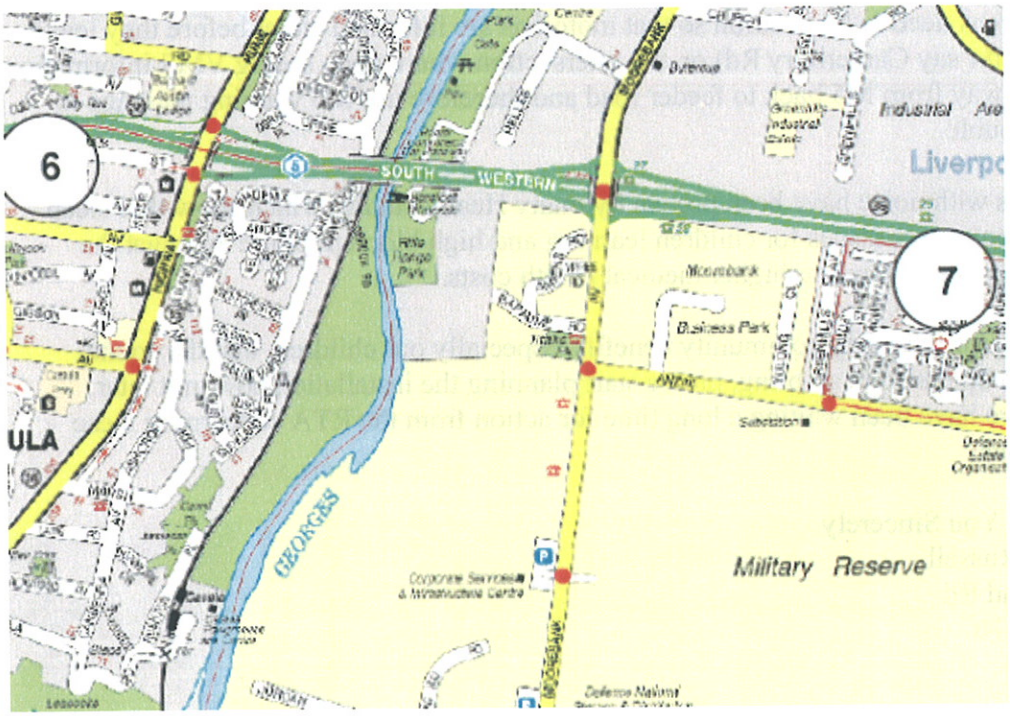
11.2 Traffic Noise Modelling and Validation

The noise model used for the noise predictions was calibrated using seven different road segments and based on the measured existing noise levels provided for the project.

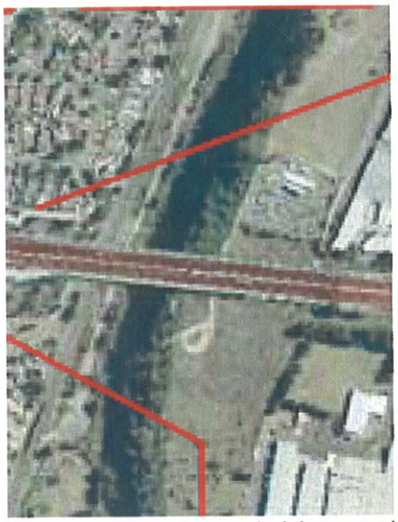
The noise predictions for various modelling scenarios, without noise mitigation being considered, are presented in the appendices to this report:

- Appendix D - Year 2013 noise levels - immediately before opening (Future Existing);
- Appendix E - Year 2023 noise levels - 10 years after opening (Future Design); and
- Appendix F – Year 2023 residences which are acute or over the allowance levels

Before upgrade of the Motorway, there will be many residences over the base noise criterion. After upgrade in 2023, an estimated 944 residences would be over the allowance criterion (levels increase by more than 2 dB) or will be affected by noise levels considered acute, unless mitigation is adopted as part of the upgrade.



Appendix A Heggies Report 10-8495 Receivers testing location.
Note Receivers 6 and 7 have not addressed areas on lower residential receivers along Georges River foreshore houses and significant parklands.



This section shows bridge section above Georges River between Moorebank Ave. and Hume Highway at Casula where no sound barriers are recommended to be installed . Please note well the houses along either side of the bridge and further along the riverbank where no sound record has been conducted..

On the issue of VMS please take into consideration that many vehicles leave feeder roads to travel along the M5 around Tempe, Bardwell Park, Beverley Hills, Roselands etc and find it very frustrating to find it is closed for maintenance or blocked by congestion

VMS screens need to be position so that motorists are informed either before they leave feeder road (say Canterbury Rd) or at a intersection where upon seeing VMS information can turn away from M5 back to feeder road and therefore use M5 warning message to bypass trouble.

The issues with noise have been proven by many Health studies which show that sleep depravation causes issues for children learning and high blood pressure amongst the community which leads to higher medical health costs.

Therefore, for the many community benefits, especially our children, that the sound mitigation on the M5 can bring, please start planning the installation now, not later, because we have been waiting a long time for action from the RTA concerning these noise issues.

Thanking You Sincerely
Michael Russell
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