



**Pacific Highway Upgrade
Brunswick Heads to Yelgun
Community Liaison Group Meeting No. 3
8th June 2005**

Attendees:

Robert Kooyman
Brett Lee (BSC)
Pauline Millington
Frank Mills
Malcolm Murray
Kathy Norley-Farmer
Robert Rosen
Gillian Secombe
Sue Stirton
Tony Stupka
Jack Taylor
Greg Milham
Colin Tarbox

Will MacDonald (Abi)
Mark Sabolch (Abi)
Terry Paxton (Abi)
Wendy Dooley (Abi)

Peter Borrelli (RTA)
David Purdy (RTA)
Ron Holmes (RTA)

Kerry Morrison (Abi Consultant)

Bill Gardyne (EMR)

Tracey Gowen (RT)

Apologies: P Wallbridge, P Warren, S Scott, B Hutton

1.0	Welcome Terry gave a quick overview of the agenda for the evening and welcomed Tracy Gowen from acoustic consultants Renzo Tonin and Associates Pty/Ltd (RT). He also made the following key points: <ul style="list-style-type: none">• Following the last meeting, some CLG members had requested the meeting keep moving along in order to keep to reasonable timeframes for the night.• The Project Team would like the views of all CLG members and would try to ensure that everybody has the opportunity to discuss
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	<p>issues important to them and the groups they represent.</p> <ul style="list-style-type: none"> • Again, issues relating to the planning phase of the project are on the agenda, but given the current approved status of the project and timeframes, the CLG needs to focus on the present - namely detailed design and construction phases of the project.
1.1	<p>Comments on notes from previous meeting</p> <p>One CLG member suggested the corrections from the previous meetings were inadequate and he would like to see reference to, and details of, points of significance:</p> <ol style="list-style-type: none"> 1. there be a record of the item, 2. an action be tied to that (if required), and 3. a response be tied to it (if required). <p>Regarding the suggested amendments to meeting one, he provided the following example of a point he considered had been lost:</p> <ul style="list-style-type: none"> • “landscaping” has to more than “match”, it has to “comply” with ecological habitats.
1.2	<p>Memorial Crosses</p> <p>Before moving on with the general business of the meeting Terry sought the assistance of the CLG in what was a sensitive matter for the Project Team.</p> <p>There are several memorial crosses / markers along the route placed by family members / loved ones where fatalities had occurred (for example one at southern end of the bypass and two others between the Brunswick River bridge and Rajah Road) which are within the alignment for the highway Upgrade – and need to be carefully relocated so that they are not damaged by the construction. Because of privacy legislation (and out of respect for the families involved) it is often difficult to find out who these people are and obtain contact details for next of kin, so that arrangements can be made.</p> <p>Several CLG members advised they could assist in putting the Project Team in touch with the relevant families so that arrangements could be made as to how to best handle the memorial crosses / markers.</p>
2.0	<p>Outstanding actions from previous notes</p> <p>The CLG next discussed the actions / items which had arisen from the last meeting.</p>
2.1	<p>Approval Process for Early Clearing</p> <p>The Project Team responded to a request from the previous CLG meeting on the process and rationale for early clearing works on the Brunswick Heads bypass in the vicinity of the Osprey nest.</p>

	<p>The Project Team advised that the decision to commence early clearing works in this location was based on the principle of minimising potential disturbance to the Ospreys prior to the commencement of their actual breeding. The nest tree was not in the corridor of the highway Upgrade - the concern was rather about possible disturbance within a 100m radius or buffer of the nest tree.</p> <p>Prior to any works being undertaken advice was sought by the RTA from both the Department of Infrastructure Planning and Natural Resources (DIPNR) and the Department of Environment and Conservation (DEC) (formerly National Parks and Wildlife Service (NPWS)). DEC indicated they were in agreement with the process of conducting this limited clearing early to avoid impacting actual breeding and also requested the provision of a nesting pole and platform as an alternate nesting site. DEC also requested monitoring of the breeding pair. The site for the alternate nesting pole was identified in consultation with DEC and DIPNR on RTA land (where it had more protection than private property) and DEC provided a nesting platform for the pole. The nesting pole and platform was erected prior to any limited clearing taking place inside the 100m buffer zone.</p> <p>Some time after the clearing took place, the nest tree fell over in strong winds on the weekend. The adjacent landowner advised the Project Team that this is now the fourth nesting tree to have fallen over as they tend to pick tall dead trees for nesting purposes. Monitoring revealed that prior to the nest tree blowing down in the strong wind, the nesting Ospreys had continued to use the nest despite the clearing. Indications are that the birds are still remaining in the local area.</p>
<p>2.2</p>	<p>RTA Policy Regarding Fishing from Bridges</p> <p>RTA: The RTA indicated they had reviewed the policy and guidelines in regards to fishing from bridges and had consulted with Waterways on this matter. The RTA (and Waterways) did not support fishing from bridges (particularly where other safer opportunities exist) for a range of safety reasons, and as such there would be “No Fishing from Bridge” signs erected for this crossing for the safety of all concerned. It was noted that there are many other safer opportunities for fishing in the immediate area.</p>
<p>3.0</p>	<p>Update on Works</p> <p>The Abigroup Construction Manager, Will MacDonald, indicated the following non-substantial works were currently occurring along the length of the project:</p> <ul style="list-style-type: none"> • property boundary fencing continuing and now in the order of 60 – 70% completed; • service / utility location and identification was continuing to pick up the exact location of services / utilities such as sewer, water, electrical and tele-communication lines; • three survey crews still working at the moment, to tie in the geometric design model and better fine tune the detailed design to

	<p>match the existing terrain;</p> <ul style="list-style-type: none"> • geotechnical investigations have now been completed, having done additional drilling work at various locations, including Marshalls Creek. • early non-substantial work had commenced in some non-sensitive locations with erosion and sediment control measures being constructed in key locations; • investigations are underway to establish two webcam facilities that will allow the community to monitor the progress of the Brunswick River bridges construction. <p>Will also indicated the Project Team was close to installing a Global Positioning System (GPS) receiver on an existing telecommunications aerial on top of the hill near the water tower. This would provide GPS coverage over the entire project area. Will explained that with this in place, a surveyor with a receiver on top of his survey staff could, obtain point accuracy through triangulation. This effectively:</p> <ul style="list-style-type: none"> • provides greater location accuracy in the field • requires less survey pegs • allows accurate and remote control of some earthmoving machines and their functions. Remote machine control is becoming very accurate (within 5ml accuracy on horizontal and vertical planes). <p>Q: Does it remove the need for ground pegging? A: Not entirely.</p> <p>Q: Does it send out “waves”? A: No, it is a receiving device which receives global positioning data from existing satellites.</p> <p>TP: 2 webcams will be set up so you will be able to see the Brunswick River bridges being built.</p>
<p>4.0</p>	<p>Presentation on Construction Noise and Vibration Management Plan</p> <p>Mark Sabolch introduced this presentation by saying that the various Environmental Documents for the project had identified that construction noise was likely to exceed the EPA construction noise guidelines. Tracey Gowan, an acoustic engineer with specialist consultant, Renzo Tonin and Associates (RT), was part of the Project Team to quantify the level of construction noise and provide a background to the mitigation measures outlined in the Noise and Vibration Plan. The Construction Noise and Vibration Management plan itself contained:</p> <ul style="list-style-type: none"> • the environmental monitoring to be carried out; and • some proposed noise and vibration mitigation measures. <p>RT indicated that road and bridge construction was a noisy process, but a redeeming feature was that the noise would move in “waves” with different activities in different parts of the job at different times. Key noise</p>

generating activities included: -

- corridor clearing
- earthworks
- bridgeworks
- paving

Where possible, construction noise and vibration will be managed on site to minimise impacts at sensitive noise receivers.

RT provided an introduction to the way sound is measured and the way the decibel system - the measure of sound - works. RT explained that decibels are actually logarithmic values and cannot be added in the same way as conventional numbers. For example, 60dB+60dB actually equates to 63dB and not 120dB.

RT also provided an insight into how noise levels are described – noise metrics. L_1 , L_{10} and L_{90} measure the noise levels exceeded for 1%, 10% and 90% of the measurement time respectively. L_{eq} is the equivalent continuous noise level. All these levels are considered in gaining an overview of the acoustic environment. L_{90} is usually used as a measure of background noise, being the noise level which is exceeded 90% of the time.

In terms of vibration, there are three varieties: -

- continuous;
- impulsive – (rapid build-up to peak vibration that then decays);
- intermittent – (interrupted periods of continuous vibration);

RT indicated there had been an updated background noise study conducted in March 2005 which involved both long term testing in 13 locations, and short term testing in eight locations. The results were used to calibrate the noise model being used by RT to develop the Operational noise model.

The Construction Noise and Vibration Management Plan used these background readings and: -

- sets relevant noise criteria based on DEC guidelines;
- identifies sensitive noise receivers potentially affected by noise;
- identifies typical noise generating construction plant and equipment and expected noise levels;
- assesses construction noise impacts at identified receivers; and
- identifies noise control measures to mitigate impacts.

Some examples of noise mitigation measures include: -

- early construction of the 2 - 2.5m noise barrier along the property boundary north of Rajah Road;
- building “at residence” treatments (already identified and provided or being provided by RTA);
- best practice noise management techniques (eg. – the siting of noisy plant directionally away from sensitive noise receivers where

	<p>possible);</p> <ul style="list-style-type: none"> • limiting construction hours; • ensuring construction plant and equipment is well maintained, and serviced and properly attenuated; and • noise monitoring of plant and equipment on site and at sensitive noise receiver locations. <p>In terms of vibration, RT indicated there were two key criteria: -</p> <ul style="list-style-type: none"> • Human Comfort – 0.3-0.6mm/s; and • Structural damage- 5mm/s. <p>RT then outlined some of the sources of vibration and the realistic or expected “range” of the vibration generated. For example, a bulldozer could produce a low level of vibration for up to 20m, however an air track drill may cause low levels vibration at up to 50m.</p> <p>Based on this information, mitigation will include: -</p> <ul style="list-style-type: none"> • the use of buffer distances where possible; • limiting construction hours so as to provide periods of respite; and • vibration monitoring of plant and equipment. <p>RT then presented a case study of one of the impacted areas (Ferry Reserve Caravan Park) on the site, outlining the likely impacts and the management techniques that will be applied to mitigate the impacts.</p>
<p>4.1</p>	<p>4.1 Questions and comments from presentation</p> <p><i>Acoustic/vibration Measures</i></p> <p>Q: How is the 10% (L₁₀) derived? A: The noise meter automatically provides an output reading for the 10% L₁₀ noise level.</p> <p>Q: Do you do any other analysis? A: We do the L₁₀ and look at the values. A lot of research into the noise metrics has been done to measure impact of noise and those studies led to using the descriptor. We don't assess any more, just use the common descriptors.</p> <p>Q: Noise caused by large vehicles with braking systems? That's vibration, not sound. A: Sound is vibration.</p> <p>Q: Was operation noise the result of the modeling exercise? A: No, there will be a presentation on that at a future meeting.</p> <p>Q: So the construction phase doesn't have a model? A: Yes it does.</p> <p>Q: Do you have figures for the range, especially at night? A: Yes, this is just to provide general information. That's the range over each location, not just over the night.</p>

Q: Did you measure every hour of the night?

A: Yes.

Fauna Issues

Q: Will there be any modeling to see if animals are impacted? This should have been taken into account in EIS.

A: EPA noise guidelines are for impacts on people only. No criteria for fauna exist – if the NSW Government was to establish and publish such criteria that RTA be in a position to address it. At the moment there are no standards or technology available to realistically do this assessment of impact on fauna.

Ferry Reserve Caravan Park

Q: With the Ferry Reserve Caravan Park, have you taken special note of the obvious light weight construction of the buildings?

A: Yes, but there is also a noise wall protecting the Ferry Reserve Caravan Park and we will be looking at minimising both noise and vibration at the source, as well as monitoring during construction.

Q: Brunswick Heads is very dependent on its tourist industry including Caravan Park tent and van users etc. So we are concerned about the construction impact on tourists.

A: In terms of vibration – impacts will be minimal in terms of what people will actually feel in the Ferry Reserve Caravan Park. Construction activity will generally not be occurring at night and people are more likely to feel vibration at night, so this shouldn't be an issue. In terms of construction noise, we are always considering noise impacts and will take this issue on board and try and limit outdoor noise.

Comment: Another thing to remember, experience from other projects has shown, that a lot of the construction workers often book into caravan parks (and other local rental accommodation) so economic impact over the overall duration of the project may not be as bad as first thought.

Comment: There will also be a lot of positive economic impacts for the local community from this project as well. It has already generated a lot of money for local businesses and the project has only just started.

Bridge Construction

Q: How long will Brunswick River bridge construction take?

A: Construction will take about 18 months to finish but the foundations (the noisiest part) will take less time and is expected to occur during the months of August, September and October, so it should be finished by the Christmas holiday period. Abigroup are also not allowed to undertake certain activities which impact on traffic flow on the Highway during peak holiday periods.

Noise Barriers

Q: Have you got a figure on effectiveness of the barrier? (At the Ferry Reserve Caravan Park).

A: 5 - 15 decibels noise reduction.

Q: Any scope for noise barriers which are temporary during construction?

A: We have looked at opportunities for temporary noise walls but the corridor is so narrow in some places that there are some constraints. We may be able to erect temporary shields in places, depending on the activity, its duration and the area.

Respite Options

Q: Is it possible to minimise work during school holidays?

A: In general there will be times that the Project Team can provide respite from the construction noise. Also, there will be times, such as over Christmas and Easter when the Project Team won't be on site due to the Public Holidays so there will be some relief. There needs to be a careful balance / consideration here though. The balance is this – do we extend the impact of the construction activities by an extra 26 weeks by not working over all school holidays, or do we minimise the period of impact by completing the works as soon as possible? The Project Team will aim to complete the works as soon as practicable.

Q: What about using equipment at different times or using different schedules?

A: Yes. These are the sorts of practical measures that we will be addressing to help mitigate the impact of construction noise.

Batch Plant

Q: Where is the batch plant going?

A: It is likely to be 300m south of Lucky Lane.

Ongoing Monitoring

Q: How frequently will there be monitoring?

A: Monthly, and also when needed. Hand held monitoring equipment will be used.

Q: Will the equipment be left in place?

A: It is generally best not to do unattended monitoring for long periods as that doesn't always tell you what you need to know. Attended short term noise monitoring helps to quantify and understand the specific noise source, and helps in developing mitigation - you can observe the specific noise source, and go up closer to investigate specifics etc.

Comment: Wanted to record that long term monitoring in Binya Place should be done.

5.0	General Business
5.1	<p data-bbox="419 293 882 327">Foreshore Planning Suggestions</p> <p data-bbox="419 360 1390 461">Mr. Jack Taylor then presented to the group feedback he had in relation to the southern foreshore planning options. Mr Taylor made the following points: -</p> <ul data-bbox="469 495 1390 2036" style="list-style-type: none"> <li data-bbox="469 495 1230 528">• It is assumed the area will include broad pathways etc; <li data-bbox="469 562 1334 629">• The area should include a display area, roofed and made from high-grade stainless steel or some other vandal proof material; <li data-bbox="469 663 1382 1066">• It is envisaged that the display would have four boards or sections dealing with: - <ul style="list-style-type: none"> <li data-bbox="517 763 1082 797">• European History and points of interest; <li data-bbox="517 797 1334 864">• Indigenous history identifying the importance of the area to local indigenous people; <li data-bbox="517 864 1382 931">• engineering and construction (provided by RTA and Abigroup); and <li data-bbox="517 931 1390 1066">• environment and botany (including a species list of that within the corridor and adjacent areas) and explaining why the area is botanically unique - have species associated with more northern or southern areas. <li data-bbox="469 1099 1382 1536">• A living rainforest with trees planted in soil at least a meter deep (possibly reclaimed from the work area north of the river). This should include a diverse range of species and be solidly fenced to avoid vandalism. The planting should include: - <ul style="list-style-type: none"> <li data-bbox="517 1267 1350 1301">• Red cedars (because of their historical significance to area); <li data-bbox="517 1301 671 1335">• Blue fig; <li data-bbox="517 1335 762 1368">• Maidens blush; <li data-bbox="517 1368 719 1402">• Coolamons; <li data-bbox="517 1402 762 1435">• Acacia backeri; <li data-bbox="517 1435 767 1469">• Coastal Eucola; <li data-bbox="517 1469 767 1503">• Quandong; and <li data-bbox="517 1503 767 1536">• Davidson Plum. <li data-bbox="469 1570 1046 1603">• The beds would have to be vandal proof; <li data-bbox="469 1637 1390 1771">• A loose scattering of Casuarinas, seating, tables etc should be considered. There are differing views on whether a toilet block should be included because of concerns about anti social behavior at this removed location; <li data-bbox="469 1805 1382 1872">• Where possible, millable examples of rainforest species should be recovered from the corridor and utilized in the display; <li data-bbox="469 1906 1382 1973">• Mr Taylor's group would be prepared to provide some Red Cedar, Bangalow Palms and Blue Figs; and <li data-bbox="469 2007 1294 2036">• The above items should be duplicated at the Rest Area and

	<p>consideration given to treating the Salad Bowl site in the same manner.</p> <p>Some discussion followed about the timing of the foreshore plan consultation. Council and the RTA representatives indicated there were issues to be resolved- such as the future of the old Fins building, ownership and maintenance - before the external community consultation could move forward.</p>
<p>5.2</p>	<p>Nature of approval for Noise Classification at Brunswick Heads / River – New Highway vs. Redevelopment of an Existing</p> <p>Q: My understanding of the current situation is that area north of Shara Boulevard is classified in terms of noise, as a new development or new highway and area south of Shara Boulevard is existing, and therefore an upgrade or redevelopment of an existing highway. The question relates to the bridge itself. It seems that according to the ECRTM criteria - “where there is substantial re-alignment” - it should be considered as a new highway.</p> <p>The reason this is important is that it is a difference in noise criteria for a new highway versus a redevelopment of an existing. North of Shara Boulevard there are more rigid noise requirements than the southern area. The bridge itself appears to be on a new alignment so shouldn't it be treated as a new development and subject to the same noise criteria as the northern section?</p> <p>RTA: The way we determine whether a road represents an existing road upgrade or a new development, comes about as a result of using both ECRTM and also the RTA's Noise Management Manual, which was developed in conjunction with the EPA to provide a better definition / interpretation for some terms used in the ECRTM and how it should be applied to the RTA's works.</p> <p>By way of a white board sketch, the RTA described that in the section north of Shara Boulevard, the highway is entirely a new alignment which introduces new noise into a currently relatively quiet environment, so it is a new development or new highway for the purposes of establishing the noise criteria.</p> <p>In the case of the southern approach to and Brunswick River bridges – the planned highway leaves the existing road corridor, but remains in an <u>existing 'noise affected' location</u>. This is the distinction. While the new bridge is higher, there will be noise barriers as required and all this has been considered in the modeling and provides the basis for its assessment as an upgrade of an existing highway rather than a new development.</p> <p>Q: Is there a case of inconsistency between the ERCTM and the RTA's Noise Manual and environmental documents?</p> <p>A: No. The RTA's Environmental Noise Management Manual has been developed and reviewed by DEC (former EPA) and provides greater definition and clarity to some of the terms used in, and</p>

	<p>requirements of the ERCTM so they can be applied uniformly and fairly across NSW.</p>
<p>5.3</p>	<p>Other Matters</p> <p><i>5.3.1 Yelgun Rest Area</i></p> <p>Q: Is there a list of the locations or maps of all rest areas in NSW? A: Yes, RTA will try and organise copies of these, and arrange for copies to be provided in the Community Display Centre (if available).</p> <p>Q: What are the criteria for measuring the distance between rest stops and do you have a policy on it and how do you determine where they are placed on highway (i.e. on which side of the road)? A: As covered in the last CLG meeting the REF for the Yelgun Rest Area addresses this. Regarding how the decision was made as to which side of the road rest areas should be located, for the Yelgun Rest Area, RTA looked at the physical location and constraints of the site, and the potential for duplicating facilities and operations eg, do you duplicate facilities and operations on both sides of highway (2 sets of toilets etc.). At Yelgun the grade separated interchange is very close by, so safe access could be provided to all vehicles on the Tweed Valley Way, the Northbound carriageway, Southbound carriage way, and the local service road.</p> <p>Q: Has there been any progress on the suggested changes to accommodate the local road near the rest area? A: Yes, RTA and Abi are continuing to working on developing a revised access scheme.</p> <p>Q: Locals would like an overpass or underpass so they can access the highway without mixing with heavy vehicles on the interchange. A: As soon as local traffic accesses the highway it will be mixing with a range of vehicles – the issue to be addressed is that of separating local service road traffic from highway traffic and that accessing the rest area.</p> <p><i>5.3.2 Flood Studies</i></p> <p>There were preliminary discussions relating to the draft Flooding and Drainage Management Plan provided to Byron Shire Council for comment.</p> <p>As this is a particularly specialist area, involving representatives of Byron Shire Council (including the Marshalls Creek Flood Plain Committee), RTA’s and Abigroup’s consultants, it was considered that a separate technical discussion be held between the parties to address specific areas. Further, Abigroup agreed to make a presentation on the Flooding and Drainage Management Plan at the next CLG meeting.</p> <p>Action: MS to set up a meeting with relevant parties to address</p>

	issues, and to organise a presentation for the next CLG meeting.
6.0	Next Meeting Next meeting of the group was scheduled for Wednesday 6 July, 6.30 at the project site office.