



**Pacific Highway Upgrade
Brunswick Heads to Yelgun
Community Liaison Group Meeting No. 4
13 July 2005**

Attendees:

Brett Lee (BSC)
Pauline Millington
Malcolm Murray
Kathy Norley-Farmer
Robert Rosen
Sue Stirton
Tony Stupka
Jack Taylor
Greg Milham
Colin Tarbox
Barry Hutton
Patricia Warren
Matthew Lambourne

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

David Bannigan (SMEC)

Peter Borrelli (RTA)

Kerry Morrison (Abi Consultant)

Bill Gardyne (EMR)

Apologies: Robert Kooyman, Frank Mills,
Gillian Secombe; Paul Wallbridge; David Purdy, Ron Holmes, and Susan
Scott.

1.0	Welcome There were no amendments tabled to the meeting notes and the project team was congratulated on the quality of notes provided.
1.1	Process for Amending Notes The Chairman also asked people who wished to make comments or amendments on the meeting notes in future, to put those in writing and

	<p>table them at the next meeting. If the project team was comfortable that the suggested changes better captured the proceedings of the previous meeting, they would be automatically accepted. If there were issues with the suggested amendments they would either be discussed with the person who raised them or be brought back to the group for discussion and agreement.</p> <p>This process was being implemented for several reasons: -</p> <ul style="list-style-type: none"> • To allow members and the project team to capture the intent of a point in a more accurate way; and • For improved efficiency of meetings so that the tabled agenda could be progressed in a reasonable time frame for all.
1.2	<p>Taping Meetings</p> <p>As it had been implied at the previous meeting that the meetings were being taped, the Chairman pointed out that taping meetings without seeking permission of the other CLG members of the group was not only rude and contrary to the spirit of the process, but also illegal under the Listening Devices Act. As several members had indicated they already had issues with meetings being taped, it was agreed that there would be no taping of meetings.</p>
2.0	<p>Outstanding Actions from Previous Meeting</p>
2.1	<p>Availability of a State Map For Location Of Rest Areas</p> <p>As a result of a request at the previous meeting, booklets indicating Rest Area Locations around the State were now available in the Community Display Centre.</p>
2.2	<p>Economic Impacts</p> <p>As the economic impacts of the project were touched on at the last meeting, the Chairman indicated that so far (to early June), approximately \$300,000 been spent on local goods and suppliers. This was noted as a raw figure with no multiplier considered, and did not cover wages or costs such as fuel, food or other staff/company expenses. Most of these costs related to project establishment as substantial works had not yet commenced. With the exclusion of one major consultancy, this represented in the order of 20% of the project expenditure to date.</p>
3.0	<p>Update on Works</p> <p>Abigroup Construction manager, Will McDonald provided a presentation to the CLG on the progress of the works and activities that had been recently undertaken.</p>
3.1	<p>Sediment Basins</p> <ul style="list-style-type: none"> • Purpose of the sediment basins - <ul style="list-style-type: none"> ○ Erosion Control; ○ Construction water/dust management, and ○ Bio-filtration.

	<ul style="list-style-type: none"> • Design – Construction – Location. • Temporary and permanent basins. <p>(Will also noted that the sediment basins had fared well in the recent flood event with no significant damage done to the recent excavations).</p>
<p>3.2</p>	<p>Fire Brigade Training Day</p> <ul style="list-style-type: none"> • Was part of strategy to maximise the value of materials / local opportunities from site / project; • The area assigned to the training had to be cleared as part of the works any way; • The vegetation was plantation timber; and • It presented a rare opportunity for NSW Fire Brigade to conduct chain saw training on standing timber. <p>The training day involved about 20-25 fire brigade personnel and two instructors, and although there was a lot involved in getting the necessary OH & S approvals required by the project safety officer, it provided a good outcome all round and was very well received.</p> <p>Q: Have you made any moves to salvage timber? A: Yes, one of our key project strategies is maximizing the value of everything we have to remove. To date, there has been little or interest in the timber along the route. There is going to be mulch and some chipping for Landcare and also Council projects as well as a pickup point established for the community to access surplus mulch. Please urgently let us know if you are aware of others who may be interested in the timber from the project.</p> <p>C: On Saturday we did take a Dunecare representative around to identify timber for salvaging for slabs for public seating projects. We would also like to engage the community / any local woodworkers in perhaps developing something local and unique from the timber for the project or the local area or even sculpture or public art or seating for the southern foreshore area.</p>
<p>3.3</p>	<p>Southern Cross University Visit</p> <ul style="list-style-type: none"> • Approached by the University to organise a site inspection / presentation on the project. • 80 Environmental Science and Management Students + Lecturers attended on 6 July 2005. • Objective – understanding of real world issues facing infrastructure deliverers. • Presentations were given by - Environment Manager - Bridge Engineer
<p>3.4</p>	<p>Seagrass Translocations</p> <ul style="list-style-type: none"> - Area of Work. - Objectives. - How it is done. - Typical Success Rate. <p>Will explained the seagrass was being translocated as the project team, in</p>

	<p>conjunction with a range of approval agencies, had agreed on a construction process for the bridges that involved creating temporary clean rock platforms into the river from each bank. These platforms would support the bridge piling rig and construction operations and would be fully removed from the river upon completion of the bridges.</p> <p>In order to carry out the translocation of the seagrass, silt curtains had been placed in the river to minimise any sediment drift from the active work area. A restricted navigational speed zones (4 knots) had also been established in conjunction with NSW Waterways and Will asked any members of the group who had associations with the local boating community to assist in communicating this information through their groups.</p> <p>There were a number of questions about the bridge and its construction process and Will suggested a presentation on the bridge construction process at the next meeting may be beneficial.</p>
<p>3.5</p>	<p>Rajah Road Early Wall</p> <p>Will explained that an acoustic wall was being established in the vicinity of Rajah Road. The objective of this early work was to get the wall established prior to the commencement of works so that it could assist in mitigating the impact of those works.</p>
<p>3.6</p>	<p>Out of Hours Work</p> <p>Following discussion with the CLG at the previous meeting it appeared there was a consensus that one of the best impact management strategies was to abbreviate the length of the project where possible.</p> <p>Will indicated that the some line-marking activity was likely to occur at night near the Sewerage Treatment Plant road intersection. The benefits of undertaking this work at night are: -</p> <ul style="list-style-type: none"> • It was a safer time from a traffic viewpoint; • Less overall impact; and • It was not considered likely to impact on any residents. <p>Another opportunity to capitalise on this strategy and abbreviate the length of the project was to extend the hours of operation and work, particularly on weekends, when there were works which could be conducted without impact on residents or road users, such as works clear of the current road. On Saturdays, for example, the project team sees significant time saving benefits of working an additional three hours - from 7am until 3pm instead of starting at 8am and finishing at 1pm – so long as it could be done in areas or at times that it would not generate any significant impact.</p> <p>The project team would be looking to the CLG for advice on activities, events or the like that needed to be considered in any extension of construction hours. One member of the group pointed out that Saturday mornings, for example, needed to take into account the extra traffic generated by junior sports events. The RTA noted that such construction work would generally be undertaken clear of the Pacific Highway and if not would require a Road Occupancy Licence from the</p>

	<p>RTA. Will indicated this was exactly the kind of information required and the project team would continue to liaise with the CLG in relation to works outside the original construction hours for such feedback.</p>
<p>3.7</p>	<p>Speed Zones</p> <p>A group member who had just returned from the south travelling along the Pacific Highway raised the issue of confusing sign-posting of speed zones around construction or upgrade areas. Signs which should have been covered often were not, leading to confusion and unsafe traffic situations.</p> <p>Will explained that the team will rezone the project area generally to 80kph and some sections down to 60kph as required for the safety of both road users and construction workers. One requirement is that the project team don't have all the zones open and create the problem referred to.</p> <p>RTA noted to pass on the concerns of the CLG member to the appropriate person.</p>

4.0		Flooding and Drainage Management Plan							
4.1		<p>Background</p> <p>Mark Sabolch, the Abigroup Project Environmental Manager, gave a brief history of the flood studies that had been undertaken for the Marshalls Creek floodplain. This is the current focus of attention after the recent flooding in Billinudgel and North Ocean Shores, but he pointed out the Flooding and Drainage Management Plan covered the entire project area.</p> <p>Mark pointed out that although the recent flood was a tragedy for those impacted, it did provide an opportunity to gather an enormous amount of information on a major event and calibrate the modeling against that <i>actual</i> event.</p> <p>The project EIS acknowledged that the project would not be able to improve the flooding in Billinudgel without negatively impacting on flood levels in North Ocean Shores and vice versa. As a result, the EIS recommendation and subsequent approval condition for the project was that the project must maintain the status quo of the existing flood regime.</p>							
1978 Flood	1986 Flood	1987 Flood	1997	1998	1999	2002	2003	2005	2005 Flood
	Flood Study (by Public Works) which became the basis for the 1997 Flood Plain Management Plan.		Management Plan by Pateson Consultants.	EIS S.K.M. done by Webb McKeown & Assoc. Used CELL model. Recommended "That flooding be no different to the current conditions" / "No substantial difference be made upstream or downstream."	Director General's Report, based on 1986 Study & feedback from community.	EIA reviewed the EIS, with modifications by Connell Wagner (CW). Used MIKE 11 model.	Director General's Report.	Abi / SMEC Study.	

4.2

Presentation

Mark went on to introduce David Bannigan from the Snowy Mountains Engineering Company (SMEC) and also pointed out that SMEC were not only the project hydrologists but also the designers who were working on the bridge designs, among other components of the project. David holds a Masters Degree in Engineering Science and has 15 years' experience in a range of hydrological work in Australia and overseas.

David outlined his presentation and indicated the objective was to clarify issues associated with the upgrade in relation to the Marshalls Creek Flood Plain. David revisited the studies outlined in Mark's introduction and made the point that the current understanding of the flooding regime is based on the most recent data, including substantial additional survey data compiled by Connell Wagner in 2002 and the introduction of the MIKE 11 hydraulic model and the RAFTS hydrological model.

The MIKE 11 model, has been successfully calibrated using data from the 1987 and 1978 flood events. This means the model accurately predicted flood levels in the Marshalls Creek area.

David noted that in using the MIKE 11 model, the rainfall intensities used were from the Australian Rainfall and Run-off (ARR) document, which is the current Australian engineering standard.

The validity of using the ARR for this particular area was the subject of considerable discussion. Also related to the ARR discussion was the issue of what actually constituted a one in 100 year flood event (Q100). As there had been several events rated as such in the recent past, some CLG members challenged the validity of Q100 as the design criteria for the Marshalls Creek bridges. The project team however pointed out that the real issue was that the bridges maintain the status quo of the flooding regime and did not make matters worse for upstream or downstream stakeholders.

Manly Hydraulics Laboratory, through DIPNR with the assistance of Byron Shire Council, is currently collecting extensive data on the 2005 flood for the purpose of studying the flood behavior of the Marshalls Creek catchment.

Abi / SMEC will have access to this data and will be making use of it.

ACTION: As an outcome, it was agreed that SMEC investigate the 2005 flood in Marshalls Creek and calibrate the MIKE 11 model to this event prior to works proceeding. SMEC can do a sensitivity test on the proposed bridge design against this and for larger rainfall events.

4.3

Discussion

Models

- Q: In these models (MIKE 11 and CELLS), have they got all the pertinent parts of the catchment that have been filled?
- A: Connell Wagner surveyed extensive cross sections throughout the plain.
- Q: Did these consider: -
- Bund
 - Fern Beach
 - El Dorado (which was storage area above the bridges)
 - Fill put into the back of Billinudgel?
- A: Connell Wagner survey data included development current at the time of survey. We will check the model to ensure that all relevant features are included.
- Q: Have Connell Wagner compared their results with actual records?
- A: Yes.
- Q: Have they tested their model against actual rainfall records? And if so how would they explain the 1:100 year flood exceeded twice in the last 18 years?
- A: Yes. This area has copped two big events in the last 15 years, others haven't. It is a matter of statistics and probabilities. The Bureau of Meteorology have done a statistical assessment and have come up with standardised rainfall.
- Q: Can you explain how Connell Wagner's 1:100 flood is approximately 2/3 of McKeown flood?
- A: In terms of the flood level, the MIKE 11 model used by Connell Wagner is predicting quite accurately, as evidenced by the calibration to the previous flood events.

Comment: The design level or criteria is 1:100, however some believe the ARR 1:100 design rainfall is actually different to the 1:100 rainfall that the Bureau of Meteorology uses. It is difficult to design something for a flood when we don't know what level the flood is or what rainfall event should be adopted. Where do you stop? 1:100 is our adopted level from the project planning approval and is the adopted level or standard for the majority of engineering works. Higher design criteria may have negative implications for existing developments (from what they were designed for) upstream and downstream of the highway upgrade which is not the intention of the project approval.

Recent Flood Levels

- Q: From the data you now have, when did the recent flood peak in Billinudgel?
- A: 9.09 a.m.

Q: What about levels downstream?
A: We are still collecting data and working closely with Byron Shire Council.

Flow path – Humble Pie Area

Q: The flow came from different directions. What is the flow path going to be between Humble Pies and the closest bridge?
A: The flow path will be much the same but the current bridge is to be replaced at that location by 2x1800 diameter culverts and the new bridge moved to the further to the north (where it would work more efficiently) as recommended in the Connell Wagner work. With the development of the El Dorado Estate and associated filling, the existing bridge is not working effectively in its current position.

Q: In the recent flooding the reeds have all gone from the drain in front of Sanctum. Are reeds going to be replaced as part of the landscaping?

A: They actually lie down in floods and don't have a huge effect on the flow. The new channel will be rock lined for much of the distance between Wilfred St and Marshalls Ck.

Q It appears that the flow path in front of Humble Pies is going to be filled in by the road.

A No, the road is moving east at that point and while some of the drainage area will be taken by the road shoulder, the flow path through the area in question will be maintained and the efficiency with which water can progress through that flow path will be maintained by the use of a well defined open channel.

Q: Where the reeds are, that's going to be a channel through to the other bridge? And will it hold the same capacity, without making flooding any better or worse?

A: It will not make flooding any worse. It doesn't really make any difference. The same amount of water will still end up at the same point on the other side, it's just how efficiently the water can get from one side of the highway to the other.

Bridge

Q: Connell Wagner suggested you could reduce the waterway opening from 150m to 125m. What is the basis for this conclusion?

A: Connell Wagner's flood model showed that with the bridge re-configuration and overall general drainage improvements in the area, the flood levels would not be worse off by reducing the bridge length.

Q: But they compared results using rainfall figures that were considerably lower.

Q: Are we getting the flood levels correct and is the model correct to predict the flood levels?

A: Yes. The model itself has been calibrated against actual events. We can verify that the model works. We are not debating the model, but more the intensity of the 1:100 rainfall or storm event.

<p>4.4</p>	<p>New Riverview Crescent Access</p> <p>Q: The back road into the Ferry Reserve is an appendage because it's not on the main route. It is a completely new road and therefore no existing flood level information etc is available. Did you look at flooding issues there?</p> <p>A: The design has transverse drains at that location to prevent it becoming a dam.</p> <p>Action: WM and MS to do site inspection with CLG member and provide any additional information.</p>
<p>5.0</p>	<p>General Business</p>
<p>5.1</p>	<p>Foreshore Planning Suggestions</p> <p>Malcolm Murray then addressed the group with some suggestions relating to the Southern foreshore planning opportunities. Malcolm pointed out that there were issues with the current boat ramp near the fishing co-op, especially in relation to parking. He indicated this ramp area only supported about five car parking spaces when the recommendation from the Waterways Authority was that each ramp should provide about 25 supporting car parks. Negotiations relating to the possibility of acquiring a small section of the adjacent SEPP 14 area (for new car parking) that was reported to have little ecological value had stalled.</p> <p>In light of this situation Malcolm suggested that provision (or upgrade of existing) boat ramp facilities with appropriate parking should be considered in the Southern Foreshore planning process. Such a facility should provide pontoon boarding facilities for people with disabilities.</p> <p>The current ramp is too steep and short and there are no boarding facilities particularly for those who are elderly or with disability.</p> <p>Toilets in the foreshore are also a must, as are picnic tables and BBQ facilities.</p> <p>Upgrade of the facilities would provide a necessary and safe ramp for the caravan park boat users and others. It would also relieve some of the congestion at the main ramp near the Sonny Coles Memorial Park.</p>
<p>5.2</p>	<p>Discussion - Foreshore</p> <p>C: People launching boats don't always have big boats on trailers, could have canoes etc. The ramp there is not suitable for such small craft. We should also be looking at reasonable access for non-trailored craft, such as areas of sandy beaches. Canoe launching at the Caravan Park has been closed off.</p> <p>MM: There are 210 boats in the immediate area that can go to sea and they need access. There's nothing to say kayaks can't launch from the boat ramp. We are not actually talking about launching issues, we are talking more about inadequate parking.</p>

<p>5.3</p>	<p>Rest Area</p> <p>Q: Where are Abi and RTA up to with the rest area layout? RTA: Not fully resolved yet. Abi: Abi and SMEC have to overcome some alignment issues and have to give it to RTA for their review. Once all parties are happy with the design we can then look at cost issues. RTA isn't in a position to review yet because Abi is still working on the proposal. C: A CLG member also asked if a presentation could be given on the design and layout details of the Yelgun Rest Area. A: This was agreed, but perhaps at a future meeting when further work had been done on this issue.</p>
<p>5.4</p>	<p>Billinudgel Landscaping Plan</p> <p>C: Next meeting in General Business, we would like to put in a landscape submission from the businesses in Billinudgel. Q: Can Council representative bring along thoughts on the one way suggestion for Lucky & Bonanza Drive?</p> <p>It was agreed that we would lock this in for the meeting after next so it could be the central discussion point for that meeting.</p>
<p>6.0</p>	<p>Date for Next Meeting 3rd August</p>