



Constructing Australia's Future

Pacific Highway Upgrade Brunswick Heads to Yelgun Community Liaison Group Meeting No. 13 3rd May, 2006

Attendees:

Pauline Millington
Malcolm Murray
Kathy Norley-Farmer
Robert Rosen
Sue Stirton
Tony Stupka
Jack Taylor
Don Armstrong
Colin Tarbox
Frank Mills

Brett Lee (BSC)
Bill Gardyne (EMR – DoP Representative)

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

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

Apologies: Barry Hutton, Robert Rosen and Patricia Warren.

1.0 Welcome

Terry Paxton welcomed members to the 13th CLG meeting. He also welcomed Penny Hall and Geoff Baker from HBO + EMBT, the project Urban Design and Landscape consultants, who were to give a presentation on the Billinudgel landscaping plan and on the retaining and noise wall treatments for the project.

1.1 Apologies

Apologies from Barry Hutton and Patricia Warren were noted.

1.2 Comments on Notes of Previous Meeting

The notes of the previous meeting were accepted without amendment.

1.3 Meeting Agenda

Terry advised that the agenda for the meeting would cover: -

- Outstanding actions from the previous meeting;
- Construction update;
- Draft Billinudgel landscaping plan;
- Wall locations and treatments; and
- General business.

2.0 Outstanding Actions from Previous Meeting

2.1 Historic Marker Text

Terry advised the text drafted by Frank Mills, for a marker to identify the location of the historic Hainsville settlement, had been forwarded to the RTA's communication people for formatting and 'word-smithing'.

3.0 Construction Update

3.1 Key Areas of Progress

Will McDonald, Abigroup Construction Manager, indicated that his presentation for the evening would focus on the key areas of progress on the project: -

- The Brunswick River bridges;
- Connections of local roads; and
- The local service road.

Before delivering this update though, Will McDonald provided the group with some project statistics: -

- To date, the project had worked up 493,000 man hours of labour;
- On average, there were 289 workers per day involved in construction; and
- 19,000m³ of concrete had been poured.

3.2 Brunswick River Bridges

The Modular Form Travellers (MFTs) had now been installed on the southern pier head and were currently being installed on the northern pier head of the local road bridge as well. Two “segments” had already been poured on the southern side of the river and the progress was now quite visible and obvious.

With a series of slides, Will McDonald then explained in detail how the MFTs were actually used and the steps involved in each cycle. Basically, the cycle revolved around the delivery of each “segment” of the bridge and included positioning the MFT, fixing the reinforcing steel, pouring the concrete, a curing period, then launching the MFT to commence the next segment and stressing of the last segment. Ideally, this cycle would be completed in five days.

Each segment is 4.75m long and contains approximately 100 tonnes of concrete which is supported forward of the previous segment by about 80 tonnes of steel framework – the MFT – which incorporates a static truss as well as inner and outer forms. The force this places on the piers is counteracted by the fact that the segments are alternated on either side of the pier head, balancing the stress and load on the pier heads. Temporary props are also being utilised to support the first segments and prevent the tendency to skew.

Each segment also has ducts cast into it, to allow the insertion of steel cabling (tendons) that carry through to the counter segment on the other side of the pier head. These cables are tensioned, providing tendons that also strengthen and supported the structure during construction.

The strength of the concrete is a critical consideration along with the curing time necessary to gain that strength, prior to launching the MFTs, is a major governing factor on the cycle time. Much time and work has been invested in testing various concrete mixes in order to deliver the optimum strength in the desired timeframe.

Survey is also a key part of this process. Despite the inherent strength of the concrete, reinforcement and tendons, there is a tendency for the structure to “sag” during construction. This sag has to be calculated and allowed for in the angle of projection of the MFTs and it is a constant job for surveyors to ensure the correct alignment and projection angle, so both sides of the bridge aligned correctly prior to the closing segment being poured.

Will McDonald also pointed out the progress of the southern abutment since the major night-pour several months ago. The pour had provided the common footing from which the abutments of each bridge were now rising above.

Will was also able to demonstrate how useful the barges were, by showing a massive section of MFT being transported across the river, rather than hindering traffic on the road.

3.3 Works on the Local Roads

With a series of slides, Will was able to show how many of the local roads impacted by the project were now taking shape and some were in fact now virtually complete. Working from the south to the north, Will noted: -

- The new Riverside Crescent road formation was in and settling.

- The Tweed Street roundabout was also well underway with preliminary drainage works in place and the sub-base ready for paving.
- The new overpass of the STP Access road was well advanced, with the “reinforced earth” (RE) walls almost complete. Once the piles were poured, the beams could be placed for these bridges.
- Banana Road was virtually complete, having been sealed and the guardrail installed.
- The Coolamon Scenic Drive and Tunnel Road realignments were also taking shape, but were yet to be sealed. Piling of the Coolamon Scenic Drive underpass was almost complete and it was anticipated that the headstocks would be underway next week.
- At the Bonanza Drive underpass, footings had been installed and the RE walls would commence within the next few days.
- The Stock Route Road underpass bridges were also approaching the point where the superstructure could be commenced in about three weeks.

3.4 The Service Road

Will provided the group with an update on the various items that were required to be completed prior to switching traffic onto the local road.

Just north of the Brunswick River and west of the existing highway, a capping beam was being constructed along the edge of the new road and the SEPP 14 wetland area. This capping beam, which sits on top of a row of piles, will provide the foundation for the vertical retaining wall for the new highway and also play a critical role in developing the Rajah Road temporary sidetrack.

On the eastern side of the highway, now that drainage and service relocations were complete backfilling in the area adjacent to the new noise wall was also advancing.

Further north, the service road bridges across Marshalls Creek and the Marshalls Creek overflow were rapidly taking shape to the point that, at Marshalls Creek, construction vehicles could traverse the bridge. Only parapets and handrails were left to install. The southbound lanes of the new highway bridges were also progressing at these locations.

Further north, the Yelgun interchange layout and location was also becoming more obvious with the central roundabout now ready for pavement.

The rest area service road was also all but completed, having been sealed and having guard rail largely in place. Will indicated it was still the plan to divert traffic onto this new carriageway around the third week of May and that this would be further advised in the local news papers. Once the traffic was on the local road, the mounds of soil currently in the rest area would be pushed out onto the existing highway to create the new rest area access road.

3.5 Other Activities on Site

Will explained that the pipe jacking program, mentioned at previous meetings, was about to be reactivated. In this case, the team was looking at installing a

pipe culvert of approximately 90 – 100m, to capture road and some Ocean Shores run off and transport it to the major constructed wetland (known as 'Wetland B') to be built between the highway and the sewerage treatment plant.

Also significant was the completion of the first under-bore tube below the Brunswick River. This 500mm diameter 'bore' would accommodate both optic fibre and sewerage infrastructure.

The site office had also been recently visited by a contingent of students and teachers from Mullumbimby High School, looking at the types of career opportunities available in the construction industry and on a project such as this. By coincidence, one of the Project Engineers who addressed the group was himself a graduate of that school.

In terms of plant, while most of the earthmoving machinery had left site, some more specialised machinery had also arrived in the form of a "trimmer". This specialised item is used to shape the top layer of the formation prior to laying the pavement. Will explained it had been fitted with Global Positioning System (GPS) technology that allowed the survey team to download data and effectively direct the machine with millimetre accuracy according to its location on the project. This technology effectively replaces surveyors with string lines.

3.6 The Month Ahead

While the focus for the next month would still predominantly be on bridges, drainage and local roads, a key milestone for the next month would be the traffic switches covered previously. This would then free up some critical areas of the site and allow access to progress important project works in these areas.

3.7 Questions and Discussion

Q What is the expected lifespan of the new Brunswick River Bridges?

A While the design life is technically 100 years, realistically the lifespan would be greater than this.

Q When are you expecting to open the first of the new Brunswick River Bridges?

A We are now aiming for November, but it is very hard to commit to an exact date. From previous experience, we would predict the cycling of the MFT movements will become faster.

4.0 Billinudgel Landscaping Plan

Penny Hall then provided the group with some options for the planting and landscaping arrangements around Billinudgel, in areas required by the Environmental Documents for the project and captured in the Project Deed.

The details contained in the designs resulted from consultation based refinements to the original concepts put forward to the CLG and other interested community members. While the original concept had contained feature trees actually planted in the roadway of Bonanza Drive and Lucky

Lane, these had been relocated back onto the nature strip because of concerns raised about visibility and manoeuvrability for heavy or long vehicles.

Two options had been considered in the arrangement of these trees, one which involved single trees off-set on either side of the streets at regular spacings and another which involved couplet plantings more strategically placed at property / lot boundaries.

The second of these options had been nominated as the preferred option because it reduced the potential impact on access arrangements for undeveloped blocks. It was also pointed out that this arrangement was also likely to be more enduring as well, because of this fact.

The original concept for the highway treatment near Billinudgel had remained 'true' to the original presented to the group at a previous meeting –rows of Bangalow Palms orientated at 45 degrees to the highway and leading the eye down into Wilfred Street. Between each row of palms a feature tree would be planted – a Brachychitan Acerifolius – a close relative of the Illawarra Flame tree, but significantly smaller. This feature tree would also be used in plantings within the Bonanza Estate and could be carried down Wilfred Street. (See attached plan).

It was pointed out to the group that experience along highway environments dictated that for landscaping to be effective and memorable, landscaping or feature plantings had to be bold because the viewer was in motion (generally at high speed), making it a very different situation from say, a parkland planting.

The process from here is that the preferred option will be refined to reflect feedback from the meeting and then be submitted to Council.

4.1 Questions and Comments

Comments

- Need to be aware of insurance and maintenance issues when placing plants which may over-hang close to boundaries of buildings.
- Need to continue the design of the plantings to the north to "frame" the pedestrian bridge.

Q Can the plantings be carried over to the rest of Billinudgel?

BSC We are looking at adopting these themes for the rest of Billinudgel.

Q Can you provide timeframes for when Council may actually do this?

BSC Cannot commit to timeframes for delivery as there are budget considerations.

Comment

Concerned that all this money is being spent on the Bonanza Estate when the rest of Billinudgel is being neglected. Why can't the plantings be carried all the way along Wilfred Street?

BSC We are actually talking to the project team now about what is achievable in this specific area to complete the block as it makes

sense to do so now, but while the theme may be adopted to carry through the rest of the village, there are budgetary and staging considerations as well.

RTA The group should not lose sight of the fact that people are referring to now as an 'industrial estate', will in the not too distant future, become a major entry or gateway into Billinudgel – so hence it wise to address it now.

Q We would like a commitment from Council that they will address the western end of Wilfred Street as well.

BSC Council has recently passed a resolution that there be a landscaping plan for every town and village in the shire, including Billinudgel, but they will be staged in terms of delivery.

Q How big will the trees in Bonanza Drive be when you actually plant them in?

A We are looking at a 20 litre pot size. Typically these would be 1.5 – 2 metre trees in height.

Q What is the eventual clear trunk height of the trees being considered for the industrial estate?

A Typically about 5m plus, and the driver's eye level is in the order of 1.5m high so there should be no real issue of foliage blocking drivers' views.

Q Lomandras seem to be overused. Perhaps you could use a mass planting of Dianella Caerulea (Blue Fax Lilly).

A The reason you see so many Lomandras is because they are so good for this type of hardy low maintenance road landscaping purpose, but yes, we could use a blend if that's what people preferred. Typically, this could be in the order of a 40:60 ratio.

Q What vegetation will be planted at the constructed wetland area of the Billinudgel footbridge?

A The clearing undertaken to construct the wetland and footbridge has left the closest houses less screened, so we will be looking for dense plantings of wet Sclerophyll.

Q Will this water body at the pedestrian bridge be fenced off?

A There are guidelines for what areas have to be fenced in these situations and at this stage this constructed wetland would in fact be fenced.

Q Wasn't there talk of a service directory at the Bonanza / Lucky Lane intersection?

A Yes, but when we consulted on this issue, there were concerns raised about the safety aspects of a service directory when there was no place for entering traffic to pull over and read it. For this reason, it has been deleted from our plan.

Q Do the Flame trees mentioned, drop leaves?

A They are deciduous, but do not have a lot of leaves to drop.

- Q** What is the type of vegetation at the intersection of Bonanza Drive and Wilfred Street? It could be very dangerous in terms of visibility.
- A** Sight lines, visibility and road safety are all part of the criteria for such landscaping plans and Abigroup would have to comply with such criteria in anything put forward to RTA and Council for approval.

4.2 Walls

Geoff Baker started his presentation on the treatment of retaining walls by pointing out there were some very significant retaining walls on this project that presented a challenge for the Urban Designer. If not treated sensitively in the design, the scale of the largest walls had the potential to dominate the perception of the passing motorist.

Geoff then worked through the project length identifying the location of retaining walls and the design and treatment features of each.

There was only one isolated wall at the southern end of the project and the surface treatment of that wall was actually selected to reflect the treatments applied to those on the Pacific Highway upgrade section to the south. Geoff explained that in many areas where various projects shared a border, there was often a sudden change in styles of treatment, so selecting something very compatible with the Tandy's Lane project, provided connectivity from a design perspective.

Geoff noted that most retaining and noise walls on the project were in fact relatively low walls and typically the treatment on these surfaces would be simple horizontal grid patterns. There were however some feature walls and these were largely in the area north of the Rajah Road intersection area, both along the edge of the local road and also at a lower level on the highway.

Along the edge of the local service road, an irregular, horizontal rectangle pattern had been chosen because it was more sympathetic to the urban nature of the area. This pattern was an abstraction of a stone wall and the relief pattern provided a changing effect based on the angle of the sun.

The largest wall on the project was the retaining wall along the eastern edge of the new highway, just north of Rajah Road, reaching at its maximum, a height of 15 metres. This was a very significant wall for a highway environment and a number of steps had been taken to soften the scale of this wall. For example, a 3 metre planter box will be built at its base and a range of species has been selected to provide three tiers of vegetation - very low, ground hugging vegetation; mid level shrubs; and tree ferns with tall slender Bangalow palms interspersed. This tiered effect was replicated in the finish of the facing panels on the wall, with vertical grooves of three different lengths reflecting the density of the vegetation at the different tiers. The objective of this approach was to give the impression of the wall "fading away" at height.

Geoff presented a scale model of the retaining walls north Rajah Road and this would be placed on display in the Community Information Centre.

To the south of this wall there was another interesting wall feature, being a clear (transparent) noise wall between the local road and the highway. The objective of this clear noise wall was to maintain views across the Brunswick River for motorists driving down Rajah Road.

At the northern end of the project, another style of wall could be found around the Billinudgel pedestrian bridge. These are relatively low walls and because

they have to bend to reflect the curves of the pedestrian bridge, they will be constructed out of small split faced concrete blocks rather than panels.

Each project seems to be setting a higher standard and we believe this project will deliver a higher quality outcome in this aspect, particularly greater than the Yelgun to Chinderah upgrade for example.

4.3 Questions and Comments

Q Who will maintain these works?

A For the first 10 years it will be Abigroup, then the RTA.

Q And what about the landscaping works inside Billinudgel?

A There is an arrangement for the RTA to hand over some items to Byron Shire Council and some will remain an RTA responsibility.

Q How does the anti-graffiti paint work on the more textured panels?

A We use a silicon based product that actually soaks into the concrete but does not have a visible effect on the surface.

Q How are you protecting the clear noise wall from graffiti?

A While it will not have an anti-graffiti coating, this surface is easier to clean than concrete.

Comment

Obviously a lot of thought has gone into something most of us take for granted and the results look good.

5.0 General Business

5.1 Local Road - Off Ramps Rumour

A member of the group raised the recent issue of media articles appearing re additional ramps onto the highway for connection between the local service road and the highway as a result of a new service station development.

With recent media articles suggesting the design may be changed to accommodate additional connection between the local service road and the highway, Peter Borrelli again re-affirmed no recent applications had been made to the RTA and that RTA's position had not changed from when previous applications had been received. There will be no additional access points between the local road and new highway. The project will be built as per the approved project.

5.2 Bridge Event

The Lions Club representative advised that the Brunswick Valley Rescue Squad and Lions Club had again met for the purposes of progressing the bridge event and wanted to reinforce to the group that this was a community event. As such, it was not a closed shop and both initiating organisations encouraged other organisations and individuals to become involved.

If anyone was interested in becoming involved he advised them to contact Wendy Dooley on 1800 071 144 to be put in touch with the organisation committee.

6.0 Meeting Close

The meeting was closed at 8.45 and next meeting was scheduled for Wednesday 7th June, 2006.