

APRIL 2012

Foxground and Berry bypass – southern Berry bypass review

The fourth community Q&A session for the southern Berry bypass review was held on 30 April 2012 at the Berry School of Arts.

Summary – Purpose of the meeting

RMS convened a fourth question and answer session on the Berry bypass review to keep the community updated as work progresses. Community members asked questions and raised issues for further consideration in association with a southern Berry bypass.

The session was opened and facilitated by Lucy Cole-Edelstein of Straight Talk who introduced the following RMS speakers:

- Brad Turner, RMS General Manager Southern Region, described the review process / timing, the feasibility investigations process and the role of the independent reviewers.
- Adam Berry, RMS Project Development Manager for the Foxground and Berry bypass, presented information on the make-up and brief of the Technical Review Group (TIG).

Presentations were then made by five technical specialists:

- Henk Buys, a geotechnical engineer from AECOM provided an update on geotechnical structures and the progress of the geotechnical investigations being undertaken.
- Ben Noble, a hydraulic engineer from AECOM provided an update on flood modelling.
- Ken O'Neill, a bridge designer from AURECON provided an update on the bridge structures required along the suggested southern route.
- Peter Stewart, a construction engineer from Peter Stewart Consulting provided an update on construction issues and explained the challenge to the project team of obtaining balanced earth works.
- Phil Jorgensen, an engineering estimator from Evans & Peck provided an update on the major cost components of the project.

Following the presentations by the technical specialists Derrick Hitchins from SMEC provided an update on the involvement of the independent review team.

After the presentations the technical specialists, located to separate break-out areas, where they were available to answer questions one-on-one with members of the community.

Over 150 local residents attended the meeting.

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The following is a summary of the issues raised at the meeting and of RMS's response.

| Question | Response |
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| Are all the members of the independent review panel paid for by RMS? Queried the availability in state government to make the process independent. | Brad Turner advised that the independent reviewers are being paid by RMS. Mr. Turner advised that this process had been successfully adopted on other RMS projects, for example the Seacliff Bridge was closed on the advice of an independent review team engaged in a similar way. |
| When will the independent reviewers be involved in the process? Will they only be reviewing the report following finalisation by the technical investigation group? | The independent reviewers have an ongoing involvement throughout the preparation of the technical investigation group report (to challenge ideas, decisions and assumptions made) and will also undertake a final review after the report has been submitted by the technical review group. |
| Concern was raised that the technical investigation report will not be available to the community until after the Minister for Roads and Ports has announced his decision. What time will there be for community feedback? | Brad Turner clarified that the community would not be given access to the technical investigation review report until after the Minister for Roads and Ports has made his decision. |
| Where on the project website is the documented record of discussions / challenges made by the independent reviewers to the technical review group? | Brad Turner confirmed that future technical investigation group meeting minutes would include reference to challenges made by the independent reviewers. Minutes of meeting from the weekly technical investigation group meetings will be posted onto the project website every Tuesday. |
| Has the environmental impact cost of tree removal on the northern and southern being included? | Adam Berry advised that the cost review exercise would not include tree removal. Environmental issues will be considered later in the process if the suggested southern route was to be progressed. |
| Request was made from a community member who is wishing to undertake an independent noise model review for daily independent transit movement data. Can this be made available? | Data can be provided by RMS. Community member was asked to approach RMS off line. |
| Are the independent reviewers looking at the whole Foxground and Berry bypass alignment design or just the Berry bypass? | Adam Berry advised that the independent reviewers are looking at constructability (earthworks, civil construction and structures) for the whole Foxground and Berry bypass alignment. Mr. Berry clarified that outside the Berry bypass section the route is common to both the preferred northern alignment |

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| | and the suggested southern alignment. |
| When is RMS expecting a decision from the Minister for Roads and Ports? Is a decision at end of May / beginning of June correct? Does this give RMS enough time to prepare all the information needed? | <p>Brad Turner clarified that, although he could not speak on behalf of the Minister for Roads and Ports, RMS is planning for an announcement in early June 2012.</p> <p>Mr. Turner explained that RMS has been reviewing a suggested southern alignment since December 2011 and a considerable amount of work has already been undertaken by the project team.</p> |
| Have the same technical investigations been undertaken on both the northern and southern routes? | Yes. As far as practicable the southern route is being investigated to the same level of detail as the northern route against road geometry, geotechnical, flooding, bridge structures and constructability criteria. |
| Will the independent reviewers be producing a report and will it be made public? | Yes. All documentation will be available following a decision announcement by the Minister for Roads and Ports. |
| A community member questioned the integrity of the process and only publishing information on the website every Tuesday. Concerned community members are not getting proper answers. | Brad Turner advised that although timing is a key factor, for RMS integrity is about transparency, the inclusion of independent reviewers and equal access to information for all community members. |
| Is there any indication of how much it will cost to move the fill deficit of 400,000 cubic metres of material required for the suggested southern alignment? Where will this material be sourced from? | Adam Berry advised that the technical review group is currently reviewing alternatives to reduce the deficit. Full costings and details will be provided as part of the technical review group report. |
| Concern was raised on the impact on Toolijooa Ridge and the nature reserve from the suggestions that additional fill material could be obtained from this area. | If the cut at Toolijooa is deepened to gain fill material, there would be subsequent environmental impacts. These impacts would need to be considered in detail through an environmental impact assessment should the southern suggestion be progressed further. |

The following is a summary of issues raised in the technical break out groups and the responses of the technical specialists.

Geotechnical - Henk Buys, AECOM

The following design modification suggestions were raised by a community member:

- The southern interchange should be moved further south towards Croziers Road. The existing Princes Highway can then be maintained as the access point to Croziers Road. The community member expressed concern over the presence of culverts at the interchange location being proposed by RMS.
- The southern interchange should be offset from the existing Princes Highway. The existing highway could remain open during construction of the interchange with connecting works undertaken later.
- In the opinion of the community member there could be a potential cost saving by realigning the route to the south of the sewage treatment works, utilising high ground. This route would reduce the length of the viaduct to 740 metres.
- The deficit between cut and fill material could be reduced if the cutting at the northern end of the alignment was deeper.

The community member advised that he had sent full details of the above suggestions to RMS on 23 March 2012.

| Question | Response |
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| Is it possible for the technical investigation group's meeting notes to be developed further to clearly identify which community suggestions are being addressed? | Yes. The technical investigation group's meeting notes will ensure any community suggestions discussed and being addressed by the group are recorded, along with further actions and outcomes. |
| At what depths were soft soils found to be at? What drainage is required? | The depths of soft soils vary along the route from minimal to approximately eight metres, and could result in settlements of the order of 200mm to 800mm. The type of drainage adopted will depend on the ground material. |
| How will acid sulphate soils be managed? | RMS must abide by regulations for the control of acid sulphate soils. If the level of soil disturbance is above the levels in the regulations then RMS is required to prepare an acid sulphate soil management plan. |
| Will there be any impact on the railway line from settlement? | The preliminary results from the ground investigations do not show the presence of soft soils in the vicinity of the railway line for the currently proposed suggestion. RMS does not envisage the southern alignment having an impact on the railway line, but this could change if there is any change in the suggested alignment, as the soils in the area are variable. |
| Where did drilling / ground investigation | RMS has conducted ground investigations at various |

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| occur along the southern alignment? | locations along the complete length of the suggested southern alignment. |
| Has a review on acid sulphate soils been undertaken for the northern alignment? Can RMS provide a comparison of results for the northern and southern alignments? | Yes, acid sulphate soils were part of the investigations for the northern alignment. No acid sulphate soils were identified, although there remains a low level of potential, at depth. |

| <i>Hydrology – Ben Noble, AECOM</i> | |
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| <i>Question</i> | <i>Response</i> |
| How is RMS planning to manage flood water passage through embankments and culverts? Where will this water be directed to? | RMS has a statutory obligation to minimise the impacts of its infrastructure on the existing flooding environment and upstream and downstream properties. As such the design will be optimised so as to minimise, as far as possible, the impact of the road on flood waters. Embankments and culverts are currently being designed and the detailed flood model is being run to confirm the extent of works required to manage impacts. |
| Will the bridge structure create a dam effect? How will the water get away? | Upstream or downstream flood impacts created by the bridge are being assessed as part of the consideration of the southern suggestion. Mitigation measures will be proposed where necessary to comply with the project objectives of minimising upstream or downstream flood impacts. The bridge level will be set to provide an appropriate clearance to the 1 in 100 year flood level and the length of the bridge spans will be designed to minimise increases in upstream flood levels. This will reduce the potential for a dam effect. |
| The railway line and embankments act as a dam, how will this be fixed? | The current flooding issues associated with the railway line are outside the scope of this project. However, consideration of potential flood impacts on the railway line associated with the suggested southern alignment is an important factor in the road design, to ensure that the current situation at the railway line is not made worse. This is currently being considered. |

Bridge design– Ken O’Neil, AURECON

| Question | Response |
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| What is the difference between existing level and sea level? | For road design purposes, sea level is set at 0 metres and the existing levels for existing ground level and new road design level is measured above the sea level datum of 0 metres. |
| What is the length of the largest bridge on the southern suggestion? | The technical investigation group is yet to finalise the design of all the structures along the suggested southern alignment. Currently, the technical investigation group is reviewing and costing two possible bridge designs, which include a 1200 metre long viaduct structure compared to two separate viaduct structures with an island embankment separating them. |
| How high is the bridge going to be? | The bridge height varies across the flood plain as it crosses the existing terrain and the railway line. For clarity, RMS will publish annotated cross sections of the bridges at key crossing points on the website to show the height of the bridge above the existing ground level. |
| What is the cost difference between the embankment option and the full length bridge? | There are many parameters that influence the cost of the two shorter bridges separated by an embankment including flooding impacts, ground treatment and constructability considerations. Until the technical investigation group has finalised the flooding, geotechnical and constructability assessments, a direct cost comparison cannot yet be made. |
| Why has island embankment option that was suggested by some community members been assessed as part of the cost gateway? | The island embankment with two shorter bridges on each side is being assessed in detail by the technical investigation group and will be costed as part of the cost gateway once all of the design constraints relating to flooding, geotechnical and constructability are known. |

Constructability – Peter Stewart, Peter Stewart Consulting

| Question | Response |
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| What is the timeframe for constructability from Wharf Road to the railway bridge? | Timeframes are not known at this stage. |
| How will RMS source the 600,000 cubic | No source has been identified yet, but RMS is continuing to look at potential sources of fill material to reduce the deficit |

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| metres of fill required? | within the project. |
| Have the RMS considered the transportation of fill by rail? | Transportation of fill by rail would need to be considered, however it would depend on where the fill is being sourced from. |
| What is the likely impact and potential damage to local roads if 600,000 cubic metres of fill is needed to be transported to site? | A rough calculation of approximately 200,000 truck movements (one way) would be required to move the amount of fill material currently needed to balance the deficit. |
| Could fill material be sourced from the other two phases of the project? | RMS would need to look into this further, but at this stage it is not considered a likely solution. |
| What is RMS onsite construction plan for pre-cast units? | RMS would firstly look to utilise land that it already owns. If this is not feasible RMS would look to lease a site. |
| <p>Discussion:</p> <p>A discussion was held on noise issues and noise monitoring and the general impact on lifestyle bypass would have on the town of Berry. A community member identified that if you take a 300 metre wide corridor over the southern route around 35 dwellings are affected. The same area over the northern option affects around 250 dwellings. When this is expanded to a 600 metre wide corridor a further 120 dwellings are affected by the southern route and 200 by the northern route. This will have a significant impact on the noise mitigation measures to be considered.</p> | |

Estimating– Phil Jorgensen Evans and Peck

| Question | Response |
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| Why was the submission from Bruce Ramsay considered? Why was he considered a reliable source? | Member for Kiama, Gareth Ward made a request of the Minister for Roads to review the previously established costings and proposal for the Berry bypass following receipt of the detailed submission from Mr. Bruce Ramsay who has significant civil engineering experience. |
| How much will the fill deficit cost? | The reduction of the fill deficit material and sourcing of the remainder is still being investigated by the technical investigation group. The costing will not be known until this exercise is complete. |
| Why is AECOM involved again in this process given issues with their involvement with the northern route? | AECOM is RMS's principal consulting engineer for the Foxground and Berry Bypasses project. |
| Will the southern option be given a fair estimation? | RMS is committed to ensuring both north and south routes are costed as far as practicable to the same level of detail. To achieve this RMS has set up the technical investigation |

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| | <p>group with the following brief:</p> <ul style="list-style-type: none"> • Optimise the southern route to minimise property impacts and land severance • Engineer a cost effective southern route solution • Apply any benefits found on the southern route to the northern route where applicable, and vice versa. • Evaluate the southern bypass route by comparing it to the current northern preferred bypass route within the context of the whole Foxground and Berry bypass (FBB) Princes Highway Upgrade |
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| <i>Southern suggestion visuals</i> | |
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| <i>Issue</i> | <i>Response</i> |
| The drawings misrepresent the visual impact of the road and bridges, particularly the images don't look either high or 'bulky' enough. | The visuals are an artist's impression of what the southern suggestion may look like from various locations. |
| The roads / bridges appear much further away from houses than drawings suggest. | As stated above the visuals are an artist's impression of the structures view from specific locations along the suggested southern alignment. |
| If RMS is only doing a costing analysis then RMS should not have produced drawings showing the visual impact of the road (therefore RMS is considering more than cost). | At this stage, RMS is only undertaking a costing review of the suggested southern option. The visual representations were produced by RMS in response to community feedback received at the last Q&A session (19 March 2012) asking for visuals of the southern suggestion. |
| Is this the last Q&A session? Concerned community members will not have a chance to have their say after tonight. | RMS will be making weekly updates on the progress of the southern suggestion cost review via its project website and project office (open Friday's 10am to 5pm). Community members can provided RMS with feedback through the project information line (freecall) 1800 506 976, through the project email account www.rta.nsw.gov.au/fbb , by post Foxground and Berry bypass project, AECOM PO Box 410, QVB 1230 NSW, or by visiting the project office. |

Regular updates on the progress of the suggested southern bypass review will be posted on the project website every Tuesday at www.rta.nsw.gov.au/fbb.