

WELCOME

North Street Precinct
Community Working Group
Meeting two

Agenda



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- 6.30pm Housekeeping and introductions.
 - 6.35pm Review of working group objectives.
 - 6.40pm CM+ work in response to last meeting.
 - 6.55pm RMS work in response to last meeting – presentation and discussion.
 - 7.55pm Way forward for next working group.
 - 8.15pm Close
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To identify mitigation measures to avoid/limit/reduce/manage the impact of the issues on North Street.

To capture this in mitigations recorded in the environmental assessment and in an urban design concept plan for the North Street Precinct.

CM+ Presentation



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- **Action:** RMS will provide details of why it believes the grade cannot be reduced further, for discussion with BoB and the working group.
- **Action:** RMS to investigate its policy for utilising mechanical pumps and advise the group.
- **Action:** RMS will review the feasibility of further lowering the alignment by 0.5 metres.

- **Action:** RMS to look into alternative pedestrian / cycle access by reviewing designs of the roundabouts at Huntingdale Park Road and Kangaroo Valley Road.
 - **Action:** RMS to investigate separate pedestrian/cycle overpass and provide the group with a cost comparison and other information to understand RMS view.
 - **Action:** RMS to provide the group with visuals of potential pedestrian / cycle connectivity across North Street.
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- Were examined by RMS Southern Region Engineering Technology Branch in February and March.
- Were examined by the RMS road design leadership group on 9 March 2012.
 - » The RMS Principal Road Design Engineer (Sydney).
 - » Southern Region Senior Road Design Manager.
 - » Princes Highway Road Design Manager.
 - » The RMS Senior Bridge Engineer (Parramatta).
 - » The RMS Manager Road Asset Policy (Sydney).
- This group provided the following direction to the Foxground and Berry bypass project team:

- The use of pumps would expose motorists and the RMS to an **unnecessary level of risk in relation to road user safety** and asset maintenance. Existing pumps on the NSW road network are subject to continual reliability issues.
- The design of drainage systems for the removal of surface and sub-surface water from road infrastructure in an open environment **should be gravity based.**
- Pumps incur unnecessary **higher capital and recurrent costs.**
- No further consideration will be given to mechanical means to drain roads where a gravity based system can otherwise be reasonably provided.

- An **assessment of aquaplaning potential** over this section is required. This section has large radius curves in combination with a flat longitudinal grade. These conditions can lead to long flow paths and resultant build up of water film over the travel lanes. If aquaplaning is found to be a risk then the flow paths would require shortening.
- **Road flooding during storms** - confirmation is required that any surface pit system can accommodate the design storm event. The current proposal has a combination of flat grades, low fills and cuttings. This will require larger diameter drainage pipe structures and RMS requires certainty that the pavement drainage system can be discharged into the natural stream at Berry Bridge during the design storm event without any backwater effects and possible pit surcharging.
- **Subsurface drainage** - a determination of how the pavement layers can be drained through this section requires further design. The pavement layers may lie within the water table over this section thus making it harder to maintain asset integrity.
- The existing concept grade line across this section already carries a high level of technical risk that will be carried forward to the detailed design. Only full detailed design can confirm it is feasible and provides acceptable factors of safety given the constraints outlined.
- **Any further lowering of the grade line may only be explored in detailed design and only after the investigations above.**

Reviewing design at Huntingdale Park Road and Kangaroo Valley Road.



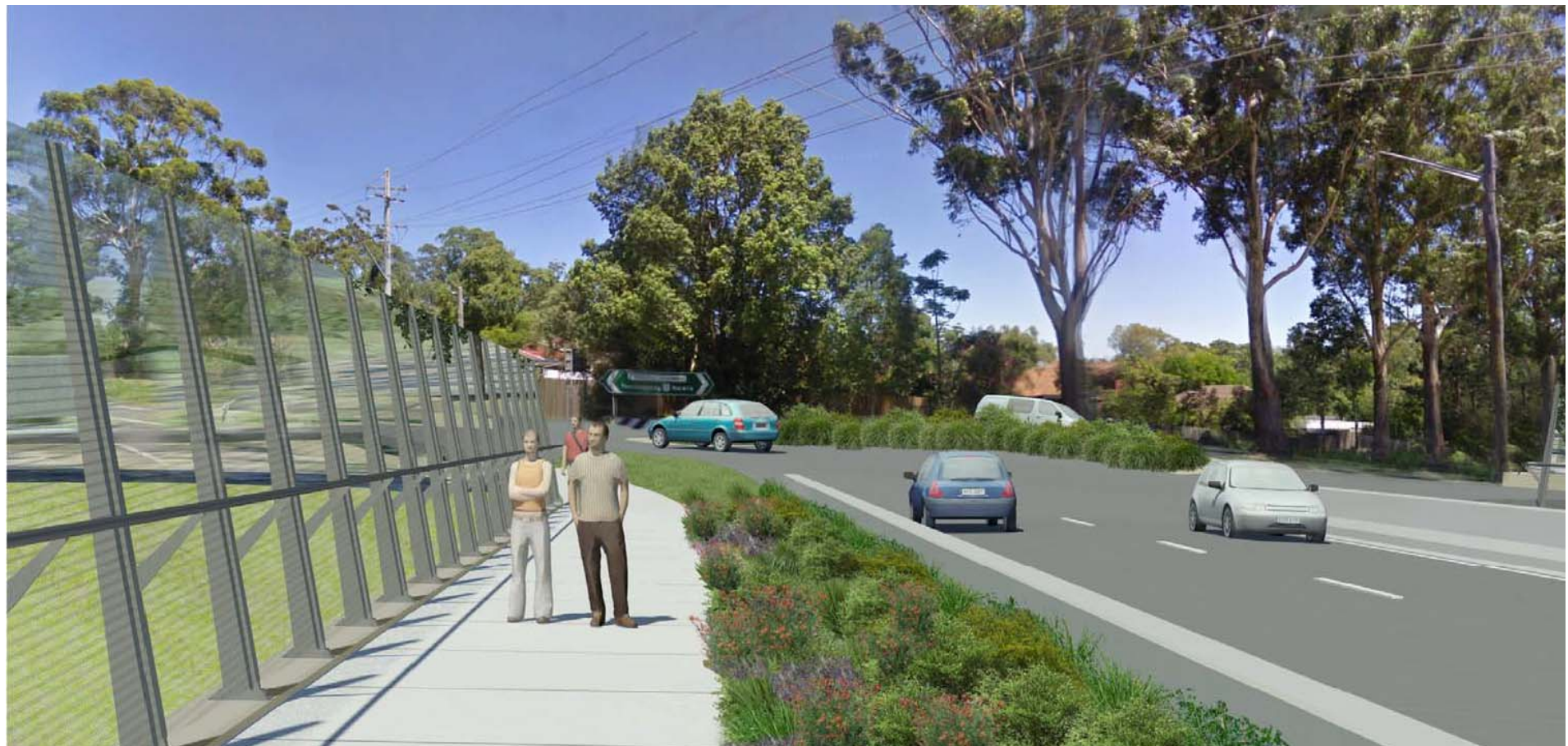
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Reviewing design at Huntingdale Park Road and Kangaroo Valley Road.



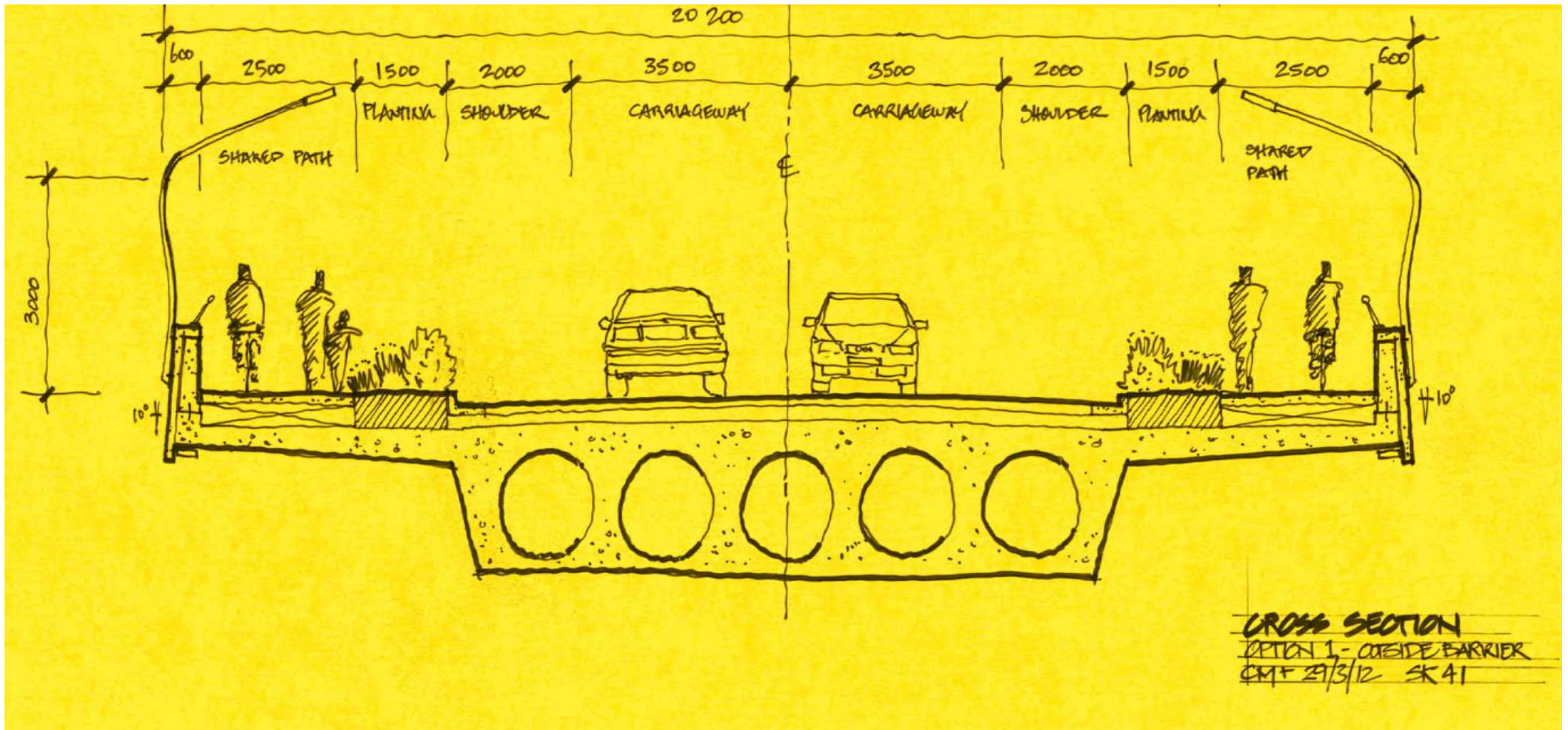
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Reviewing design at Huntingdale Park Road and Kangaroo Valley Road.



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Reviewing design at Huntingdale Park Road and Kangaroo Valley Road.



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Aurecon presentation

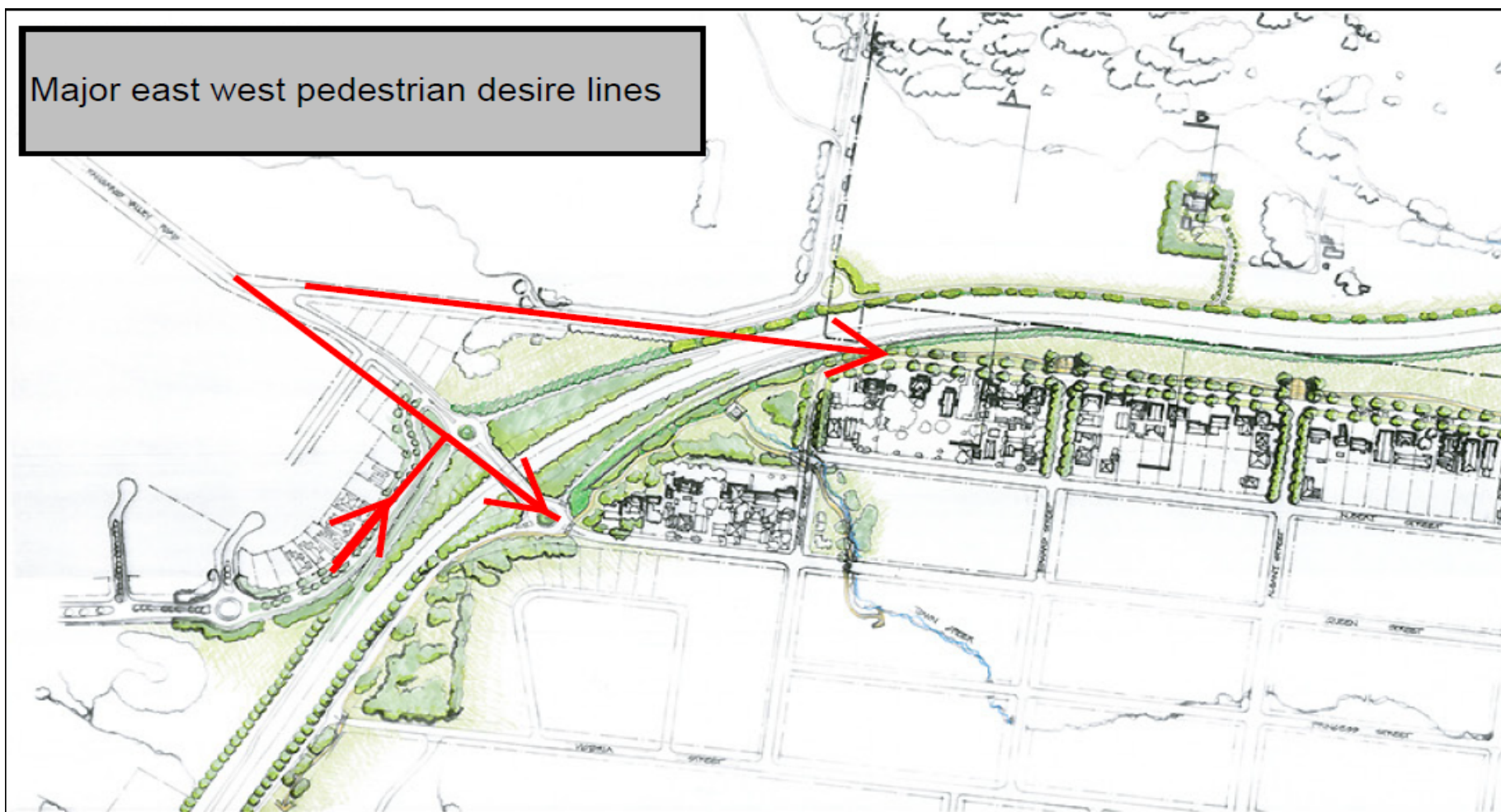


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Pedestrian bridge over North Street



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Pedestrian Bridge over North Street



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- Visual impact - given the strong community desire to reduce the visual impact of the Berry bridge and the overall alignment, and the strong changes that were made to achieve this last year....providing an additional large structure the bottom of which is 5.6 metres above the road surface, and that is four to five metres thick (3 metres of throw screen on top of 1-2 metre of bridge structure) seems to be strongly counter to the visual impact desire.
- Ramps and/or stairs would be significant structures.

Pedestrian bridge over North Street



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- There are a number of present and future pedestrian ‘desire lines’ – a pedestrian bridge on North Street works for one of them.
- People who want to go to Queen Street or the south of town from Huntingdale Park and the bottom end of Kangaroo Valley Road will walk over the Kangaroo Valley Road bridge because it’s there and will be shorter.

Distance difference..



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Other pedestrian bridges



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- There is previous experience of providing pedestrian bridges in response to community demands only to find that the bridge is significantly under used. Bulli Public School, Northern Distributor Woonona and Corrimal, F6 Kanahooka.
- Where underuse occurs, it is generally as a result of there being a number of competing and available pedestrian desire lines nearby and people choosing *not* to use a bridge that does not exactly meet their desire line.
- We know that in Berry we have other strong pedestrian desire lines. The experience elsewhere tells us many people will use the Kangaroo Valley Road bridge, even if we provide a pedestrian bridge at North Street, because it will better suit their needs.
- Pedestrian bridges can be well used – F6 at Wollongong University is a local example. But they are generally in areas of very high population density and where they exactly match a desire line and where there are no other available/competing desire lines.
- RMS believes that a safe, convenient pedestrian crossing of the highway can be achieved by widening the Kangaroo Valley Road bridge and incorporating pedestrian facilities.

Noise



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Legend

- Noise protection wall
- Design Alignment

LAeq(15Hour)

- 55 dB(A)
- 60 dB(A)



Legend

- Noise protection wall
- Design Alignment

LAeq(9Hour)

- 50 dB(A)
- 55 dB(A)

- The noise assessment for North Street shows that with a 4m noise structure/barrier/mound along the edge of the proposed road, Office of Environment and Heritage 'Road Noise Policy' goals are met for both day and night time noise requirements for all homes except three – one at North Street closest to the curve in the road, and two properties on the northern side of North Street.
- This means these properties may require additional treatment over and above the proposed noise wall.

Way forward discussion



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- Further considerations needed.
 - Incorporating into project environmental assessment.
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Thanks and close



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LCE

Pedestrian access – Huntingdale Park Road (Kangaroo Valley Road Bridge)



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