

Foxground and Berry bypass

Urban design and landscape workshop

28 October 2014

(This section has been intentionally left blank)

Workshop agenda



6.00 – 6.05pm	Welcome and introductions WHS Workshop format Agenda	Christine Marsden (Facilitator)
6.05 – 6.15pm	Introduction to project – where we've been and what next	Ron de Rooy (Roads and Maritime Services) Andrew McRae (Fulton Hogan)
6.15 – 6.35pm	Urban design – presentation	Nadira Yapa (Fulton Hogan)
6.35 – 6.50pm	Landscape design – presentation	Matthew Easton (Fulton Hogan)
6.50 – 7.00pm	North Street – future use of residual land parcels	Ron de Rooy
7.00 – 7.10pm	Break – tea and coffee	All
7.10 – 7.50pm	Table discussions	All
7.50 – 8.00pm	Wrap up and next steps	Facilitator Ron de Rooy and Andrew McRae
8.00pm	Thanks and close out	Facilitator

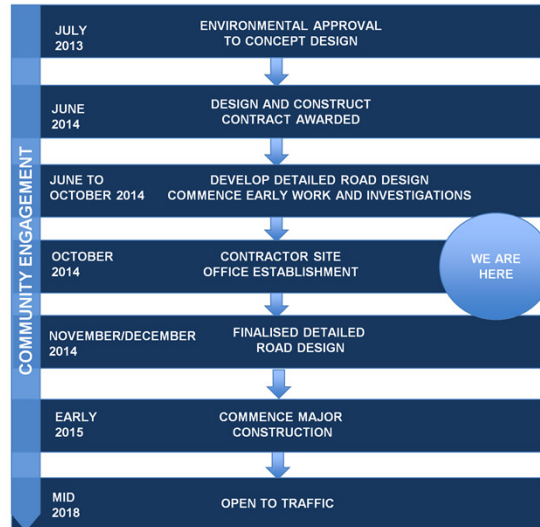
28 October 2014

- 2 -

every journey matters

- This workshop will consist of presentations by our urban design and landscape architects and designers and members of the project team from Roads and Maritime Services and Fulton Hogan.
- Following the presentations, we will have small discussion groups to gather your feedback. This will assist our team with finalising the urban design and landscaping on the bypass.
- During this workshop we will:
 - Establish what is and isn't negotiable in the final urban design and landscape elements.
 - Identify any concerns and issues.
 - Initiate discussion to review options and record preferences.
 - Discuss how these preferences may be incorporated into the final design and when the final design will be on display.
 - Discuss how additional input and feedback can be submitted following the workshop.
 - Discuss the future potential use of residual land on North and George streets.

The journey so far



28 October 2014

- 3 -

every journey matters

- In 2006 Roads and Maritime Services announced the Princes Highway upgrade between Gerringong and Bomaderry.
- Between 2007 and 2013 route options were displayed, a preferred option announced and community consultation was carried out to develop the concept design and environmental assessment.
- In June 2014 the design and construct contract was awarded to Fulton Hogan.
- Currently, the project's detailed road design is being refined.
- This workshop forms part of process to finalise the detailed road design.

Session 1 – Urban design

(This section has been intentionally left blank)

Urban designer's role

The urban designer's role on a major infrastructure project is to work with the design team to:

- Develop designs that integrate well with the existing natural and built surroundings.
- Provide a unified approach to the design of built elements.
- Consider the visual impacts of new structures.

(This section has been intentionally left blank)

Design approach

The urban design approach adopted for this project has considered several factors.



Several factors have influenced the urban design approach adopted for this project including:

- Community feedback received to date.
- Design responses to the rural farmland setting.
- Design responses to Berry township and its surrounds.
- Continuing the design approach adopted for the Gerringong upgrade.

Key urban design features

- Bridges, Berry interchanges, noise barriers.

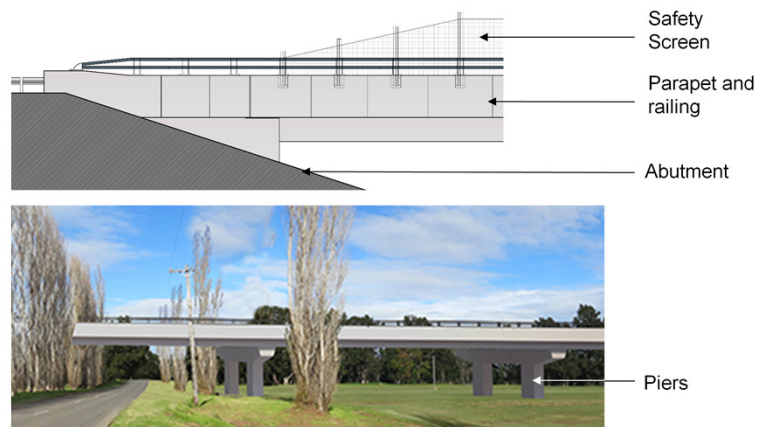


The key urban design features of the project are:

- Bridges.
- Berry interchanges.
- Noise barriers.

Bridge design

Several criteria influence the design of bridges.



The following criteria have influenced the design of bridges:

- Bridge type and its role on the project.
- Location of the bridge.
- Visibility and visual impact.
- Community submissions and past consultations.

Bridge types



There are four
bridge types on
the project.



There are four types of bridge on this project including:

- Bridges that span the highway to connect local roads.
- Bridges where the highway spans over creeks.

Bridge types



- Interchange bridges that provide access in to town.
- Bridges that cross local roads, service roads and property accesses.

Bridge at Berry – Environmental Assessment design



OPTION A – ORIGINAL PIER OPTION



OPTION B – FLOOD PLAIN/ EXPRESSED COURSING



OPTION C – CONTEMPORARY PORTAL FRAME



OPTION D – FLARED CAPITAL/ INTEGRATED HEADSTOCK

BERRY BRIDGE CONCEPT DESIGN 2013 – PIER DESIGN OPTIONS; EXTRACT FROM THE ENVIRONMENTAL ASSESSMENT

28 October 2014

- 11 -

every journey matters

Several bridge design options were presented to the community as part of the concept design in the Environmental Assessment (2013). These images are extracts from the Environmental Assessment document.

Following the Environmental Assessment, the detailed design process allows us to refine and improve the concept design.



28 October 2014

- 12 -

every journey matters

The current design for the bridge at Berry:

- Provides a 4.6 metre clearance over Woodhill Mountain Road, minimising visual impacts.
- Has moved the bridge about 95 metres away from Berry township as it crosses Woodhill Mountain Road, minimising noise and visual impacts to the town.
- Reduces impact on the local heritage listed Poplar trees.
- Has a reduced number of columns - two at each pier - creating greater opportunities for through views and minimising visual impact.
- Provides a slender bridge structure with clean elegant lines.



ALEXANDER AND DAVID BERRY MEMORIAL AS EXISTING

28 October 2014

- 13 -

every journey matters

- The Alexander and David Berry Memorial will be relocated north of its current position.
- The new location of the Memorial was determined in consultation with Shoalhaven City Council.
- This will be the northern gateway statement and will continue to be a visual identity marker for Berry.
- During construction the Alexander and David Berry Memorial will be temporarily relocated to allow construction in this area to occur.

Berry southern interchange



28 October 2014

- 14 -

BERRY SOUTHERN INTERCHANGE
every journey matters

- The Berry southern interchange maintains the Kangaroo Valley Road connection to town.
- It also provides flood free access into town for up to a one in 100 year flood event.
- This interchange will be the southern Berry gateway statement.

Berry southern interchange – Environmental Assessment design



KANGAROO VALLEY ROAD OVERBRIDGE CONCEPT DESIGN 2013 – VIEW LOOKING NORTH, EXTRACT FROM THE ENVIRONMENTAL ASSESSMENT

28 October 2014

- 15 -

every journey matters

This shows the design for the Berry southern interchange that was presented to the community as part of the concept design in the Environmental Assessment (2013). This image is an extract from that document.

Following the Environmental Assessment, the detailed design process allows us to refine and improve the concept design.

Berry southern interchange – current design



The current design for the Kangaroo Valley Road overbridge:

- Maintains no central column – the overbridge spans the full width of the road.
- Provides a potential for featured landscape on the approaches to the overbridge.
- Provides textured and coloured bridge abutments in a warm tone to soften the impact of the structure and blend better with the landscape.
- Replaces the narrow grassed median with a paved median, for improved maintenance safety. This is consistent with Gerringong upgrade and continues across the project.
- Provides a slender bridge structure with clean elegant lines.
- Is designed as an entrance statement to the township of Berry.
- Will also be a visual marker for the town to passing motorists.

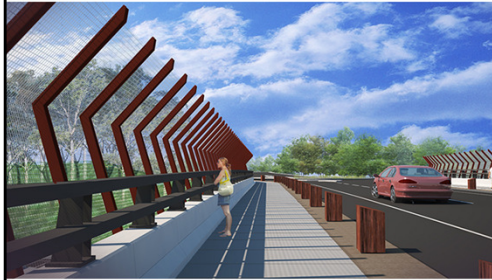
Berry southern interchange – design approach



In the 1810's, George William Evans, the Government Surveyor, reported on this area as a potential settlement based on the good stands of Red Cedar.

(This section has been intentionally left blank)

Berry southern interchange – current design



The current design for the Berry southern interchange provides:

- Safety screens that are designed as an artwork - a 'Forest of Red Cedars', reminiscent of the Red Cedar forests that were a feature of this area at the time of the founding of Berry.
- A colour that reflects the Alexander and David Berry Memorial, which is the northern town entry statement and visual marker.

Berry southern interchange – current design



- The planter boxes on the bridge, that was presented as an option to the community in the concept design in 2013, have been replaced with timber bollards.
- This will provide a wider footpath for pedestrians and cyclists and reduce the maintenance effort.

North Street noise barrier – Environmental Assessment design



28 October 2014

- 20 -

every journey matters

Three options for the North Street noise barrier were presented to the community as part of the concept design in the Environmental Assessment (2013). These images are extracts from that document.

Following the Environmental Assessment, the design process allows us to refine and improve the concept design.

North Street noise barrier – Environmental Assessment design



NOISE BARRIER AT NORTH STREET CONCEPT DESIGN 2013 – EXTRACT FROM THE ENVIRONMENTAL ASSESSMENT

28 October 2014

- 21 -

every journey matters

Option 1 that was presented in 2013 was a precast concrete wall. Community feedback was received about the noise wall will become the defining feature when approaching Berry.

North Street noise barrier – current design



28 October 2014

- 22 -

every journey matters

The current design for the North Street noise barrier:

- Provides a landscaped noise mound that alleviates concerns about a wall (a built element) being the defining feature on the approach to Berry.

North Street noise barrier – current design



NOISE BARRIER AT NORTH STREET CURRENT DESIGN – VIEW FROM NORTH STREET LOOKING WEST

28 October 2014

- 23 -

every journey matters

The current design for the North Street noise barrier:

- Maintains distant views to the escarpment from North Street by providing primarily low level planting and widely spaced groupings of trees.
- This is in response to feedback from the residents of North Street.



A precast concrete wall adjacent to Huntingdale Park Road was presented to the community as part of the concept design in the Environmental Assessment (2013). This image is an extract from that document.

Following the Environmental Assessment, the design process allows us to refine and improve the concept design.

Huntingdale Park Road noise barrier – current design



NOISE BARRIER AT HUNTINGDALE PARK ROAD CURRENT DESIGN – VIEW LOOKING NORTH

28 October 2014

- 25 -

every journey matters

The current design for the noise barrier adjacent to Huntingdale Park Road provides:

- A landscaped noise mound to alleviate concerns about a large 'wall' (a built element) being the defining feature on the approach to Berry.
- A low height rock wall (typical of rock walls in the area) will sit on top of the mound to complete the required noise protection.

End of session 1

(This section has been intentionally left blank)

Session 2 – Landscape design

(This section has been intentionally left blank)

Landscape architect's role



The Landscape Architect's role on a major infrastructure project is to:

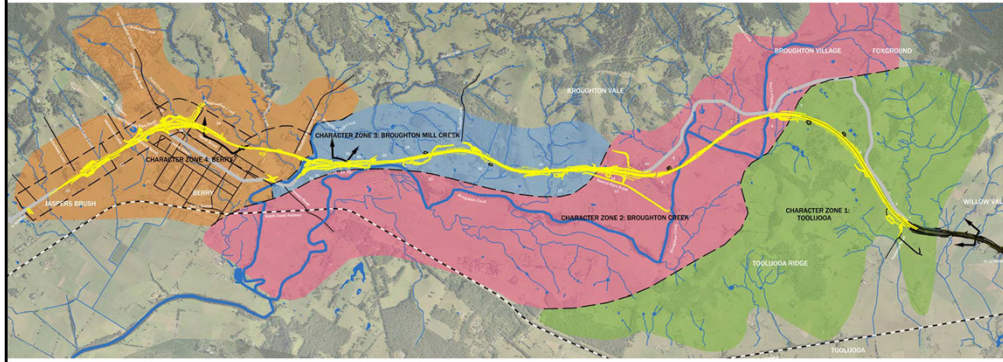
- Develop landscape planting and design.
- Provide input into design of fauna connectivity strategies.
- Design creek diversion treatments.
- Design integration of road corridor landforms.
- Develop visual mitigation strategies.

(This section has been intentionally left blank)

Landscape character zones

There are four landscape character zones along the bypass:

- Zone 1:  Toolijooa Ridge.
- Zone 2:  Broughton Creek.
- Zone 3:  Broughton Mill Creek.
- Zone 4:  Berry.



28 October 2014

- 29 -

every journey matters

The landscape character zones along the bypass include:

- Zone 1: Toolijooa Ridge is coloured green and is at the northern end of the corridor. It is the highest point of the corridor and its landscape is associated with the ridge.
- Zone 2: Broughton Creek is coloured pink. This landscape is associated with the valley of Broughton Creek and is dominated by wide open views.
- Zone 3: Broughton Mill Creek is coloured blue. This landscape is associated with the ridgeline that separates the Broughton Creek and Broughton Mill Creek valleys.
- Zone 4: Berry is coloured orange and reflects the cultural landscapes of Berry.

Vegetation and fauna corridor mapping

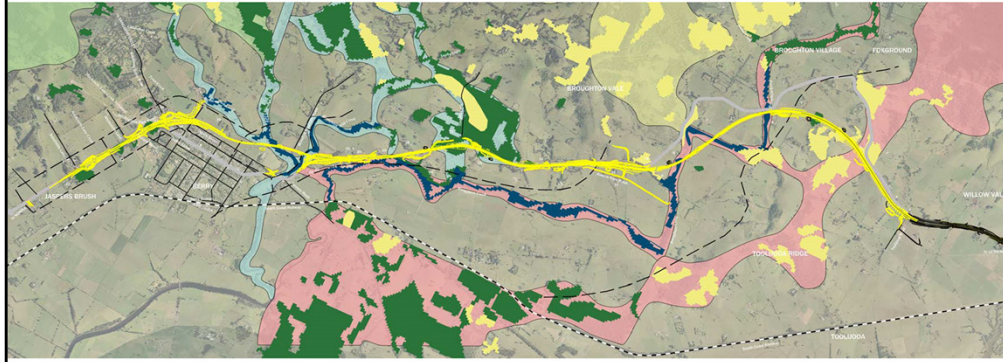
Flora and fauna have been mapped as follows:

Vegetation Communities:

- Warm Temperate Forest
- Riverbank Forest
- Illawarra Wet Gully Forest

Wildlife Corridors:

- Seven Mile Beach NP – Subregional
- Seven Mile Beach NP – Local
- Regional Unofficial



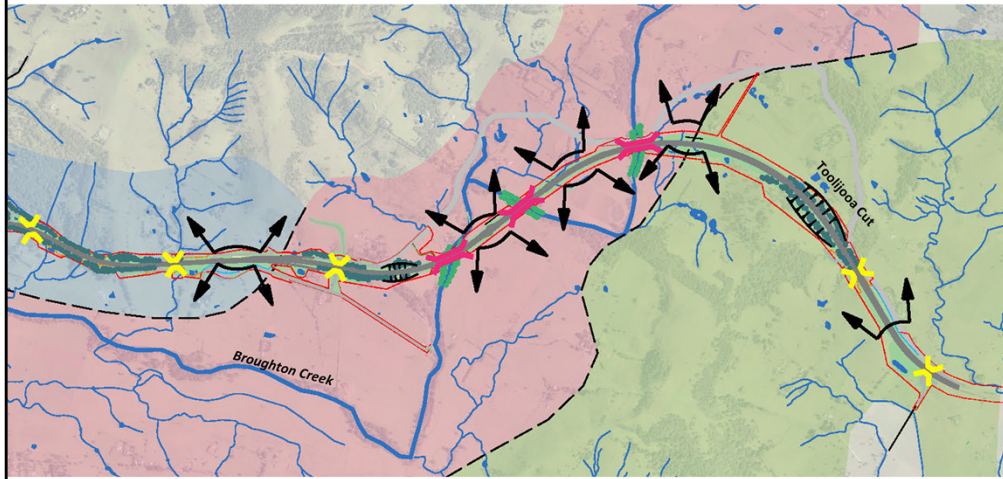
28 October 2014

- 30 -

every journey matters

The flora and fauna have been mapped as vegetation communities and wildlife corridors.

Northern section



28 October 2014

- 31 -

every journey matters

- The landscape strategy in the northern section of the bypass reflects the character zones of Toolijooa Ridge and Broughton Creek.
- Key screening and definition of the corridor is achieved in the form of Warm Temperate Forest community plantings and cuttings which limit the views through the Toolijooa cut.
- Once on the valley distant views across the floodplain are retained and framed by plantings.
- Creek crossings are to be highlighted by the Riverbank Forest community.

Landscape strategy - vegetation communities

Tree species – Warm Temperate Forest.



Acmena smithii
Lillypilly



Cryptocarya glaucescens
Jackwood



*Emmenospermum
alphaitonioides*
Yellow Ash



Eucalyptus saligna
Sydney Blue Gum



Eucalyptus quadrangulata
White-topped Box

- The Warm Temperate forest ecological community will be used throughout the project.
- Primarily this community will be used in the northern half of the corridor and in particular Toolijooa Ridge.

Landscape strategy - vegetation communities

Tree species – Riverbank Forest.



Casuarina cunninghamiana
She-oak



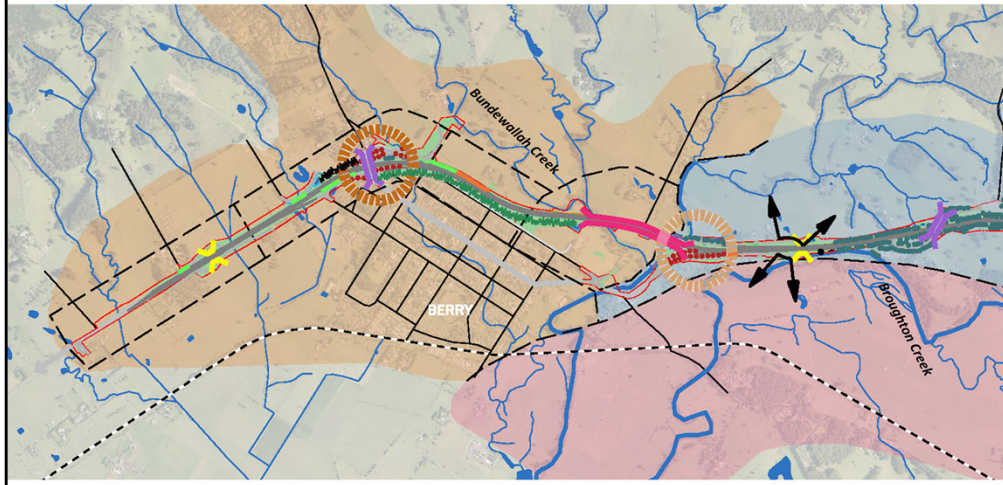
Melaleuca quinquenervia
Broad-leaved Paperbark



Melaleuca stypheloides
Prickly-leaved Paperbark

- The Riverbank Forest ecological community will be used on the floodplain adjoining creek lines.
- *Casuarina cunninghamiana* is the dominate tree of the area's creeklines and a clear marker for road users of the change in vegetation to Riverbank Forest.

Southern section



28 October 2014

- 34 -

every journey matters

The landscape strategy in the southern section of the bypass is associated with the:

- Ridge separating Broughton Mill Creek from Broughton Creek, dominated by the Illawarra Wet Gully Forest. This vegetation type will maintain the character of the ridge between the creeks.
- Berry character zone, typical of the edges of town. This vegetation character will be extended to the interchanges and the North Street noise mound to maintain the town identity.

Landscape strategy - vegetation communities

Tree species – Illawarra Wet Gully Forest.



Eucalyptus pilularis
Blackbutt



Eleocharpus kirtonii
Pigeon Berry Ash



Glochidion ferdinandi
Cheese Tree



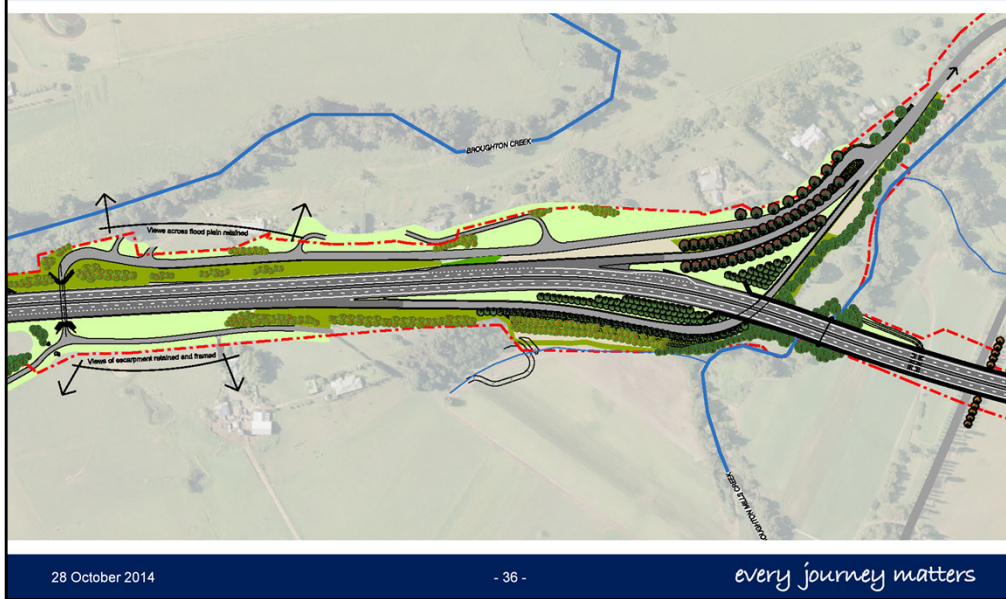
Pittosporum revolutum
Wild Yellow Jasmine



Polyscias elegans
Celery Wood

- The Illawarra Wet Gully Forest ecological community is located primarily within the central sections of the corridor in associated with the ridge between Broughton Creek and Broughton Mill Creek.

Berry northern interchange



Indicative landscape concept design for the Berry northern interchange. The key aspects of this design are:

- Consideration of visual definition to the exit to Berry by the use of suitable exotic plantings.
- Provision of native planting to reinforce the geometry of the alignment and mitigate the visual impact of the interchange on the hill side.

Option 1 – Native and Exotic Mix

Species:

- Native – Blackbutt and Forest Red Gum.
- Exotic – Sweet Gum.



Eucalyptus pilularis
Blackbutt



Eucalyptus tereticornis
Forest Red Gum



Liquidambar styraciflua
Sweet Gum

The landscape design for the Berry northern interchange has proposed two options to achieve the gateway nature of the landscape.

Option 1:

- Native Eucalypts provide the body of the planting and reinforce the geometry of the main alignment.
- Sweet Gums (Liquid Amber) as the deciduous tree, reflect the existing avenue which marks the entry into Berry.
- This option is preferred due to the existing plantings.

Berry northern interchange

Option 2 – Native and Exotic Mix

Species:

- Native – Blackbutt and Forest Red Gum.
- Exotic – Claret Ash.



Eucalyptus pilularis
Blackbutt



Eucalyptus tereticornis
Forest Red Gum



Fraxinus angustifolia 'Oxycarpa'
Claret Ash

An alternative option is:

- Option 2 also includes both a Native and Exotic Mix.
- Claret Ash is proposed in lieu of Sweet Gum.

Berry southern interchange



28 October 2014

- 39 -

every journey matters

Indicative landscape concept design for the Berry southern interchange. Like the northern interchange, the key aspects of this design are:

- Plantings at the Berry southern interchange reinforce the geometry of the alignment.
- Eucalypts combined with a feature tree planting to highlighting the exit from the highway and entry into Berry.

Berry southern interchange

Option 1 – Native and Exotic Mix

Species:

- Native – Blackbutt and Forest Red Gum.
- Exotic – Claret Ash and Chanticleer Pear.



Eucalyptus pilularis
Blackbutt



Eucalyptus tereticornis
Forest Red Gum



Fraxinus angustifolia 'Oxycarpa'
Claret Ash



Pyrus calleryana 'Chanticleer'
Chanticleer Pear

There are two options proposed for the landscape design for the southern interchange.

Option 1:

- Eucalypts continue the connection with the broader community.
- Exotic trees are used to provide a colour and textural contrast building on the concept developed as part of the Environmental Assessment.
- Claret Ash are proposed as the main tree lining the exit ramp.
- Chanticleer Pears are proposed on the western side of the interchange forming the connection to Kangaroo Valley Road.

Berry southern interchange

Option 2 – Native Mix

Species:

- Body – Blackbutt and Forest Red Gum.
- Avenues – Lilly Pilly and Yellow Ash



Eucalyptus pilularis
Blackbutt



Eucalyptus tereticornis
Forest Red Gum



Acmena smithii
Lilly Pilly



Emmenospermum alphaitonioides
Yellow Ash

An alternative option is:

Option 2:

- Eucalypts continue the connection with the broader community.
- Colour and texture is achieved through the use of the local rainforest species.
- Lilly Pillies and Yellow Ash are proposed as an alternating planting where the shape, colour and flower are all used to inform the driver of the changing environment.

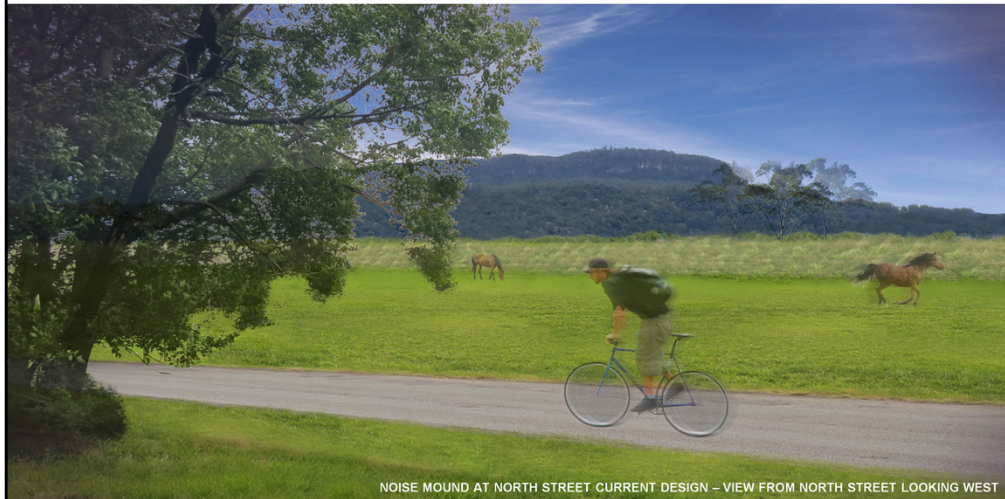
Toolijooa Ridge cutting



Strategies adopted to minimise visual impact of the Toolijooa Ridge cutting include:

- Offsetting near vertical cuttings in areas of strong rock.
- Cutting benches to provide smooth and flowing lines.
- Establishing vegetation at the top of the cutting to ensure integration with the adjacent landscape.
- Shrubs and small trees along the sides of the road at the base of the cutting.

North Street noise mound – current landscape design



NOISE MOUND AT NORTH STREET CURRENT DESIGN – VIEW FROM NORTH STREET LOOKING WEST

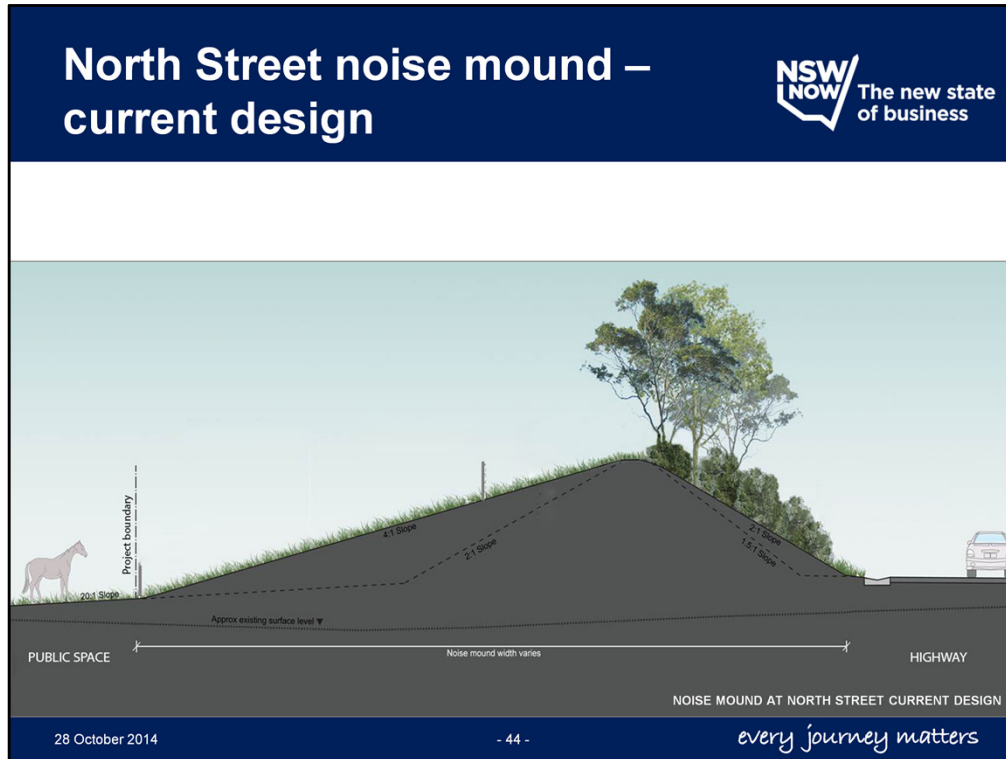
28 October 2014

- 43 -

every journey matters

The current landscape design for the North Street noise mound design:

- Maintains views to the escarpment.
- Provides a noise barrier that minimises visual intrusion.
- Reduces visual impact and enhances integration of the mound with plantings.
- Connects Kangaroo Valley interchange to the Oval by a shared path.



A landscaped noise mound is proposed between the bypass and North Street to:

- Reduce traffic noise.
- Conceal the bypass.
- Blend in with the adjoining landscape and retaining escarpment views.

North Street noise mound – plant species

Selected species



Clematis microphylla
Small-leaved Clematis



Clematis aristata
Traveller's Joy



Cissus antarctica
Kangaroo Vine



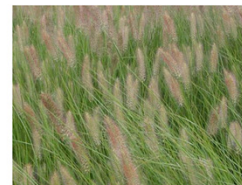
Alternanthera dentata
Little Ruby



Hardenbergia violacea
Hardenbergia



Poa poliformis
Poa Kingsdale



Pennisetum alopecuroides
Pennisetum Nafray

The species selected along the North Street noise mound will:

- Minimise the impact of plantings on views of the escarpment.
- Avoid obstruction of views to signage located along the mound.
- Provide seasonal changes in colour and texture indicating motorists are passing Berry.

North Street noise mound – fencing



28 October 2014

- 46 -

every journey matters

- Secure fencing will be installed along the North street noise mound to separate pedestrians from highway traffic.
- The current design is for a 1.8 metre high chain wire fence.
- To reduce the visual impact the chain wire and fence posts could be painted black.
- This slide shows an example of fauna fence being painted back.

End of session 2

(This section has been intentionally left blank)

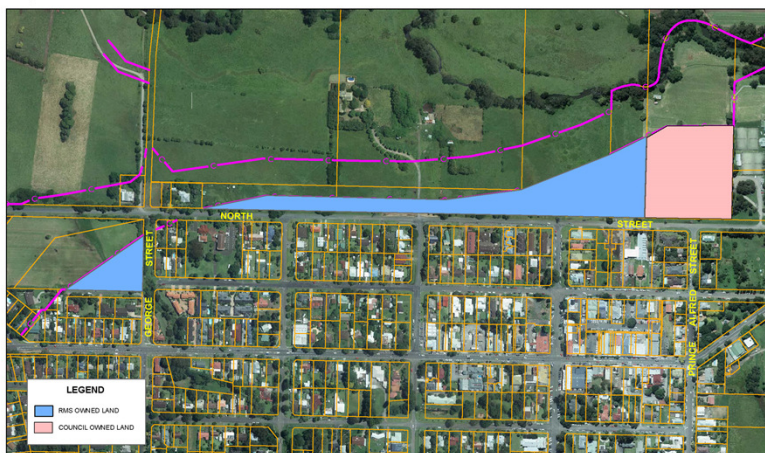
Session 3 – Potential use for North and George street residual land

(This section has been intentionally left blank)

Berry residual land parcels



Public land adjacent to North Street, Berry



28 October 2014

- 49 -

every journey matters

There are parcels of residual land along North and George streets:

- Pink area – Owned by Shoalhaven City Council.
- Blue areas – Owned by Road and Maritime Services.

The pink area will remain council owned.

The blue areas will be dedicated to be under the control of Shoalhaven City Council under Section 159 of the Roads Act.

There is an opportunity for the community to contribute to a strategy on the future use of this land.

North Street residual land – possible options



Possible uses of the residual land at North Street:

- Example of a community garden.

North Street residual land – possible options



Possible uses of the residual land at North Street:

- Example of a display garden.

North Street residual land – possible options



Possible uses of the residual land at North Street:

- Indicative picture of land agistment.

North Street residual land – Berry Rotary Club proposal



Berry Adventure Playground
Vision Concept

- Possible uses of the residual land at North Street may include an adventure playground.
- Berry Rotary Club have developed a concept design of an adventure playground.

George Street residual land – concept design



- The possible uses for the residual land on George Street include a display garden or plantings similar to Mark Radium Park.

End of session 3

(This section has been intentionally left blank)

Session 4 - Group discussions

(This section has been intentionally left blank)

Facilitated group discussions



The following are the areas of the urban and landscape design that we would like you to provide feedback on:

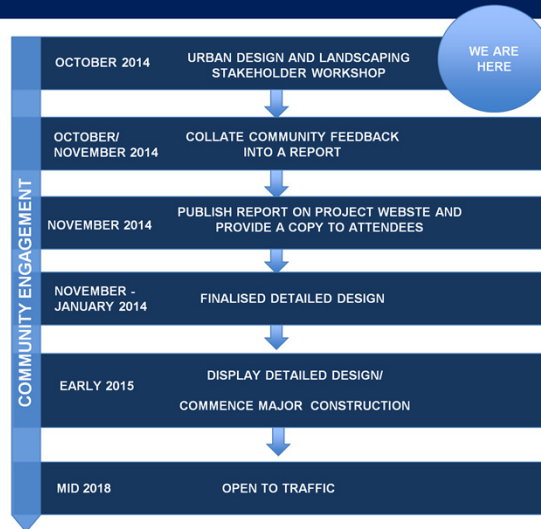
- Urban design (eg. the pedestrian facilities on Kangaroo Valley Road interchange).
- Landscape design (e.g Species selection and arrangements at the interchanges and Toolijooa Ridge).
- Planning for the future use of Roads and Maritime Services and council owned residual land.

(This section has been intentionally left blank)

Break for tea and coffee

(This section has been intentionally left blank)

Next steps



(This section has been intentionally left blank)

For further information



- Tel: 1800 506 976 (free call) press 2
- Email: foxgroundandberrybypass@fultonhogan.com.au
- Web : www.rms.nsw.gov.au/fbb
- Visit: Berry project office. Shop 3/113 (Broughton Court) Queen Street, Berry.
Open Fridays between 10am and 5pm

(This section has been intentionally left blank)