



## 04 Landscape and Urban Design Strategy

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### 4.1 Introduction

The overall project objective is to achieve an upgraded highway that is:

- \_Interesting and stimulating
- \_An enjoyable and memorable experience for drivers
- \_A safe and comfortable journey

The completed project should to celebrate each special landscape character and setting through which it passes while providing minimal impact on that setting. Key project objectives and design principles are already outlined in existing RMS strategy documentation to ensure a positive project outcome is achieved. These are documented in *Beyond the Pavement* (RTA, 2009) and *Pacific Highway Urban Design Framework* (RTA, 2005).

A summary of these overall project objectives is provided in Section 4.2.



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### 4.2 Project objectives

Generally, RMS requires that new road projects achieve the following objectives:

- \_New road projects, and the networks of which they are a part, that fit sensitively with the landform and the built, natural and community environments through which they pass
- \_Road planning and design that contributes to the accessibility and connectivity of communities and a general permeability of movement through affected areas
- \_Design and management of roads that contributes to the overall quality of the public domain for the community, including road users.

Nine additional general road project objectives specifically noted in *Beyond The Pavement*, (RTA, 2009), and relevant to the proposed project, include that new road projects should:

- \_Contribute to urban structure and revitalisation.
- \_Fit into the built fabric.
- \_Connect modes and communities.
- \_Fit with the landform.
- \_Incorporate heritage and cultural contexts.
- \_Design roads as an experience in movement.
- \_Create self explaining road environments.
- \_Create an integrated and low maintenance design.

Specific objectives for all Pacific Highway upgrades are identified in the *Pacific Highway Urban Design Framework* (RTA, 2005). In this document a vision of the Pacific Highway upgrade is defined as:

**“.....a sweeping green highway providing panoramic views to the Great Dividing Range and for forests, farmland and coastline of the Pacific Ocean; sensitively designed to fit into the landscape and be unobtrusive; and characterised by simple and refined road structure.”** (p24)

Specific objectives include that all Pacific Highway upgrade projects should:

- \_Provide a flowing road alignment that is responsive and integrated with the landscape
- \_Provide a well vegetated, natural road reserve
- \_Provide an enjoyable, interesting highway
- \_Value the communities and towns along the road
- \_Provide consistency-with-variety in road elements
- \_Provide a simplified and unobtrusive road design

The above vision and objectives are incorporated into the concept design and mitigation strategies recommended for the project.



#### Fit with the landform\_

Bonville upgrade: Extra wide medians and independent grading allows the retention of existing woodland providing best fit into the landscape, mitigates headlight glare issues and provides better opportunities for wildlife crossing.

RMS image.



#### Fit with the landform\_

The fauna overpass for the Bonville upgrade of the Pacific Highway connects both sides of the forest via a wide land bridge. It also provides an attractive, interesting landmark (Northern Region).

RMS Beyond the pavement image.



#### Respond to natural pattern\_

The freeway is located in the flatter land, avoiding the ecologically sensitive ridges and woodlands.

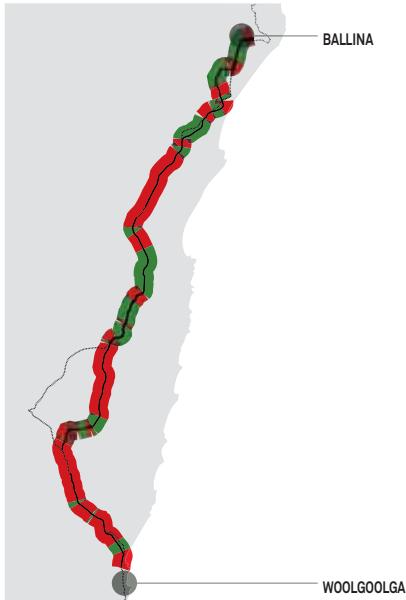
RMS image.

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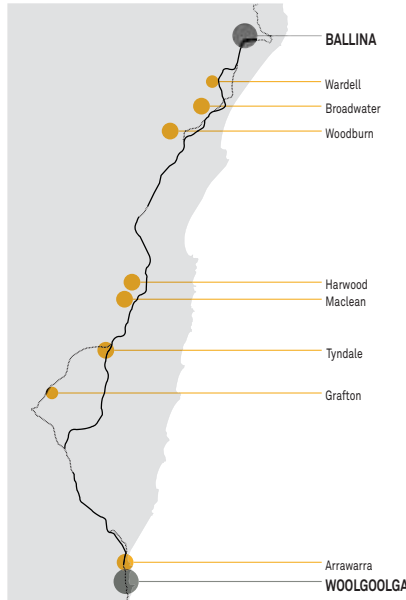
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### 4.3 Key landscape/urban design principles

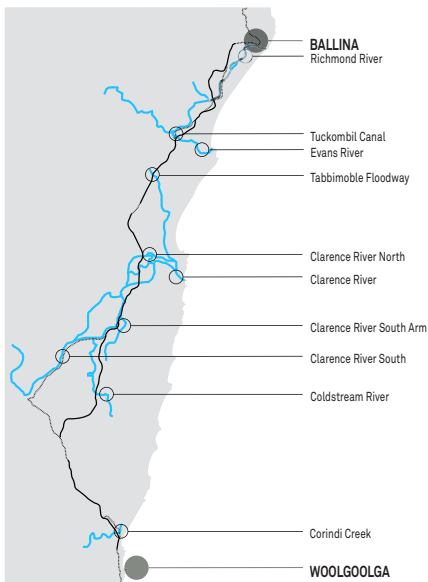
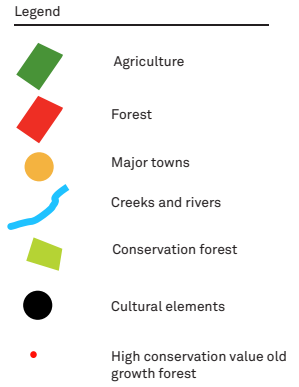
Four key landscape and urban design principles underpin the formulation of the landscape and urban concept design strategy for the Woolgoolga to Ballina project. These are summarised in the diagrams below.



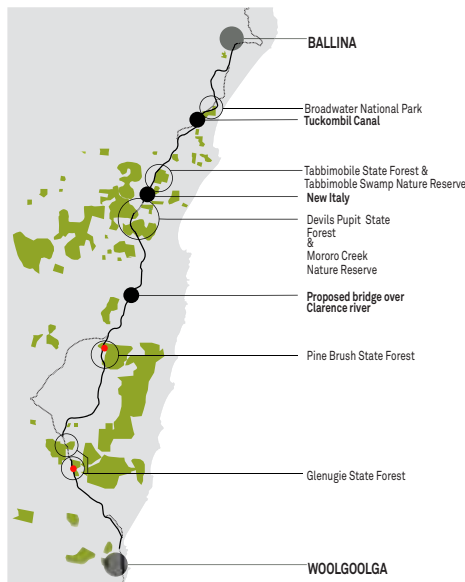
Principle 1: Retain the strong contrasting experience of driving through forest and open agricultural land as a feature of the Pacific Highway experience.



Principle 2: Acknowledging and celebrate the small and medium sized coastal towns that mark progress along the coastal Pacific Highway journey.



Principle 3: Highlight and celebrate the numerous minor and major creek and river crossings that punctuate the Pacific Highway journey over the coastal floodplains.



Principle 4: Acknowledge and preserve the natural and cultural landscapes and landmarks identified along the full length of the Pacific Highway journey.

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### 4.4 Detailed landscape/urban design strategies

#### 4.4.1 General

Typical detailed design strategies that should be adopted for the length of the project are provided:

- \_Typically, for each landscape type along the project alignment and,
- \_Specifically, for each of the 11 project sections of the project to specifically address the conditions of each section.

These are outlined as follows and they are incorporated in the concept design and recommended mitigation strategies for the project.

#### *Typical landscape strategies for each landscape type:*

#### **Built environment, landscape character and land use**

- \_Highlight major towns on-route with distinctive landscape treatments
- \_Highlight creek and river crossings

#### **Views**

- \_Ensure open or filtered views to pastureland are retained
- \_Provide screen planting on batters to specifically mitigate the visual impact of the project to adjacent residences

#### **Ecology**

- \_Reinstate disturbed areas of riparian vegetation where possible and comply with core riparian zone requirements
- \_Maximise riparian vegetation under creek crossings to encourage fauna connectivity along creek lines
- \_Use local and endemic species on batters to complement existing vegetation patterns and reduce the visual impact of earthworks. This is particularly important for disturbed areas on prominent ridge lines.
- \_Adhere also to ecological requirements outlined in specialist reporting

#### **Landscape treatment**

- \_Install large size plant stock at interchanges and near townships to maximise impact and mitigation at project outset
- \_Lay back the top batter of cuttings and tie back into the existing landform  
Revegetate the top of the profile to blend with the existing landscape
- \_Where competent rock is encountered, steepen batter grades (1V:0.25H) and expose rock faces
- \_Avoid use of shotcrete at all cutting locations. If shotcrete is to be used at cutting locations then any treatments and pigmentation must blend with the surrounding vegetation and rock setting
- \_Provide frangible planting within clear zones
- \_Where possible reinstate agricultural land uses
- \_Provide functional and safe rest areas with high landscape amenity
- \_Provide planting in the medians to reduce headlight glare

#### **Built elements**

- \_Minimising both the use and scale of noise walls and ensuring they are recessive in the landscape, or transparent, where they are required
- \_Minimise the road furniture that is required in the project and ensure that road furniture proposed is an integrated and cohesive set of elements
- \_All materials and finishes of the built infrastructure are to be of high quality for durability and appearance



Landscape planting to match the surrounding planting types.

*RTA Image*



Where the project passes through dense tree planting, new dense planting is to be reinstated to retain a closed driving experience.

*HASSELL image*



Where landscape allows, distant views are to be maintained.

*HASSELL Image*

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### Specific landscape strategies for each project section (1-11):

#### 4.4.2\_ Section 1 Woolgoolga to Halfway Creek

- \_ Provide substantial re vegetation along both sides of the highway between Arrawarra and Corindi Beach to maintain a closed driving experience where the project travels through local forest/woodland vegetation
- \_ Provide screen planting to nearby residents at the Kangaroo Trail Road over bridge
- \_ Retain open views across the Corindi Creek floodplain
- \_ Retain and protect existing woodland tree vegetation contained in the median (where widened) and between service roads at the Corindi Road access and the interchange at Range Road. Supplement this planting if necessary
- \_ Retain filtered views of the pockets of pastureland within the forest north of the Dirty Creek Range
- \_ Provide local screening with dense shrub vegetation at properties in close proximity (foreground) at the Dirty Creek Range



Where possible existing agricultural practices are to be reinstated on adjacent project land areas.

HASSELL image

#### 4.4.3\_ Section 2 Halfway Creek to Glenugie upgrade

- \_ Re vegetate cuttings and embankments with local species, particularly through the Newfoundland and Glenugie state forests. Provide an enclosed driving experience through these locations
- \_ Maintain occasional open view across pastureland near Wells Crossing. Revegetate batters with pasture grasses and scattered trees to retain local character and existing views
- \_ Maximise woodland planting between the project and the property access to the north of Lemon Tree Road
- \_ Maximise woodland planting between the project and the existing highway, particularly near Wells Crossing and the Glenugie state forest
- \_ Retain and protect existing woodland vegetation in the widened median at Wells Crossing. Augment this vegetation as necessary to mimic the natural vegetation complement at this location



Plant species selection is to match existing ecosystems along the project.

HASSELL Image

#### 4.4.4\_ Section 3 Glenugie upgrade to Tyndale (south)

- \_ Maintain open forest character around Grafton airport
- \_ Maintain existing views to the Pillar Valley foothills
- \_ Where the road is located in dense forest reintroduce tree and forest vegetation to emphasis the enclosed driving experience, specifically within the Glenugie and Pine Brush state forests and within woodland areas east of Tucabia
- \_ Maximise woodland planting between local roads and the project, specifically around Old Six Mile, Avenue, Wooli and Firth Heinz roads and Wants and Bensons lanes
- \_ At bridges over rivers, creeks and gullies (specifically the Coldstream River Pheasant, Pillar Valley, Black Snake, Chaffin and Champion creek, crossings) provide sufficient vegetation to reinstate riparian corridor while enabling views of the local topography
- \_ Minimise the visual impact of deep cut batters on Bondi Hill at Tyndale. Provide dense local tree, shrub and ground cover planting to the upper laid back batter in accordance with the concept design. Where competent rock is encountered steepen the lower batters to 1(V):0.25(H) and expose the natural rock surface



At key locations on the highway, landscape interventions in the existing landscape character are to increase driver awareness of decision points. An example includes cultural tree planting at town entries.

HASSELL Image

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### 4.4.5\_ Section 4 Tyndale to Maclean

- \_ Retain existing tree vegetation between the existing highway and the project north of Tyndale
- \_ Provide intermittent tall roadside planting within the agricultural floodplains of Shark Creek and the Clarence River. Retain views across the floodplains towards Green Hill, Woodford Island Ridge and Shark Creek Range
- \_ Extend vegetation along the southern side of the highway, as the highway travels east across the floodplain from Tyndale. Vegetation to act as visual buffer for nearby residents
- \_ At Green Hill, provide frangible shrub and grass planting on cut and fill embankments to integrate with the pastoral surrounding landscape. Round off cut batters to increase natural appearance. Reinstate forest in disturbed areas with local woodland species
- \_ Reinstate riparian vegetation to bridge approaches and disturbed area near Shark Creek. Ensure bridge design allows for view both up and downstream
- \_ Provide intermittent screen planting on embankments to diminish visibility of the project for residents in Gulmarrad and other nearby properties
- \_ Retain cultural tree planting (eg fig, Poinciana, Hoop Pine) within the floodplain around Green Hill, Maclean and Townsend where possible
- \_ Create a sense of arrival to the township of Maclean. Plant distinctive street trees along Cameron Street as an entry road into Maclean
- \_ Provide vegetation as screening around the interchange at Maclean
- \_ Provide signage at the entry to Maclean to further reinforce your arrival to the township



Riparian vegetation is to be reinstated to creek, river and drainage crossings.



Frangible median vegetation will reduce headlight glare.

*HASSELL Image*

### 4.4.6\_ Section 5 Maclean to Iluka Road, Mororo

- \_ Re vegetate batters and any other disturbed areas with local forest species along the interface with the Yaegl Nature Reserve in accordance with the concept plan
- \_ Reinstate park landscape to the landscape areas adjacent the bridge approaches south of the Clarence River
- \_ Reinstate agricultural land uses adjacent the project in the Clarence River floodplain
- \_ Limit roadside planting within the Clarence River floodplain, unless otherwise noted (such as the Clarence River bridge approach). Retain existing open views
- \_ Provide a sense of arrival to Harwood on the approach from the south and the north. Develop avenue street tree planting using landmark tree species in accordance with the proposed landscape design. Configure batters, soil profiles, drainage and barrier designs to accommodate tree planting at the top of batters
- \_ Use tree planting to screen the bridge abutments and undercroft spaces in accordance with the concept design at the bridge crossing over the Clarence River
- \_ Minimise the need for and, if necessary, mitigate the visual impact of acoustic walls on the bridge over the Clarence River and in Harwood. Use transparent structures that are carefully integrated with the bridge design
- \_ Provide planting to detail design around the interchange at Harwood
- \_ Provide tree planting on local approaches to major overpasses, specifically at Chatsworth Road and Carrolls Lane
- \_ Provide new amenity street tree planting along the existing highway, at Harwood adjacent the new bridge
- \_ Bridges at Clarence River North Arm are to allow views to the surrounding landscape

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### 4.4.7\_ Section 6 Iluka Road to Devils Pulpit upgrade

- \_Heavily vegetate the interchange at Iluka Road using local species
- \_Supplement the existing forest character with additional forest tree planting to reinforce the closed driving experience through the Bundjalung National Park and Mororo State Forest
- \_Ensure occasional pasture views are retained in areas between Bunjalung National Park and Mororo State Forest
- \_Provide detailed landscape treatment at New Italy that fully considers the tourist visitation and heritage requirements in accordance with a future detailed landscape design plan

### 4.4.8\_ Section 7 Devils Pulpit update to Trustums Hill

- \_Plant batters with local forest trees to reinforce the existing forest area character and closed driving experience through the Devils Pulpit State Forest and Bundjalung National Park, the Tabbimoble State Park, the Tabbimoble Nature Reserve and Doubleduke State Forest
- \_Reinforce Tabbimoble floodway crossings with riparian and wetland planting species to match existing

### 4.4.9\_ Section 8 Trustums Hill to Broadwater National Park

- \_Provide intermittent screen planting on batters to allow filtered views to Woodburn and to provide screening of the project for adjacent residences
- \_Use local species for all batter planting especially in the vicinity of Broadwater National Park

### 4.4.10\_ Section 9 Broadwater National Park to Richmond River

- \_Plant batters in the Broadwater National Park area using local species to extend the existing heath vegetation to the edge of the project
- \_Provide intermittent screen planting on batters to allow filtered views to Broadwater and to provide screening of the project for adjacent residences
- \_Plant batters around the interchange at Broadwater and adjacent woodland areas with local woodland species
- \_Reinstate any disturbed areas of dense vegetation around Cooks Hill and ensure a clear change of landscape is maintained (from closed views to open views) at the start of the cane fields north of Broadwater
- \_Landscape treatment on the southern approach to the Richmond River Bridge seeks to highlight and maximise views to the dominant agricultural landscape
- \_Recommend batter removal, replace with bridge structure on the agricultural floodplain immediately south of the Richmond River bridge crossing

### 4.4.11\_ Section 10 Richmond River to Coolgardie Road

- \_Emphasise the change in landscape character between forest and floodplain to the south and west of Wardell
- \_Maintain views to the Blackwall Range where possible
- \_Provide intermittent screen planting on batters to allow filtered views to the landscape and to provide screening of the project for adjacent residences, particularly to the north and west of Wardell
- \_Reshape major cut batters near to Wardell road to blend with surrounding landscape



The ephemeral character from the seasonal change of sugarcane plantations typify certain sections of the journey. This is to be retained.  
*HASSELL Image*



Bridge designs are to be simple with a dominant superstructure.  
*RTA Image*



Existing Harwood Bridge to be retained as a significant place marker along the journey.  
*HASSELL image*



## **04\_\_\_\_\_ Landscape and Urban Design Strategy**

### **4.4.12\_ Section 11 Coolgardie Road to Ballina Bypass**

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- \_Retain existing forest vegetation wherever possible and plant local forest trees to batters and between service and access roads at the proposed interchange at Coolgardie
- \_Planting designs near Coolgardie and Pimlico are to ensure views to the Blackwall Range are maintained
- \_Provide intermittent screen planting on batters north of Whytes Lane to allow filtered views to across the floodplain and to provide screening of the project for adjacent residences. Maintain long distance views from the project where possible

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### 4.5\_ Urban and Landscape Concept Design

The following section depicts the urban and landscape concept design strategy in a comprehensive series of design drawings as follows:

- \_Overall Landscape Strategy of the full length of the project at 1:20,000 scale (refer drawings LA01-LA36 inclusive, section 4.5.1)
- \_Detailed Landscape Strategy plans showing key new structures at 1:5,000 (refer drawings LA101-LA119 inclusive, section 4.5.2)
- \_Project cross sections (refer pages 277-282 inclusive, section 4.5.3)
- \_Detail design plans/sections showing typical landscape treatments (refer pages 284-301 inclusive, section 4.5.4)

A detailed list of plans/sections precedes each set of drawings.

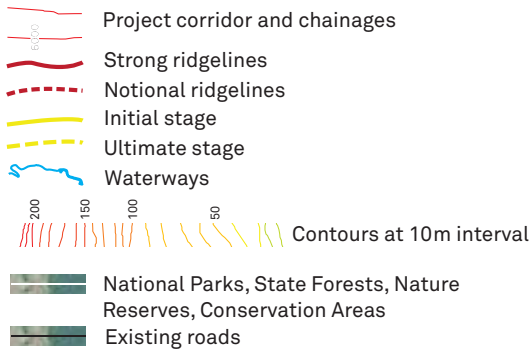
In all cases the concept design strategy depicts the proposed interim option as the most likely initial build option. All of the plans also show the indicative alignment and configuration of the ultimate (full class M design) option for which planning approval is sought. It is understood that detail landscape and urban design solutions would be sought for the ultimate (full class M) design when and if the work is undertaken.

#### 4.5.1\_ General Area Plans (Scale 1:20,000)

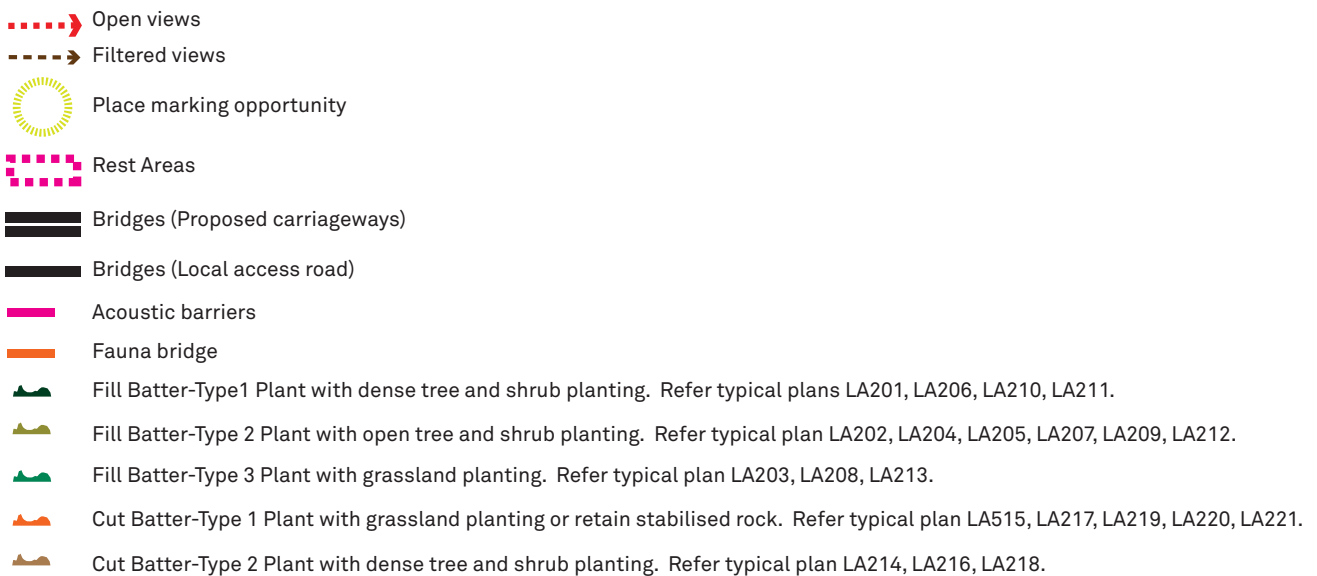
LA 01_ CH 0-4000	Arrawarra and Corindi Beach
LA 02_ CH 4000-9000	Corindi
LA 03_ CH 9000-14000	Dirty Creek Range
LA 04_ CH 14000-19000	Halfway Creek
LA 05_ CH 19000-24000	Wells Crossing
LA 06_ CH 24000-29000	Glenugie State Forest
LA 07_ CH 29000-34000	Glenugie
LA 08_ CH 34000-38000	Eight Mile Lane
LA 09_ CH 38000-42000	Grafton Airport
LA 10_ CH 42000-46000	Coldstream River
LA 11_ CH 46000-51000	Pillar Valley
LA 12_ CH 51000-55000	Tucabia
LA 13_ CH 55000-60000	Upper Coldstream
LA 14_ CH 60000-64000	Pine Brush State Forest
LA 15_ CH 65000-69000	Tyndale and Bondi Hill
LA 16_ CH 69000-72000	South Arm
LA 17_ CH 72000-77000	Shark Creek and Green Hill
LA 18_ CH 77000-82000	Gulmarrad, Maclean and Townsend
LA 19_ CH 82000-88000	Harwood
LA 20_ CH 88000-92000	Serpentine Channel
LA 21_ CH 92000-97000	Iluka Road
LA 22_ CH 97000-102000	Mororo
LA 23_ CH 102000-107000	Bundjalung National Park
LA 24_ CH 107000-113000	Tabbimoble State Forest
LA 25_ CH 113000-118000	Tabbimoble State Forest
LA 26_ CH 118000-123000	New Italy
LA 27_ CH 123000-128000	Trustums Hill
LA 28_ CH 128000-133000	Woodburn
LA 29_ CH 133000-138000	Broadwater National Park
LA 30_ CH 138000-143000	Broadwater (South)
LA 31_ CH 143000-147000	Broadwater (North) and Richmond River
LA 32_ CH 147000-151000	Richmond River Rest Area
LA 33_ CH 151000-155000	Wardell Road
LA 34_ CH 155000-160000	Coolgardie
LA 35_ CH 160000-165000	Pimlico
LA 36_ CH 165000	Ballina Bypass Upgrade

## Legend

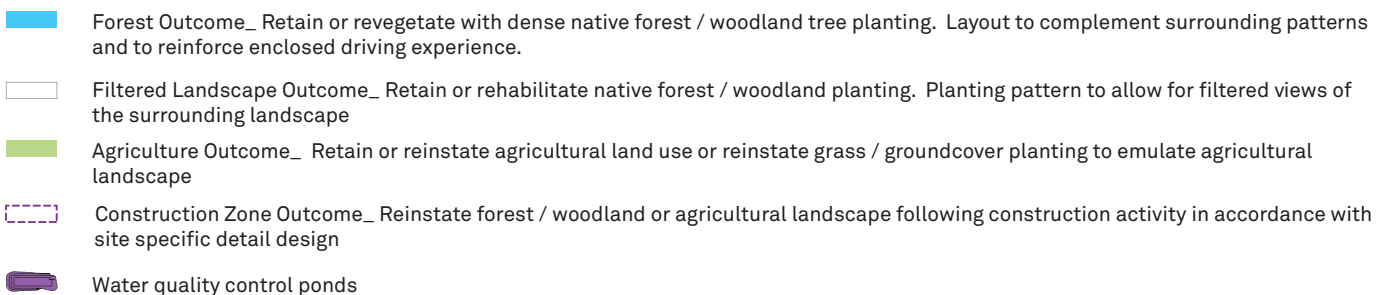
Note: The following legend is to be read in conjunction with the landscape strategy plans LA01 - LA35

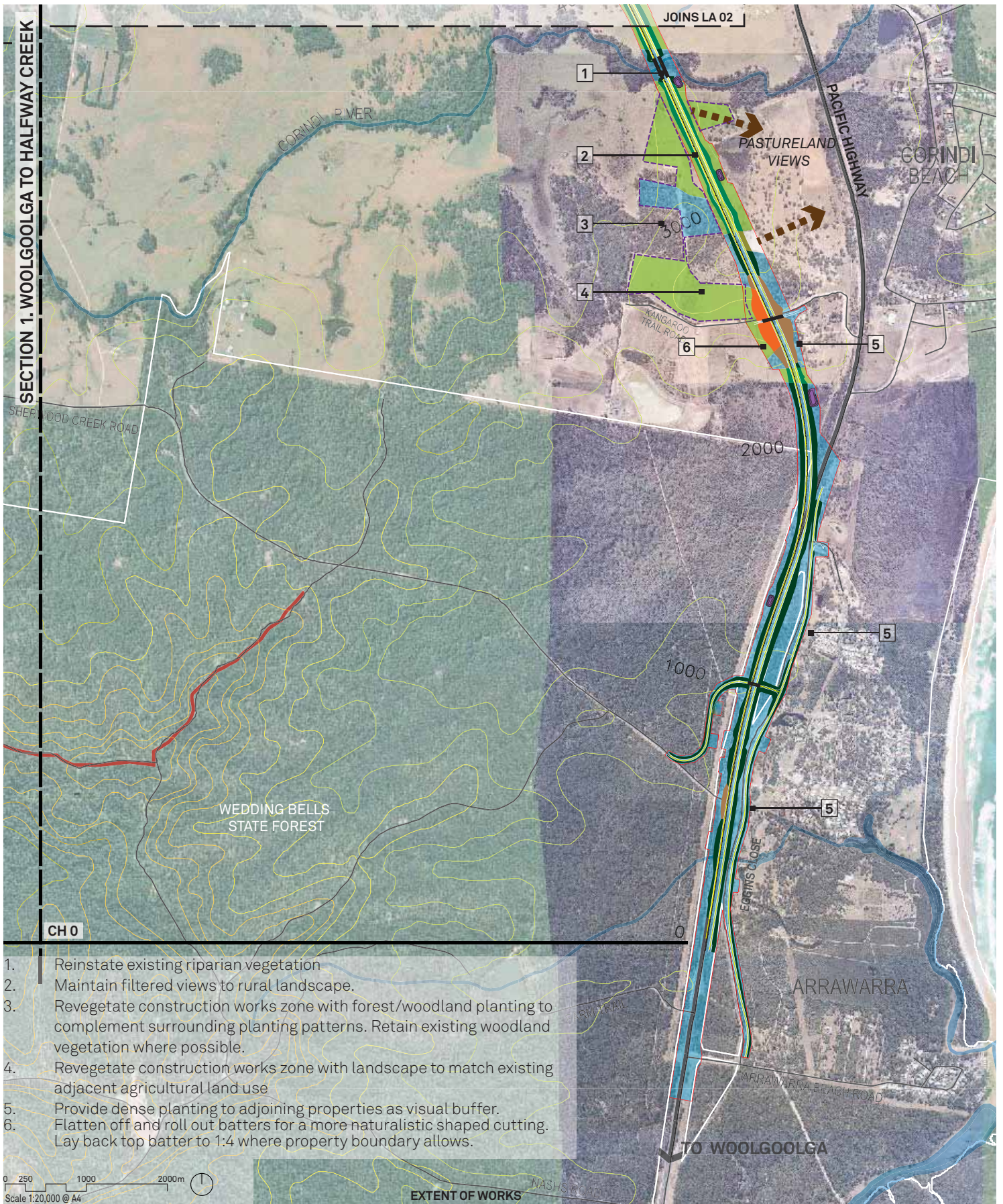


## Landscape Strategy



## Revegetation





1. Reinstate existing riparian vegetation
2. Maintain filtered views to rural landscape.
3. Revegetate construction works zone with forest/woodland planting to complement surrounding planting patterns. Retain existing woodland vegetation where possible.
4. Revegetate construction works zone with landscape to match existing adjacent agricultural land use
5. Provide dense planting to adjoining properties as visual buffer. Lay back top batter to 1:4 where property boundary allows.
6. Flatten off and roll out batters for a more naturalistic shaped cutting.

**Legend**  
Refer to page 246 for full legend

- Project corridor and chainages
- Strong ridgelines
- Notional ridgelines
- Initial stage
- Ultimate stage
- Waterways
- Contours at 10m interval
- National Parks, State Forests, Nature Reserves, Conservation Areas
- Existing roads

**Landscape Strategy**

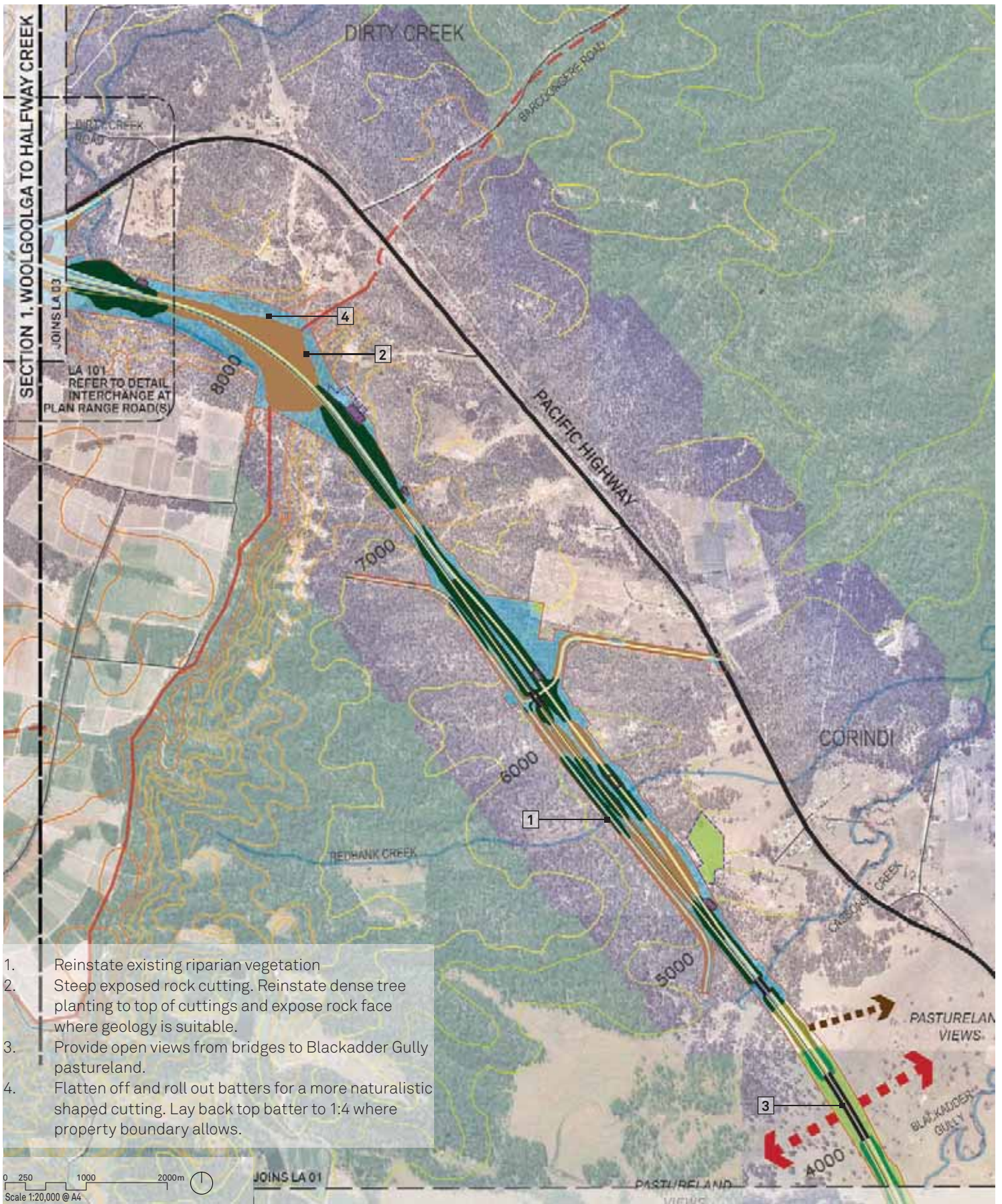
- Open views
- Filtered views
- Place marking opportunity
- Rest Areas
- Bridges (Proposed carriageways)
- Bridges (Local access road)
- Acoustic barriers
- Fauna bridge
- Fill Batter-Type 1
- Fill Batter-Type 2
- Fill Batter-Type 3
- Cut Batter-Type 1
- Cut Batter-Type 2

**Revegetation**

- Forest Outcome
- Filtered Landscape Outcome
- Agriculture Outcome
- Construction Zone Outcome
- Water quality control ponds

**LA 01**

Overall Landscape Strategy plan



1. Reinstate existing riparian vegetation
2. Steep exposed rock cutting. Reinstate dense tree planting to top of cuttings and expose rock face where geology is suitable.
3. Provide open views from bridges to Blackadder Gully pastureland.
4. Flatten off and roll out batters for a more naturalistic shaped cutting. Lay back top batter to 1:4 where property boundary allows.

**Legend**  
Refer to page 246 for full legend

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**Landscape Strategy**

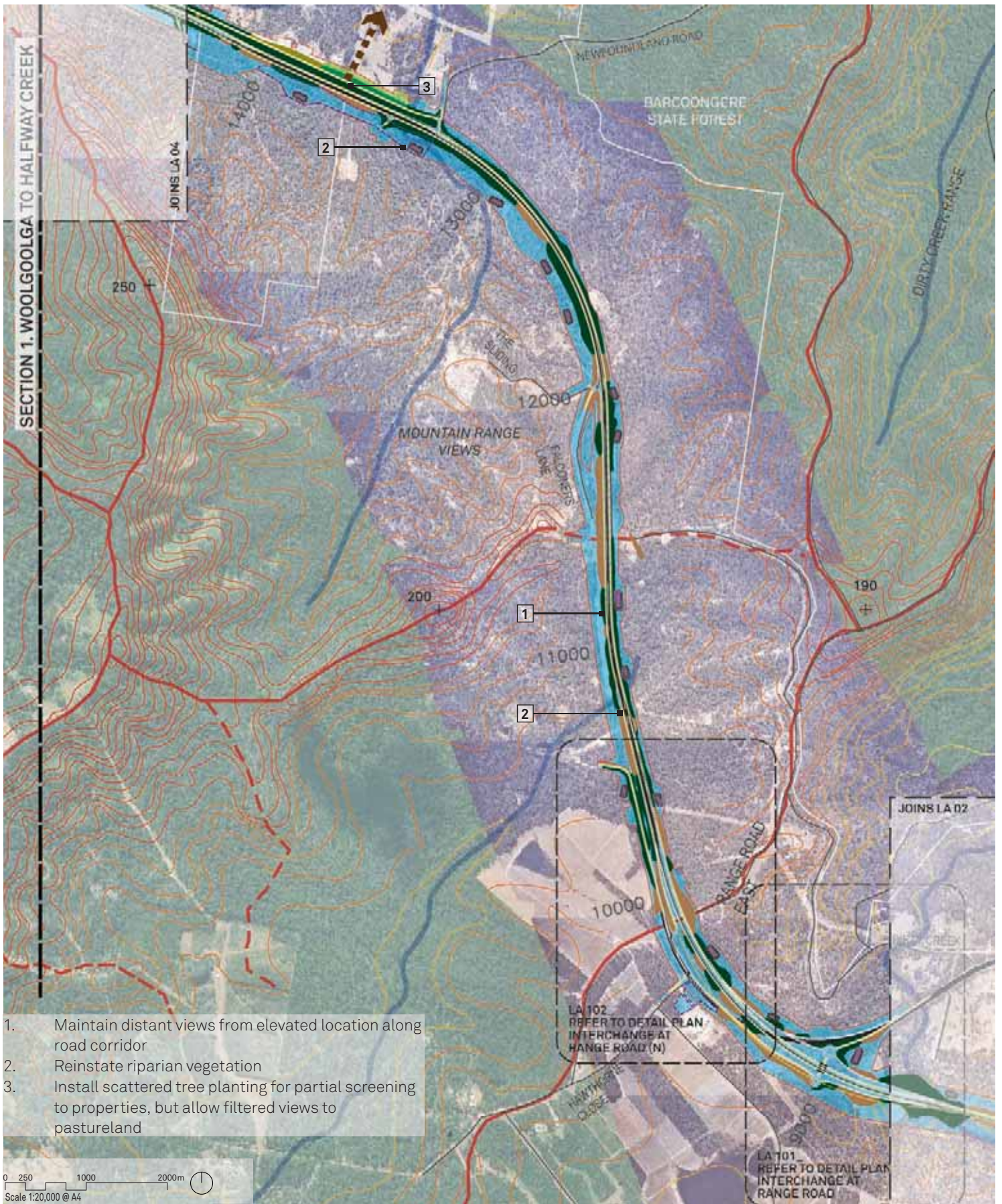
- Open views
- Filtered views
- Place marking opportunity
- Rest Areas
- Bridges (Proposed carriageways)
- Bridges (Local access road)
- Acoustic barriers
- Fauna bridge
- Fill Batter-Type 1
- Fill Batter-Type 2
- Fill Batter-Type 3
- Cut Batter-Type 1
- Cut Batter-Type 2

**Revegetation**

- Forest Outcome
- Filtered Landscape Outcome
- Agriculture Outcome
- Construction Zone Outcome
- Water quality control ponds

**LA 02**

Overall Landscape Strategy plan



1. Maintain distant views from elevated location along road corridor
2. Reinstall riparian vegetation
3. Install scattered tree planting for partial screening to properties, but allow filtered views to pastureland



**Legend**

- Refer to page 246 for full legend
- Project corridor and chainages
  - Strong ridgelines
  - Notional ridgelines
  - Initial stage
  - Ultimate stage
  - Waterways
  - Contours at 10m interval
  - National Parks, State Forests, Nature Reserves, Conservation Areas
  - Existing roads

**Landscape Strategy**

- Open views
- Filtered views
- Place marking opportunity
- Rest Areas
- Bridges (Proposed carriageways)
- Bridges (Local access road)
- Acoustic barriers
- Fauna bridge
- Fill Batter-Type 1
- Fill Batter-Type 2
- Fill Batter-Type 3
- Cut Batter-Type 1
- Cut Batter-Type 2

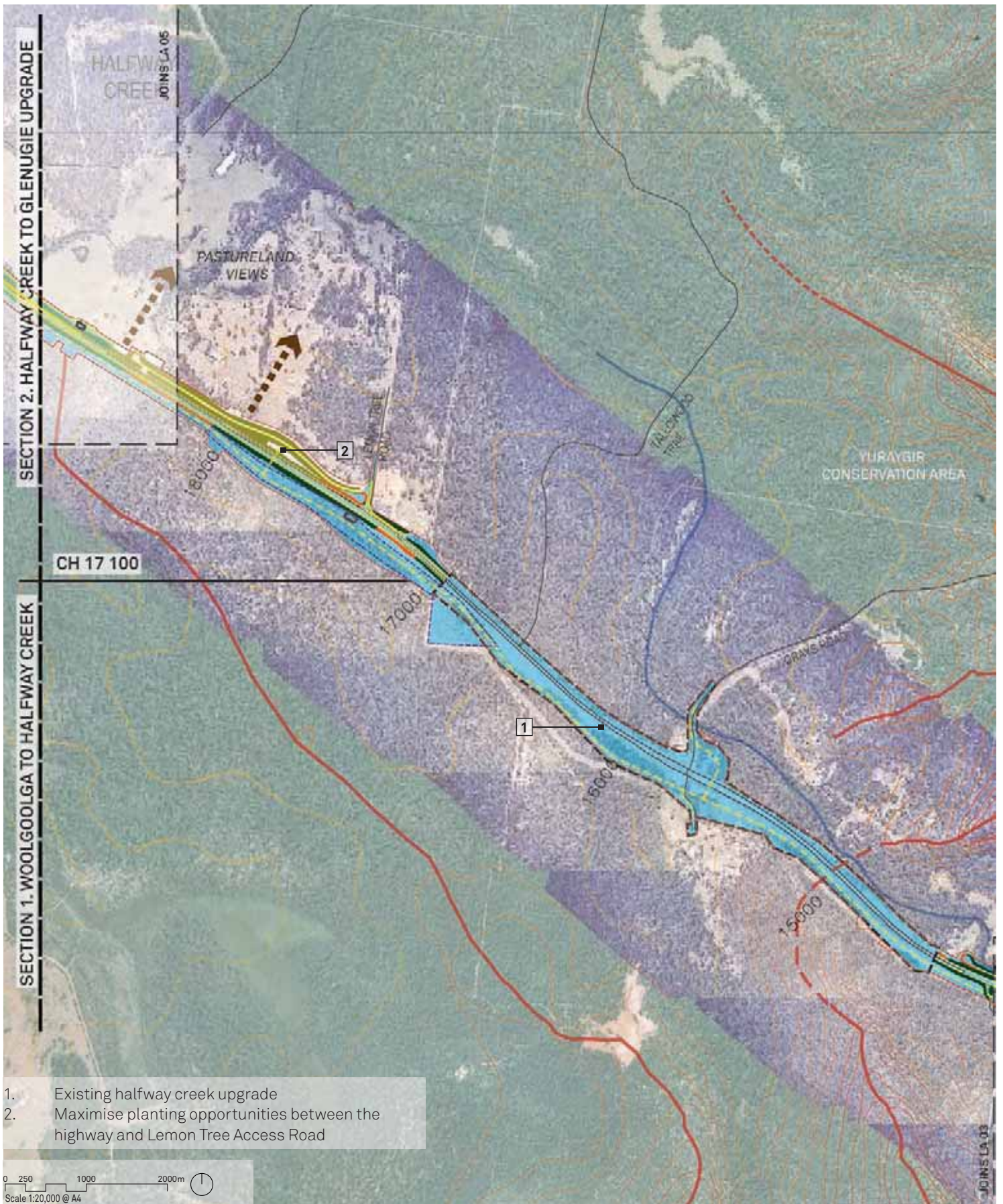
**Revegetation**

- Forest Outcome
- Filtered Landscape Outcome
- Agriculture Outcome
- Construction Zone Outcome
- Water quality control ponds

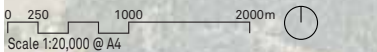
**LA 03**



Overall Landscape Strategy plan



1. Existing halfway creek upgrade
2. Maximise planting opportunities between the highway and Lemon Tree Access Road



**Legend**

- Refer to page 246 for full legend
- Project corridor and chainages
  - Strong ridgelines
  - Notional ridgelines
  - Initial stage
  - Ultimate stage
  - Waterways
  - Contours at 10m interval
  - National Parks, State Forests, Nature Reserves, Conservation Areas
  - Existing roads

**Landscape Strategy**

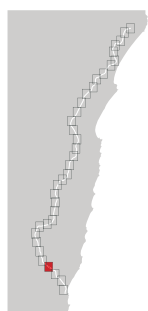
- Open views
- Filtered views
- Place marking opportunity
- Rest Areas
- Bridges (Proposed carriageways)
- Bridges (Local access road)

- Acoustic barriers
- Fauna bridge
- Fill Batter-Type 1
- Fill Batter-Type 2
- Fill Batter-Type 3
- Cut Batter-Type 1
- Cut Batter-Type 2

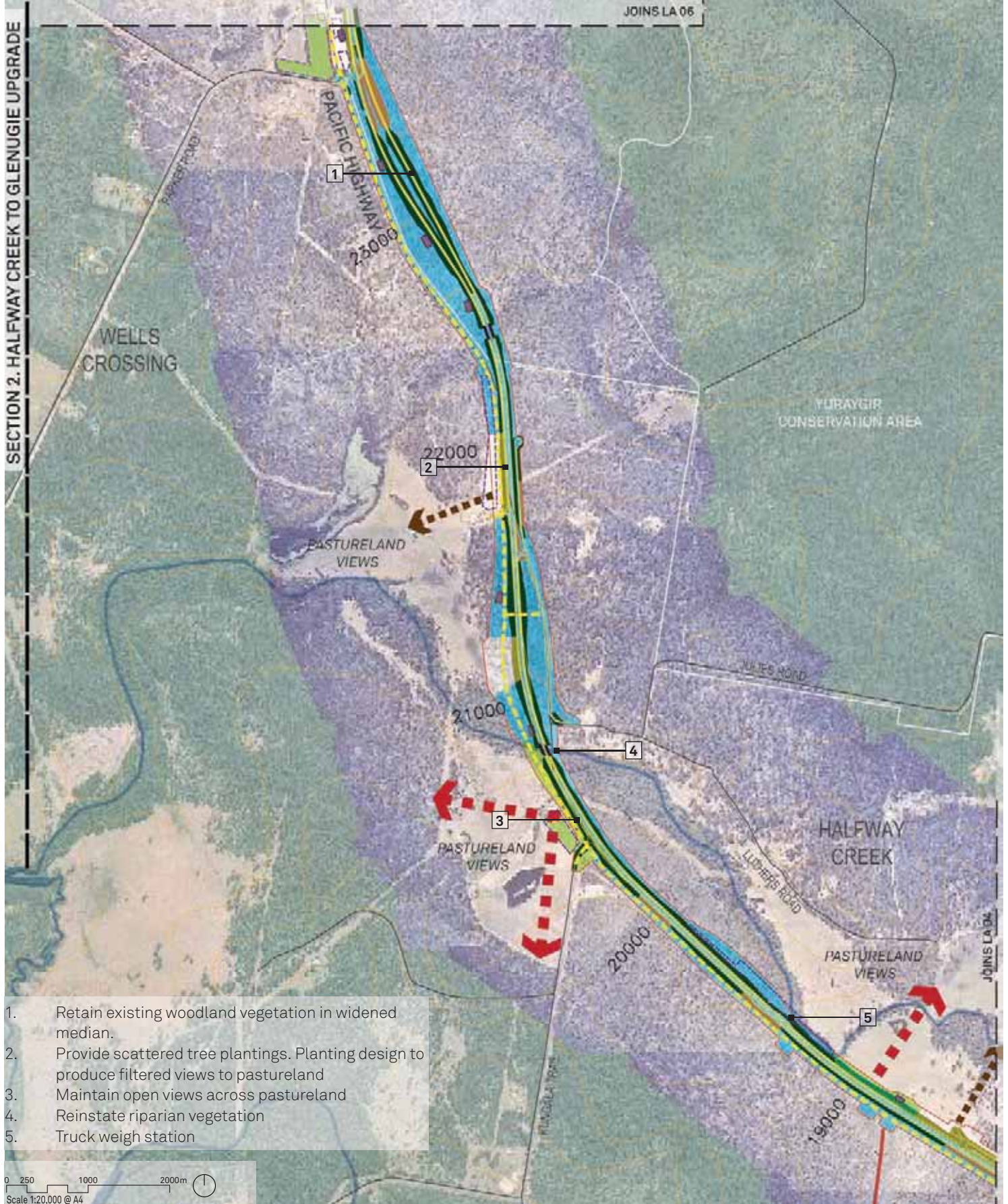
**Revegetation**

- Forest Outcome
- Filtered Landscape Outcome
- Agriculture Outcome
- Construction Zone Outcome
- Water quality control ponds

**LA 04**



Overall Landscape Strategy plan



SECTION 2. HALFWAY CREEK TO GLENUGIE UPGRADE

JOINS LA 06

JOINS LA 04

1. Retain existing woodland vegetation in widened median.
2. Provide scattered tree plantings. Planting design to produce filtered views to pastureland
3. Maintain open views across pastureland
4. Reinstall riparian vegetation
5. Truck weigh station



**Legend**  
Refer to page 246 for full legend

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- Initial stage
- Ultimate stage
- Waterways
- Contours at 10m interval
- National Parks, State Forests, Nature Reserves, Conservation Areas
- Existing roads

**Landscape Strategy**

- Open views
- Filtered views
- Place marking opportunity
- Rest Areas
- Bridges (Proposed carriageways)
- Bridges (Local access road)

**Revegetation**

- Acoustic barriers
- Fauna bridge
- Fill Batter-Type 1
- Fill Batter-Type 2
- Fill Batter-Type 3
- Cut Batter-Type 1
- Cut Batter-Type 2

**Revegetation**

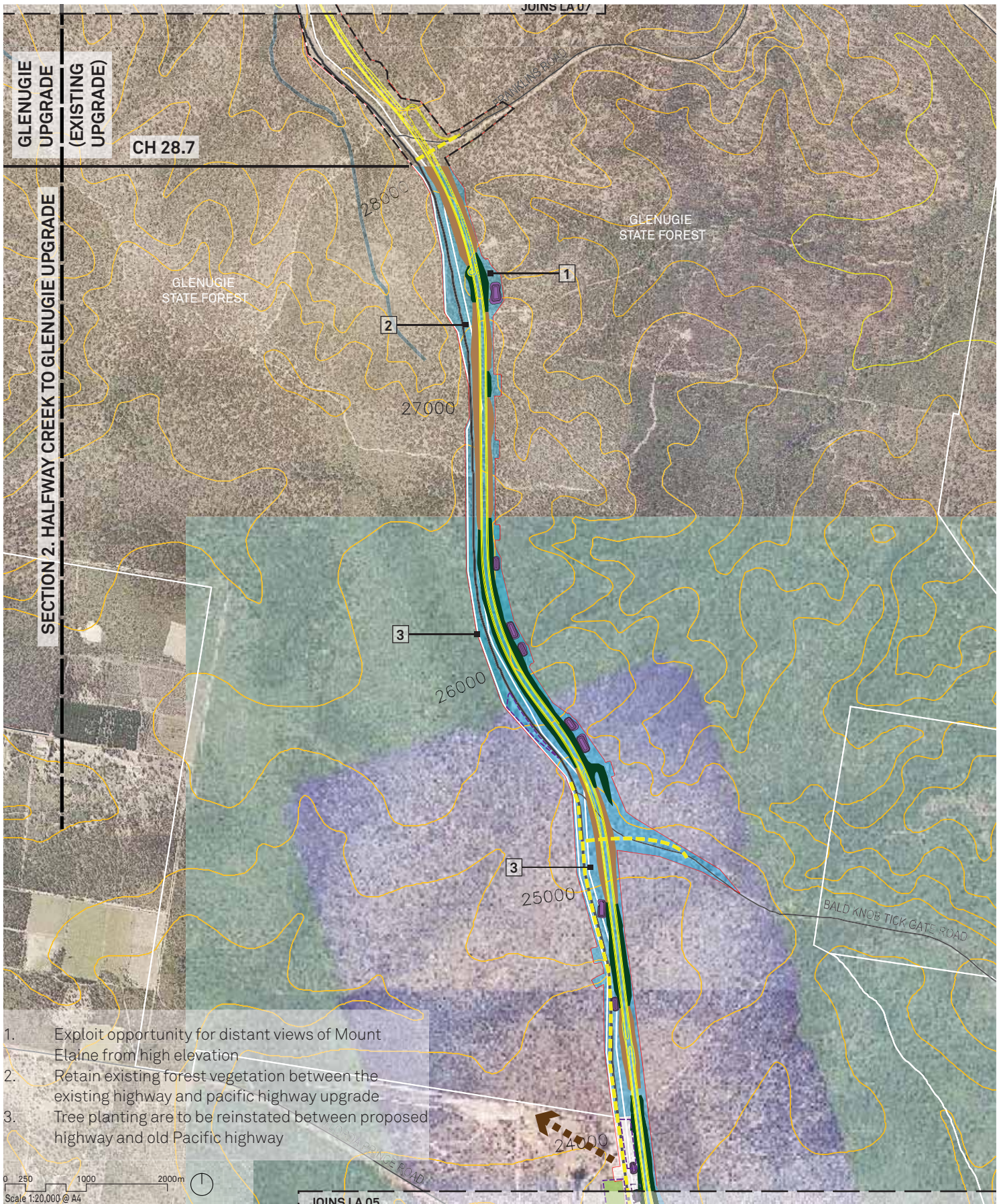
- Forest Outcome
- Filtered Landscape Outcome
- Agriculture Outcome
- Construction Zone Outcome
- Water quality control ponds

LA 05



Overall Landscape Strategy plan





1. Exploit opportunity for distant views of Mount Elaine from high elevation
2. Retain existing forest vegetation between the existing highway and pacific highway upgrade
3. Tree planting area to be reinstated between proposed highway and old Pacific highway

**Legend**

- Refer to page 246 for full legend
- Project corridor and chainages
  - Strong ridgelines
  - Notional ridgelines
  - Initial stage
  - Ultimate stage
  - Waterways
  - Contours at 10m interval
  - National Parks, State Forests, Nature Reserves, Conservation Areas
  - Existing roads

**Landscape Strategy**

- Open views
- Filtered views
- Place marking opportunity
- Rest Areas
- Bridges (Proposed carriageways)
- Bridges (Local access road)

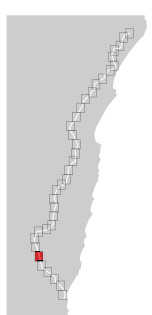
**Revegetation**

- Acoustic barriers
- Fauna bridge
- Fill Batter-Type 1
- Fill Batter-Type 2
- Fill Batter-Type 3
- Cut Batter-Type 1
- Cut Batter-Type 2

**Revegetation**

- Forest Outcome
- Filtered Landscape Outcome
- Agriculture Outcome
- Construction Zone Outcome
- Water quality control ponds

**LA 06**



Overall Landscape Strategy plan



**Legend**  
Refer to page 246 for full legend

- Project corridor and chainages
- Strong ridgelines
- Notional ridgelines
- Initial stage
- Ultimate stage
- Waterways
- Contours at 10m interval
- National Parks, State Forests, Nature Reserves, Conservation Areas
- Existing roads

**Landscape Strategy**

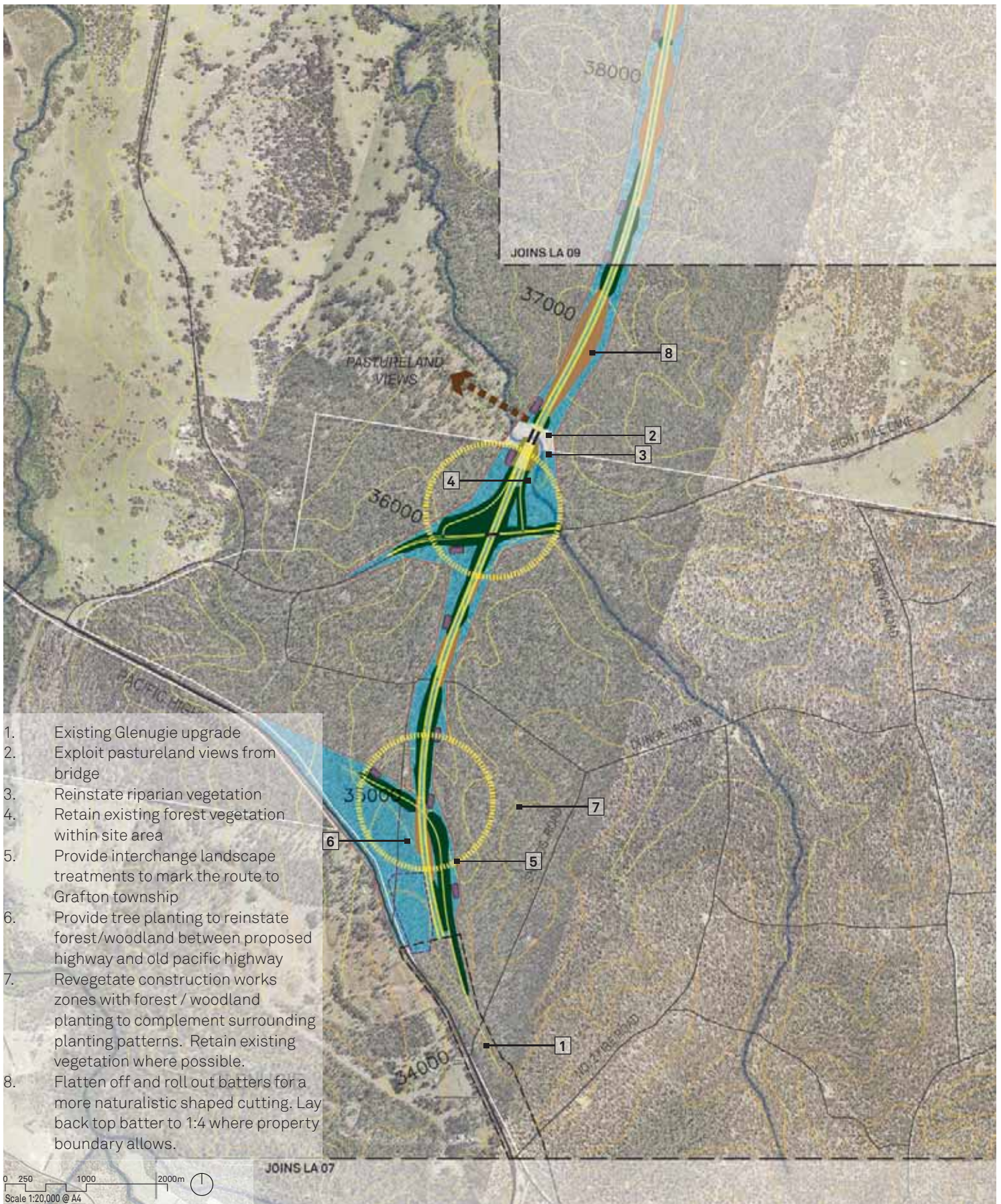
- Open views
- Filtered views
- Place marking opportunity
- Rest Areas
- Bridges (Proposed carriageways)
- Bridges (Local access road)
- Acoustic barriers
- Fauna bridge
- Fill Batter-Type 1
- Fill Batter-Type 2
- Fill Batter-Type 3
- Cut Batter-Type 1
- Cut Batter-Type 2

**Revegetation**

- Forest Outcome
- Filtered Landscape Outcome
- Agriculture Outcome
- Construction Zone Outcome
- Water quality control ponds

**LA 07**

Overall Landscape Strategy plan



1. Existing Glenugie upgrade
2. Exploit pastureland views from bridge
3. Reinststate riparian vegetation
4. Retain existing forest vegetation within site area
5. Provide interchange landscape treatments to mark the route to Grafton township
6. Provide tree planting to reinststate forest/woodland between proposed highway and old pacific highway
7. Revegetate construction works zones with forest / woodland planting to complement surrounding planting patterns. Retain existing vegetation where possible.
8. Flatten off and roll out batters for a more naturalistic shaped cutting. Lay back top batter to 1:4 where property boundary allows.

**Legend**

Refer to page 246 for full legend

- Project corridor and chainages
- Strong ridgelines
- Notional ridgelines
- Initial stage
- Ultimate stage
- Waterways
- Contours at 10m interval
- National Parks, State Forests, Nature Reserves, Conservation Areas
- Existing roads

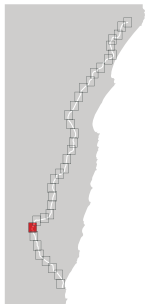
**Landscape Strategy**

- Open views
- Filtered views
- Place marking opportunity
- Rest Areas
- Bridges (Proposed carriageways)
- Bridges (Local access road)
- Acoustic barriers
- Fauna bridge
- Fill Batter-Type 1
- Fill Batter-Type 2
- Fill Batter-Type 3
- Cut Batter-Type 1
- Cut Batter-Type 2

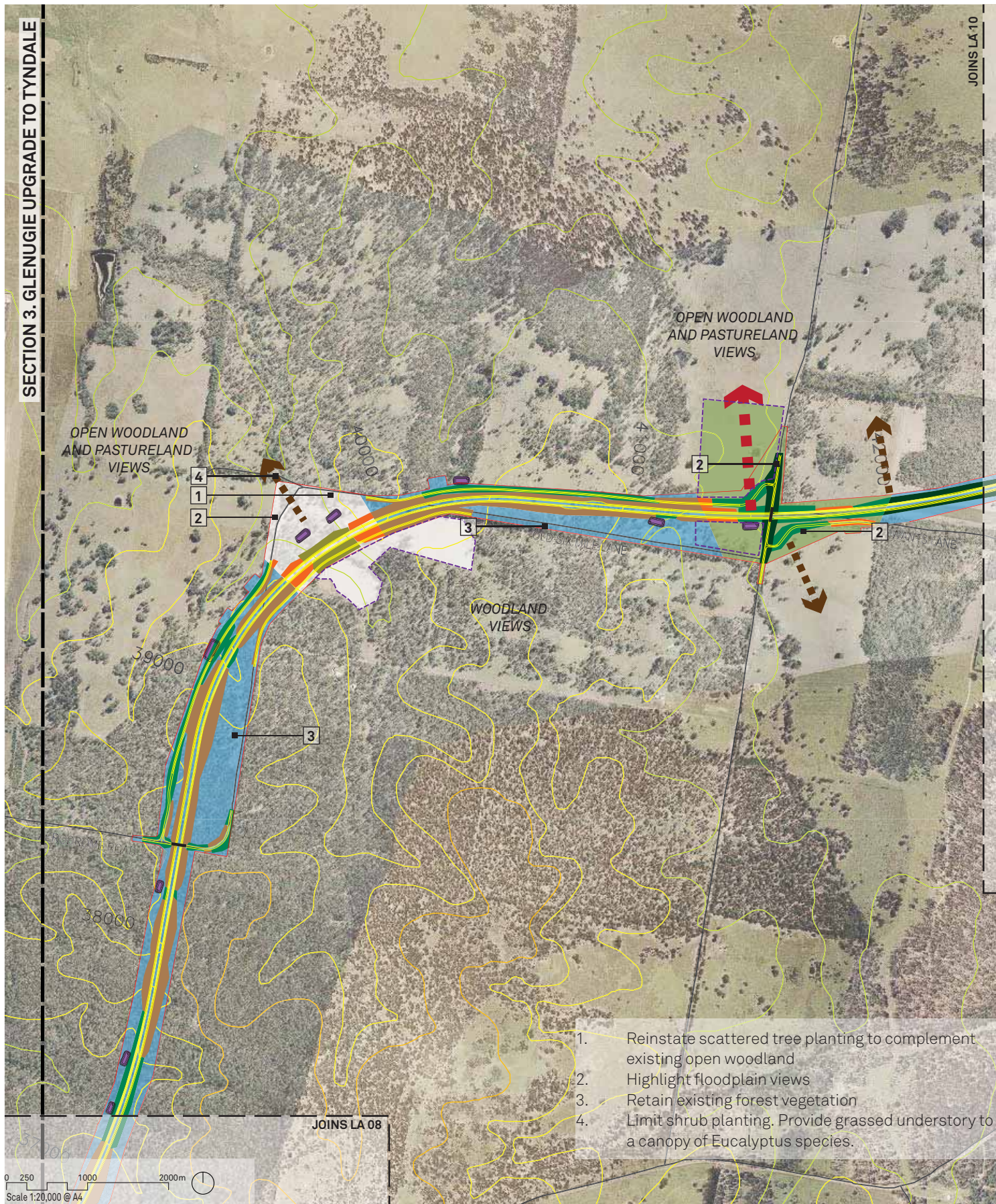
**Revegetation**

- Forest Outcome
- Filtered Landscape Outcome
- Agriculture Outcome
- Construction Zone Outcome
- Water quality control ponds

LA 08



Overall Landscape Strategy plan



**Legend**  
Refer to page 246 for full legend

- Project corridor and chainages
- Strong ridgelines
- Notional ridgelines
- Initial stage
- Ultimate stage
- Waterways
- Contours at 10m interval
- National Parks, State Forests, Nature Reserves, Conservation Areas
- Existing roads

**Landscape Strategy**

- Open views
- Filtered views
- Place marking opportunity
- Rest Areas
- Bridges (Proposed carriageways)
- Bridges (Local access road)
- Acoustic barriers
- Fauna bridge
- Fill Batter-Type 1
- Fill Batter-Type 2
- Fill Batter-Type 3
- Cut Batter-Type 1
- Cut Batter-Type 2

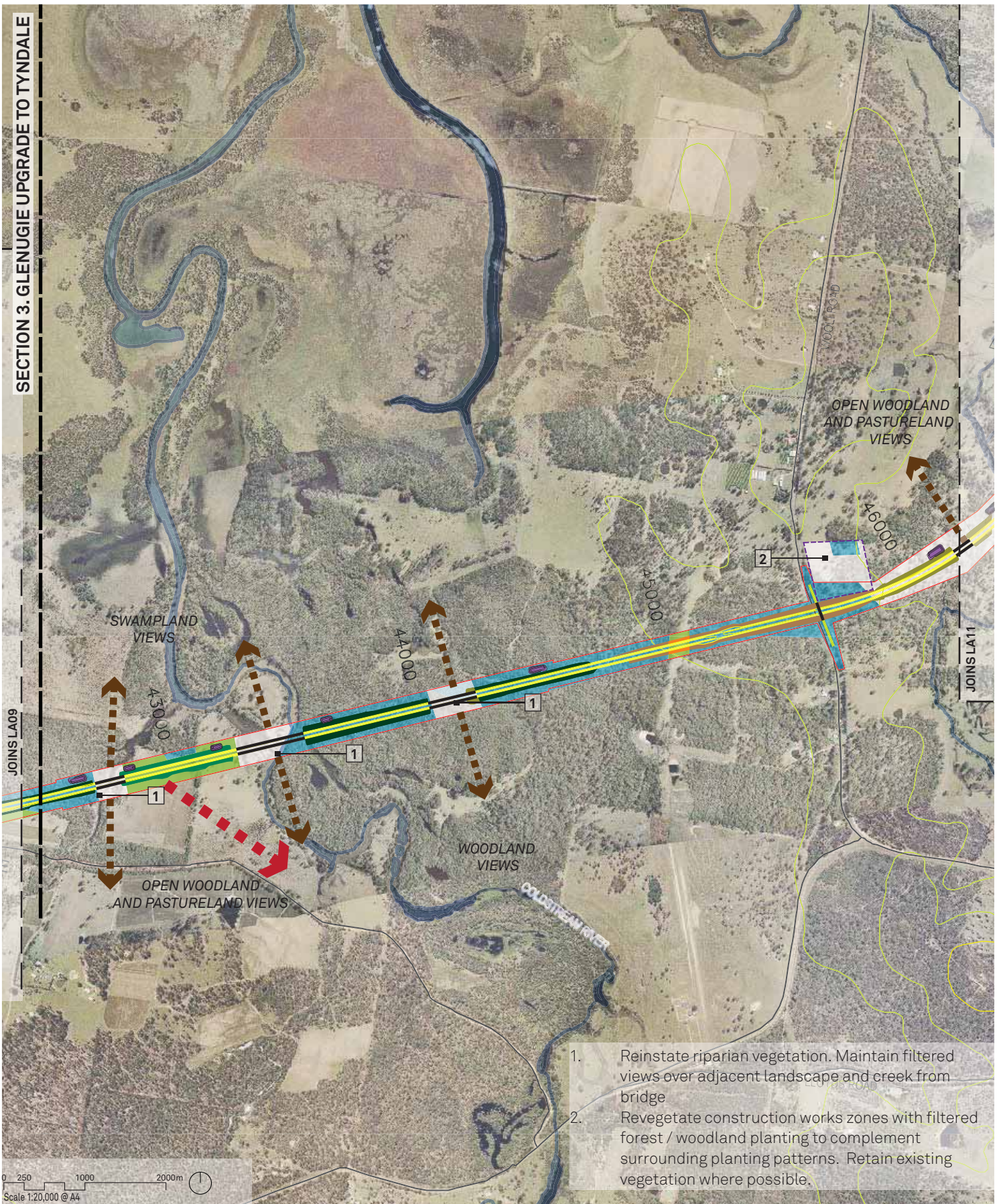
**Revegetation**

- Forest Outcome
- Filtered Landscape Outcome
- Agriculture Outcome
- Construction Zone Outcome
- Water quality control ponds

**LA 09**

Overall Landscape Strategy plan

SECTION 3. GLENUGIE UPGRADE TO TYNDALE



1. Reinstatement of riparian vegetation. Maintain filtered views over adjacent landscape and creek from bridge
2. Revegetate construction works zones with filtered forest / woodland planting to complement surrounding planting patterns. Retain existing vegetation where possible.

**Legend**  
Refer to page 246 for full legend

- Project corridor and chainages
- Strong ridgelines
- Notional ridgelines
- Initial stage
- Ultimate stage
- Waterways
- Contours at 10m interval
- National Parks, State Forests, Nature Reserves, Conservation Areas
- Existing roads

**Landscape Strategy**

- Open views
- Filtered views
- Place marking opportunity
- Rest Areas
- Bridges (Proposed carriageways)
- Bridges (Local access road)
- Acoustic barriers
- Fauna bridge
- Fill Batter-Type 1
- Fill Batter-Type 2
- Fill Batter-Type 3
- Cut Batter-Type 1
- Cut Batter-Type 2

**Revegetation**

- Forest Outcome
- Filtered Landscape Outcome
- Agriculture Outcome
- Construction Zone Outcome
- Water quality control ponds

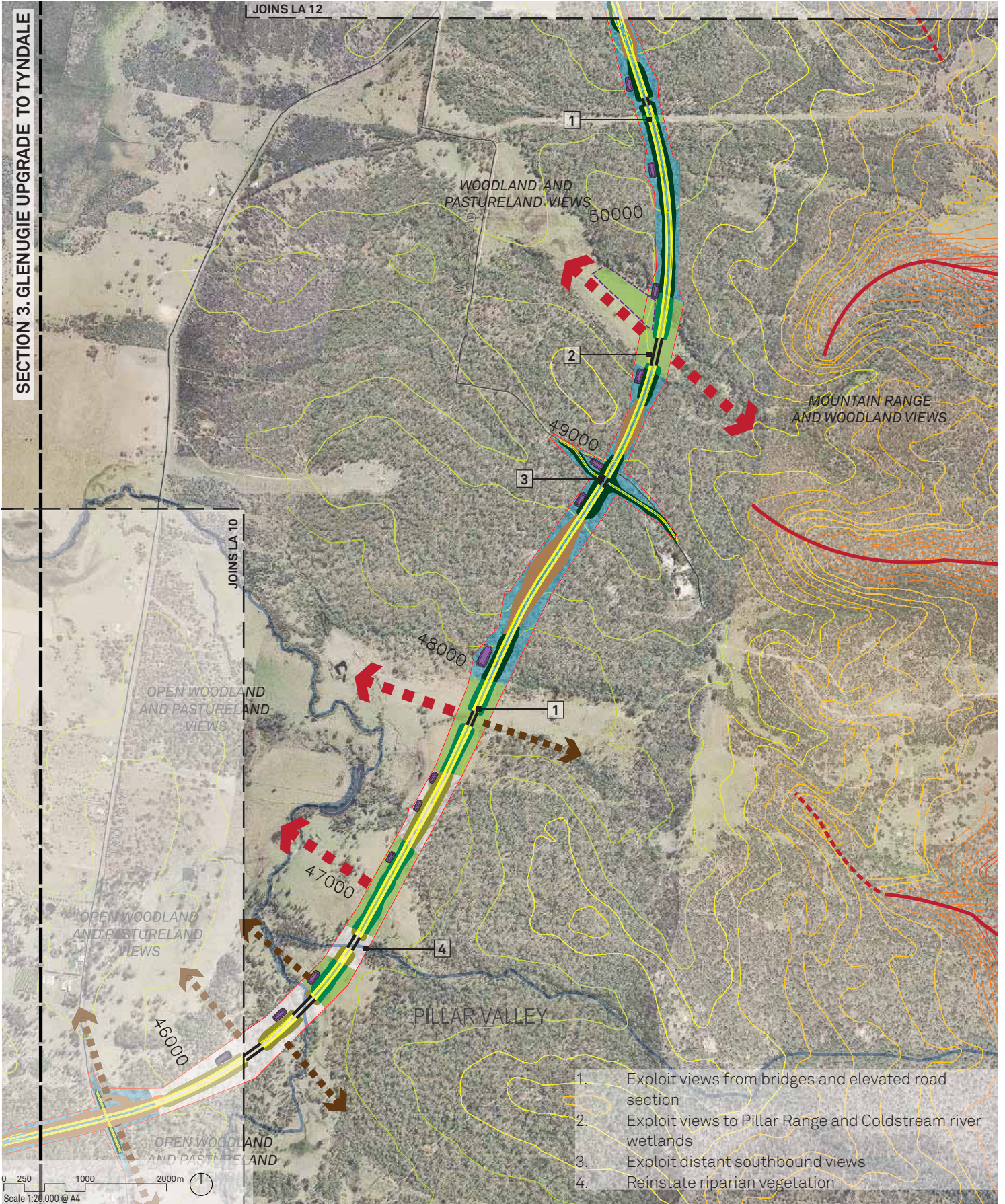
**LA 10**

Overall Landscape Strategy plan

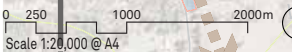
SECTION 3. GLENUIGIE UPGRADE TO TYNDALE

JOINS LA 12

JOINS LA 10



1. Exploit views from bridges and elevated road section
2. Exploit views to Pillar Range and Coldstream river wetlands
3. Exploit distant southbound views
4. Reinststate riparian vegetation



**Legend**

- Refer to page 246 for full legend
- Project corridor and chainages
  - Strong ridgelines
  - Notional ridgelines
  - Initial stage
  - Ultimate stage
  - Waterways
  - Contours at 10m interval
  - National Parks, State Forests, Nature Reserves, Conservation Areas
  - Existing roads

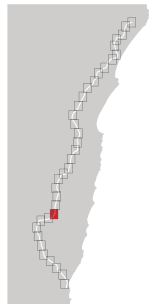
**Landscape Strategy**

- Open views
- Filtered views
- Place marking opportunity
- Rest Areas
- Bridges (Proposed carriageways)
- Bridges (Local access road)
- Acoustic barriers
- Fauna bridge
- Fill Batter-Type 1
- Fill Batter-Type 2
- Fill Batter-Type 3
- Cut Batter-Type 1
- Cut Batter-Type 2

**Revegetation**

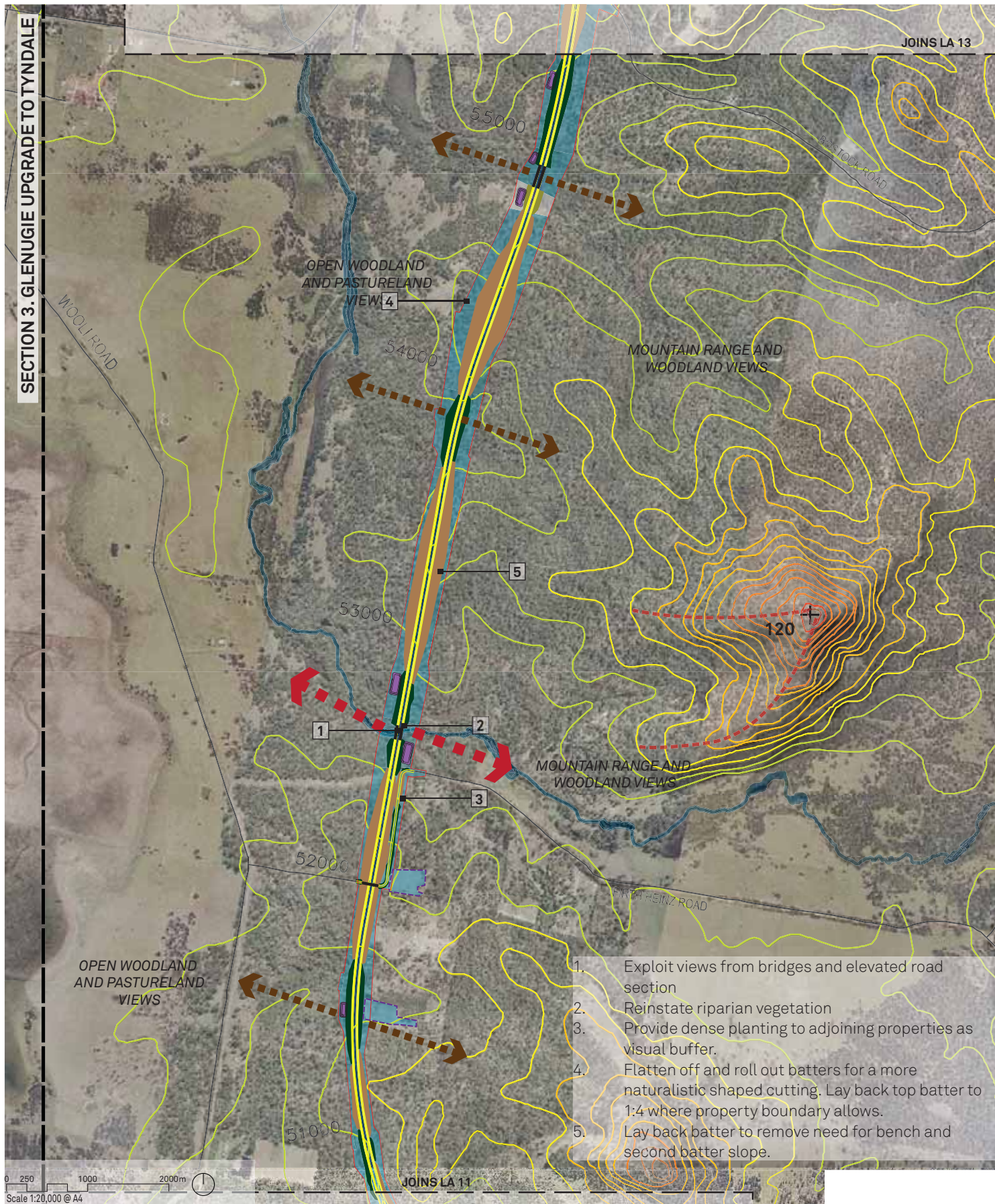
- Forest Outcome
- Filtered Landscape Outcome
- Agriculture Outcome
- Construction Zone Outcome
- Water quality control ponds

**LA 11**



Overall Landscape Strategy plan

SECTION 3. GLENGUIGIE UPGRADE TO TYNDALE



**Legend**  
Refer to page 246 for full legend

- Project corridor and chainages
- Strong ridgelines
- Notional ridgelines
- Initial stage
- Ultimate stage
- Waterways
- Contours at 10m interval
- National Parks, State Forests, Nature Reserves, Conservation Areas
- Existing roads

**Landscape Strategy**

- Open views
- Filtered views
- Place marking opportunity
- Rest Areas
- Bridges (Proposed carriageways)
- Bridges (Local access road)
- Acoustic barriers
- Fauna bridge
- Fill Batter-Type 1
- Fill Batter-Type 2
- Fill Batter-Type 3
- Cut Batter-Type 1
- Cut Batter-Type 2

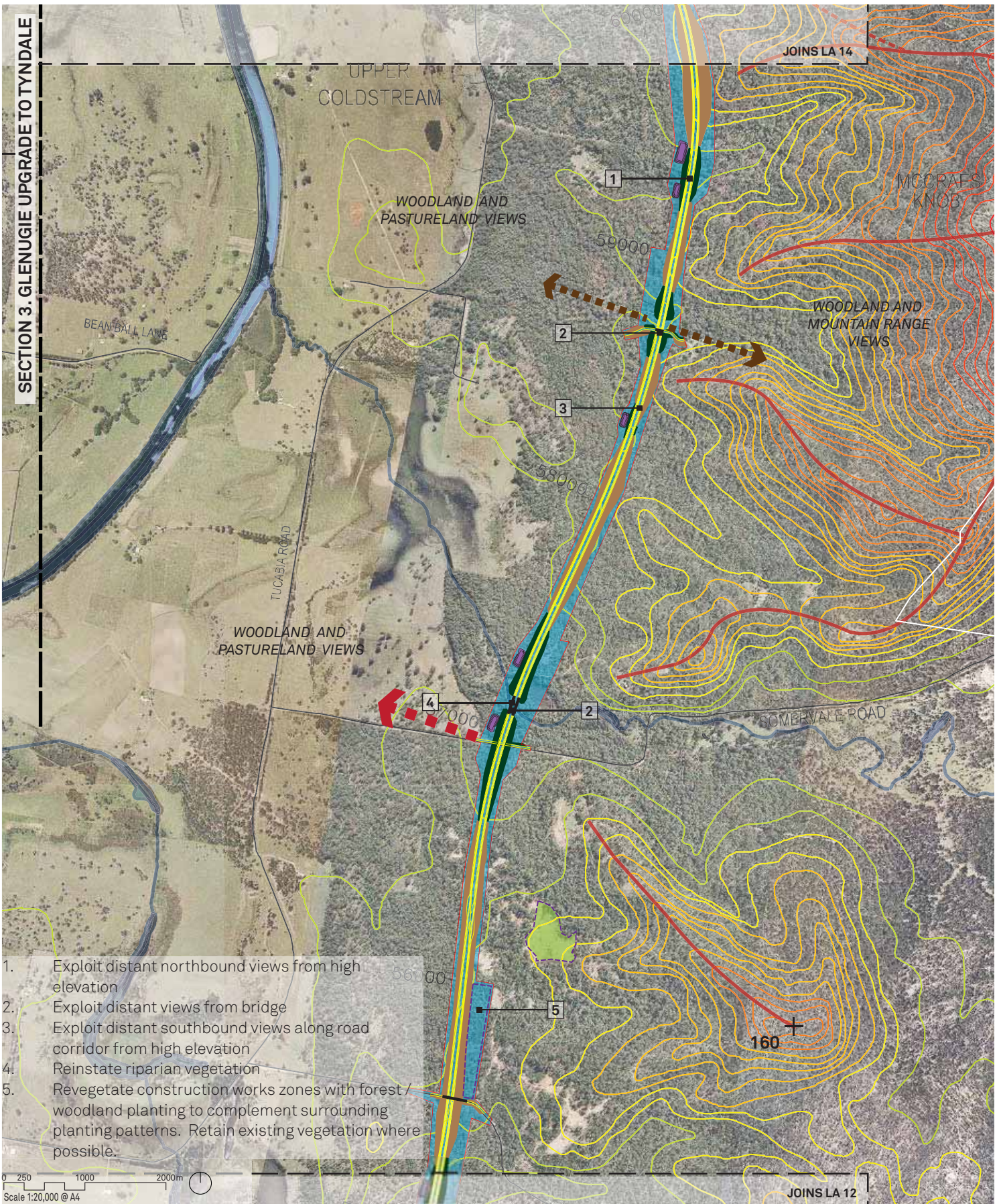
**Revegetation**

- Forest Outcome
- Filtered Landscape Outcome
- Agriculture Outcome
- Construction Zone Outcome
- Water quality control ponds

**LA 12**

Overall Landscape Strategy plan

SECTION 3. GLENUGIE UPGRADE TO TYNDALE



1. Exploit distant northbound views from high elevation
2. Exploit distant views from bridge
3. Exploit distant southbound views along road corridor from high elevation
4. Reinstatement riparian vegetation
5. Revegetate construction works zones with forest / woodland planting to complement surrounding planting patterns. Retain existing vegetation where possible.

Refer to page 246 for full legend

- Project corridor and chainages
- Strong ridgelines
- Notional ridgelines
- Initial stage
- Ultimate stage
- Waterways
- Contours at 10m interval
- National Parks, State Forests, Nature Reserves, Conservation Areas
- Existing roads

Landscape Strategy

- Open views
- Filtered views
- Place marking opportunity
- Rest Areas
- Bridges (Proposed carriageways)
- Bridges (Local access road)

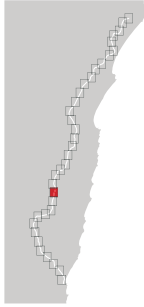
Revegetation

- Acoustic barriers
- Fauna bridge
- Fill Batter-Type 1
- Fill Batter-Type 2
- Fill Batter-Type 3
- Cut Batter-Type 1
- Cut Batter-Type 2

Revegetation

- Forest Outcome
- Filtered Landscape Outcome
- Agriculture Outcome
- Construction Zone Outcome
- Water quality control ponds

LA 13



Overall Landscape Strategy plan