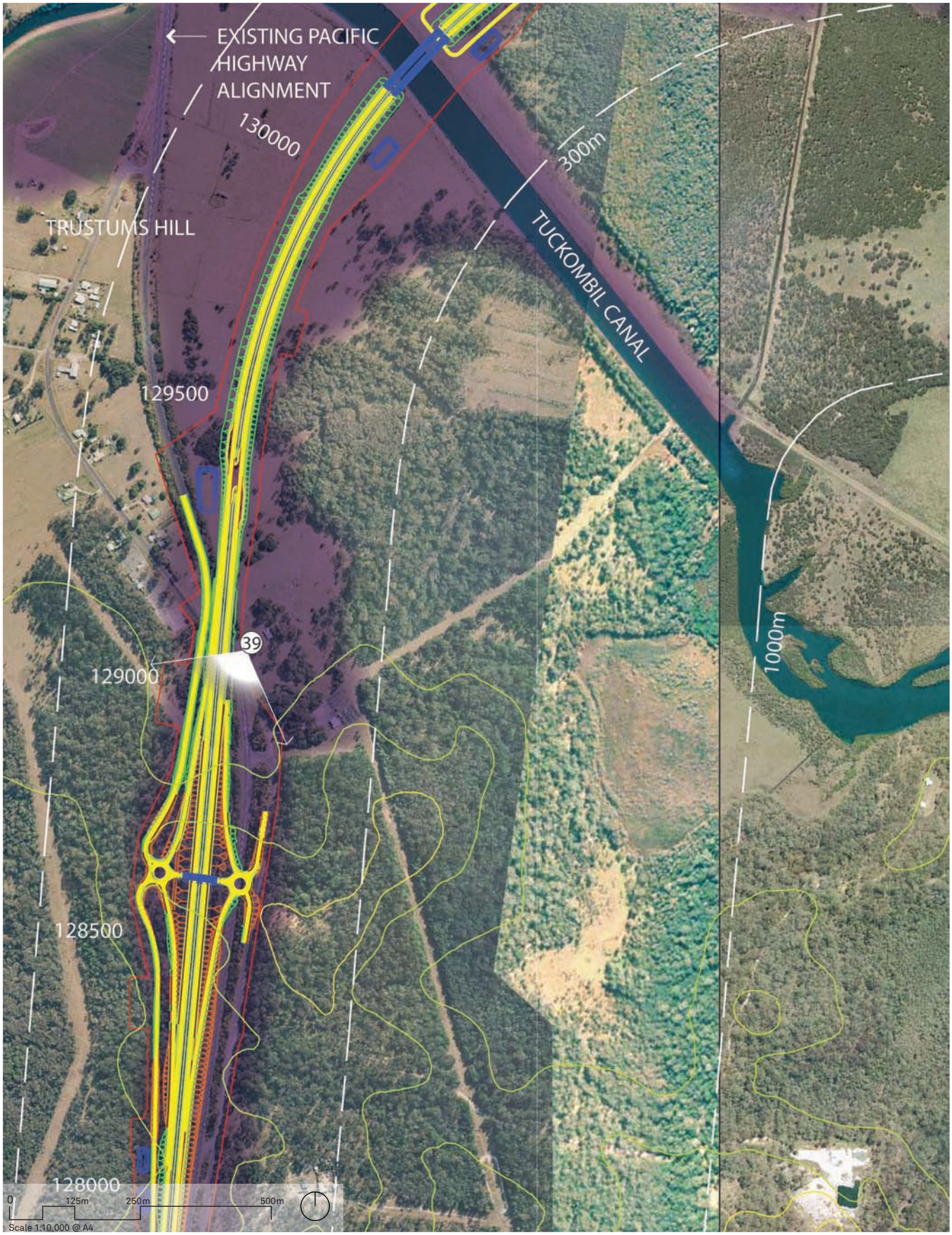
03____Visual impact assessment

3.11_ Section 08_Trustums Hill to Broadwater National Park

39_ Pacific Highway, South Woodburn
40_ Pacific Highway, Woodburn
41_ Corner Wagner Street & Evan Head Road, Woodburn
42_ Evans Head Road, Woodburn

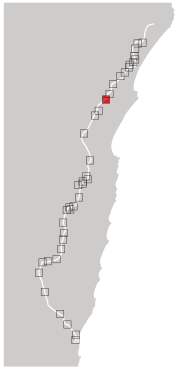
The landscape character assessment assessed the impact of the project on Section 8 to be ***moderate.***



Legend

- Alignment and boundary with chainages (6000)
- Areas of cut
- Areas of fill
- Bridge
- Existing Pacific Highway Upgrade alignment
- Waterways
- Distance from road centreline (300m / 1000m)
- Visual Envelope
- Photo Location
- Contours at 10m interval (200, 150, 100, 50)

Viewpoint 39



03____Visual impact assessment

3.11.1_ Viewpoint 39
Woodburn Interchange

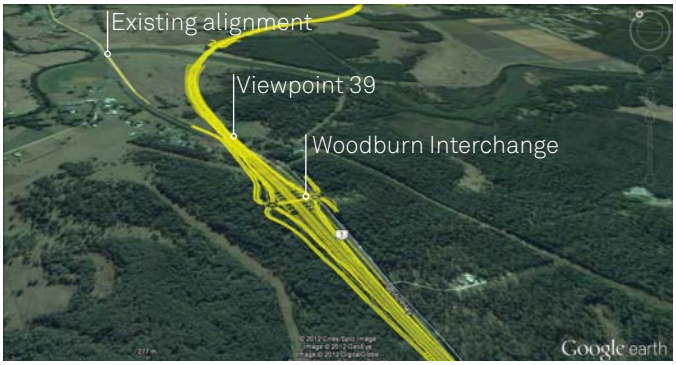
Section 8_ Trustums Hill to Broadwater
Character precinct 39: Moderate ability to visually absorb change.

Site description
The project follows the alignment of the existing highway through a major stand of existing vegetation and undulating topography at the base of Trustums Hill at the northernmost extent of a major north-south ridge line. The extensive vegetation cover and undulating topography restricts the extent of the visual catchment in this area. A few residences and an electrical substation are located on the Pacific Highway at this location.

Project description
The interchange at Woodburn consists of a new overpass over the upgraded Pacific Highway. Two new elevated roundabouts, on/off ramps, a service road to the west and an access road to the local rod network to the east are proposed to connect to the local road network. These are accommodated on near natural grades, above the new dual carriageways which passes in a deep cutting, typically 10 m and up to 14 m deep. Major removal of native forest vegetation cover is required.

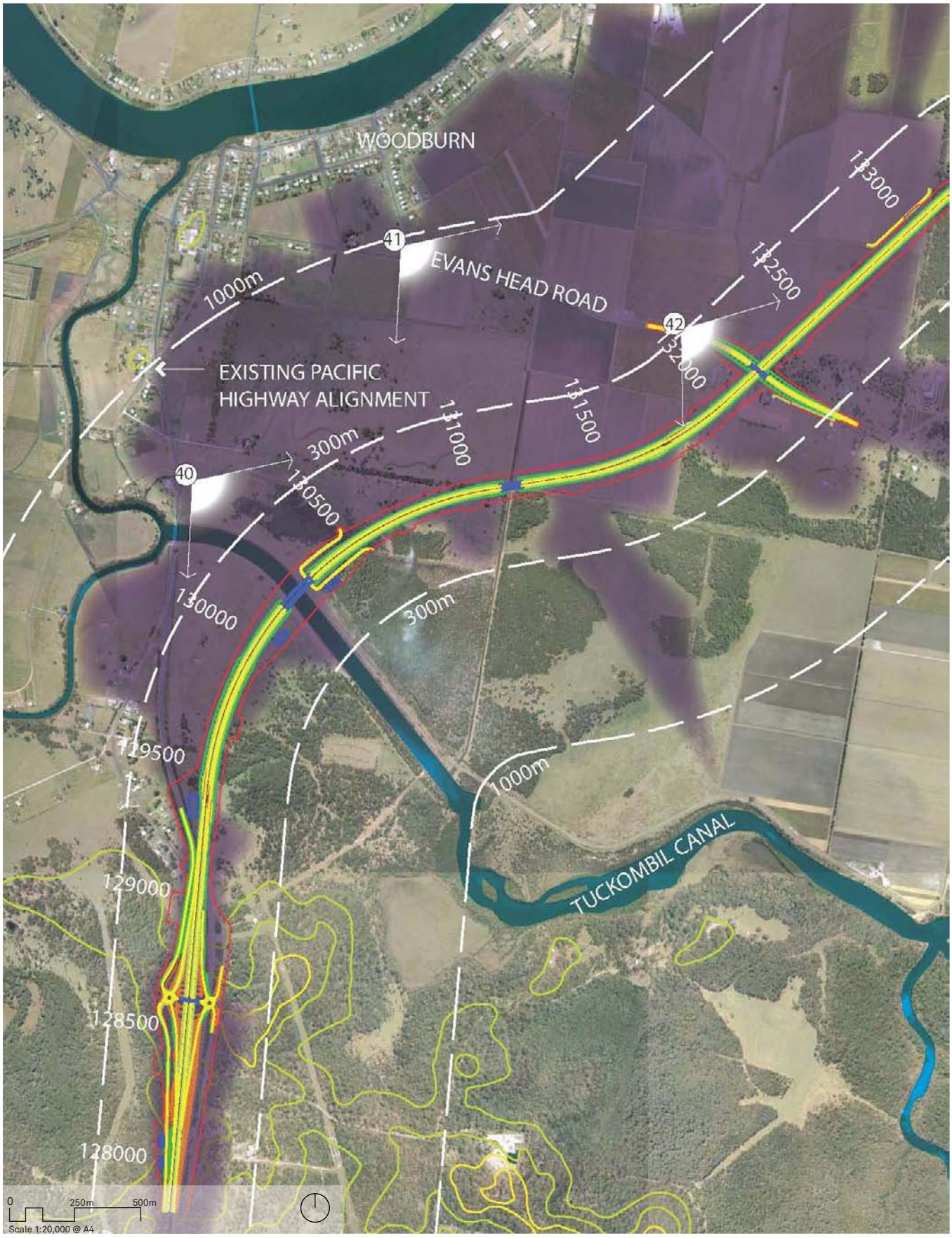
Vantage point selection
This vantage point addresses the proposed major new interchange at Woodburn.

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
39 Foreground view	**High** Major removal of forest vegetation to accommodate the new interchange is proposed.	**Moderate–low** This changed view would be visible from a low number of local residences, and a high number of motorists would have fleeting glimpses of this new road corridor.	**Moderate–high**	_Minimise loss of existing trees _Plant local woodland/ forest trees on cut/fill batters _Reinstate local forest vegetation where applicable



Oblique view looking north-east

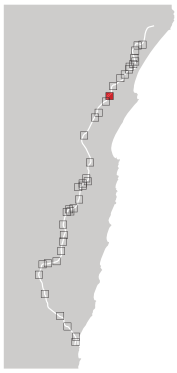
Annotated diagrammatic approximation of the project as photographed from viewpoint 39_ View south-east Pacific Highway, south of Woodburn. Location: 29°05'48"S 153°20'23"E



Legend

- Alignment and boundary with chainages
- Areas of cut
- Areas of fill
- Bridge
- Existing Pacific Highway Upgrade alignment
- Waterways
- Distance from road centreline (300m / 1000m)
- Visual Envelope
- Photo Location
- Contours at 10m interval

Viewpoint 40,41 & 42



03____Visual impact assessment

3.11.2_ Vantage Points 40, 41, and 42
Woodburn/Evans Head overpass.

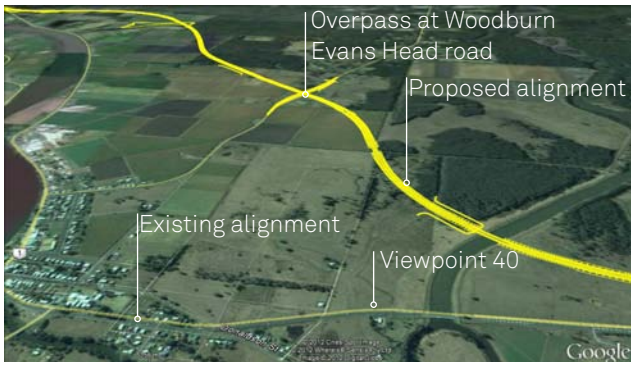
Section 8_ Trustums Hill to Broadwater
Character precinct 41: Moderate ability to visually absorb change.

Site description
The project deviates from the existing highway alignment to travel around the town of Woodburn through cleared sugar cane fields and pastoral land. The new alignment skirts broad patches of existing vegetation and scattered farm houses.

Project description
The project comprises new dual carriageways traversing open floodplain on fill embankments typically two to three metres but up to 4.5m with more elevated sections up to seven metres on approaches to the Tuckombil Canal and other minor creek crossings. A proposed local overpass at Woodburn to Evans Head Road (at Viewpoint 42) is also elevated above the floodplain. Removal of minor isolated stands to trees may be required.

Vantage point selection
Vantage Point 40 and 41 represents typical views of the highway travelling across the Richmond River floodplain area from local town streets in Woodburn. Vantage Point 42 specifically addresses the proposed overpass at Woodburn Evans Head Road.

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
40 Middle ground view.	**Moderate** The project traverses existing pasture land on an embankment across the floodplain.	**Moderate** This changed view would be visible from a low number of local residences, and a high number of motorists.	**Moderate**	_Minimise loss of existing trees _Plant dense low grasses/ ground covers on fill batters _Reinstate agricultural land where possible



Oblique view looking north-east

Annotated diagrammatic approximation of the project as photographed from viewpoint 40_ View south-east Pacific Highway, Woodburn. Location: 29°04'59"S 153°20'20"E

03____Visual impact assessment

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
41 Middle ground view	**Moderate** The project traverses existing pasture land on a substantial embankments across the floodplain.	**Moderate** This changed view would be available to a low number of residents and local people using the local road network.	**Moderate**	_Provide new intermittent screen planting on batters to screen the project from existing residences _Provide new woodland/ forest trees to extend existing tree patterns in the landscape in accordance with the concept design

Annotated diagrammatic approximation of the project as photographed from viewpoint 41_ View south-east from corner Wagner Street and Evan Head Road, Woodburn. Location: 29°04'32"S 153°20'54"E

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
42 Foreground view	**High** Large embankments to accommodate a new local overpass across the new dual carriageway highway in close proximity. Some loss of vegetation anticipated.	**Moderate** A low number of people would experience long duration views from their homes.	**Moderate-High**	_Provide new screen planting buffer to existing homes in accordance with the concept design _Provide new woodland/ forest trees to extend existing tree patterns in the landscape in accordance with the concept design

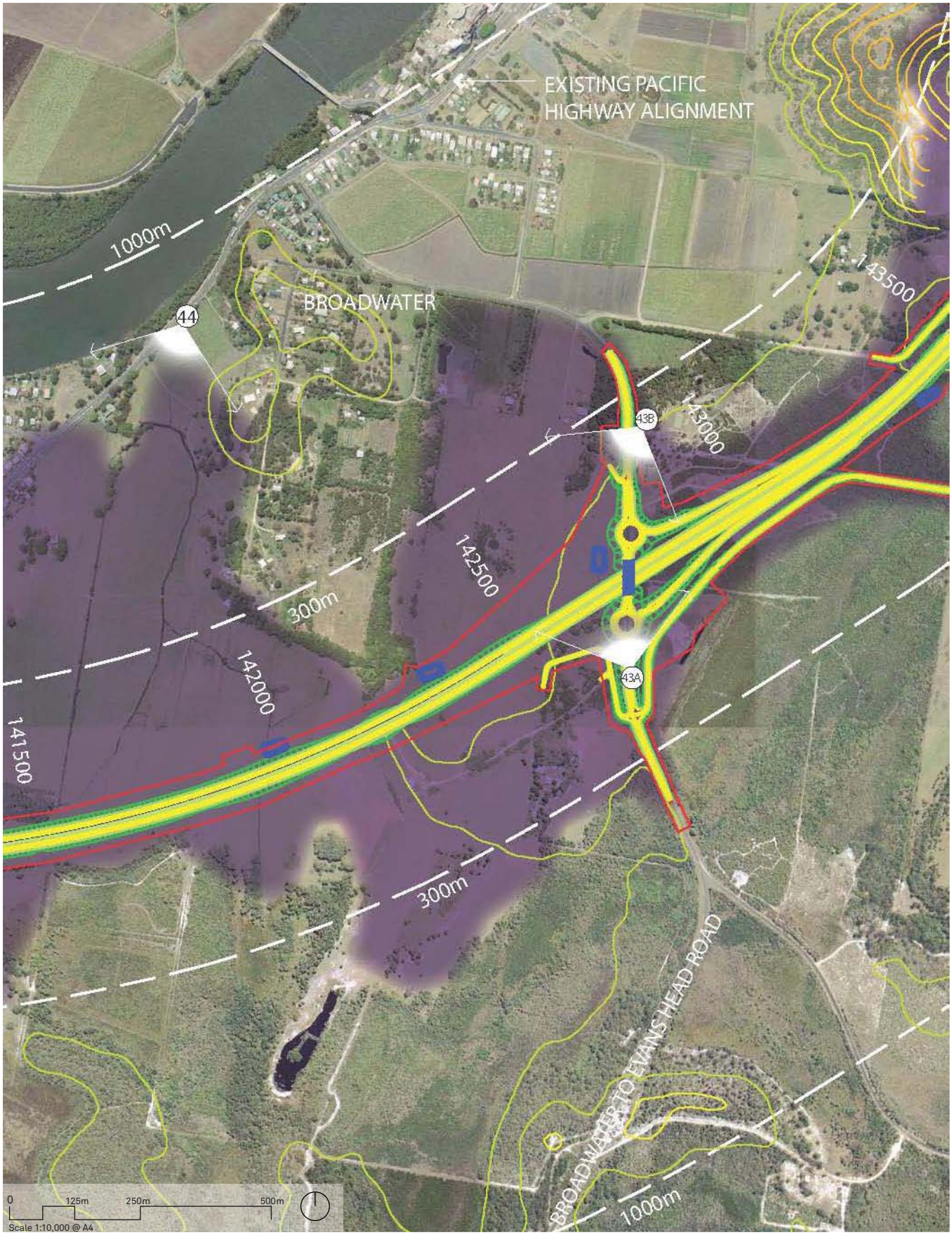
Annotated diagrammatic approximation of the project as photographed from viewpoint 42_ View south-east Evan Head Road, Woodburn. Location: 29°04'40"S 153°04'64"E

03____Visual impact assessment

3.12_ Section 9_Broadwater National Park to Richmond River

43A & 43B_ Evens Head Road, Broadwater
44_ Pacific Highway, Broadwater

The landscape character assessment assessed the impact of the project on Section 9 to be ***low.***



Viewpoint 43A, 43B & 44

Legend

- Alignment and boundary with chainages
- Areas of cut
- Areas of fill
- Bridge
- Existing Pacific Highway Upgrade alignment
- Waterways
- Distance from road centreline (300m / 1000m)
- Visual Envelope
- Photo Location
- Contours at 10m interval

03____Visual impact assessment

3.12.1_ Vantage Point 43A, 43B & 44
Interchange at Broadwater

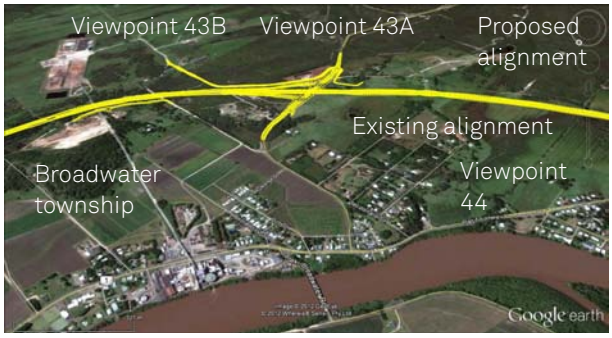
Section 9: Broadwater National Park to Richmond River
Character precinct 45: Moderate ability to visually absorb change

Site description
At Broadwater the project deviates from the existing highway alignment to skirt the town of Broadwater and the prominent Cooks Hill, continuing north to the new bridge crossing over the Richmond River. The new alignment traverses sugar cane farm lands, pastoral land and some remnant pockets of coastal open forest landscape. There are no residences in the immediate vicinity of this viewpoint.

Project description
The project traverses the floodplain area to the east of the existing highway. A major new interchange is proposed to the east of the town of Broadwater at Broadwater to Evans Head Road. This comprises a new overpass, two elevated new roundabouts, north facing on/off ramps and a new access road to the east side of the interchange. Removal of minor isolated stands to trees may be required.

Vantage point selection
Vantage points were selected to address the major interchange at Broadwater (43A and 43B) and the typical view of the proposed highway traversing the floodplain as seen from Broadwater residences, local streets and the existing highway (44).

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
43A & B Middle ground view	**High** Major new road infrastructure in a natural setting. Disturbance to the existing vegetation and major earthworks is proposed.	**Moderate–low** This changed view would be accessible to a low number of local people.	**Moderate–high**	_Minimise loss of existing trees _Provide new screen planting buffer to existing residences in accordance with the concept design _Provide new native heath vegetation to reinstate existing heath land in accordance with the concept design _Reinstate agricultural land where possible



Oblique view looking east

Annotated diagrammatic approximation of the project as photographed from viewpoint 43A_ View north, Evans Head Road, Broadwater. Location: 29°01'23"S 153°26'11"E

03____Visual impact assessment

Annotated diagrammatic approximation of the project as photographed from viewpoint 43B_ View south-west, Broadwater. Location: 29˚01'12"S 153˚26'11"E

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
44 Middle ground view	**Moderate** The project traverses existing agricultural land on a substantial embankment across the floodplain	**Low** This changed view would be repeatedly visible from a moderate number of homes, and a high number of motorists would have fleeting glimpses of this new road corridor.	**Moderate-low**	_Minimise loss of existing trees _Provide new screen planting buffer to existing residences in accordance with the concept design _Reinstate agricultural land where possible

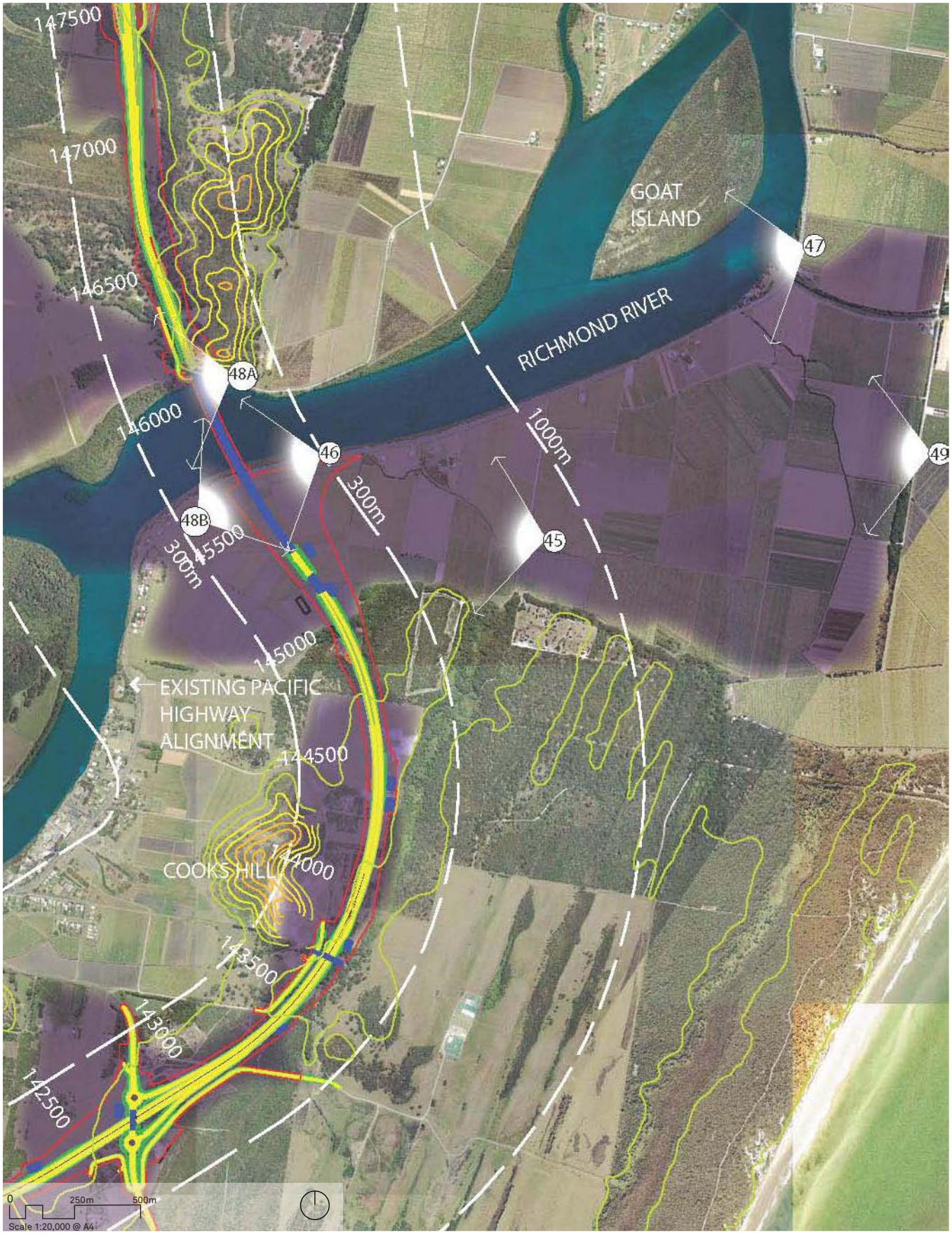
Annotated diagrammatic approximation of the project as photographed from viewpoint 44_ View south-east, Pacific Highway, Broadwater. Location: 29˚01'08"S 153˚25'33"E

03____Visual impact assessment

3.13_ Section 10_Richmond River to Coolgardie Road

45_ Eversons Lane, North Broadwater
46_ Pacific Highway, North Broadwater
47_ Pacific Highway, opposite Goat Island
48A_ Pacific Highway, Broadwater
48B_ Backchannel Road
49_ Legges Lane, North Broadwater
50_ Old Bagotville Road
51_ Thurleigh's Lane
52_ Wardell Road
53_ Lumley's Lane, Wardell
54_ Lumley's Lane, Wardell
55_ Lumley's Lane, Wardell
56_ Coolgardie Road, Coolgardie
57_ Pimlico Road, Coolgardie
58_ Pimlico Road, Pimlico

The landscape character assessment assessed the impact of the project on Section 10 to be ***moderate-high.***



Legend

- Alignment and boundary with chainages (6000)
- Areas of cut
- Areas of fill
- Bridge
- Existing Pacific Highway Upgrade alignment
- Waterways
- Distance from road centreline (300m / 1000m)
- Visual Envelope
- Photo Location
- Contours at 10m interval (200, 150, 100, 50)

Viewpoint 45, 46, 47, 48 &49

03____Visual impact assessment

3.13.1_ Vantage Point 45, 46, 47, 48A, 48B & 49
Richmond River Bridge

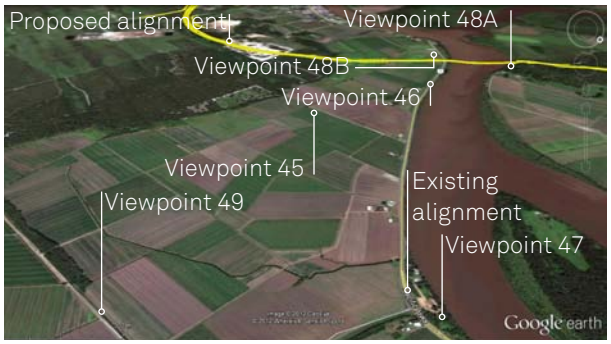
Section 10: Richmond River to Coogardie Road
Character precinct 48: Low-moderate ability to visually absorb change.

Site description
An elevated bridge crossing over the Richmond River is proposed. The project deviates from the existing highway alignment around Cook's Hill on the south side of the river to the low ridge on the north side of the river. The new alignment typically traverses sugar cane farm lands and forested slopes associated with Cooks Hill and the prominent ridge. Views towards the bridge would typically be experienced from the flood plain areas around the proposed new crossing area. To the north of the river the visual catchment area is limited by the topographical relief and forest vegetation. There are few existing residences in close proximity to this area.

Project description
The proposed highway traverses flood plain areas on a fill embankment rising to a high level bridge crossing nearly two kilometres in length. The proposed highway approach from the south is located on a low fill embankment. On the northern side the bridge lands on an existing elevated natural ridge line.

Vantage point selection
These vantage points were selected to address the visibility and impact of the proposed Richmond River bridge. These views are considered to represent the changed views that would be experienced by local people from their residences and from the local street network and by travellers passing through the area.

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
45 Middle ground view	**High–moderate** Major new bridge infrastructure and fill embankments across an open agricultural landscape.	**Low** This changed view would be accessible to a low number of people using the local road network.	**Moderate**	_Maintain an agricultural setting for the elevated bridge and embankments in this location where they cross sugar cane fields. Provide new tree planting only where the upgrade passes through forested areas in accordance with the concept plan _Plant dense low grasses/ ground covers on fill batters _Reinstate agricultural land where possible _Consider removing the proposed short length of batter at CH 145200 and extend the Richmond River bridge structure for the full extent of the floodplain



Oblique view looking south-west

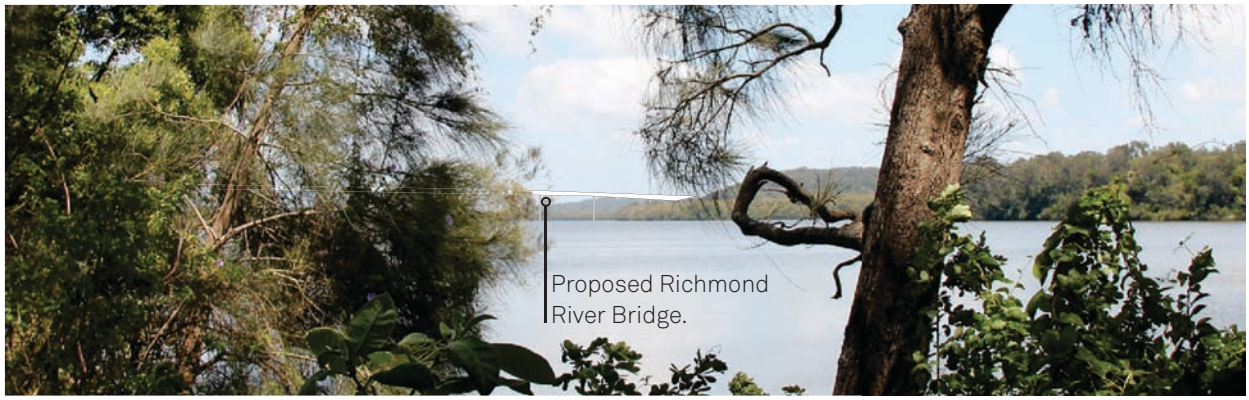
Annotated diagrammatic approximation of the project as photographed from viewpoint 45_ View north-west, Eversons lane. Location: 29°00'09"S 153°27'06"E

03____Visual impact assessment

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
46 Foreground view	**High–moderate** Major new bridge infrastructure over the river and Pacific Highway in a natural and agricultural setting.	**Low** This changed view would be visible to a low number of local people from the local road network.	**Moderate**	_Minimise the loss of existing riparian vegetation _Minimise the depth of the bridge deck _Avoid adding acoustic barriers above the bridge deck. If this is necessary use transparent barriers _Provide a high quality bridge design

Annotated diagrammatic approximation of the project as photographed from viewpoint 46_ View west, Pacific Highway, North Broadwater. Location: 28°59'56"S 153°26'33"E

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
47 Distant view	**Moderate** Major new bridge infrastructure over the Richmond River in a natural scenic setting viewed at a distance.	**Moderate** The view is sensitive because of its high scenic quality but only a few people have access to the view.	**Moderate**	_Minimise the loss of existing riparian vegetation. _Minimise the depth of the bridge deck. _Avoid adding acoustic barriers above the bridge deck. If this is necessary use transparent barriers. _Provide a high quality bridge design.



Annotated diagrammatic approximation of the project as photographed from viewpoint 47_ View south-west, Pacific Highway, opposite Goat Island. Location: 28°59'34"S 153°27'40"E

03____Visual impact assessment

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
48A Foreground view	**High** Major new bridge infrastructure and fill embankments in the foreground across the open agricultural landscape.	**Moderate–low** Considerable sensitivity for a low number of residents at locations along the existing highway and in the floodplain area. Moderate sensitivity for motorists using the existing Pacific Highway	**Moderate–low**	_Maintain an agricultural setting for the elevated bridge and embankments in this location over pastoral land _Minimise the loss of existing riparian vegetation as much as possible _Minimise the depth of the bridge deck _Avoid adding acoustic barriers above the bridge deck. If this is necessary use transparent barriers _Provide a high quality bridge design

Annotated diagrammatic approximation of the project as photographed from viewpoint 48A_ View east, Pacific Highway, North Broadwater. Location: 29˚00'03"S 153˚26'20"E

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
48B Foreground view	**High** Major new bridge infrastructure over the river in a natural setting.	**Low** This changed view would be visible to low number of local people from the local road network. A small group of homes physically affected by the proposed work would be removed.	**Moderate**	_Minimise the loss of existing riparian vegetation _Minimise the depth of the bridge deck _Avoid adding acoustic barriers above the bridge deck. If this is necessary use transparent barriers _Provide a high quality bridge design

Annotated diagrammatic approximation of the project as photographed from viewpoint 48B_ View west, Backchannel Road. Location: 28˚59'46"S 153˚26'19"E

03____Visual impact assessment

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
49 Distant view	**Moderate** Major new bridge infrastructure and fill embankments across an open agricultural landscape at a distance.	**Low** A low number of people have access to this view.	**Moderate-low**	_Maintain an agricultural setting for the elevated bridge and embankments in this location over pastoral land _Plant dense low grasses/ ground covers on fill batters _Reinstate agricultural land where possible

Annotated diagrammatic approximation of the project as photographed from viewpoint 49_ View west, Legges Lane.
Location: 28°59'55"S 153°28'00"E

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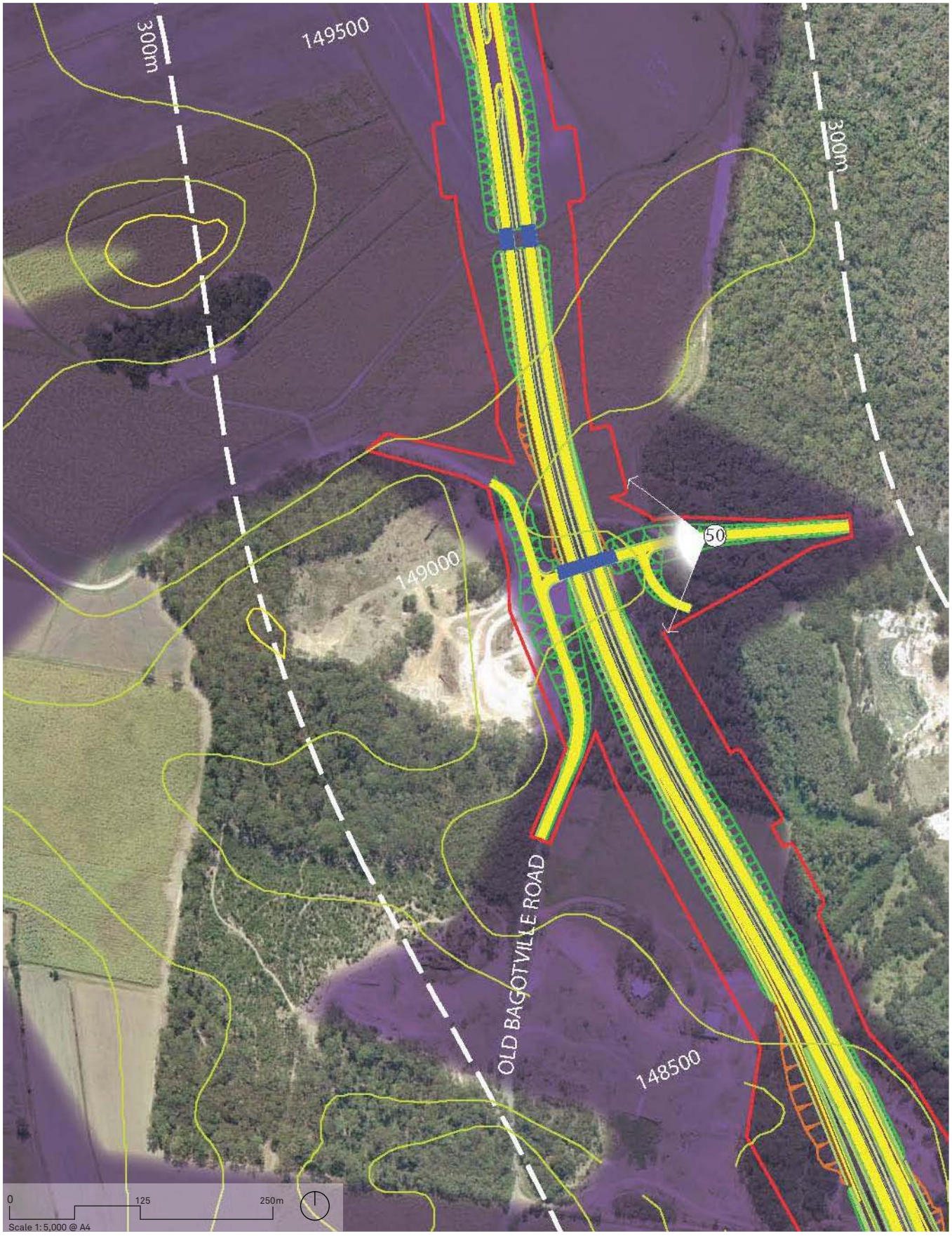


Legend

- Alignment and boundary with chainages (6000)
- Areas of cut
- Areas of fill
- Bridge
- Existing Pacific Highway Upgrade alignment
- Waterways
- Distance from road centreline (300m / 1000m)
- Visual Envelope
- Photo Location
- Contours at 10m interval (200, 150, 100, 50)

Viewpoint 50

03____Visual impact assessment

3.13.2_ Viewpoint 50

Overpass at Old Bagotville Road

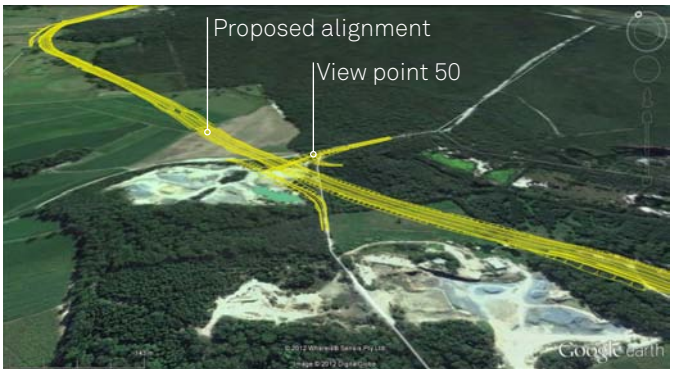
Section 10: Richmond River to Coolgardie Road
Character precinct 50: Low-moderate ability to visually absorb change.

Site description
The project continues to follow a new alignment through open forest at the western foothills of the ridge line associated with Wardell Mountain at the edge of the Richmond River floodplain. The visual catchment area is limited by the topographical relief and forest vegetation.

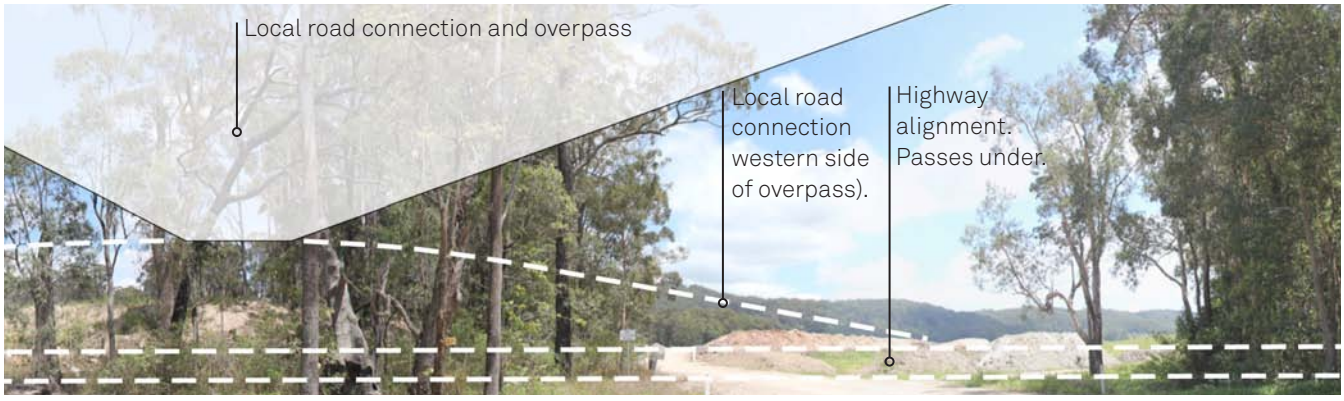
Project description
The proposed highway is located alternately in cuttings and on fill embankments as it passes through the undulating landscape around Bagotville Road. An overpass over the new dual carriageway is proposed to connect to the local road system.

Vantage point selection
This vantage point was selected to address the proposed minor vehicular crossing at Bagotville Road.

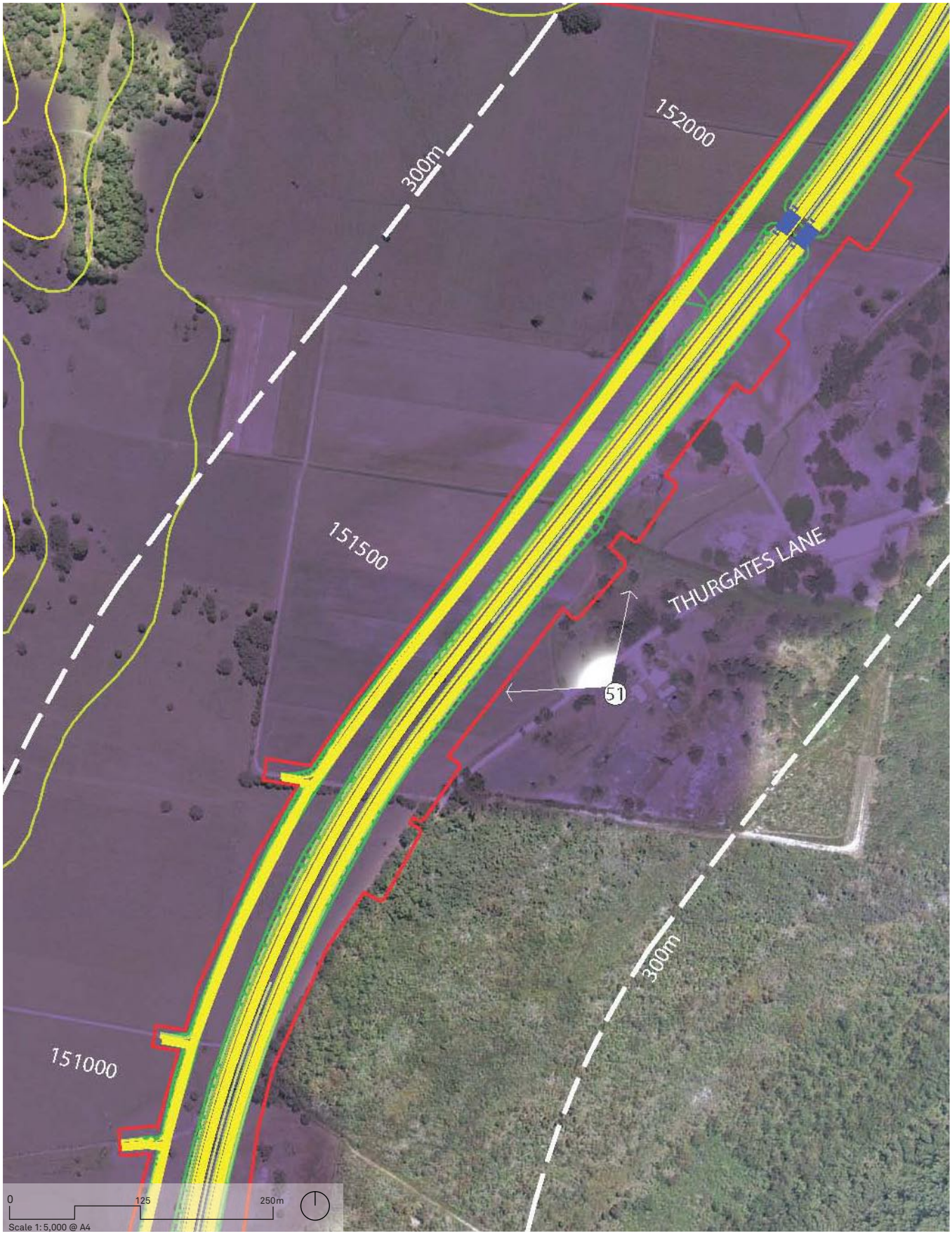
Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
50 Foreground view	**Moderate -high** Major new road infrastructure adjacent to an existing disturbed quarry area.	**Moderate–low** This changed view would be visible for a low number of people from the local road network.	**Moderate**	_Minimise loss of existing trees _Plant local forest trees on cut/fill batters _Reinstate local forest vegetation where applicable _Minimise the depth of the bridge deck _Provide a high quality bridge design



Oblique view looking north-east



Annotated diagrammatic approximation of the project as photographed from viewpoint 50_ View west, Old Bagotville Road.
Location: 28°58'17"S 153°25'55"E



Legend

- Alignment and boundary with chainages (6000)
- Areas of cut
- Areas of fill
- Bridge
- Existing Pacific Highway Upgrade alignment
- Waterways
- Distance from road centreline (300m / 1000m)
- Visual Envelope
- Photo Location
- Contours at 10m interval (200, 150, 100, 50)

Viewpoint 51

03____Visual impact assessment

3.13.3_ Viewpoint 51
Thurgates Lane

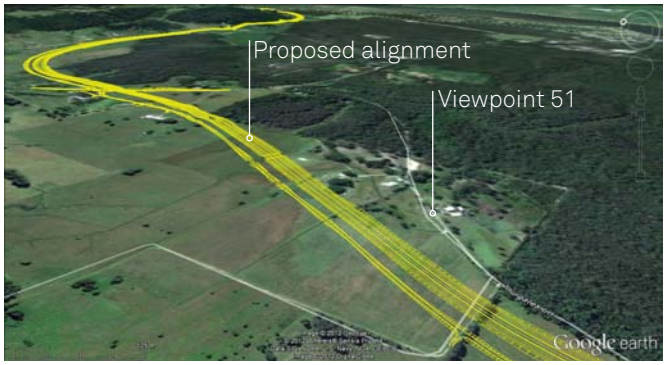
Section 10: Richmond River to Coolgardie Road
Character precinct 50: Low-moderate ability to visually absorb change.

Site description
The project continues to follow a new alignment through an open pastoral landscape at the eastern foothills the Blackwall Range. Scattered patches of vegetation are dotted across the flood plain area and substantial open forest vegetation clothes the slopes to the west and Bingal Creek swamp the east. The visual catchment area is limited by the topographical relief and forest vegetation.

Project description
The proposed highway is located on low fill embankments up to 1.5 m in height. An access road on the west side of the highway provides connection to the local road system.

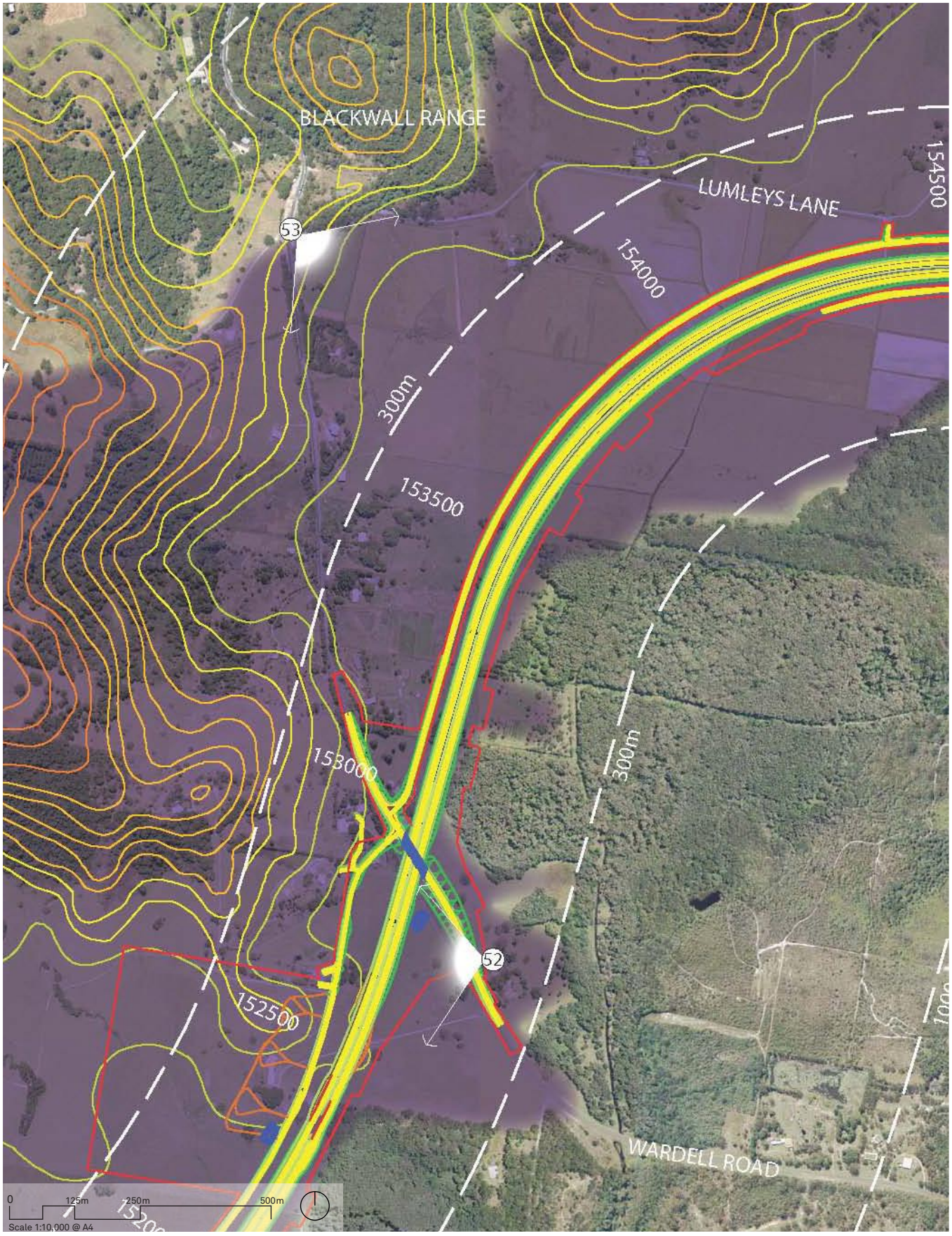
Vantage point selection
This vantage point was selected to typically address anticipated views of the new road alignment traversing the valley as it might be experienced from local residences and local streets. There are a low number of scattered residences in the area.

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
51 Foreground view	**High** Major highway infrastructure in an existing scenic agricultural setting	**Moderate** Considerable sensitivity for a low number of residences with direct views of the project and local residents who would have repeated views to a changed foreground view.	**Moderate–high**	_Minimise loss of existing trees _Plant dense low grasses/ ground covers on fill batters _Reinstate agricultural land where possible



Oblique view looking north-east

Annotated diagrammatic approximation of the project as photographed from viewpoint 51_ View west, Thurgates Lane.
Location: 28°56'58"S 153°25'55"E



Legend

- Alignment and boundary with chainages (6000)
- Areas of cut
- Areas of fill
- Bridge
- Existing Pacific Highway Upgrade alignment
- Waterways
- Distance from road centreline (300m / 1000m)
- Visual Envelope
- Photo Location
- Contours at 10m interval (200, 150, 100, 50)

Viewpoint 52 & 53

03____Visual impact assessment

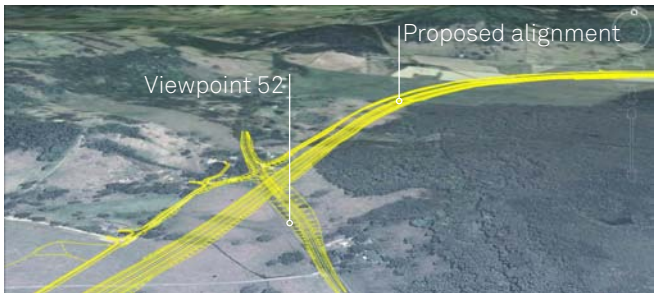
3.13.4_ Viewpoints 52 &53
Wardell Valley and overpass at Wardell Road
Section 10: Richmond River to Coolgardie Road
Character precinct 49: Moderate ability to visually absorb change.

Site description
The project continues to follow a new alignment through an open pastoral landscape at the eastern foothills of the Blackwall Range and Buckombil Mountain. Scattered patches of vegetation are dotted across the flood plain area and substantial open forest vegetation clothes the slopes to the west and Bingal Creek swamp the east. The visual catchment area is limited by the topographical relief and forest vegetation.

Project description
The proposed highway is located on low fill embankments one to two metres in height. An extensive new access road on the west side of the highway provides connection to the local road system and properties to the west of the highway. A major cut up to twenty metres is proposed at the base of Buckombil Mountain to accommodate the new alignment. A new overpass is proposed over the proposed highway at Wardell Road requiring tree removal and construction of major fill embankments.

Vantage point selection
These vantage points address anticipated views of the new road alignment traversing the valley as it might be experienced from local homes and local streets, and views of the minor overpass at Wardell Road. There is a low number of existing residences in the area.

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
52 Foreground view	**High** Major highway infrastructure in an existing scenic agricultural setting. Considerable earthworks and loss of existing trees is anticipated	**Moderate** A low number of local people would have repeated and/or long duration access to this changed view.	**Moderate-high**	_Minimise loss of existing trees _Lay back and feather top cut of large batters to blend with natural landform _Plant local forest trees on large cut batter. Blend into existing landscape _Provide new landscape treatment in accordance with the concept design

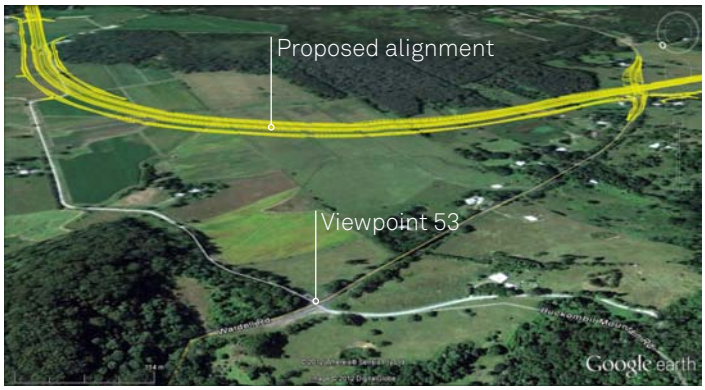


Oblique view looking north-west

Annotated diagrammatic approximation of the project as photographed from viewpoint 52_ View west, Wardell Road.
Location: 28°56'24"S 153°26'18"E

03____Visual impact assessment

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
53 Middle ground view	**High** Major highway infrastructure in an existing peaceful agricultural setting	**Moderate** A low number of people would have repeated and/or long duration access to this changed view.	**Moderate–high**	_Minimise loss of existing trees _Plant dense low grasses/ground covers on fill batters _Reinstate agricultural land where possible



Oblique view looking south-east

Annotated diagrammatic approximation of the project as photographed from viewpoint 53_ View south -east, Lumley's Lane, Wardell. Location: 28°55'42"S 153°26'06"E

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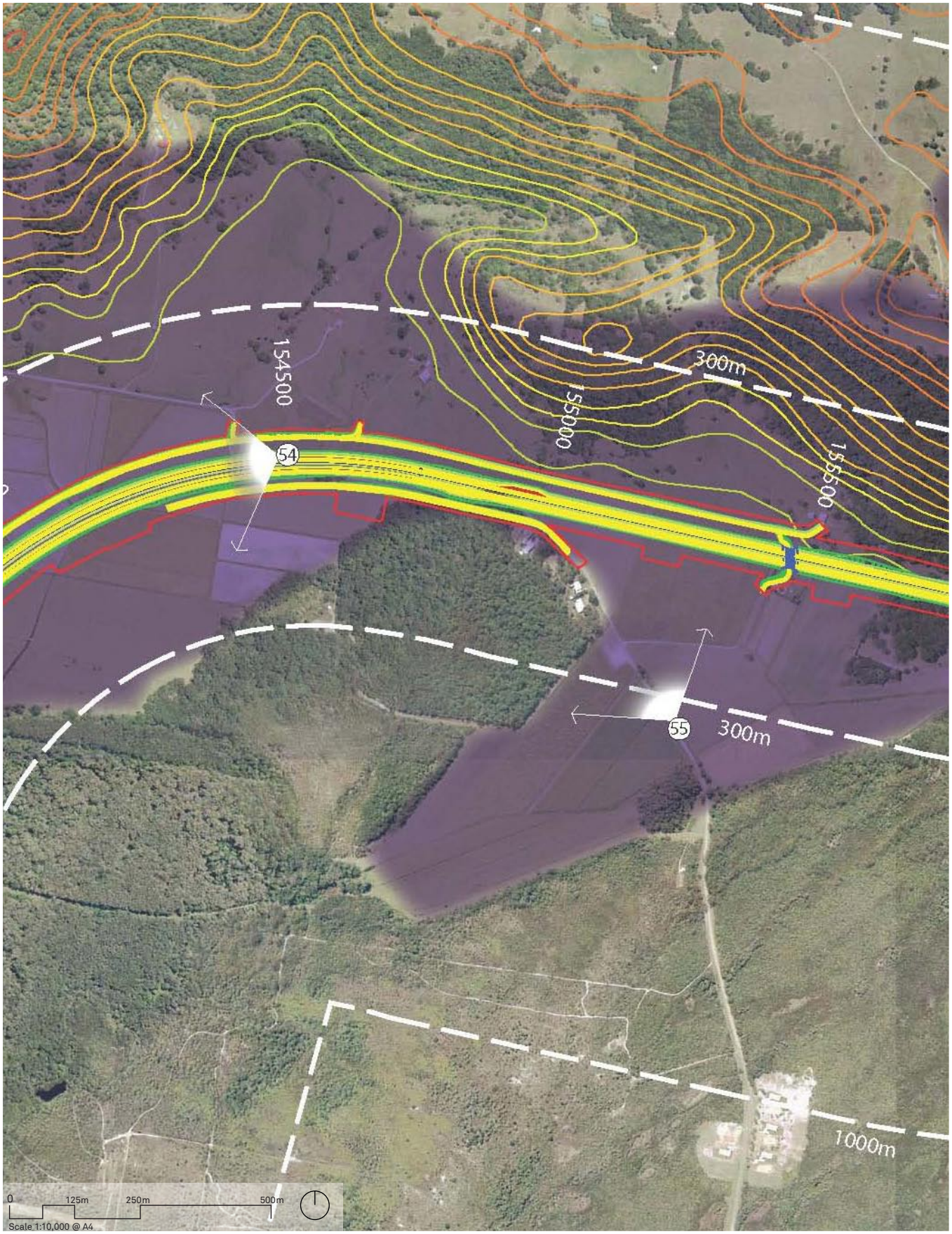


Legend

- Alignment and boundary with chainages (6000)
- Areas of cut
- Areas of fill
- Bridge
- Existing Pacific Highway Upgrade alignment
- Waterways
- Distance from road centreline (300m / 1000m)
- Visual Envelope
- Photo Location
- Contours at 10m interval (200, 150, 100, 50)

Viewpoint 54 & 55

03____Visual impact assessment

3.13.5_ Viewpoints 54 and 55

West of Wardell

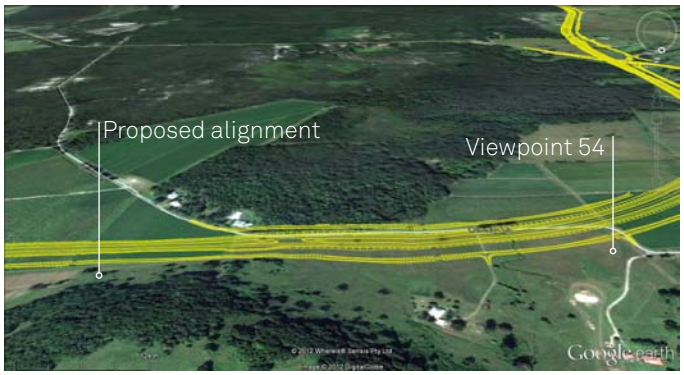
Section 10: Richmond River to Coolgardie Road
Character precinct 49: Moderate ability to visually absorb change.

Site description
The project continues to follow a new alignment through an open pastoral landscape at the eastern foothills of the Blackwell Range and Buckombil Mountain. Scattered patches of existing native vegetation are dotted across the floodplain area and substantial open forest vegetation clothes the slopes to the west and Bingal Creek Swamp to the east. The visual catchment area is limited by the topographical relief and forest vegetation.

Project description
The proposed highway is located on low fill embankments up to two metres in height. An extensive new service road on the west side of the new dual carriageway, and various smaller connections to the east, provide connection to the local road system.

Vantage point selection
This vantage point was selected to typically address anticipated views of the new road alignment traversing the valley as it might be experienced by road travellers. There are a low number of residences in the area associated with Lumley's Lane and Wardell Road. Viewpoint 34 looks at a view along the alignment of the proposed highway.

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
54	**High** Major highway infrastructure in an existing peaceful agricultural setting.	**Moderate** This changed view in a scenic setting would be available to motorists using the new highway and by local residents.	**Moderate–high**	_Minimise loss of existing trees _Plant dense low grasses/ ground covers on fill batters _Reinstate agricultural land where possible



Oblique view looking north

Annotated diagrammatic approximation of the project as photographed from viewpoint 54_ View west, Lumley's Lane, Wardell. Location: 28°55'43"S 153°26'48"E

03____Visual impact assessment

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
55 Middle ground view	**Moderate–high** Major highway infrastructure in an existing peaceful agricultural setting.	**Moderate** This changed view in a natural scenic setting would be repeatedly visible from the local road network.	**Moderate–high**	_Minimise loss of existing trees _Plant dense low grasses/ground covers on fill batters _Reinstate agricultural land where possible

Annotated diagrammatic approximation of the project as photographed from viewpoint 55_ View north-east, Lumley's Lane, Wardell. Location: 28°56'00"S 153°27'18"E

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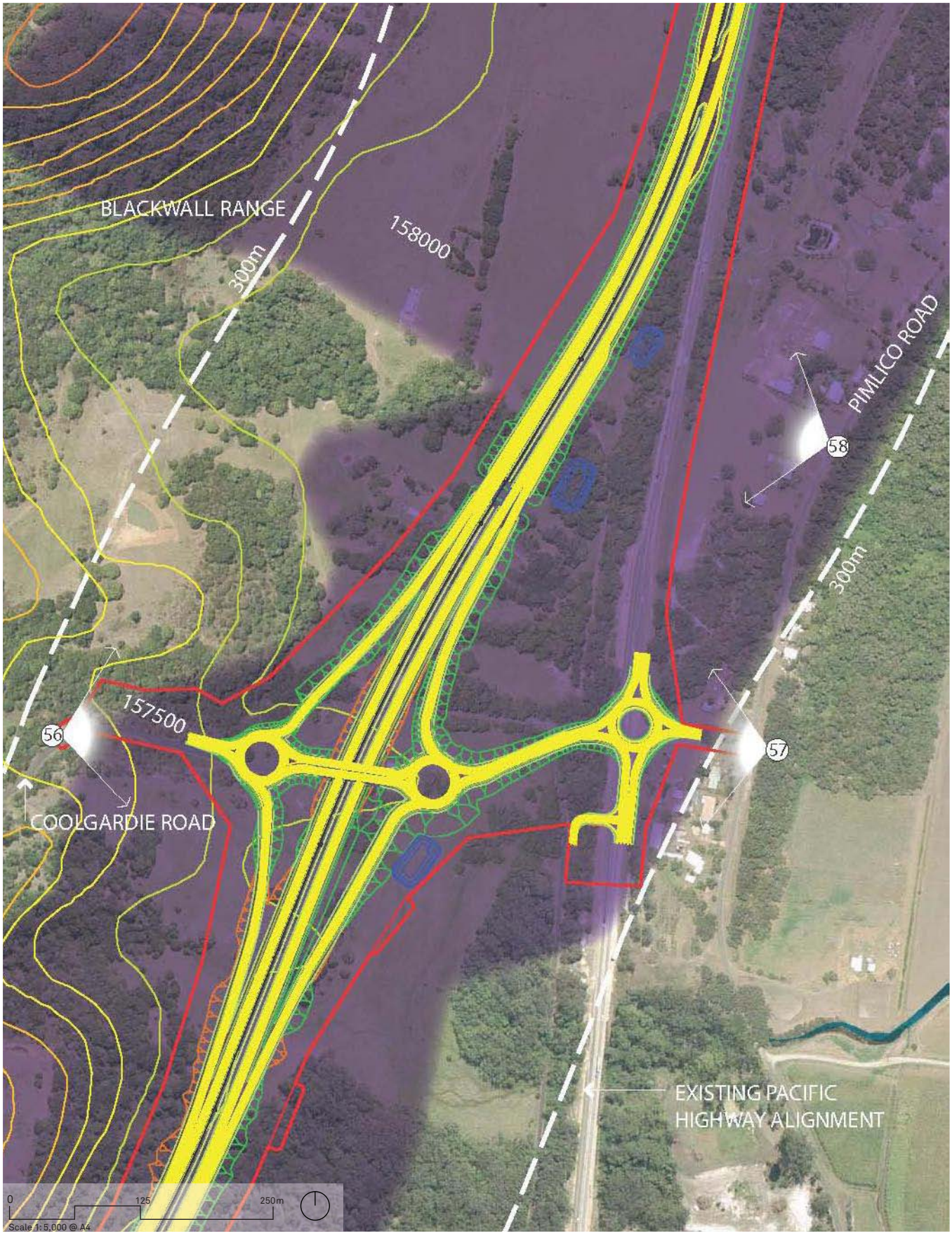


Legend

- Alignment and boundary with chainages (6000)
- Areas of cut
- Areas of fill
- Bridge
- Existing Pacific Highway Upgrade alignment
- Waterways
- Distance from road centreline (300m / 1000m)
- Visual Envelope
- Photo Location
- Contours at 10m interval (200, 150, 100, 50)

Viewpoint 56 & 57

03____Visual impact assessment

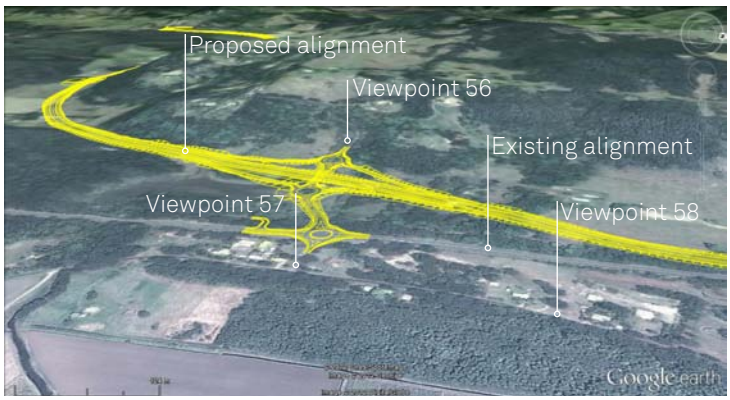
3.13.6_ Viewpoints 56,57
Interchange at Coolgardie

Section 10: Richmond River to Coolgardie Road
Character precinct 53: Low-moderate ability to visually absorb change.

Site description
The proposed highway rejoins the alignment of the existing highway just to the north of this location. At this location the proposed highway travels through open woodland/forest and cleared pastoral landscapes. Scattered rural properties and residences are located in clearings along the existing highway and small settlements exist along Pimlico Road and other low key local roads.

Project description
The proposed highway comprises a new dual carriageway deviating slightly from the existing highway alignment with new on/off ramps on both sides of the proposed new overpass and roundabout connections. These provide access to the existing highway and local road network. The existing highway to the east would form the service road. The new carriageways are located on cut and fill embankments typically one to two metres and up to three metres. Major tree removal is likely to be required. Much of the new work is typically accommodated within, and screened by, existing open woodland vegetation. Removal of vegetation at the new roundabout on the old Pacific Highway would open up views to the new interchange to existing residences on Pimlico Road.

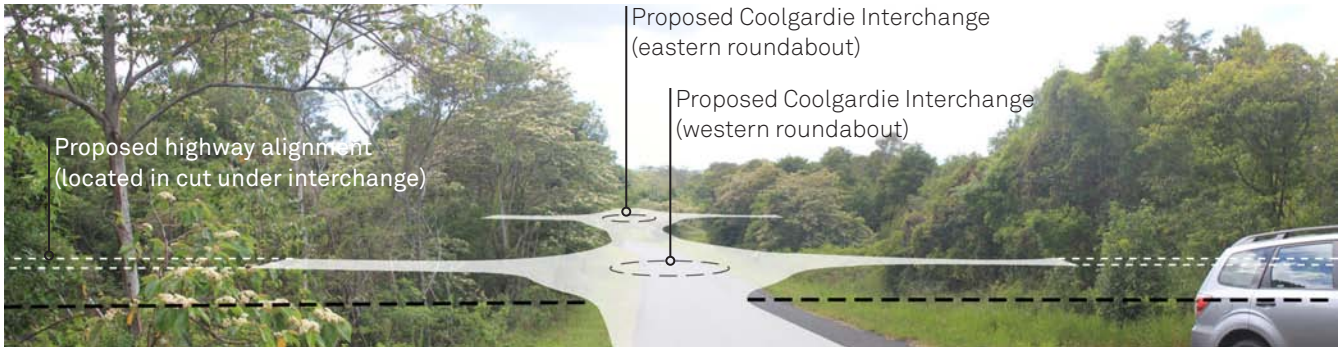
Vantage point selection
Vantage points 30 and 31 typically address the views of the proposed highway and the new roundabout on the Pacific Highway as experienced from nearby residences and on local streets. Vantage point 32 specifically address the major interchange at Coolgardie.



Oblique view looking south-west

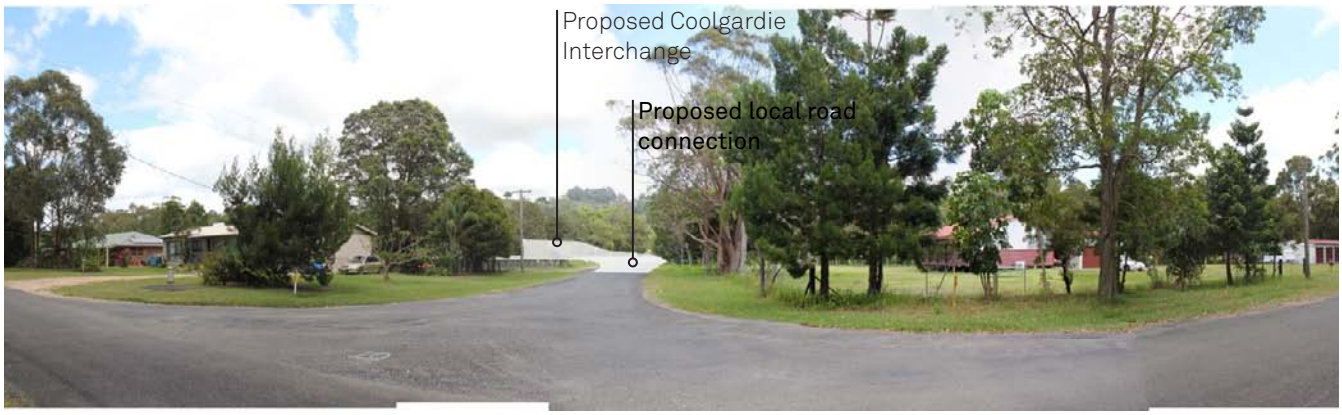
03____Visual impact assessment

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
56 Foreground view	**High** Major disturbance to the existing native woodland.	**Moderate** Considerable sensitivity for a low number of residences with a changed foreground view at this location, however, the project is generally well screened by existing woodland landscape and mostly visible only to motorists using the highway.	**Moderate–high**	_Minimise loss of existing trees _Plant local forest trees on cut/fill batters _Reinstate local forest vegetation where applicable _Provide new screen planting buffer to existing homes and landscape treatment generally in accordance with the concept design



Annotated diagrammatic approximation of the project as photographed from viewpoint 56_ View east, Coolgardie Road, Coolgardie. Location: 28°55'19"S 153°28'16"E

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
57 Middle ground view	**High–moderate** Major disturbance to the existing native woodland, however the new infrastructure is typical of infrastructure already in place at this location.	**Moderate–low** Considerable sensitivity for a low number of residents from local homes with a changed foreground view at this location, however, the project is generally well screened by existing woodland landscape and mostly visible only to motorists using the highway.	**Moderate**	_Minimise loss of existing trees _Plant local forest trees on cut/fill batters _Reinstate local forest vegetation where applicable _Provide new intermittent screen planting on batters to screen the project from local residences in accordance with the concept plan



Annotated diagrammatic approximation of the project as photographed from viewpoint 57_ View west, Pimlico Road, Pimlico. Location: 28°55'21"S 153°28'38"E

03____Visual impact assessment

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
58 Foreground view	**Low** The proposed highway alignment is beyond the existing highway alignment and largely screened by existing tree vegetation. It is important to retain as much existing vegetation as possible.	**Moderate** Considerable sensitivity for a low number of residents from local homes with a changed foreground view at this location, however, the project is generally well screened by existing trees and mostly visible only to motorists using the highway.	**Moderate–low**	_Minimise loss of existing trees _Plant local forest trees on cut/fill batters _Reinstate local forest vegetation where applicable _Provide new intermittent screen planting on batters to screen the project from local residences in accordance with the concept plan

Annotated diagrammatic approximation of the project as photographed from viewpoint 58_ View west, Pimlico Road, Pimlico. Location: 28°55'10"S 153°28'41"E

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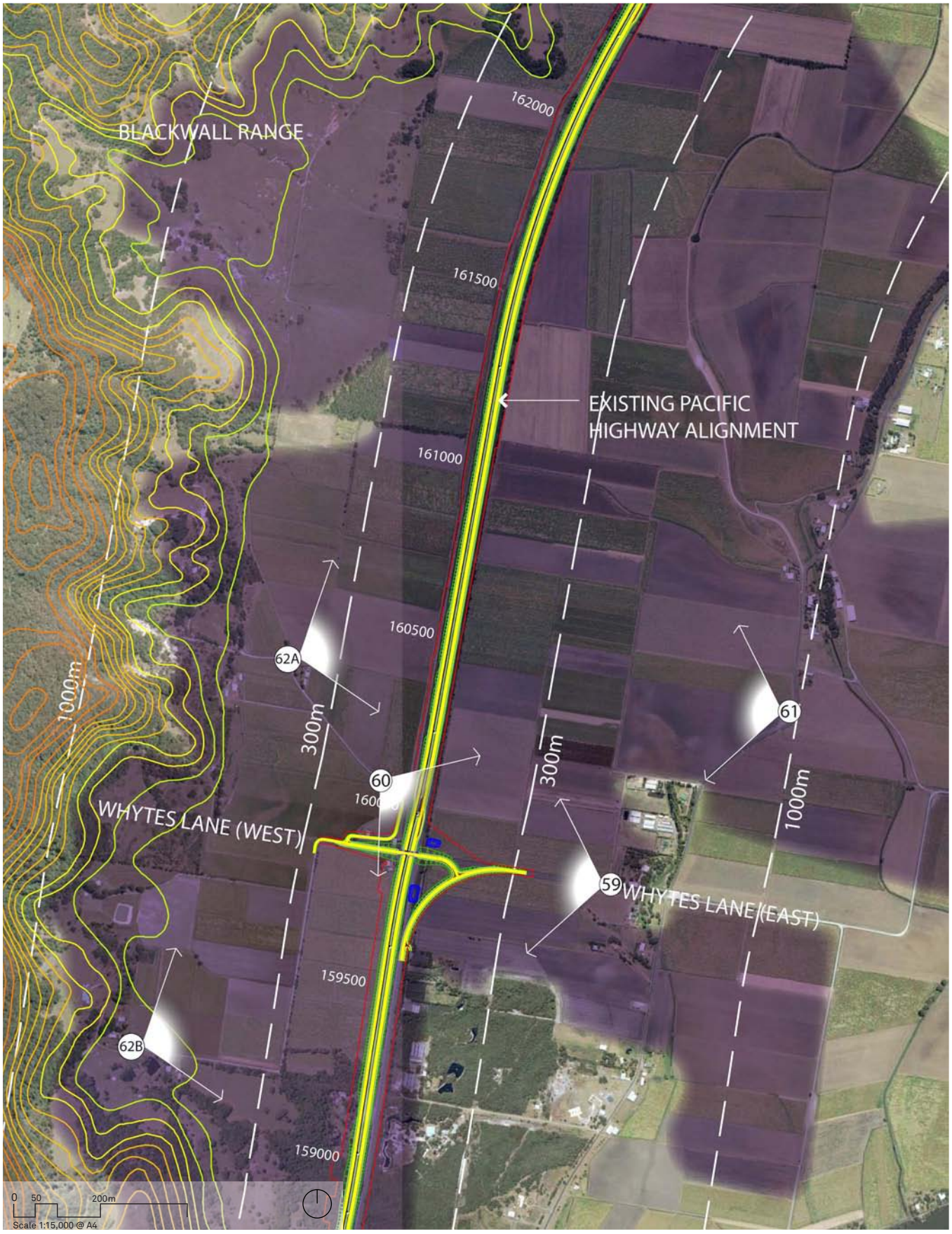
03____Visual impact assessment

3.14_ Section 11_Coolgardie Road to Ballina

59_ Whytes Lane (East), Pimlico
60_ Whytes Lane, Pimlico
61_ Pimlico Road, Pimlico
62A_ Whytes Lane (West), Pimlico
62B_ Sartories Lane, Pimlico
63_ Pimlico Road, Emigrant Creek, West Ballina
64_ Bruxner Highway, Emigrant Creek, West Ballina
65_ Pacific Highway bridge over Emigrant Creek, West Ballina

The landscape character assessment assessed the impact of the project on Section 11 to be ***low.***



Legend

- Alignment and boundary with chainages (6000)
- Areas of cut
- Areas of fill
- Bridge
- Existing Pacific Highway Upgrade alignment
- Waterways
- Distance from road centreline (300m / 1000m)
- Visual Envelope
- Photo Location
- Contours at 10m interval (200, 150, 100, 50)

Viewpoint 59, 60, 61, & 62

03____Visual impact assessment

3.14.1_ Viewpoints 59, 60, 61, 62A & 62B

Whytes Lane Overpass

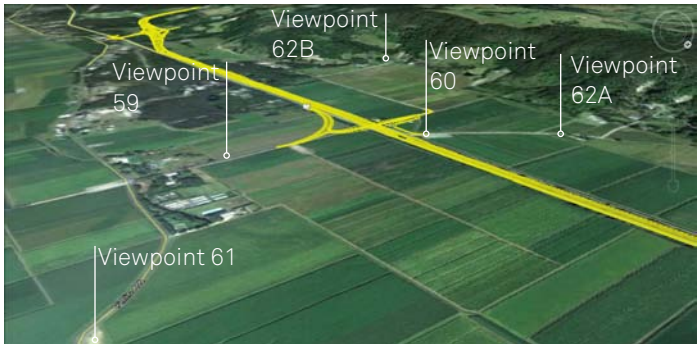
Section 11: Coolgardie Road to Ballina Bypass
Character precinct 53: Low–moderate ability to visually absorb change.

Site description
The proposed highway upgrade follows the existing Pacific Highway alignment through an open pastoral landscape on the Richmond River floodplain to the east of the Blackwall Range. A low number of homes are dotted amongst the foothills of the ridgeline with access to Whytes Lane and along Pimlico Road to the east of the existing highway. Fingers of local native vegetation follow creek lines and provide screening along the existing highway.

Project description
The new dual carriageway of the proposed highway is elevated on low fill batters up to two metres to the west of the existing highway pavement. The existing highway becomes a new service road connection between Whytes Lane and Coolgardie Road. A new overpass at Whytes Lane provides connection across the proposed highway.

Vantage point selection
These vantage points address the typical view that would be experienced from local residences and streets on both sides of the project. Views 59 and 60 also specifically address the proposed elevated overpass at Whytes Lane. Vantage point 62B address the typical view the might be experienced from homes located in the foothills of the Blackwall Range just to the west of the proposed highway upgrade.

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
59 Middle ground view	**Moderate** New elevated highway infrastructure traversing the floodplain in an agricultural setting however the new work is typical of infrastructure already in place at this location.	**Moderate–low** Considerable sensitivity for a low number of residences with a changed foreground view at this location.	**Moderate**	_Plant dense low grasses/ ground covers on fill batters _Reinstate agricultural land where possible _Provide intermittent screen planting on batters to screen the project from individual residences in accordance with the concept design



Oblique view looking south-west

Annotated diagrammatic approximation of the project as photographed from viewpoint 59_ View west, Whytes Lane East, Pimlico. Location: 28°54'10"S 153°29'01"E

03____Visual impact assessment

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
60 Foreground view	**High** New elevated highway infrastructure traversing the floodplain in an agricultural setting however the new work is typical of infrastructure already in place at this location. Possible removal of existing vegetation would increase visibility of the proposed highway.	**Moderate** Considerable sensitivity for a low number of residents from local homes with a changed foreground view.	**Moderate–high**	_Retain as many trees as possible _Plant local forest trees on fill batters _Reinstate local forest vegetation where applicable _Provide intermittent screen planting on batters to screen the project from individual residences in accordance with the concept design

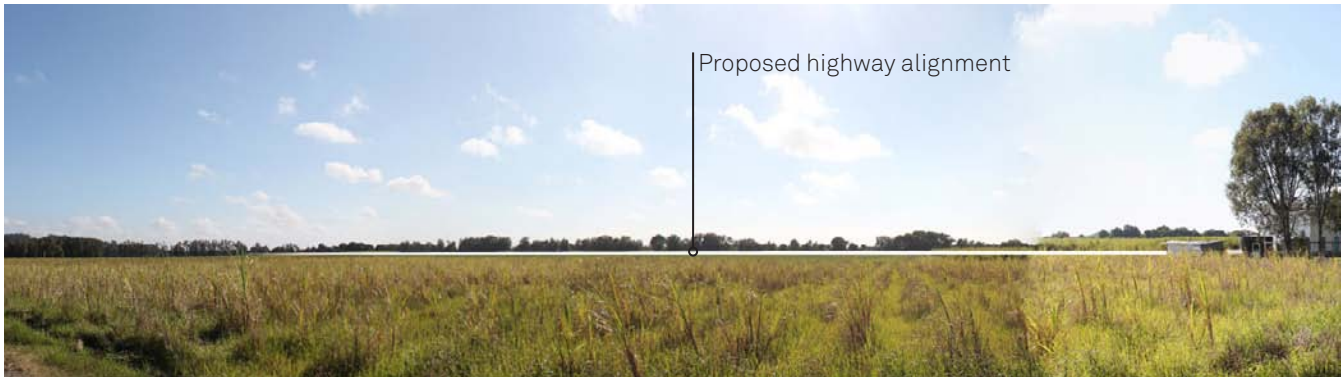
Annotated diagrammatic approximation of the project as photographed from viewpoint 60_ View south-east, Whytes Lane, Pimlico. Location: 28°54'02"S 153°28'45"E

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
61 Middle ground view	**Moderate–low** New elevated highway infrastructure in an agricultural setting however the new work is typical of infrastructure already in place at this location.	**Moderate–low** Considerable sensitivity for a low number of residents in local homes with a changed middle ground view.	**Moderate–low**	_Plant dense low grasses/ ground covers on fill batters _Reinstate agricultural land where possible _Provide intermittent screen planting on batters to screen the project from individual residences in accordance with the concept design

Annotated diagrammatic approximation of the project as photographed from viewpoint 61_ West, Pimlico Road, Pimlico. Location: 28°53'55"S 153°29'27"E

03____Visual impact assessment

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
62A Middle ground view.	**Moderate–low** New elevated highway infrastructure traversing the floodplain in an agricultural setting however the new work is typical of infrastructure already in place at this location.	**Moderate–low** Considerable sensitivity for a low number of residents from local homes with a changed middle ground view.	**Moderate–low**	_Plant dense low grasses/ground covers on fill batters _Reinstate agricultural land where possible _Provide intermittent screen planting on batters to screen the project from individual homes in accordance with the concept design



Annotated diagrammatic approximation of the project as photographed from viewpoint 62A_ View east, Whytes Lane West, Pimlico. Location: 28°53'49"S 153°28'34"E

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
62B Middle ground view	**Moderate** New elevated highway infrastructure traversing the floodplain in an agricultural setting, however the new infrastructure is typical of infrastructure already in place at this location.	**Moderate** Considerable sensitivity for a few residents with a changed middle ground view due to loss of existing roadside vegetation screen	**Moderate**	_Replace existing roadside screen vegetation where it provides a screen between the highway and local homes along Sartories Road and other local streets

Annotated diagrammatic approximation of the project as photographed from viewpoint 62B _ West, Pimlico Road, Pimlico. Location: 28°53'55"S 153°29'27"E

Legend

- Alignment and boundary with chainages (6000)
- Areas of cut
- Areas of fill
- Bridge
- Existing Pacific Highway Upgrade alignment
- Waterways
- Distance from road centreline (300m / 1000m)
- Visual Envelope
- Photo Location
- Contours at 10m interval (200, 150, 100, 50)

Viewpoint 63

03____Visual impact assessment

3.14.2_ Viewpoints 63
Emigrant Creek

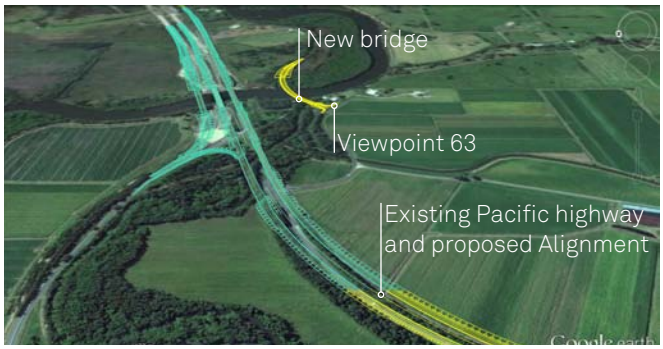
Section 11: Coolgardie Road to Ballina Bypass
Character precinct 53: Low-moderate ability to visually absorb change.

Site description
The proposed highway follows the alignment of the existing highway over the confluence of Duck and Emigrant Creeks on low lying land on the Richmond river floodplain. (Creek crossings are outside of the project scope) A new bridge is proposed on the service road across Emigrant Creek south of the highway crossing. There is a low number of residences on the banks of the creeks that would be affected by the changed landscape.

Project description
Vegetation would provide limited screening from the new work at locations surrounding the new bridge. Proposed service road approaches are located on low fill embankments up to two metres in height.

Vantage point selection
The vantage point addresses the new bridge work proposed at Emigrant Creek.

Viewpoint	Magnitude	Sensitivity	Impact	Management Measures
63 Foreground view	**High–moderate** Removal of native riparian vegetation would be required to accommodate the new bridge	**Moderate–low** Considerable sensitivity for a low number of residences at locations along this section of the creek.	**Moderate**	_Minimise loss of existing trees _Plant dense low grasses/ ground covers on fill batters _Reinstate agricultural land where possible _Provide new screen planting buffer to existing residences _Reinstate riparian vegetation



Oblique view looking east

Annotated diagrammatic approximation of the project as photographed from viewpoint 63_ View north, Emigrant Creek, Pimlico Road. Location: 28°52'06"S 153°30'04"E

03____Visual impact assessment

3.15_ Overall visual assessment

Visual assessment
Visual impact helps to define the day to day visual effects of development on people's views . For this large project it is difficult to summarise the raw ratings determined for each of the viewpoints into one overall visual assessment because the conditions of the project, the setting, and the degree of sensitivity vary considerably. The major benefit of visual impact assessment is to identify the areas of high impact in order that they can be addressed through engineering and urban design changes and mitigation strategies. In this way, we can be sure that areas of high impact are addressed in the best way possible.

A total of 75 viewpoints were selected for the project. This equates to one view point for just over two kilometre of new highway development. However the selected viewpoints are not evenly spaced over the corridor. Instead, they are focused around the areas of highest anticipated magnitude and the areas where there are most people in the most sensitive settings. The above methodology is helpful because it focuses attention where there is highest development impact, but it can skew the overall visual assessment results if they are read without considering that lower impact viewpoints were not selected because they were considered less critical.

Out of the 75 selected viewpoints visual impact ratings were determined as follows:
_Seven viewpoints have high visual impact
_Twenty-one viewpoints have high to moderate impact
_Twenty-nine viewpoints have moderate impact
_Fourteen viewpoints have moderate to low impact
_Four viewpoints have low impact (however they represent a high proportion of the overall development).

Ratings of high impact occur where the project follows a new alignment through sensitive forest such as at Dirty Creek Range, Pine Brush State Forest and Tyndale (Bondi Hill), the bridge over the Clarence River, New Italy, and at major interchange affecting local residents. High–moderate impacts were recorded in areas of forest removal and new interchanges affecting local residents, or where the project follows a new alignment through particularly scenic landscapes, for example, near Wardell. Moderate–low impacts were recorded in less sensitive agricultural areas where no elevated interchanges are proposed or where views of the project are distant. Low impacts also generally occur in less sensitive agricultural areas and where views of the project are distant. Moderate impacts result from a variety of conditions where magnitude or sensitivity ratings are high.

An urban design and landscape concept design strategy has been developed to address the assessment findings of the character and visual assessments (section 4.5, plans LA01-36). Supportive detailed plans, cross sections, imagery and descriptive text are also provided. This design strategy seeks to achieve the most appropriate response to address the identified visual impacts for the entire project.

Specific mitigation measures provided at every vantage point (refer vantage point assessments, section 3) seek to ensure that areas assessed at high impact are properly and appropriately considered at design and implementation stages. In this way that the identified visual impacts are minimised and addressed to the greatest possible extent.