



Australian Government



Coffs Harbour Bypass

Amendment Report

Volume 1A. Executive summary, Chapters 1-4



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Volume 1 (A – C)

Executive Summary

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Executive summary

Executive Summary

Background

Transport for New South Wales (TfNSW, formerly Roads and Maritime Services) is planning to build a 12 kilometre bypass of Coffs Harbour from south of Englands Road to Korora Hill in the north and a two-kilometre upgrade of the existing highway between Korora Hill and Sapphire. The project would provide a four-lane divided highway that bypasses Coffs Harbour, passing through the North Boambee Valley, Roberts Hill and then traversing the foothills of the Coffs Harbour basin to the west and north to Korora Hill.

The project is subject to an approval under Division 5.2 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) as Critical State Significant Infrastructure (CSSI). The project is also a controlled action under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) and would need separate approval from the Australian Minister for the Environment. Accordingly, an environmental impact statement (EIS) was prepared, which described and assessed the Coffs Harbour Bypass. The EIS was exhibited by the Department of Planning, Industry and Environment (DPIE) for 47 days from 11 September 2019 to 27 October 2019.

During the exhibition of the EIS, 186 submissions were received from government agencies, stakeholders and the community. The Secretary of DPIE provided copies of the submissions to TfNSW. In accordance with section 5.17 of the EP&A Act, the Secretary requested TfNSW to provide a response to the submissions on 7 November 2019 that addresses the issues identified. These responses are documented in the Submissions Report prepared for the project which is available on the DPIE website: <https://www.planningportal.nsw.gov.au/major-projects/project/10461>.

Purpose of this report

Following the exhibition of the EIS, TfNSW amended several aspects of the project to minimise environmental impacts, further address design and constructability issues and address issues raised during public exhibition of the EIS for the project and during consultation with the community, stakeholders and government agencies. In accordance with clause 192(2) of the Environmental Planning and Assessment Regulation 2000 (NSW) (EP&A Regulation), the Secretary of DPIE gave approval to amend the project on 19 May 2020.

As such, this Amendment Report has been prepared for the project in accordance with clause 192(3) of the EP&A Regulation. The report outlines the proposed design and construction amendments to the project and assesses the environmental impact of these changes. Where necessary, the report has made provisions for additional or revised environmental management measures to manage and/or minimise potential environmental impacts.

Proposed design changes

The proposed design changes to the project described in the EIS are:

- Englands Road interchange
- North Boambee Valley vertical alignment
- Coramba Road bus stop
- Coffs Creek flood mitigation

- Korora Hill interchange
- Kororo Public School bus interchange and Luke Bowen footbridge
- Pine Brush Creek and Williams Creek realignment
- New and revised operational water quality basins.

The proposed construction changes to the project described in the EIS are:

- Additional blasting
- New and revised ancillary sites
- Revised traffic management
- New and revised construction sediment basins.

The concept design has incorporated the design and construction changes identified above and is referred to as the amended design.

The amended design is detailed in **Chapter 2, Design changes** and **Chapter 3, Construction updates** and assessed in **Chapter 5, Additional assessment** of this report.

Assessment updates

The amended design was assessed against each of the key issues and other issues, as set out in the Secretary's Environmental Assessment Requirements (SEARs) issued for the project on 30 October 2017 by the Secretary of DPIE.

A screening assessment was carried out to determine where, as a result of the amended design, additional or different impacts would be expected from those identified in the EIS. Where the impacts would not differ, it was determined that additional assessment was not required. For this reason, it was determined that additional assessment was not required for non-Aboriginal cultural heritage, air quality, sustainability, hazard and risk, and cumulative impacts.

Where additional impacts were considered likely, the assessment process involved desktop studies and/or field investigations for particular issues where required. Updated technical papers were prepared where there was a large amount of numerical changes as an outcome of the design and construction changes and present the same level of assessment and content as carried out for the EIS. Supplementary technical papers were prepared where the changes to the potential impacts as a result of design and construction changes were relatively simple.

While the design and construction changes have aimed to avoid or reduce potential environmental impacts, a number of impacts on the environment and community during construction and operation would still be experienced. As described in the EIS, the project will require a range of mitigation measures to manage these impacts. The Amendment Report has proposed additions or revisions to the mitigation measures to manage potential impacts associated with design and construction changes where required.

Key adverse and beneficial impacts identified which are additional or different to those in the EIS include:

- **Traffic and transport** – The predicted daily traffic volumes for the amended design are generally similar to the EIS design, with small differences across the network. The project as a whole would attract more traffic than the EIS design as the proposed design changes provide improved access to the project. The amended design would result in an additional 1100 vehicles per day travelling on Coramba Road between Shephards Lane and the project, compared to an additional 600

vehicles per day reported in the EIS. Other impacts to the local and regional road network are generally consistent with the EIS.

- **Noise and vibration** – The proposed design and construction changes as well as updated noise modelling methodology has resulted in changes to the impacts identified in the EIS. The largest change in impacts is due to the North Boambee Valley vertical alignment design change, where there is an overall increase to the sound levels. In regard to the whole of the project, the proposed design changes, and updates to noise modelling methodology have resulted in about 619 sensitive receivers qualifying for consideration of at-property treatment. This is an increase from about 478 in the EIS. The final extent of operational noise treatment will be confirmed during detailed design.

Consistent with the EIS, construction noise impacts and exceedance of noise management levels are expected across the project. The greatest number of exceedances are expected from activities involving larger work areas within the construction footprint such as earthworks and roadworks. However, compared to the EIS, the total number of receivers potentially experiencing exceedances has increased due to a more conservative modelling approach used.

- **Biodiversity** – The Biodiversity Assessment Report was updated in response to comments from the Environment, Energy and Science Group (EESG), DPIE and to address the proposed design and construction changes. An additional survey was undertaken in January 2020 which targeted threatened flora searches, verification of vegetation communities and additional surveys for microbats. As a result of comments from EESG, DPIE, impacts to the common planigale and scrub turpentine have also been considered in the updated assessment, and the southern swamp orchid and green-thighed frog has been removed from consideration. The overall impact from construction of the project is around 48.17 hectares of native vegetation being potentially impacted. This is an increase of about 4.80 hectares compared to the EIS, however only about 1.21 hectares of this increase is due to the proposed design and construction changes. An additional threatened ecological community, Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions, was also recorded during the January 2020 field surveys. The Biodiversity Offset Strategy for the project has been updated to reflect the changed impact.
- **Socio-economic, land use and property** – The proposed design and construction changes would result in overall increased impact to property compared to the projects described in the EIS. No properties additional to those outlined in the EIS would be acquired as a result of the amended design. The proposed Englands Road interchange design change would result in a decreased impact to the Coffs Coast Resource Recovery Park and associated businesses. However, this design change would also result in a minor increased impact on the Oz Group Packhouse. The amended design would result in overall socio-economic impacts consistent with the EIS but would result in positive changes to access and connectivity.
- **Aboriginal cultural heritage** – In response to the proposed design and construction changes, an additional archaeological investigation including field survey was carried out in January 2020 to assess new areas within the construction footprint. Two additional Aboriginal archaeological sites were identified, CHB AFT 16 and CHB PAD 27. CHB AFT 16 comprised a low-density artefact scatter, and CHB PAD 27 is a potential archaeological deposit. The environmental management measures have been updated to manage the impacts on the additional archaeological sites. Additionally, updates have incorporated measures identified during consultation with the registered Aboriginal parties on the EIS and now includes a requirement to undertake cultural salvage of sites of exhibiting at least moderate significance.

- **Flooding and hydrology** – The proposed design changes would result in changes to flood impacts across the three catchment areas described in the EIS. In addition to the proposed design changes, the flood modelling for the project was updated due to the inclusion of new survey data and improved modelling methodologies. Excavation of the Bennetts Road detention basin is no longer proposed to mitigate the project’s flood impacts for the Coffs Creek catchment.

As a result of the proposed design changes and the updated flood modelling, the flood impacts across the project would change. A number of locations would experience reductions in flood impacts and some locations would experience slight worsening in flood impacts. However, the flood impacts remain consistent with the floodplain management objectives from the EIS and overall, the amended design would result in positive impacts to flooding and hydrology across the project compared to the project outlined in the EIS. Additionally, consultation with Coffs Harbour City Council has commenced in regard to the whole-of-government approach to managing flood risk in North Boambee Valley. A number of opportunities have been identified for further improvements to the flooding outcomes of the project.

Next steps

DPIE will consider this Amendment Report and the Submissions Report and during its assessment of the project. The Secretary will prepare an environmental assessment report in accordance with section 5.18 of the EP&A Act. The Minister for Planning and Public Spaces will then decide whether or not to approve the project and identify any conditions of approval which will apply.

As the project is being assessed under the Assessment Bilateral Agreement (2015) between the Australian and NSW governments, this only accredits the assessment process under Division 5.2 of the EP&A Act. Accordingly, should the Minister for Planning and Public Spaces approve the project, the Australian Minister for the Environment would then need to issue a separate approval for the project as a controlled action.

If approved by the Australian and NSW governments, TfNSW will continue to consult with community members, government agencies and other stakeholders during the detailed design and construction phases of the project.



Chapter 1

Introduction and background

1. Introduction and background

1.1 The project as described in the EIS

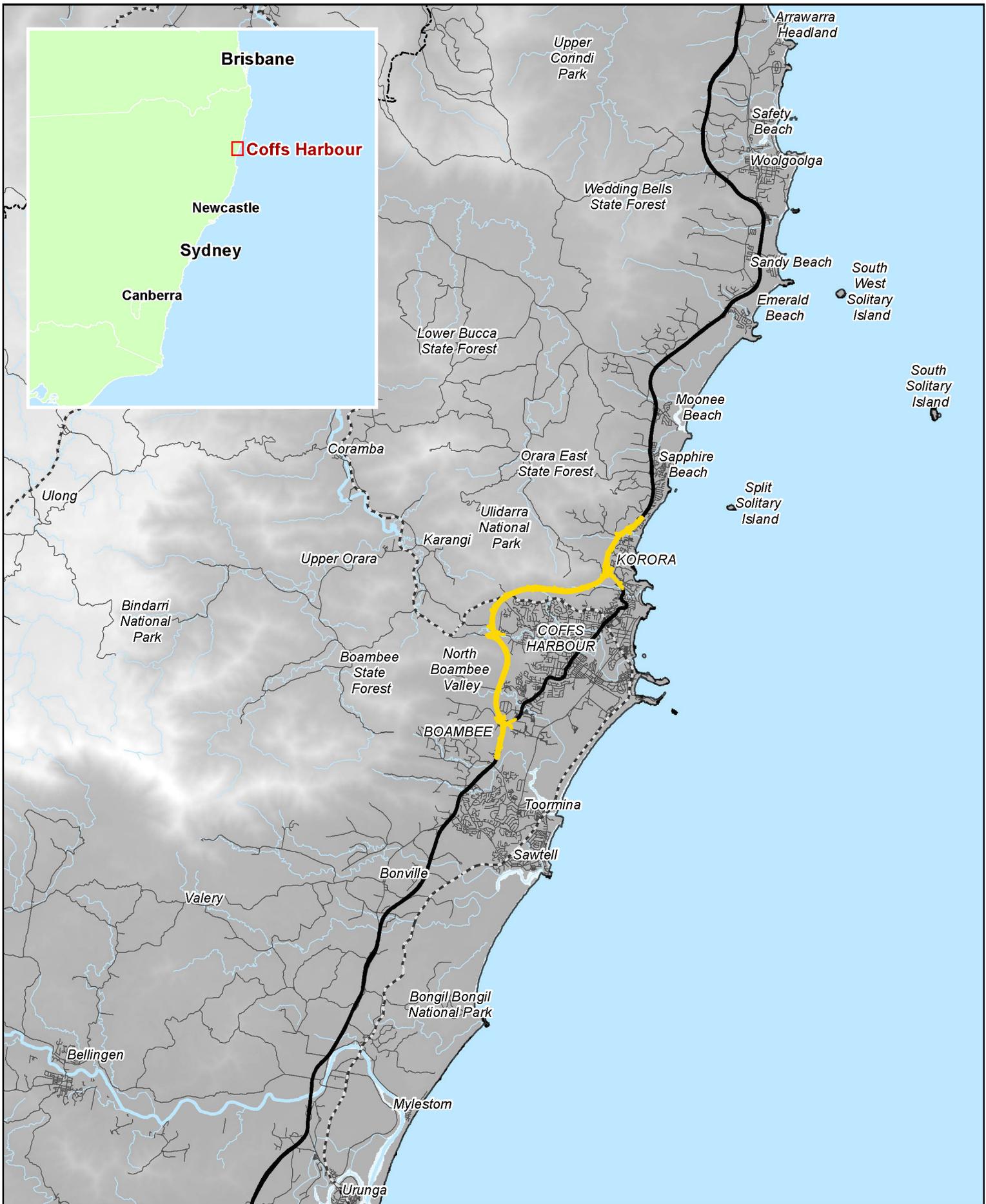
Transport for New South Wales (TfNSW, formerly Roads and Maritime Services) is seeking approval to construct the Coffs Harbour Bypass (the project). The project is located in the Coffs Harbour local government area (LGA) about three kilometres west of the Coffs Harbour central business district (CBD), about 540 kilometres north of Sydney and about 400 kilometres south of Brisbane. The location of the project is shown in **Figure 1-1**.

The project includes a 12 kilometre bypass of Coffs Harbour from south of Englands Road to Korora Hill in the north and a two-kilometre upgrade of the existing highway between Korora Hill and Sapphire. The project would provide a four-lane divided highway that bypasses Coffs Harbour, passing through the North Boambee Valley, Roberts Hill and then traversing the foothills of the Coffs Harbour basin to the west and north to Korora Hill.

Key features of the project are shown in **Figure 1-2** and include:

- Four-lane divided highway from south of Englands Road roundabout to the dual carriageway highway at Sapphire
- Bypass of the Coffs Harbour urban area from south of Englands Road intersection to Korora Hill
- Upgrade of the existing Pacific Highway between Korora Hill and the dual carriageway highway at Sapphire
- Grade-separated interchanges at Englands Road, Coramba Road and Korora Hill
- A one-way local access road along the western side of the project between the southern tie-in and Englands Road, connecting properties to the road network via Englands Road
- A new service road, located east of the project, connecting Solitary Islands Way with James Small Drive and the existing Pacific Highway near Bruxner Park Road
- Three short tunnels through ridges at Roberts Hill (around 190 metres long), Shephards Lane (around 360 metres long) and Gatelys Road (around 450 metres long)
- Relocation of the Kororo Public School bus interchange and Luke Bowen footbridge.

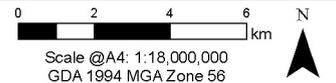
A more detailed description of the project is found in Chapter 5 of the Coffs Harbour Bypass environmental impact statement (EIS) (TfNSW 2019).



- Legend**
- Coffs Harbour Bypass
 - Existing Pacific Highway
 - - - North Coast Railway

Coffs Harbour Bypass
 Location of project
 Figure 1-1

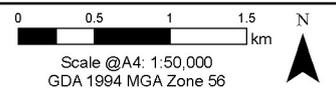
NOTE: Elements are indicative only for the purpose of project planning and may change prior to construction.





- Legend**
- Construction footprint
 - Ancillary sites
 - Alignment
 - North Coast Railway
 - Watercourse

Coffs Harbour Bypass
Key features of the project
Figure 1-2



1.2 Environmental impact statement exhibition

The Coffs Harbour Bypass EIS was exhibited by the Department of Planning, Industry and Environment (DPIE) for 47 days from 11 September 2019 to 27 October 2019. As part of the exhibition, several activities were carried out by TfNSW to engage with the community.

TfNSW has prepared a Submissions Report in response to EIS exhibition (available on the DPIE website <https://www.planning.nsw.gov.au/Assess-and-Regulate/State-Significant-Projects/Coffs-Harbour-Bypass>). The Submissions Report identifies the issues raised by government agencies and the community during exhibition and provides responses to those issues.

1.3 Overview of proposed changes

TfNSW has amended several aspects of the project as exhibited in the EIS. These changes have been developed in response to:

- Consultation with the community and landowners during the EIS public exhibition period (11 September 2019 to 27 October 2019)
- Submissions received during the EIS public exhibition period
- Continued development and refinement of the concept design and consultation with government agencies
- Consultation with the community, landowners and stakeholder groups during the design changes display period (27 November 2019 to 13 December 2019).

The proposed design changes to the project as described in the EIS are:

- Englands Road interchange
- North Boambee Valley vertical alignment
- Coramba Road bus stop
- Coffs Creek flood mitigation
- Korora Hill interchange
- Kororo Public School bus interchange and Luke Bowen footbridge
- Pine Brush Creek and Williams Creek realignment
- New and revised operational water quality basins.

The proposed construction changes are:

- Additional blasting
- New and revised ancillary sites
- Revised traffic management
- New and revised construction sediment basins.

The concept design has incorporated the design and construction changes identified above and is referred to as the amended design.

Design refinements have also been made as part of the ongoing development of the project since the EIS was exhibited. Design refinements are changes that are consistent with the parameters of the

project description as described in the EIS. However, for completeness these refinements have been described and considered in any modelling or impact assessment within **Chapter 5, Additional assessment** where relevant.

1.4 Purpose of this document

As a result of the above the Secretary of DPIE gave approval to amend the project on 19 May 2020 in accordance with clause 192(2) of the Environmental Planning and Assessment Regulation 2000 (NSW) (EP&A Regulation). As such and in accordance with clause 192(3) of the EP&A Regulation, an Amendment Report has been prepared for the project to provide a description and assessment of the proposed changes to the project.

Specifically, this Amendment Report provides:

- Design changes – a description of the proposed design changes to the project (**Chapter 2**)
- Construction updates – a description of the construction changes, including changes to ancillary facilities (**Chapter 3**)
- Consultation – a description of the consultation and engagement process (**Chapter 4**)
- Additional assessment – additional assessment carried out for the design and construction changes (**Chapter 5**)
- Revised environmental management measures (**Chapter 6**).

1.5 Next steps

DPIE will consider this Amendment Report and the Submissions Report and during its assessment of the project. The approval process under Part 5, Division 5.2 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) is illustrated in **Figure 1-3**. The Secretary will prepare an environmental assessment report in accordance with section 5.18 of the EP&A Act. The Minister for Planning and Public Spaces will then decide whether or not to approve the project and identify any conditions of approval which will apply.

As the project is being assessed under the Assessment Bilateral Agreement (2015) between the Australian and NSW governments, this only accredits the assessment process under Division 5.2 of the EP&A Act. Accordingly, should the Minister for Planning and Public Spaces approve the project, the Australian Minister for the Environment would then need to issue a separate approval for the project as a controlled action.

If approved by the Australian and NSW governments, TfNSW will continue to consult with community members, government agencies and other stakeholders during the detailed design and construction phases of the project.

PREPARATION AND ASSESSMENT

Project declared to be critical State Significant Infrastructure (SSI).

TfNSW prepared and submitted SSI application to the Secretary of Department of Planning, Industry and Environment (DPIE).

DPIE issued Secretary's Environmental Assessment Requirements (SEARs) to TfNSW.

TfNSW prepared and submitted a referral to the Australian Government Department of Agriculture, Water and the Environment. Project determined a controlled action.

Revised SEARs issued as part of the NSW-Australian Government bilateral agreement.

EIS prepared by TfNSW.

EIS submitted to the Secretary of DPIE for consideration against the SEARs.

EXHIBITION AND CONSULTATION

EIS placed on public exhibition (minimum 42 days).

At completion of public exhibition period, Secretary of DPIE provides TfNSW with copy of the submissions received by the community, stakeholders and government agencies.

TfNSW prepares a Submissions Report and Amendment Report.

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ASSESSMENT AND DECISION

Assessment report prepared by Secretary of DPIE. Submissions Report and Amendment Report is made available to public.

NSW Minister for Planning and Public Spaces and Australian Minister for the Environment decides whether or not to approve the project, any modifications that must be made to the infrastructure and the conditions to be attached to the approval (if approved).

Figure 1-3 Approvals process under Division 5.2 of the EP&A Act and EPBC Act



Chapter 2

Design changes

2. Design changes

This chapter describes the design changes proposed since the display of the EIS. Changes to the proposed construction activities needed to deliver the project are described in **Chapter 3, Construction updates.**

The proposed design changes are:

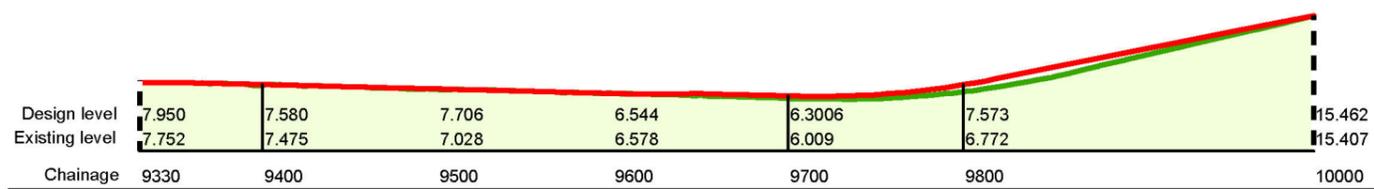
- Englands Road interchange
- North Boambee Valley vertical alignment
- Coramba Road bus stop
- Coffs Creek flood mitigation
- Korora Hill interchange
- Kororo Public School bus interchange and Luke Bowen footbridge
- Pine Brush Creek and Williams Creek realignment
- New and revised operational water quality basins.

The amended design is shown in **Figure 2-1-01** to **Figure 2-1-12**, including the locations of the proposed design changes. The design changes, including figures showing the extent of each design change is provided in the following sections. This series of figures allow comparison against the concept design presented in Figure 5-2-01 to Figure 5-2-12 of Chapter 5, Project description of the EIS.

The proposed design changes have resulted in changes to the indicative road corridor shown in **Figure 2-1-01** to **Figure 2-1-12**. The indicative road corridor would accommodate operational water quality basins and finishing work (ie line marking, signage, road furniture, fencing, lighting, footpaths for pedestrians and cyclists, and landscaped areas). The indicative road corridor is subject to detailed design and final property acquisitions.



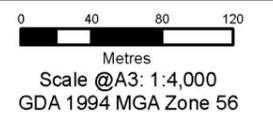
Longitudinal
section
MCN1
Pacific
Highway
Northbound

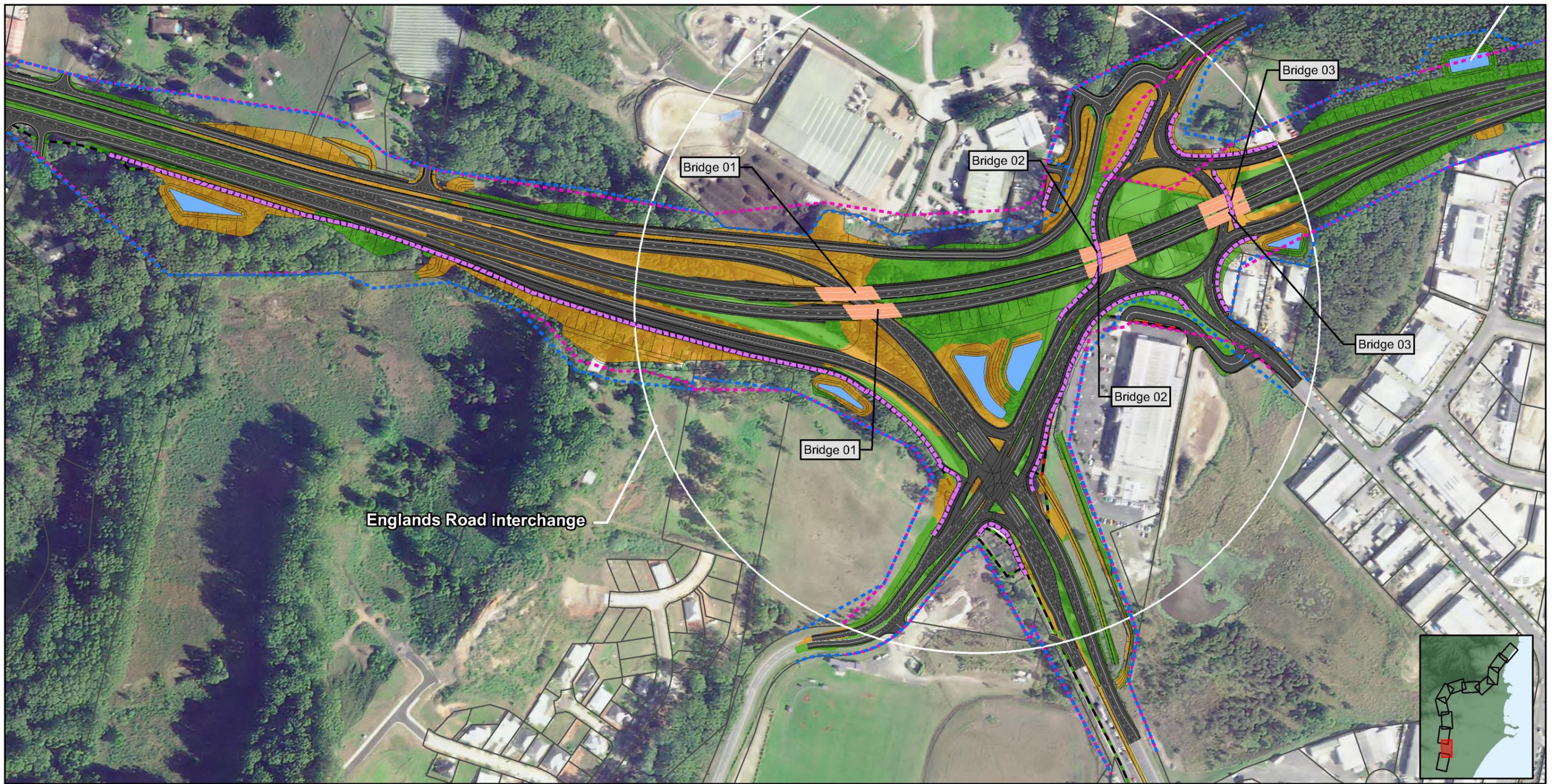


Coffs Harbour Bypass
Project features
Figure 2-1-01

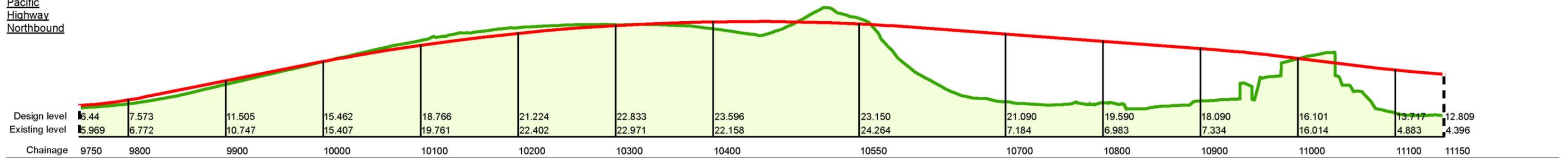
Legend

- Revised indicative road corridor
- Pavement
- Earthworks cut
- Operational water quality basin
- Shared path
- Existing cycleway
- EIS indicative road corridor
- Bridge
- Earthworks fill
- Watercourse
- Existing Footpath





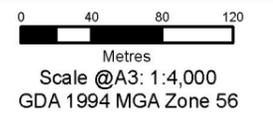
Longitudinal section
MCN1
Pacific Highway
Northbound

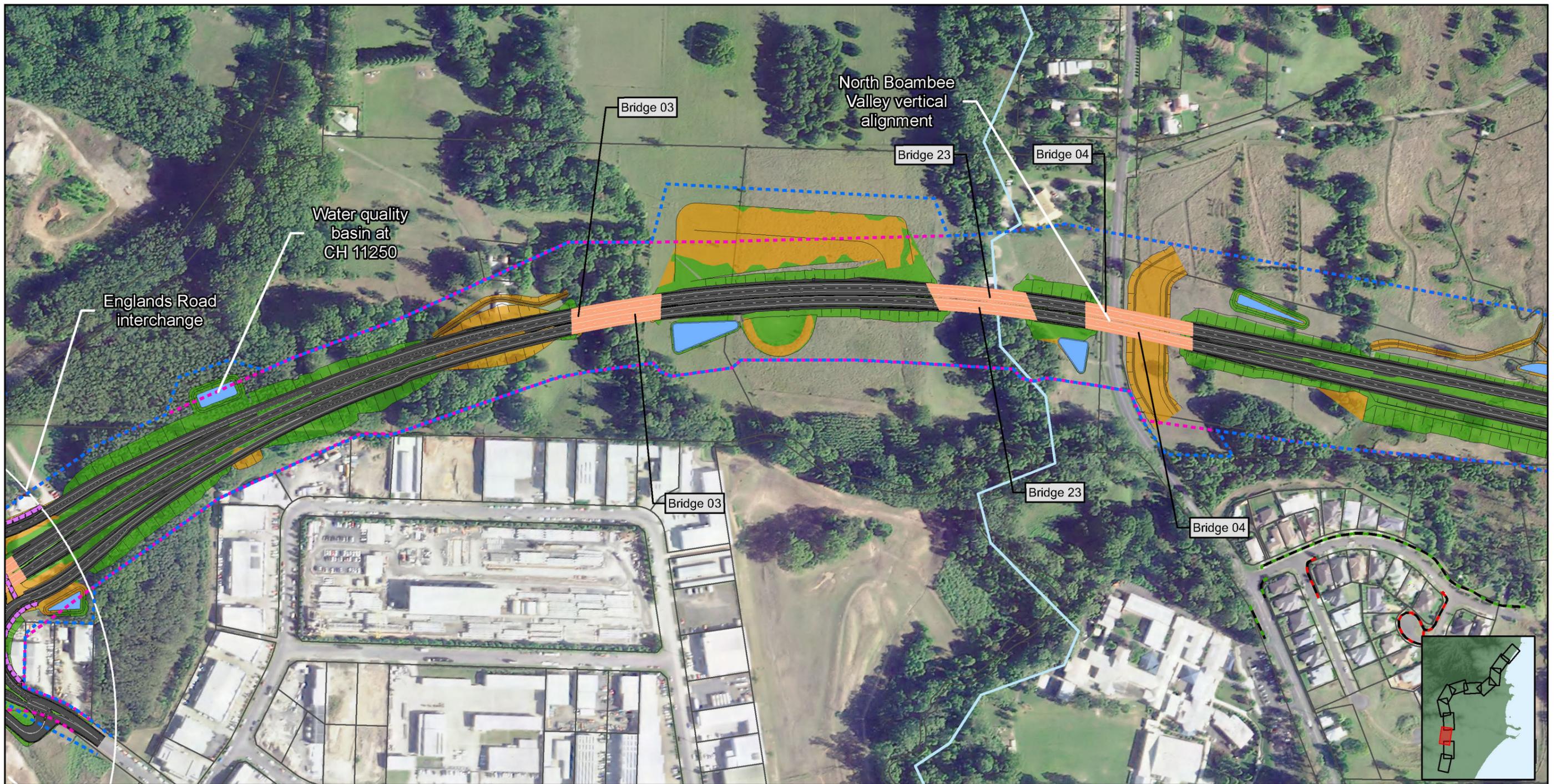


Coffs Harbour Bypass
Project features
Figure 2-1-02

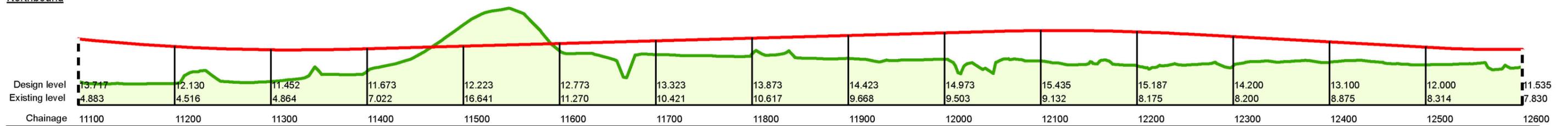
Legend

- - - Revised indicative road corridor
 Pavement
 Earthworks cut
 Operational water quality basin
 Shared path
 Existing cycleway
- - - EIS indicative road corridor
 Bridge
 Earthworks fill
 Watercourse
 Existing Footpath





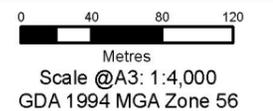
Longitudinal section
MCN1
Pacific Highway
Northbound

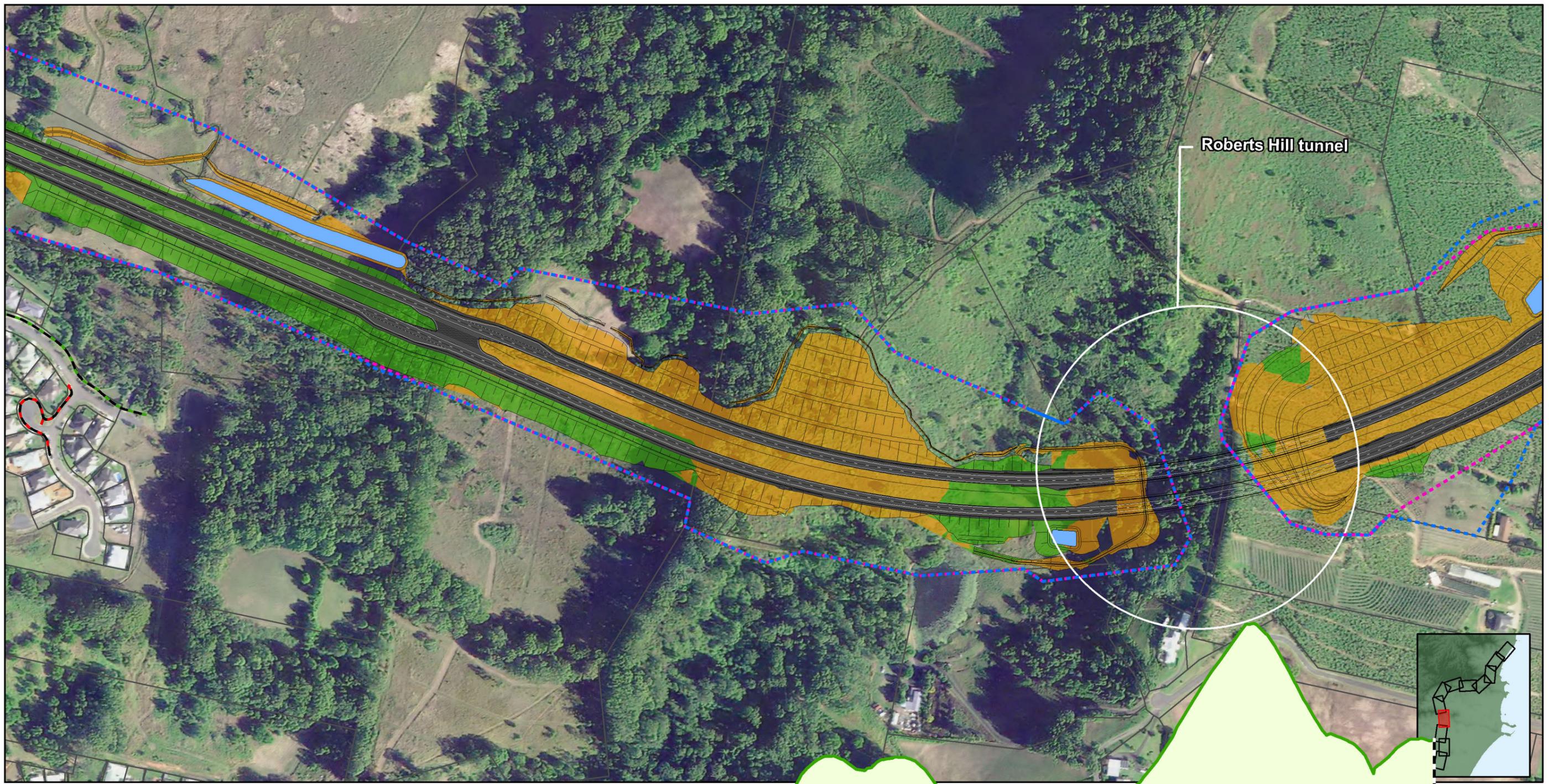


Coffs Harbour Bypass
Project features
Figure 2-1-03

Legend

- - - Revised indicative road corridor
 Pavement
 Earthworks cut
 Operational water quality basin
 Shared path
 Existing cycleway
- - - EIS indicative road corridor
 Bridge
 Earthworks fill
 Watercourse
 Existing Footpath



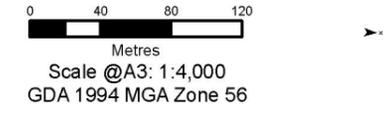


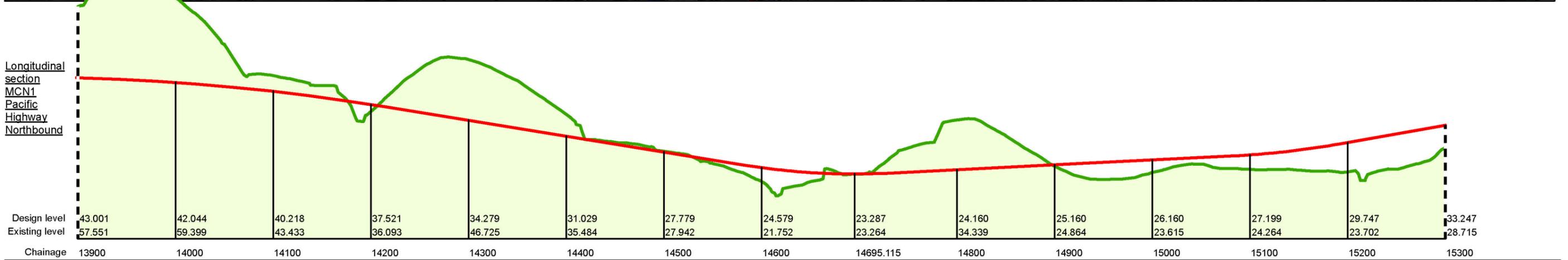
Longitudinal section
MCN1
Pacific Highway
Northbound

Design level	12.000	11.535	12.723	15.314	18.064	20.912	24.304	27.804	31.304	34.804	38.134	40.655	42.307	43.089	43.001
Existing level	8.314	7.830	9.691	10.642	19.677	27.017	27.293	35.012	51.907	44.311	32.910	49.733	79.840	58.152	57.551
Chainage	12500	12600	12700	12800	12900	13000	13100	13200	13300	13400	13500	13600	13700	13800	13900

Coffs Harbour Bypass
Project features
Figure 2-1-04

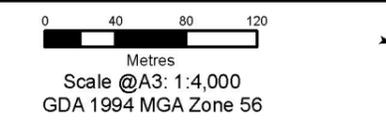
- Legend**
- - - Revised indicative road corridor
 - █ Pavement
 - █ Earthworks cut
 - █ Operational water quality basin
 - - - Shared path
 - - - Existing cycleway
 - - - EIS indicative road corridor
 - █ Bridge
 - █ Earthworks fill
 - - - Watercourse
 - - - Existing Footpath





Coffs Harbour Bypass
Project features
Figure 2-1-05

- Legend**
- - - Revised indicative road corridor
 - █ Pavement
 - █ Earthworks cut
 - █ Operational water quality basin
 - - - Shared path
 - █ Existing cycleway
 - - - EIS indicative road corridor
 - █ Bridge
 - █ Earthworks fill
 - - - Watercourse
 - █ Existing Footpath





Longitudinal section
MCN1
Pacific Highway
Northbound

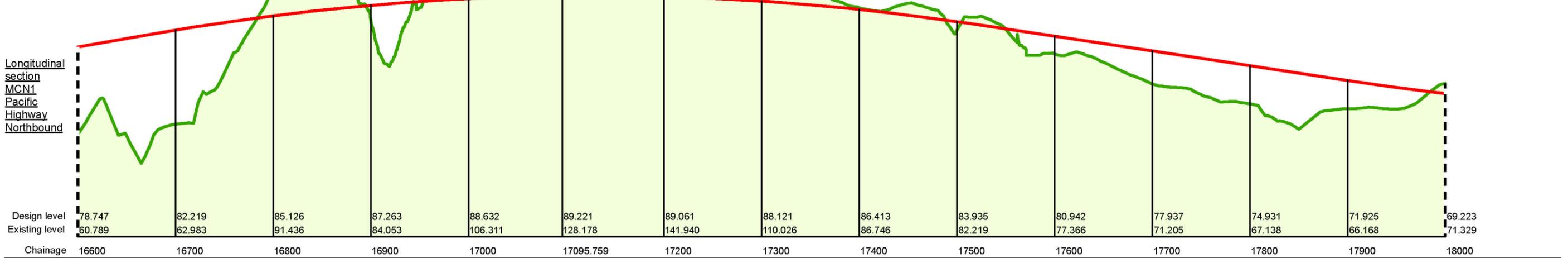
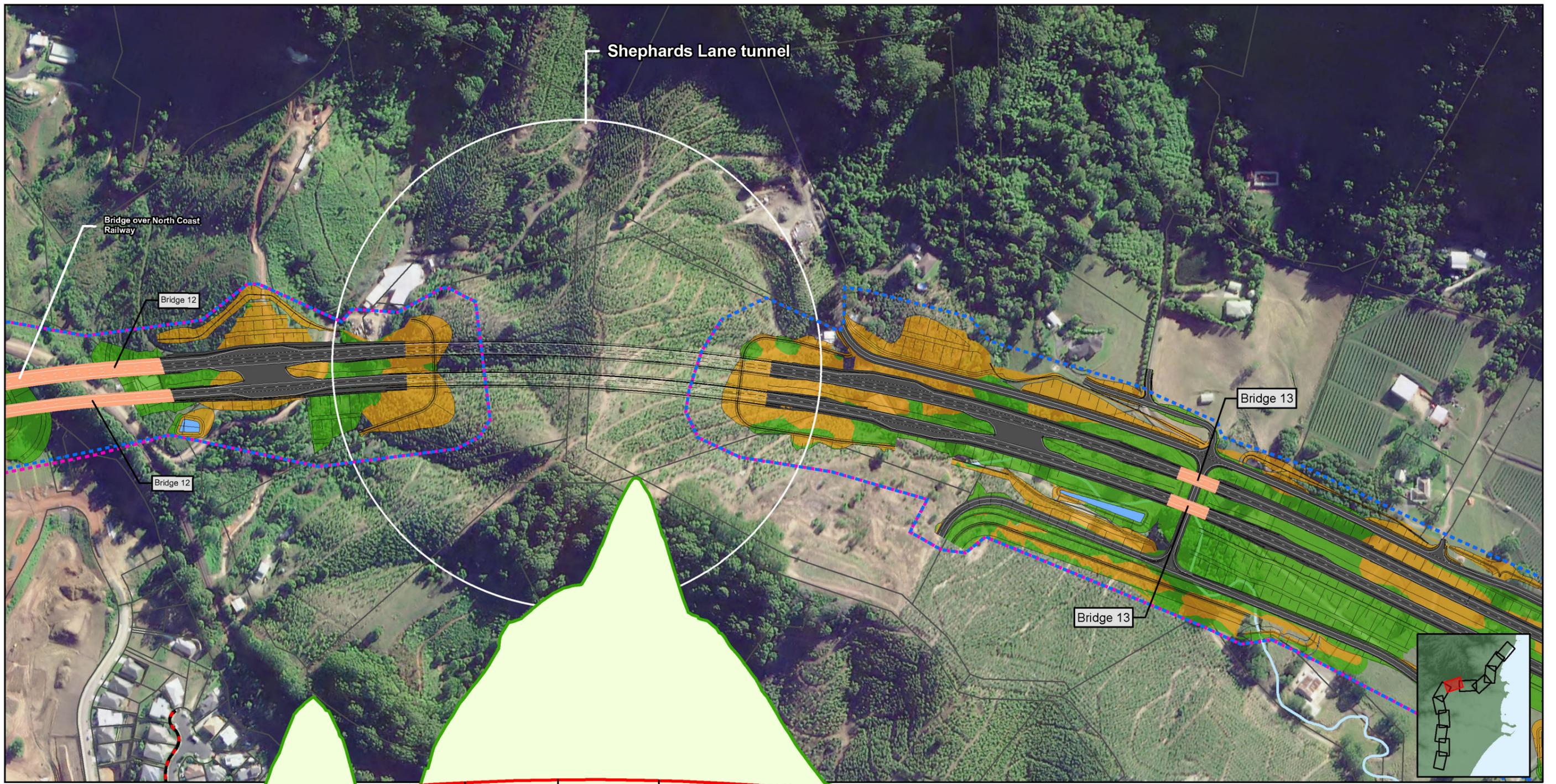
Design level	33.247	36.747	40.247	43.747	47.247	50.747	54.247	57.747	61.247	64.747	68.247	71.747	75.247	78.747
Existing level	28.715	41.564	37.005	53.374	55.609	58.373	54.588	66.160	74.539	62.738	56.195	82.779	67.499	60.789
Chainage	15300	15400	15500	15600	15700	15800	15900	16000	16100	16200	16300	16400	16500	16600

Coffs Harbour Bypass
Project features
Figure 2-1-06

Legend

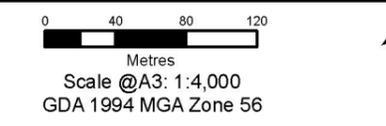
- - - Revised indicative road corridor
 Pavement
 Earthworks cut
 Operational water quality basin
 Shared path
 Existing cycleway
- - - EIS indicative road corridor
 Bridge
 Earthworks fill
 Watercourse
 Existing Footpath

0 40 80 120
Metres
Scale @A3: 1:4,000
GDA 1994 MGA Zone 56



Coffs Harbour Bypass
Project features
Figure 2-1-07

- Legend**
- - - Revised indicative road corridor
 - █ Pavement
 - █ Earthworks cut
 - █ Operational water quality basin
 - - - Shared path
 - - - Existing cycleway
 - - - EIS indicative road corridor
 - █ Bridge
 - █ Earthworks fill
 - - - Watercourse
 - - - Existing Footpath



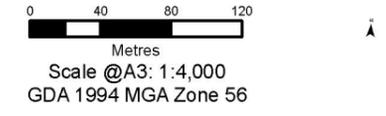


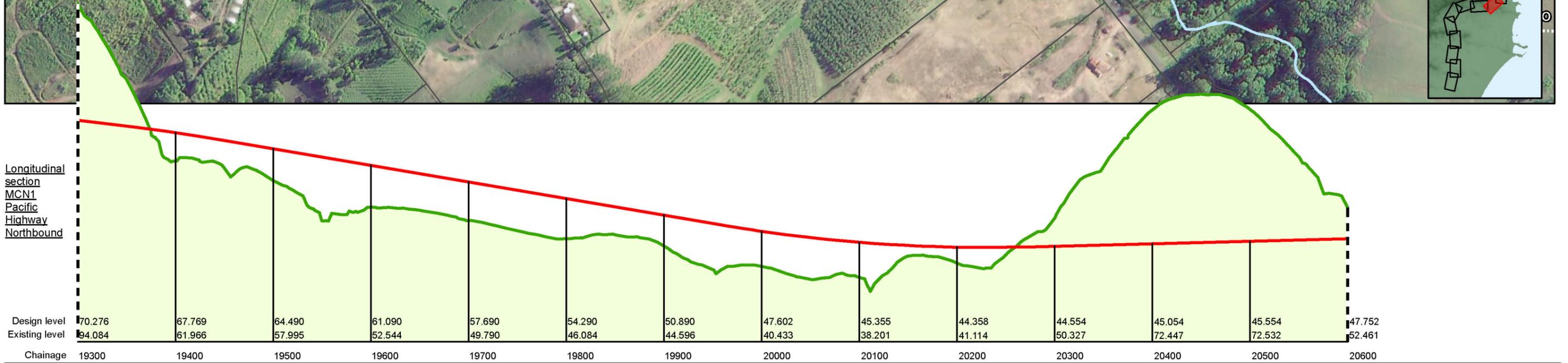
Longitudinal section
MCN1
Pacific
Highway
Northbound

Design level	69.223	67.146	65.694	64.867	64.665	65.088	66.136	67.809	69.809	71.606	72.578	72.680	71.913	70.276
Existing level	71.329	68.766	66.981	65.541	75.239	76.673	61.993	69.266	68.378	87.801	127.208	151.242	129.414	94.084
Chainage	18000	18100	18200	18300	18400	18500	18600	18700	18800	18900	19000	19100	19200	19300

Coffs Harbour Bypass
Project features
Figure 2-1-08

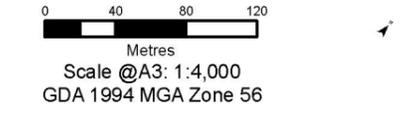
- Legend**
- - - Revised indicative road corridor
 - █ Pavement
 - █ Earthworks cut
 - █ Operational water quality basin
 - - - Shared path
 - █ Existing cycleway
 - - - EIS indicative road corridor
 - █ Bridge
 - █ Earthworks fill
 - █ Watercourse
 - █ Existing Footpath

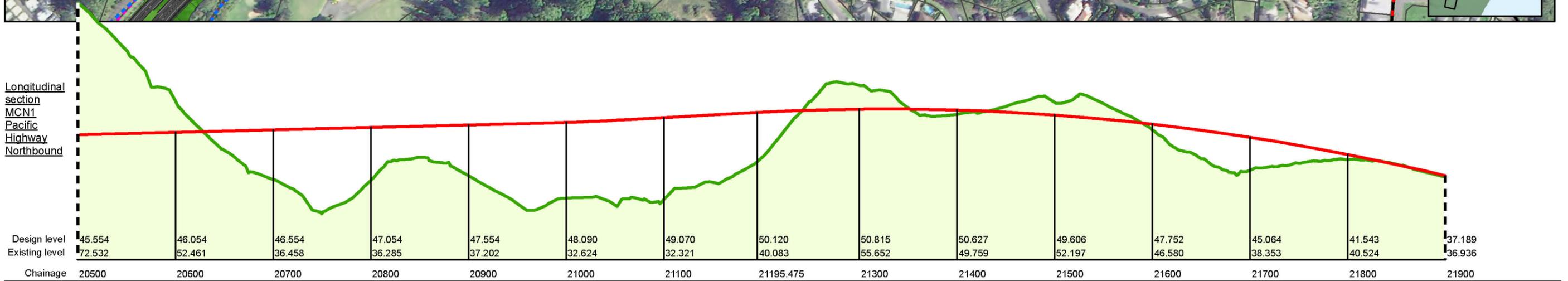
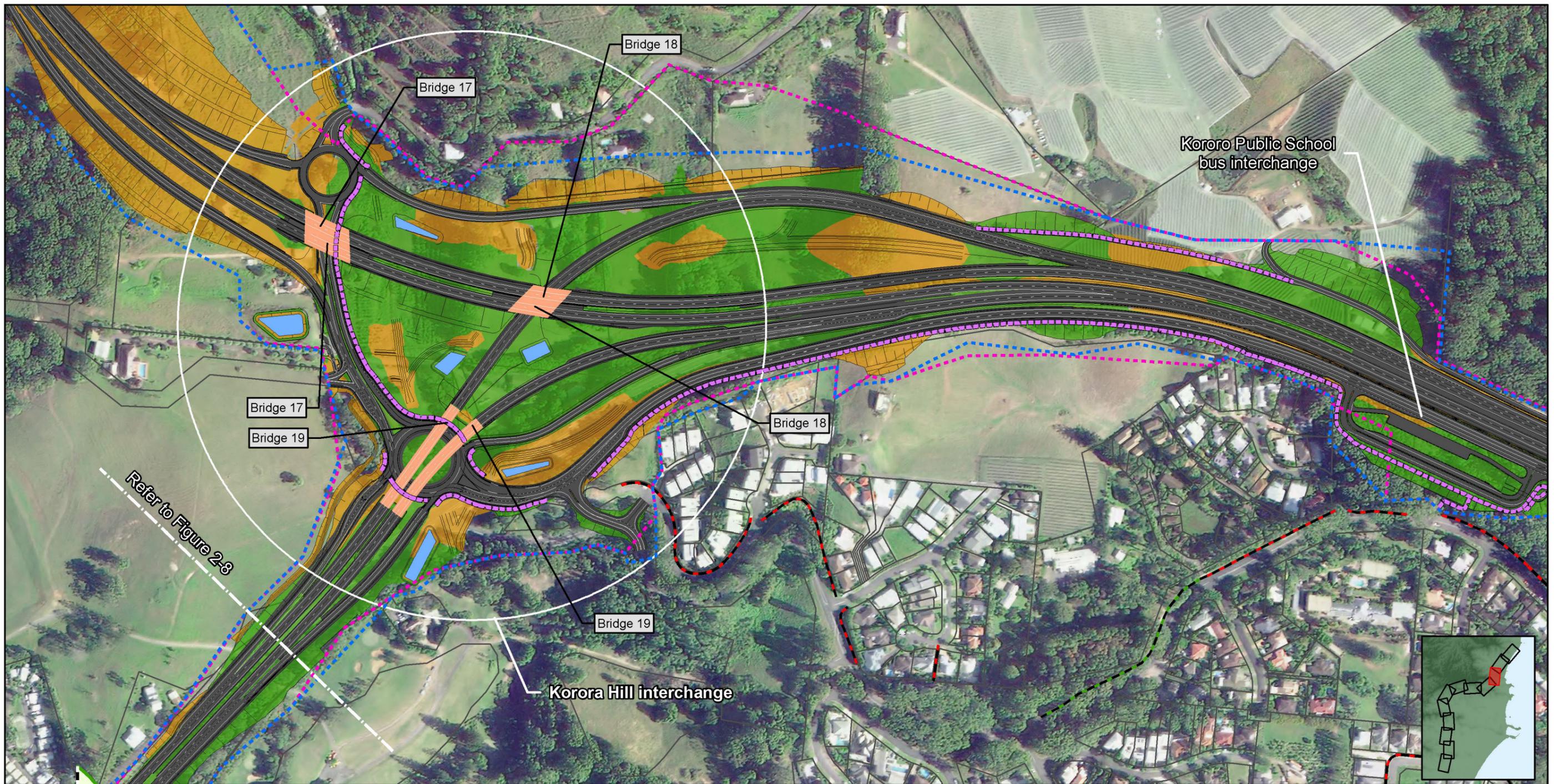




Coffs Harbour Bypass
Project features
Figure 2-1-09

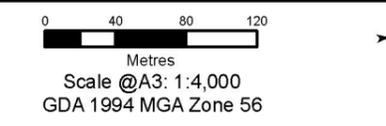
- Legend**
- - - Revised indicative road corridor
 - █ Pavement
 - █ Earthworks cut
 - █ Operational water quality basin
 - - - Shared path
 - █ Existing cycleway
 - - - EIS indicative road corridor
 - █ Bridge
 - █ Earthworks fill
 - - - Watercourse
 - █ Existing Footpath

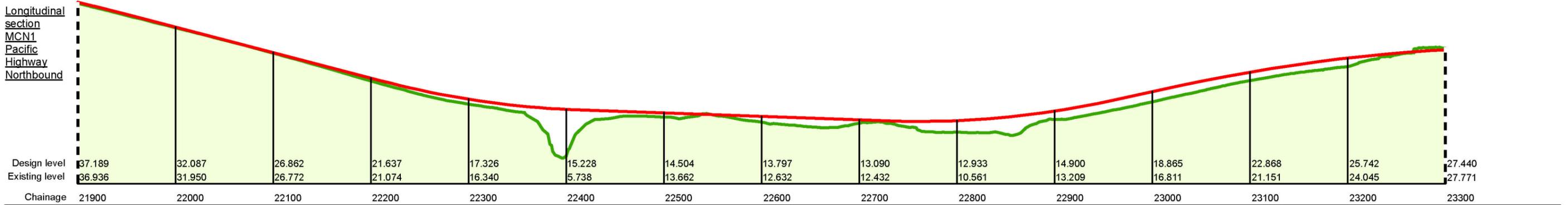




Coffs Harbour Bypass
Project features
Figure 2-1-10

- Legend**
- - - Revised indicative road corridor
 - █ Pavement
 - █ Earthworks cut
 - █ Operational water quality basin
 - - - Shared path
 - - - Existing cycleway
 - - - EIS indicative road corridor
 - █ Bridge
 - █ Earthworks fill
 - - - Watercourse
 - - - Existing Footpath

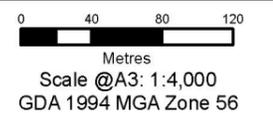




Coffs Harbour Bypass
Project features
Figure 2-1-11

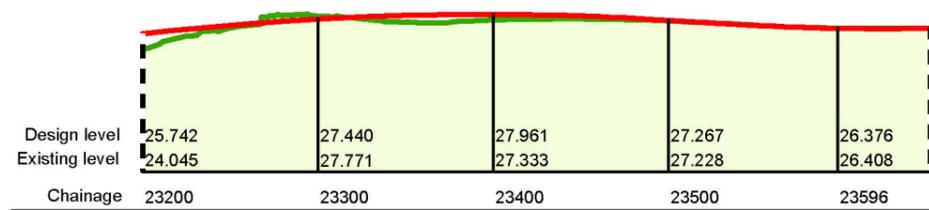
Legend

- Revised indicative road corridor
- EIS indicative road corridor
- █ Pavement
- █ Bridge
- █ Earthworks cut
- █ Earthworks fill
- █ Operational water quality basin
- █ Watercourse
- █ Shared path
- █ Existing cycleway
- █ Existing Footpath





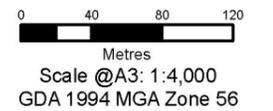
Longitudinal section
MCN1
Pacific Highway
Northbound



Coffs Harbour Bypass
Project features
Figure 2-1-12

Legend

- Revised indicative road corridor
- Pavement
- Earthworks cut
- Operational water quality basin
- Shared path
- Existing cycleway
- EIS indicative road corridor
- Bridge
- Earthworks fill
- Watercourse
- Existing Footpath



2.1 Englands Road interchange

Further design investigation of the Englands Road interchange has been carried out since the exhibition of the EIS, resulting in changes to the design of the interchange. The changes were developed in consultation with Coffs Harbour City Council (CHCC) to improve the design of the interchange. Design changes were carried out to:

- Address community feedback on the complexity and legibility of the interchange
- Lower the height of the interchange to help with managing visual and noise impacts
- Maintain full access between Englands Road and Isles Drive (improving access for businesses located in the Isles Drive industrial area), and avoid the need for possible upgrade of the existing Isles Drive and Pacific Highway intersection
- Improve traffic flows and reduce delays through the removal of two sets of traffic lights
- Improve functionality and simplicity of the interchange for motorists in way finding
- Improve constructability to reduce potential traffic impacts during construction
- Improve connectivity for koalas using the underpass south of Englands Road.

2.1.1 EIS design

The main features of the Englands Road interchange proposed in the EIS included:

- A northbound exit ramp that would pass under the project carriageways and connect to a new signalised intersection with the existing Pacific Highway, Englands Road and Stadium Drive
- A southbound entry ramp connecting the existing Pacific Highway, Englands Road and Stadium Drive to the existing Lyons Road to Englands Road section of the highway
- A northbound entry ramp from Englands Road connecting with the project
- A southbound exit ramp to new traffic lights on Englands Road. The southbound exit ramp included a left slip lane to Isles Drive, which provided direct access to the Isles Drive industrial area from the southbound exit ramp
- Access between Isles Drive and Englands Road would be one-way towards Englands Road. Traffic bound for the Isles Drive industrial area would generally be via the intersection of Isles Drive and the existing Pacific Highway (opposite Coffs Harbour Health Campus). The exception would be for traffic from the southbound exit ramp which would have direct access to Isles Drive
- A new one-way local access road, located on the west side of the project, to provide access between properties west of the existing highway and the road network via Englands Road
- Traffic lights along Englands Road on either side of the project to allow for safe entry and exist to the project while providing access to existing road network at Englands Road and the existing Pacific Highway.

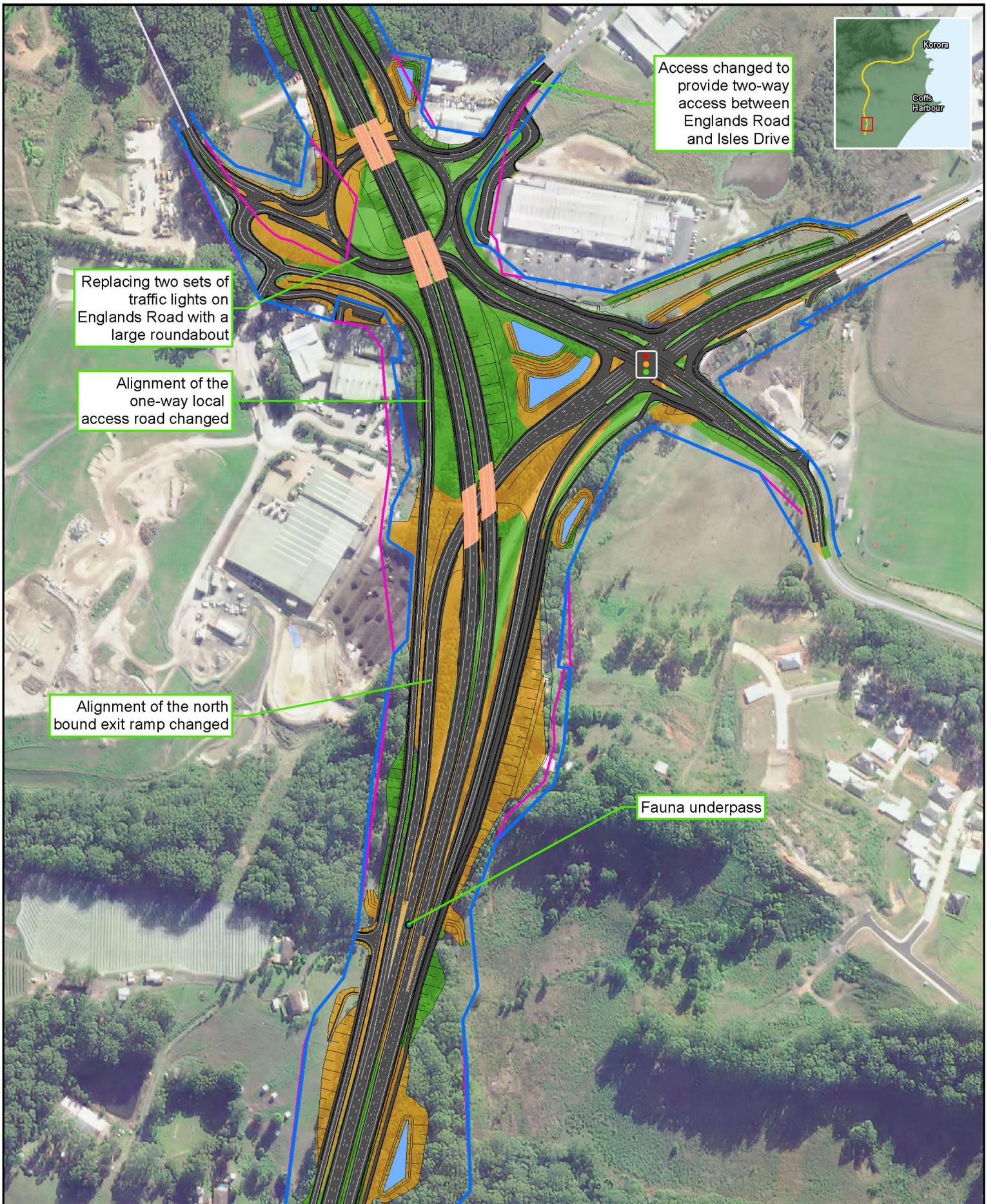
2.1.2 Design changes

The proposed design changes to the Englands Road interchange are shown in **Figure 2-3** and an artist's impression of the interchange is shown in **Figure 2-2**. The design changes comprise:

- A revised alignment for the northbound exit ramp and the new one-way local access road, located on the western side of the project, to reduce impacts on the Coffs Coast Recovery Park
- A roundabout about 116 metres in diameter under the project carriageways to provide a connection between Englands Road, Isles Drive, the northbound entry ramp and the southbound exit ramp. The roundabout would replace the two sets of traffic lights along Englands Road on either side of the project proposed in the EIS
- Lowering the alignment of the carriageways by 5.7 metres to reduce the height of the project to help manage visual and noise impacts. A new fauna underpass about 80 metres in length would be constructed about ten metres north of the existing fauna underpass to accommodate lowering of project carriageways and to improve connectivity for koalas by aligning better with the identified koala corridor. The underpass would be constructed prior to the existing underpass being demolished and would have the same dimensions as the existing fauna underpass (ie 2.8 metres high, 5.5 metres wide at the base)
- Minor adjustments to the operational water quality basins to accommodate changes to the interchange design.



Figure 2-2 Artist's impression of Englands Road interchange looking north-west



Access changed to provide two-way access between Englands Road and Isles Drive

Replacing two sets of traffic lights on Englands Road with a large roundabout

Alignment of the one-way local access road changed

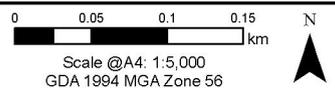
Alignment of the north bound exit ramp changed

Fauna underpass

Legend

- Revised indicative road corridor
- EIS indicative road corridor
- North Coast Railway
- Watercourse
- Pavement
- Bridge
- Tunnel
- Permanent basin
- Earthworks cut
- Earthworks fill
- Signalised intersection

Coffs Harbour Bypass
 Englands Road interchange
 Figure 2-3



2.2 North Boambee Valley vertical alignment

Further investigation of the vertical alignment of the project through North Boambee Valley has been carried out since the exhibition of the EIS, resulting in changes to the design through the North Boambee Valley. These design changes were developed to reduce flooding impacts, earthworks and the project footprint through the North Boambee Valley.

2.2.1 EIS design

The main features of the project through the North Boambee Valley proposed in the EIS included:

- A new four-lane divided highway just west of the urban footprint to the north of Englands Road towards North Boambee Road, generally on fill to keep the project above the floodplain. The fill embankments may include an earth mound to help with managing visual and noise impacts
- Bridges over Newports Creek (BR 23), North Boambee Road (BR 04) and a tributary of Newports Creek (BR 05) to the north of North Boambee Road
- Realignment of a northern tributary of Newports Creek as it passes beneath the project north of North Boambee Road. About 130 metres of Newports Creek would be realigned around the piers of the bridge over the tributary (BR 05). The realignment would involve shallow excavation of the floodplain beneath the bridge and would include a low flow channel so that natural flow conditions could be maintained, which would be designed in accordance with the requirements of the DPIE guidelines for fish conservation and management (Fairfull & Witheridge 2003)
- Minor realignment of the northern tributary of Newports Creek (about 400 metres north of North Boambee Road and about 150 metres north of BR 05) as it passes beneath the project.

2.2.2 Design changes

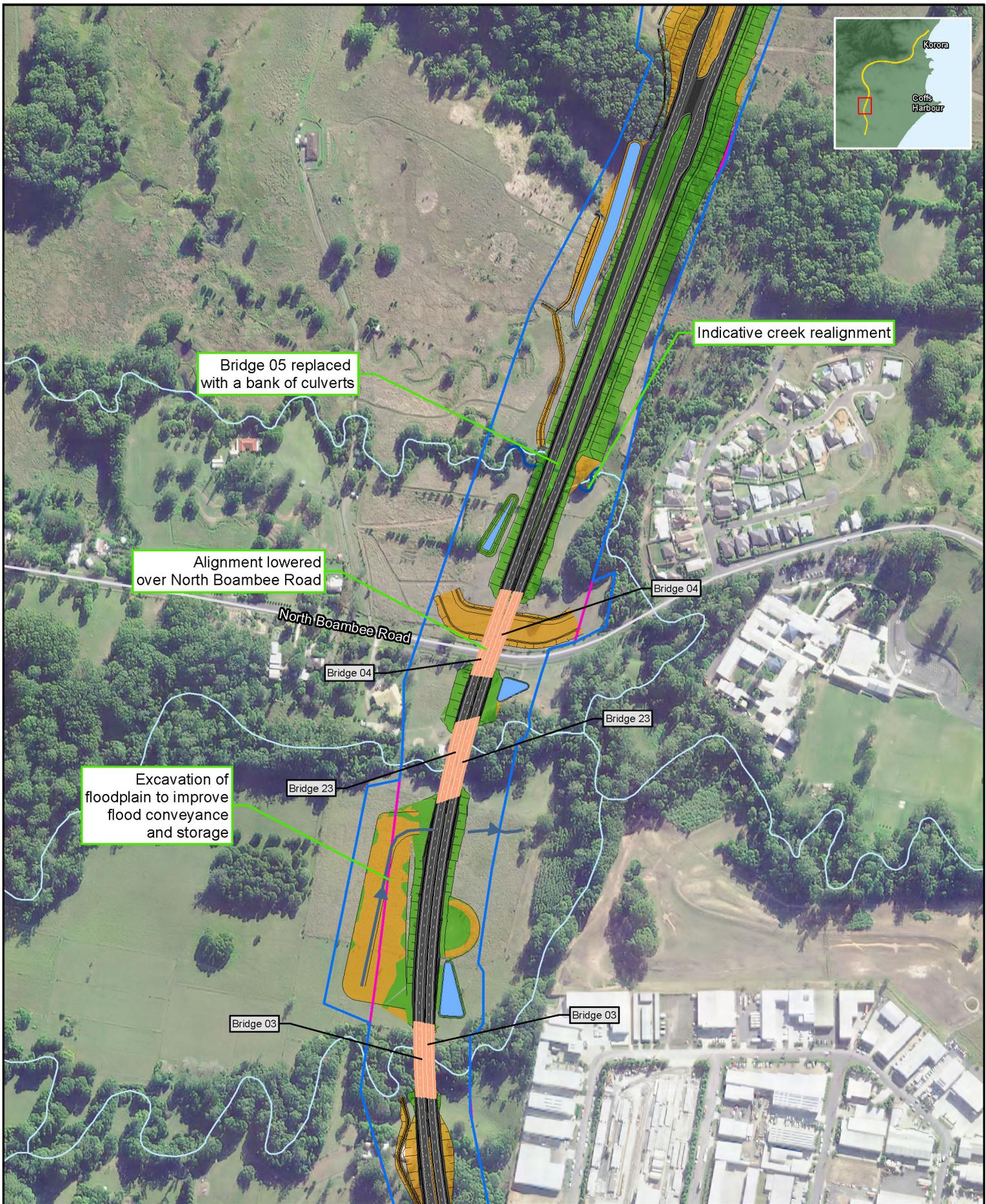
The design changes through the North Boambee Valley are shown in **Figure 2-4** and comprise:

- Lowering the vertical alignment of the project. A minimum clearance of 4.6 metres would be provided over North Boambee Road to maintain access. TfNSW would continue to consult with CHCC about clearance requirements for North Boambee Road, which would include provision of a minimum clearance of 4.6 metres and route which is flood free in the 5 per cent annual exceedance probability (AEP), as part of the whole of government approach to manage flooding in North Boambee Valley
- Removal of the earth mounds between the bridge over a tributary of Newports Creek (BR 03) and the bridge over Newports Creek (BR 23), adjacent to the Isles Drive industrial area.
- Removal of the earth mound between the bridge over North Boambee Road (BR 04) and the bridge over a tributary of Newports Creek (BR 05). A noise wall would be provided along the eastern edge of the carriageway between bridges BR 04 and BR 05
- Excavation of the floodplain west of the project between bridges BR 03 and BR 23 to improve flood conveyance and storage. The shallow excavation is about 60 metres wide and 250 metres long, grading towards the cross drainage culvert at Chainage 11900 and Newports Creek
- Changing BR 05 from a 64 metre long bridge to a bank of box culverts. The culverts would consist of six 2.4 metre x 2.4 metre box culverts about 45 metres long. The culverts would require about 130 metres of the northern tributary of Newports Creek to be realigned as it passes through the culverts beneath the project. The realignment would include a low flow channel to provide for fish passage, including through one of the culverts beneath the carriageways, which would be

designed in accordance with the requirements of DPIE guidelines for fish conservation and management (Fairfull & Witheridge 2003). The alignment of the creek through the culverts (directly beneath the carriageways) would be straightened, and there would be limited opportunity to meander the creek through this section, compared with the EIS which provided more space below bridge BR 05 to enable design of a more natural creek alignment. Scour protection is likely to be needed on the upstream and downstream side of the culverts. The scour protection would be designed and constructed in a way that would accommodate a low flow channel and where possible provide an opportunity to include a meander. The extent of scour protection would be determined during detailed design in accordance with the requirements detailed in Chapter 5, Project description and Chapter 6, Construction of the EIS.

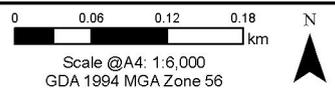
Where reasonable and feasible, the creek realignments will be designed to behave in a similar hydrologic and geomorphic manner as existing conditions and will consider the requirements of the Policy and Guidelines for Fish Habitat Conservation and Management (Department of Primary Industries (DPI) 2013) and Guidelines for Instream Works on Waterfront Land (DPI 2012a). Detailed design of waterway realignments and adjustments would be developed in consultation with Regions, Industry, Agriculture and Resources, DPIE and will consider:

- Investigation of opportunities to reduce or avoid waterway realignments to maintain existing creek alignments including locating piers outside of the waterway
- Retention of existing riparian vegetation where possible, including retention of tree stumps where trees are removed
- Maintaining existing waterway lengths, velocities and hydraulic grades
- Use of soft engineering approaches to scour protection where landscaping is provided over the rock scour
- Maintaining fish passage in accordance with the waterway classification and Regions, Industry, Agriculture and Resources, DPIE guideline Why Do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (Fairfull & Witheridge 2003).



- Legend**
- Revised indicative road corridor
 - EIS indicative road corridor
 - North Coast Railway
 - Watercourse
 - Pavement
 - Bridge
 - Tunnel
 - Permanent basin
 - Flow of water
 - Coffs Creek realignment
 - Earthworks cut
 - Earthworks fill

Coffs Harbour Bypass
 North Boambee Valley vertical alignment
 Figure 2-4



2.3 Coramba Road bus stop

An existing informal bus stop is located on the corner of Coramba Road and Spagnolos Road which would be replaced as part of the project. Since the exhibition of the EIS, the proposed design for the Coramba Road bus stop has been developed to provide a safe and accessible area for multiple buses to stop at once and formalise the bus stop. Consultation with CHCC and the school bus operator(s) has been undertaken regarding the design (see **Chapter 4, Consultation**).

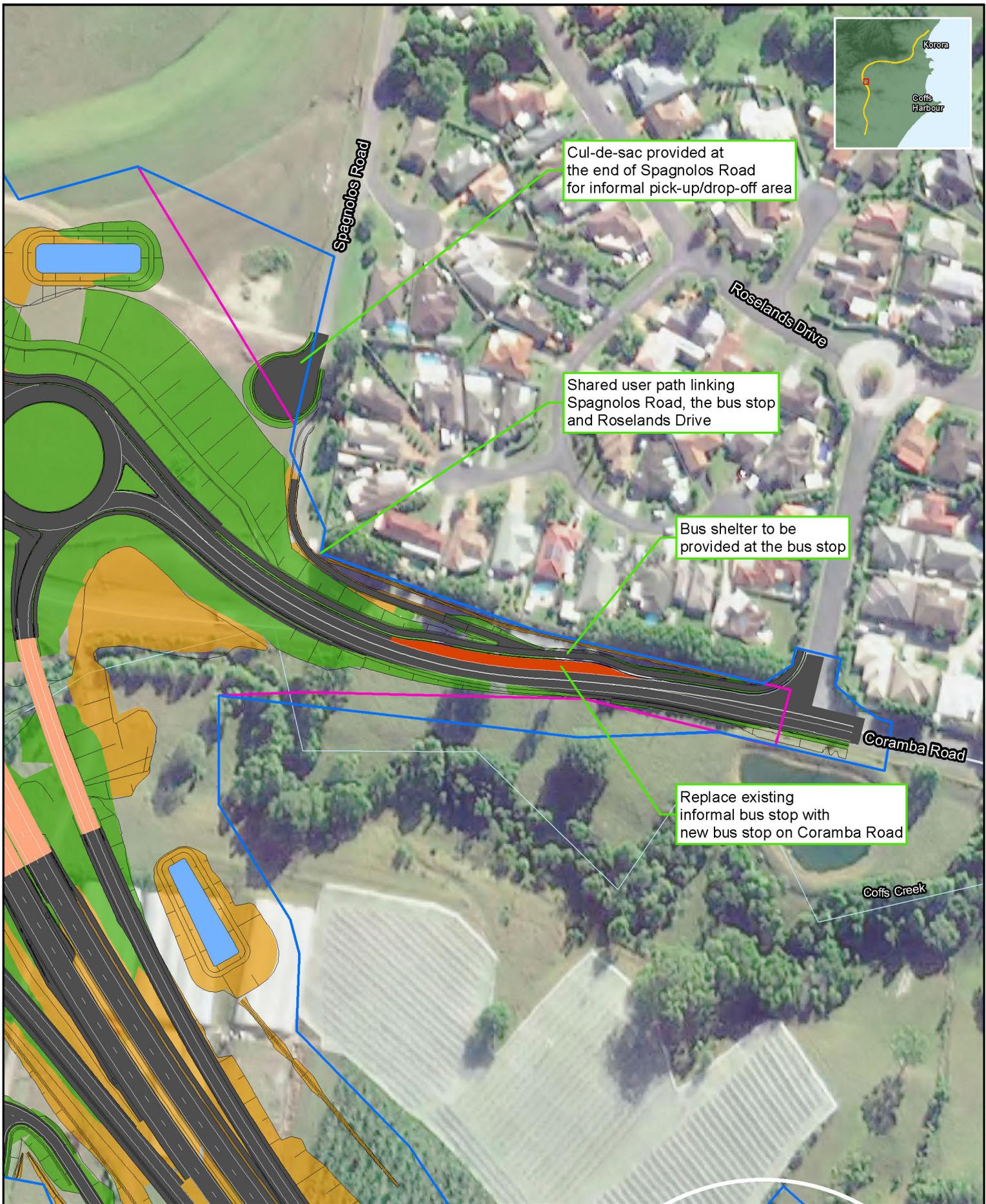
2.3.1 EIS design

The EIS design of the Coramba Road interchange required the removal of the existing informal school bus stop at the intersection of Coramba Road and Spagnolos Road. It was proposed in the EIS that the bus stop would likely be reinstated further east along Coramba Road near its existing location. The final location and requirements were subject to consultation with CHCC and the school bus operator.

2.3.2 Design changes

The design changes for the Coramba Road bus stop are shown in Figure 2-5 and comprise:

- Removal of the informal bus stop and a new school bus stop on the north side of Coramba Road and about 50 metres east of Spagnolos Road. The new bus stop would include capacity for four 12.5 metre long buses
- A bus shelter
- A raised concrete median to separate the facility and its users from Coramba Road traffic
- A shared user path to connect Spagnolos Road with the new bus stop on Coramba Road. There would be an overlap in the proposed noise wall to facilitate access to the shared user path
- A cul-de-sac would be provided at the Coramba Road end of Spagnolos Road to provide an informal area for parents and carers to park, pick-up and drop-off children and turnaround.



Cul-de-sac provided at the end of Spagnolos Road for informal pick-up/drop-off area

Shared user path linking Spagnolos Road, the bus stop and Roselands Drive

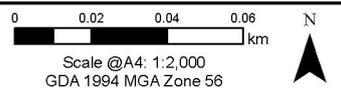
Bus shelter to be provided at the bus stop

Replace existing informal bus stop with new bus stop on Coramba Road

Legend

- | | | |
|------------------------------------|-------------------|-------------------|
| — Revised indicative road corridor | ■ Pavement | ■ Earthworks cut |
| — EIS indicative road corridor | ■ Bridge | ■ Earthworks fill |
| --- North Coast Railway | ■ Tunnel | |
| — Watercourse | ■ Permanent basin | |
| | ■ Bus stop | |

Coffs Harbour Bypass
Coramba Road bus stop
Figure 2-5



2.4 Coffs Creek flood mitigation

Further design investigation of the flood mitigation measures in the Coffs Creek catchment has been carried out since the exhibition of the EIS, resulting in changes to the Coffs Creek flood mitigation measures. These design changes were developed to reduce potential flood impacts along Coffs Creek and reduce the need to excavate the Bennetts Road detention basin.

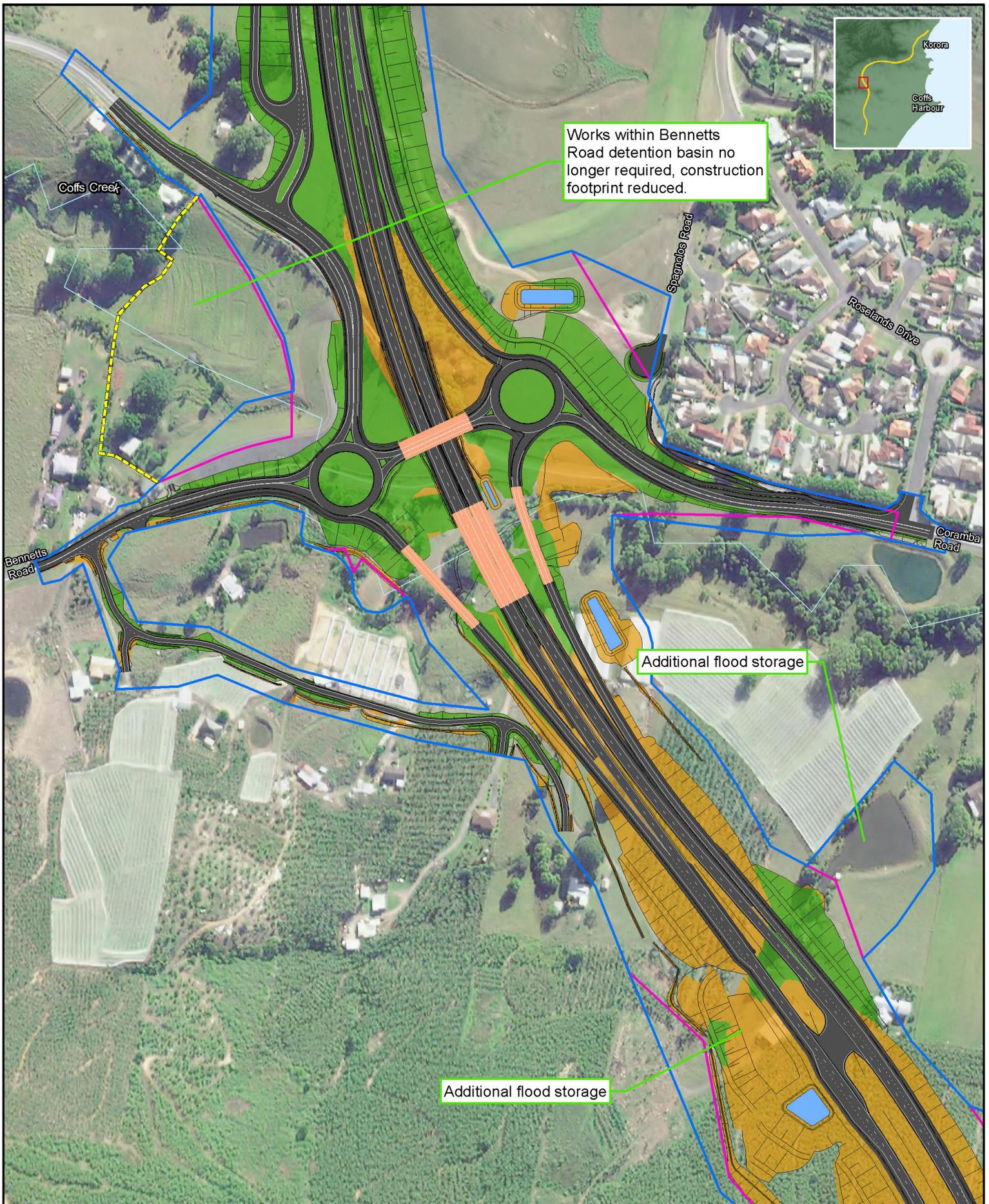
2.4.1 EIS design

The EIS design included bridges, culverts and additional flood storage (upstream of the project near Coramba Road and within the Bennetts Road detention basin) to mitigate potential flood impacts in the Coffs Creek catchment. This included excavation of 26,600 cubic metres of the Bennetts Road detention basin to increase the flood storage capacity of the basin to minimise flooding impacts downstream of the project.

2.4.2 Design changes

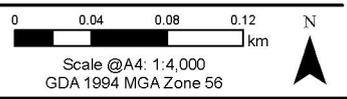
The design changes to the project within the Coffs Creek catchment are shown in **Figure 2-6** and include:

- Excavation of Bennetts Road detention basin to increase the flood storage capacity of the basin is no longer required, resulting in a boundary change which would reduce property impacts for APO36
- Additional flood storage is provided upstream and downstream of the project (about 500 metres south of Coramba Road interchange) to reduce predicted flood levels in Coffs Creek. A farm dam to the east of the project (downstream) would be excavated and would be increased in size to about 11,500 cubic metres. A retention basin would be included to the west of the project (upstream) and the capacity would be about 14,500 cubic metres.



- Legend**
- Revised indicative road corridor
 - EIS indicative road corridor
 - - - EIS construction footprint
 - - - North Coast Railway
 - Watercourse
 - █ Pavement
 - █ Bridge
 - █ Tunnel
 - █ Permanent basin
 - █ Earthworks cut
 - █ Earthworks fill

Coffs Harbour Bypass
 Coffs Creek flood mitigation
 Figure 2-6



2.5 Korora Hill interchange

Further design investigation of the Korora Hill interchange has been carried out since the exhibition of the EIS, resulting in changes to the design of the interchange. Design changes were carried out to:

- Address CHCC and community feedback on the design of the interchange
- Provide more direct access to and from Coffs Harbour
- Improve traffic flows and reduce delays by removing two sets of traffic lights
- Improve way finding and functionality by simplifying the design and improving connectivity with the local road network
- Improve access to existing properties near the proposed interchange
- Reduce potential impacts on traffic during construction of the interchange
- Reduce the footprint of the interchange.

2.5.1 EIS design

The main features of the Korora Hill interchange proposed in the EIS included:

- A southbound exit ramp from the project to the existing Pacific Highway via a bridge (BR 19) providing access to the existing Pacific Highway. A left slip lane would be provided from the southbound exit ramp to provide access to James Small Drive, the service road and Bay Drive (via the James Small Drive roundabout and the existing Pacific Highway)
- A new connection road providing access from James Small Drive to the existing Pacific Highway, the northbound and southbound entry ramps and Bruxner Park Road
- A bridge (BR 17) carrying the project over the realigned existing Pacific Highway and the northbound entry ramp
- Realignment of the existing Pacific Highway to pass beneath the project and merge with the northbound entry ramp and the northbound exit ramp. Traffic lights with pedestrian crossings would be provided on either side of the project to facilitate access between the project, Bruxner Park Road, James Small Drive and the service road
- A northbound exit ramp from the project to the existing Pacific Highway via the James Small Drive roundabout
- A southbound entry ramp from the existing Pacific Highway, via the eastern traffic lights and pedestrian crossing, to the project
- Bruxner Park Road would be realigned to the west of the project to join the realigned existing Pacific Highway
- Traffic lights on the realigned existing Pacific Highway on either side of the project and a roundabout at the junction of James Small Drive and the service road. These intersections would provide safe entry and exit points to the project while providing access to the existing road network.

2.5.2 Design changes

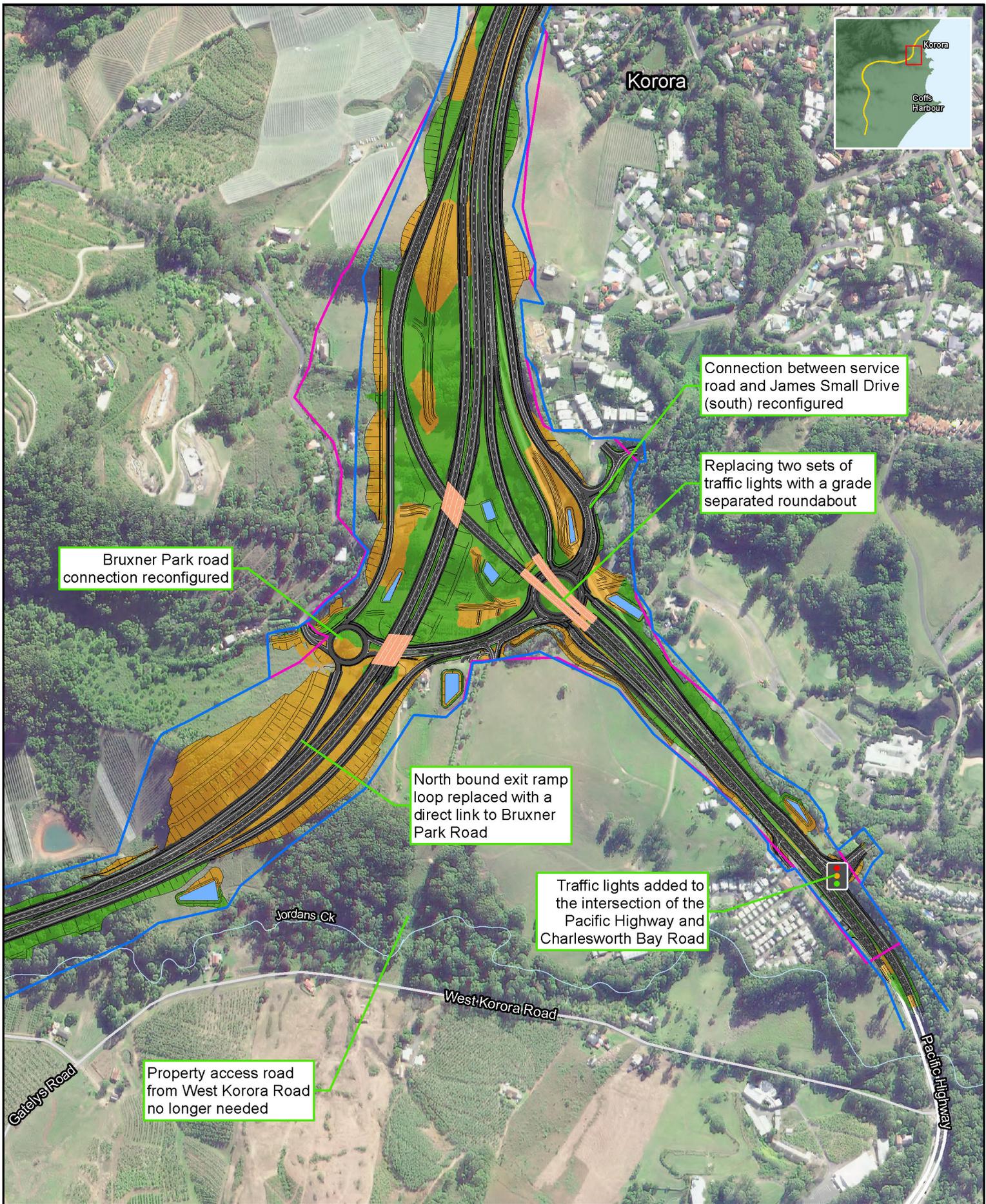
The design changes to the Korora Hill interchange are shown in **Figure 2-8** and an artist's impression of the interchange is shown in **Figure 2-7**. The key features of the interchange comprise:

- A southbound exit ramp from the project to the existing Pacific Highway via a bridge (BR 19) over a roundabout at the intersection of Bruxner Park Road, the service road and slip lanes to and from the existing Pacific Highway. A left slip lane would be provided from the southbound exit ramp to provide access to James Small Drive, the service road and Bruxner Park Road
- A northbound entry ramp from the existing Pacific Highway to the project via a bridge (BR 19) over a roundabout at the intersection of Bruxner Park Road, the service road and slip lanes to and from the existing Pacific Highway. The northbound entry ramp would pass beneath the project (below BR 18)
- A northbound exit ramp from the project to Bruxner Park Road. A new roundabout would be provided at the intersection of the exit ramp and Bruxner Park Road
- A bridge (BR 17) would carry the project over Bruxner Park Road. Property accesses would be retained for existing properties south of Bruxner Park Road between the project and the existing highway. The property access from West Korora Road proposed in the EIS would no longer be required, as property access is retained from Bruxner Park Road
- A southbound entry ramp from Bruxner Park Road to the project
- A new roundabout would be provided below the northbound entry ramp and the southbound exit ramp to provide access between Bruxner Park Road, the service road, James Small Drive, and the existing Pacific Highway and replace two sets of traffic lights
- James Small Drive would join the service road via a T-intersection
- Traffic lights would be provided at the intersection of the existing Pacific Highway and Charlesworth Bay Road to provide safe access for traffic from Charlesworth Bay Road travelling north.

2. Design changes



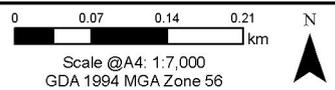
Figure 2-7 Korora Hill interchange artist's impression looking north



Legend

- | | | |
|------------------------------------|-------------------|-------------------|
| — Revised indicative road corridor | ■ Pavement | ■ Earthworks cut |
| — EIS indicative road corridor | ■ Bridge | ■ Earthworks fill |
| --- North Coast Railway | ■ Tunnel | |
| — Watercourse | ■ Permanent basin | |

Coffs Harbour Bypass
 Korora Hill interchange
 Figure 2-8



2.6 Kororo Public School bus interchange and Luke Bowen footbridge

Further design investigation of Kororo Public School bus interchange and Luke Bowen footbridge has been carried out since the exhibition of the EIS, resulting in changes to the design of the bus interchange and design and location of the footbridge. These design changes were developed to:

- Address CHCC, Kororo Public School and community feedback on the design of the bus interchange and footbridge
- Change the access point to the bus interchange from James Small Drive to the service road to remove the need for additional bus traffic on James Small Drive
- Separate bus and light vehicle entry points with barriers and fencing to remove conflict points between pedestrians and vehicles
- Reduce the need for light vehicle school drop-off and pick-up movements on James Small Drive
- Reduce the potential for congestion on the service road during school peaks
- Provide grade-separated crossing points to remove all conflict points between pedestrians and vehicles
- Provide a bus interchange that caters for the operational requirements of bus operators (capacity for up to eight 12.5 metre long buses)
- Improve the location of the new Luke Bowen footbridge in relation to the school and bus interchange.

2.6.1 EIS design

The main features of the Kororo Public School bus interchange proposed in the EIS included:

- The existing bus interchange located near Kororo Nature Reserve would be relocated to just south of Kororo Public School with access provided via James Small Drive
- The bus interchange would have capacity for seven 12.5 metre long buses with bus shelters provided adjacent to the bus bays
- The bus interchange would include capacity for 52¹ staff car park spaces
- Parking and pick up/drop off bays would be provided on the service road adjacent to Kororo Public School
- The bus interchange would be subject to further refinement during the detailed design stage.

The main features of the Luke Bowen footbridge proposed in the EIS included:

- Luke Bowen footbridge would be replaced with a new pedestrian bridge over the project around 200 metres north of the existing bridge. The new bridge would retain the name Luke Bowen footbridge. This bridge would provide a pedestrian and cyclist connection between Old Coast Road and the proposed service road next to Kororo Public School
- A steel box girder bridge with a total length of about 206 metres, including the bridge over the project and the ramps to connect the bridge to the Old Coast Road and the service road adjacent to Kororo Public School.

¹ Figure 5-10 of the EIS incorrectly noted the number of car park spaces as 55. This should have been noted as 52 car park spaces. This was correctly reported as 52 car park spaces in Chapter 8, Traffic and transport of the EIS. This correction is noted in Chapter 5, Clarifications, corrections and further information of the response to Submissions Report.

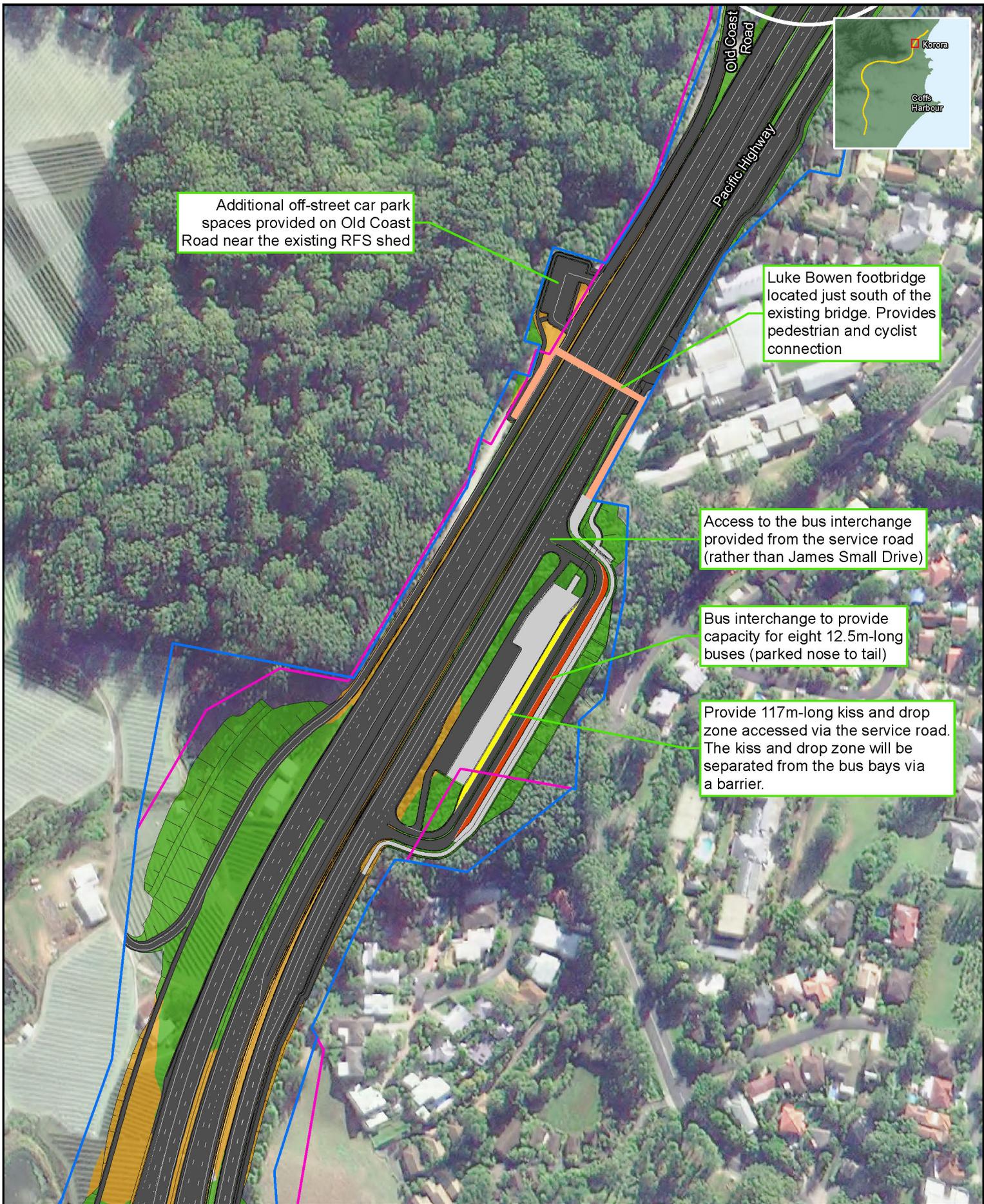
2.6.2 Design changes

Design changes to the Kororo Public School bus interchange and Luke Bowen footbridge are shown in **Figure 2-10**. An artist's impression of the Kororo Public School bus interchange and Luke Bowen footbridge is shown in **Figure 2-9**. The design changes comprise:

- The existing bus interchange located near Kororo Nature Reserve would be relocated to just south of Kororo Public School with access provided via the service road
- The bus interchange would have capacity for eight 12.5 metre long buses (parked nose to tail) with bus shelters provided adjacent to the bus bays
- The bus interchange would include capacity for 30 staff car park spaces
- A 117-metre-long 'kiss-and-drop' zone would be provided within the bus interchange, accessed via the service road. The 'kiss-and-drop' zone would be separated from the bus bays via a barrier
- The Luke Bowen footbridge would be replaced with a new steel arch bridge over the project located just south of the existing bridge and closer to the main entrance of the school. The new bridge would retain the name Luke Bowen footbridge and would be a sympathetic design to complement the old bridge. This bridge would provide a pedestrian and cyclist connection between Old Coast Road and the service road next to Kororo Public School
- Additional off-street short-term and long-term car park spaces would be provided on Old Coast Road near the existing Solitary Rural Fire Services (RFS) shed
- The existing Solitary RFS shed would be directly impacted to accommodate the additional car park spaces and the new footbridge location. TfNSW have commenced consultation with RFS Mid North Coast Team and identified a location near Korora Hill interchange for a new shed and facilities on TfNSW owned property (within construction ancillary facility site 3B, see **Figure 3-1-05**). The new shed and facilities are proposed to be constructed as part of the project and would be undertaken as a pre-construction activity as described in Section 6.4.1 of the EIS. TfNSW will continue to consult with RFS Mid North Coast Team to confirm any additional requirements.



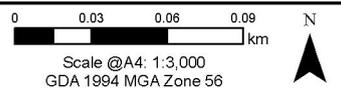
Figure 2-9 Kororo Public School bus interchange visualisation looking north-east



Legend

- Revised indicative road corridor
- EIS indicative road corridor
- North Coast Railway
- Watercourse
- Pavement
- Bridge
- Tunnel
- Permanent basin
- Bus bays
- Kiss and drop area
- Pavement and landscape areas
- Earthworks cut
- Earthworks fill

Coffs Harbour Bypass
 Kororo Public School bus interchange and Luke Bowen footbridge
 Figure 2-10



2.7 Pine Brush Creek and Williams Creek realignment

Further design investigation of the waterway realignments for Pine Brush Creek and Williams Creek has been carried out since exhibition of the EIS. Design investigations have been carried out in accordance with the design principles for waterway realignments as described in Section 5.3.9 of the EIS and have incorporated detailed survey done following exhibition of the EIS. The design investigations also reviewed constructability issues and engineering constraints associated with the proximity of the existing Pacific Highway and the need to retain the existing southbound bridge as part of construction staging and the new service road. The design investigations have also included consultation with Regions, Industry, Agriculture and Resources Group, DPIE and Environment, Energy and Science Group, DPIE.

2.7.1 EIS design

The main features of the Pine Brush Creek and Williams Creek realignment proposed in the EIS included:

- Realignment and temporary work within Pine Brush Creek between the new northbound bridge over Pine Brush Creek (BR 21) and the existing bridge over Old Coast Road. Works were to be limited to the riparian corridor (bank to bank) where feasible
- Minor realignment of Williams Creek (previously identified as the northern tributary of Pine Brush Creek) immediately upstream the new bridge. The proposed work included realignment of about 35 metres of Williams Creek to optimise drainage and flow at this location and to provide a new confluence of Pine Brush Creek and Williams Creek.

2.7.2 Design changes

Design changes to the Pine Brush Creek and Williams Creek realignment are shown in **Figure 2-11** and include:

- A new confluence of Pine Brush Creek and Williams Creek to be constructed about 20 metres upstream of the new bridge (BR 21)
- The realignment of Williams Creek would extend for about 90 metres upstream of the new confluence and would require construction of a new low flow channel and waterway corridor. The low flow channel would need to meander within the realigned waterway corridor to ensure existing waterway lengths, velocities and hydraulic grades are maintained
- Realignment of Pine Brush Creek would require construction of a new 85 metre channel slightly north of the existing channel. The realignment would generally remain within the extents of the existing riparian corridor and would be located between the new bridge over Pine Brush Creek (BR 21) and the existing bridge over Old Coast Road.

The new northbound and southbound highway bridge over Pine Brush Creek (BR 21) has also been refined as a result of the design investigations for Pine Brush Creek and Williams Creek realignment. The bridge length has been reduced from an indicative length of 40 metres in the EIS to 37 metres and is now proposed to be a single span bridge compared to a two span bridge described in the EIS. The bridge would be designed for fauna passage as described in the EIS. There has been no change to the retention of the existing southbound bridge which would be used as part of the new service road.

Key outcomes of the design investigations described above which have influenced the amended waterway realignment and led to the need to acquire additional property beyond that shown in the EIS include:

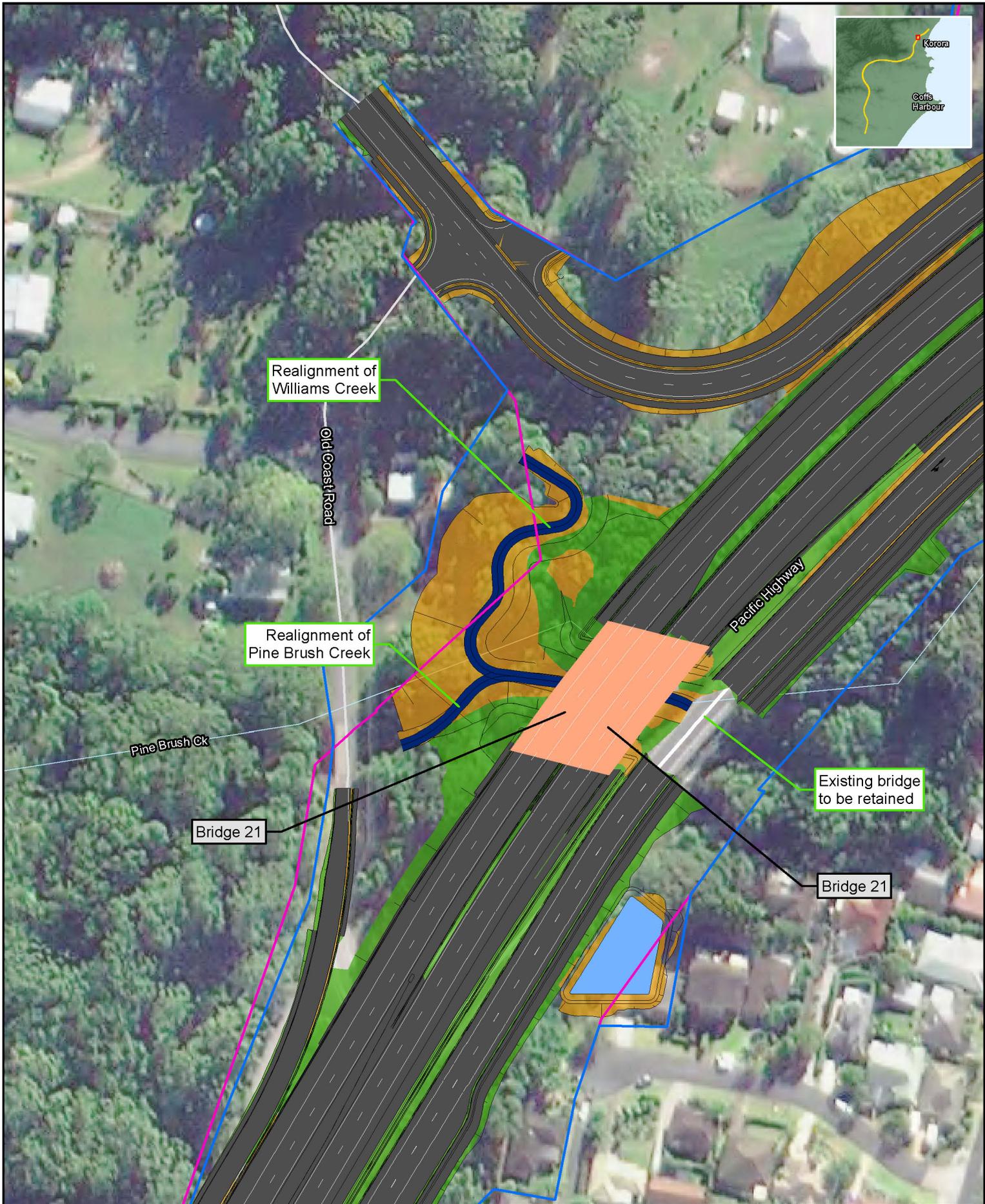
- Pine Brush Creek is identified as a Class 1 waterway and has been realigned to provide a waterway length similar to the existing waterway length and to minimise hard engineering treatments and concrete channelisation of the waterway
- To ensure the new bridge structures and the retained southbound bridge are protected and road user risks minimised and as well as to minimise erosion and scour in the creek next to the bridge structures, the confluence of Pine Brush Creek and Williams Creek need to be relocated further upstream from the new bridge (BR 21). This assists in providing acceptable hydraulic performance (eg flow direction and velocity) of the waterway as it flows under the new and retained bridges
- The design of the realignments would maintain the existing waterway lengths, velocities and hydraulic grades. This is a requirement of Regions, Industry, Agriculture and Resources Group, DPIE and has been adopted for all major waterway realignments as part of the Pacific Highway upgrade program over the past several years. In addressing the above requirements, designing for the new confluence and taking into consideration the new highway formation, the Williams Creek realignment has resulted in the main channel being located further west which led to the design extending outside the EIS construction footprint and onto adjacent private property on Old Coast Road
- In addition to maintaining existing waterway lengths, velocities and hydraulic grades, 2:1 slopes are also required for long-term bank stability and landscaping of the realigned waterway. Achieving 2:1 slopes either side of the realignment, particularly for Williams Creek given the existing terrain, has resulted in the need to extend the construction footprint further than that shown in the EIS.

2.8 New and revised water quality basins

As part of the design changes and ongoing consultation with affected property owners, there have been revisions to the location and size of the operational water quality basins for the project. The basins that have resulted in change to the construction footprint are described below and are shown on **Figure 2-1-03** and **Figure 2-1-11**:

- On the western side of the project in the vicinity of Englands Road interchange (Chainage 11250)
- On the eastern side of the project in the vicinity of the Pine Brush Creek and Russ Hammond Close (Chainage 22350).

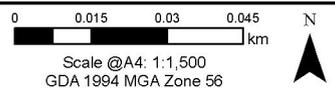
Other operational water quality basins and gross pollutant traps (GPTs) have also been revised as part of the design changes but have not resulted in any amendments to the construction footprint. Refer to **Section 5.12, Surface water quality** for further detail.



Legend

- Revised indicative road corridor
- EIS indicative road corridor
- - - North Coast Railway
- Watercourse
- Pavement
- Bridge
- Tunnel
- Permanent basin
- Creek realignment

Coffs Harbour Bypass
 Pine Brush Creek and Williams Creek realignment
 Figure 2-11





Chapter 3

Construction updates

3. Design changes

This chapter describes the changes to the proposed approach to the construction of the project. The elements which have changed since the completion of the EIS comprise:

- Additional blasting
- New and revised ancillary sites
- Revised construction traffic management
- New and revised construction sediment basins.

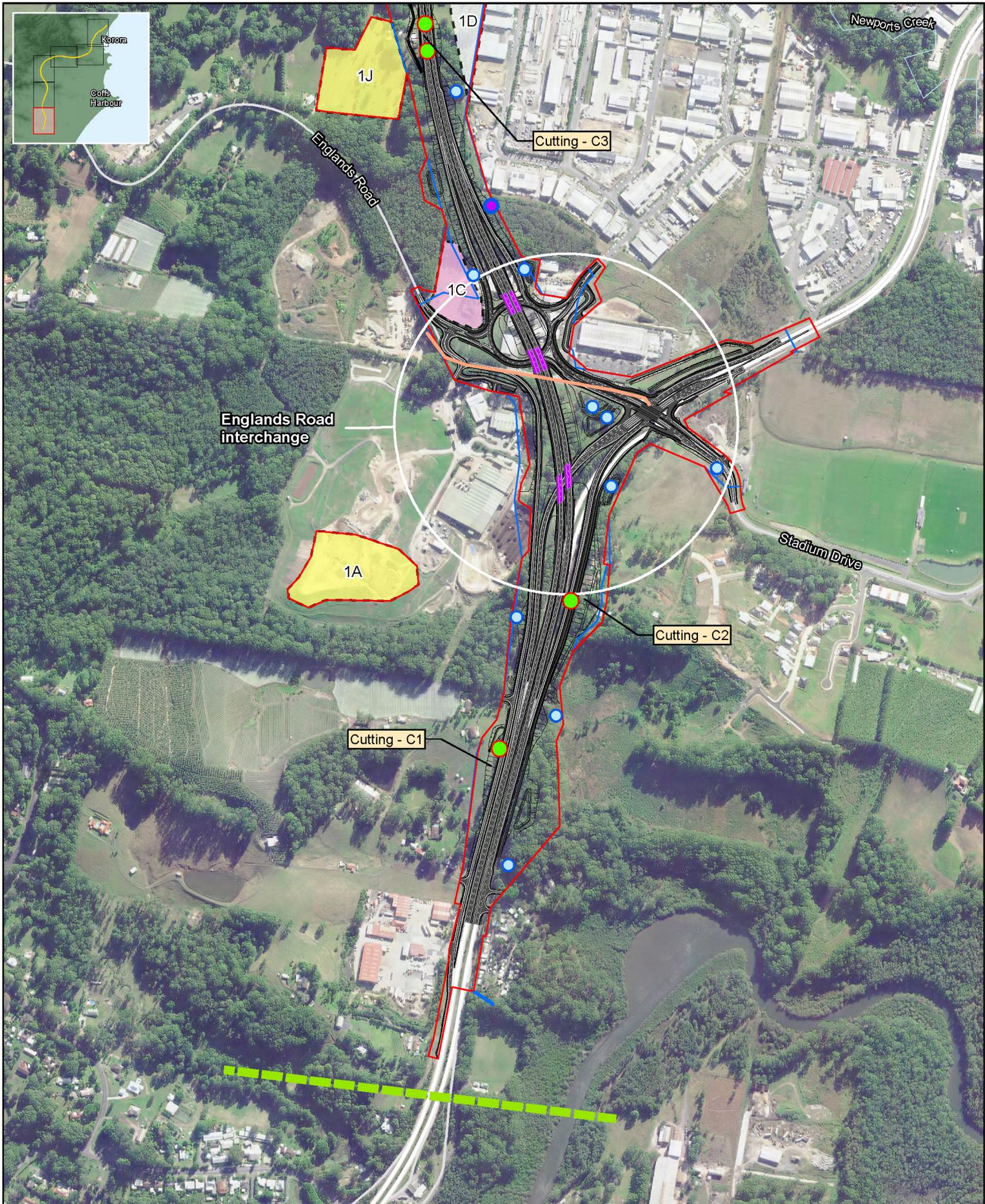
These changes have resulted in a revised construction footprint as described in the following sections. Key features of the project along with the proposed changes to the construction of the project are shown in **Figure 3-1-01** to **Figure 3-1-06**.

The changes to impacts associated with the proposed changes to the construction of the project are assessed in **Chapter 5, Additional assessment** and any changes to proposed mitigation measures are detailed in **Chapter 6, Revised environmental management measures**.

3.1 Construction footprint

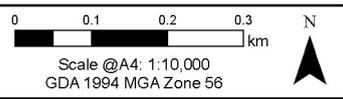
The construction footprint, shown in **Figure 3-1-01** to **Figure 3-1-06**, has been amended based on the design changes described in **Chapter 2, Design changes** to show the likely extent of the area required for construction and operation of the project. The amended footprint also includes the area required for all work such as temporary and permanent drainage structures, permanent waterway realignments, ancillary sites (including new and revised locations), access roads, temporary erosion and sediment control measures and to allow for the variation of a right of carriageway to a public road at Mackays Road. As such, the construction footprint for the amended design would be about 301.55 hectares compared to about 282.21 hectares for the EIS design.

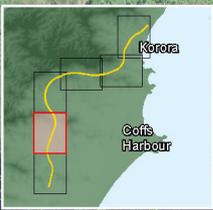
The construction footprint has been established to minimise vegetation clearing while providing sufficient room to allow the project to be constructed in a safe and efficient manner. The construction footprint would be subject to refinement during detailed design and construction. Some factors that could affect the final construction footprint include the location and size of sedimentation basins, the construction methodology, geotechnical conditions and arrangements made directly with affected landowners.



Construction footprint - Amendment Report	Potential ancillary site	Indicative construction sediment basin location
Construction footprint - EIS	Revised potential ancillary site	Modified construction sediment basin location
Alignment	Additional potential ancillary site	North Coast Railway
Construction zone	Potential controlled blasting sites	Watercourse
Potential construction access	Additional potential controlled blasting sites	
Additional potential construction access		
Temporary access road		

Coffs Harbour Bypass
 Proposed construction changes
 Figure 3-1-01

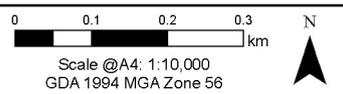


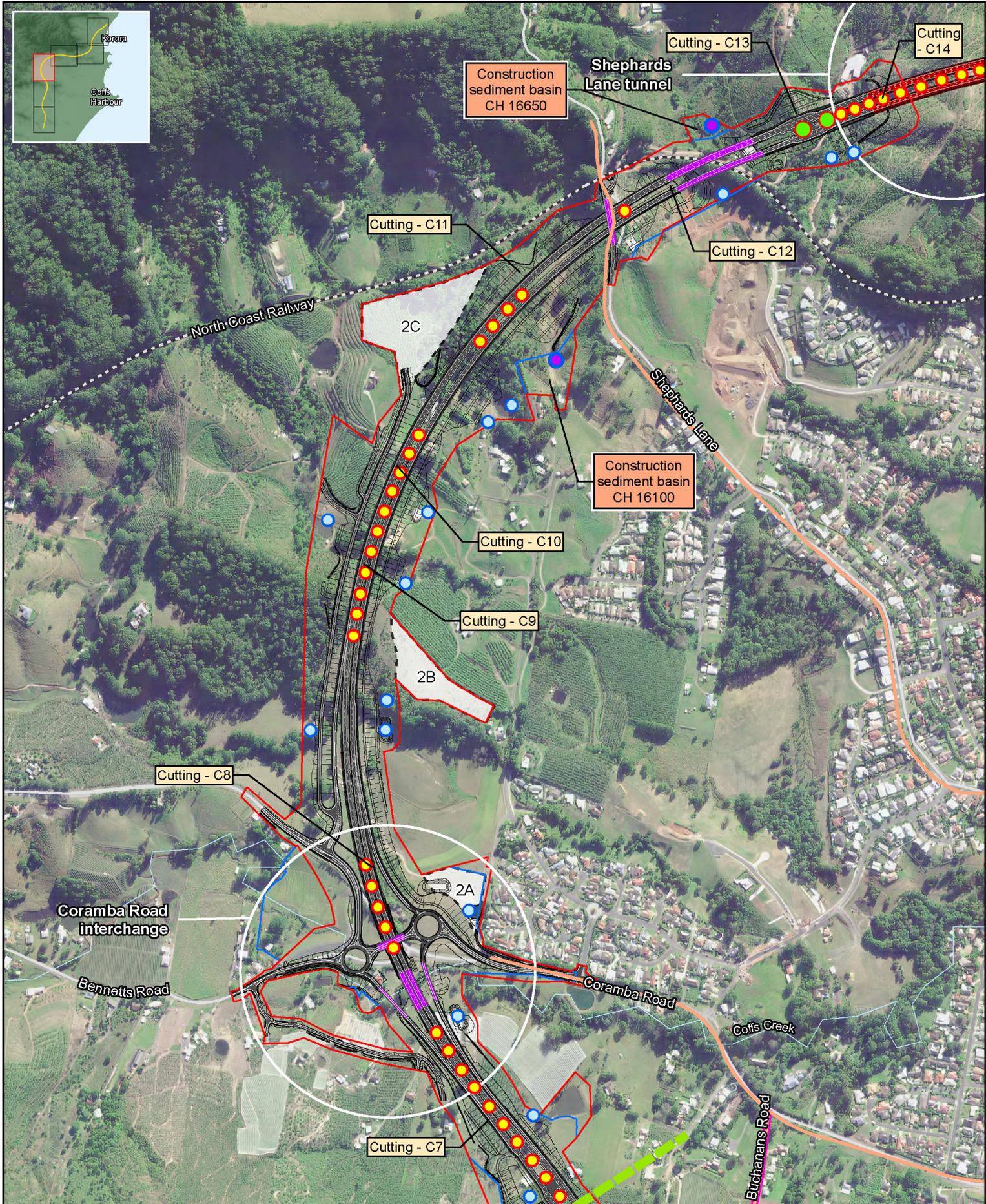


Legend

- | | | |
|---|--|---|
| Construction footprint - Amendment Report | Potential ancillary site | Indicative construction sediment basin location |
| Construction footprint - EIS | Revised potential ancillary site | Modified construction sediment basin location |
| Alignment | Additional potential ancillary site | North Coast Railway |
| Construction zone | Potential controlled blasting sites | Watercourse |
| Potential construction access | Additional potential controlled blasting sites | |
| Additional potential construction access | | |
| Temporary access road | | |

Coffs Harbour Bypass
Proposed construction changes
Figure 3-1-02

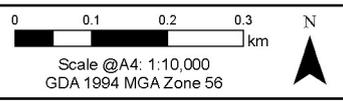


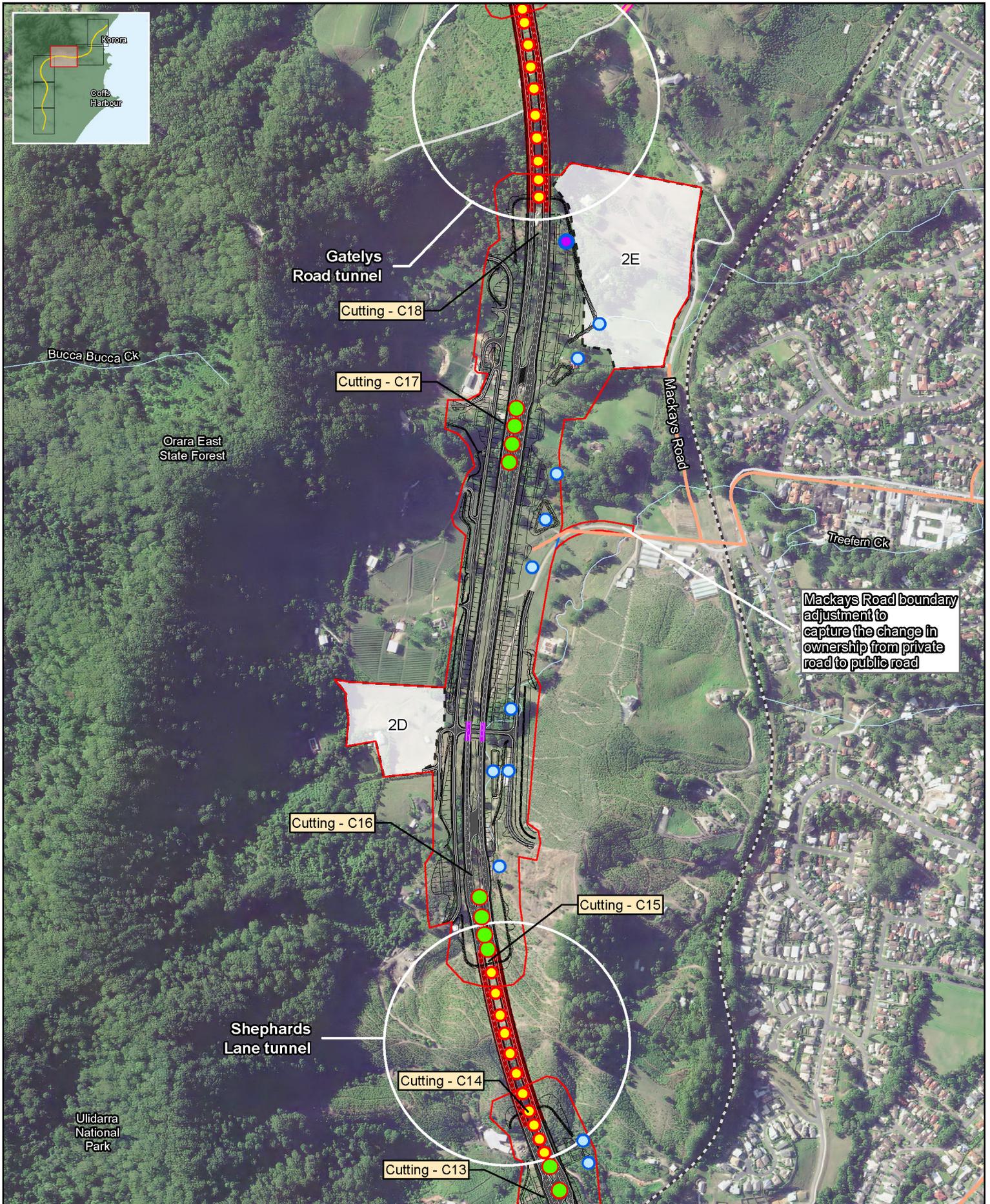
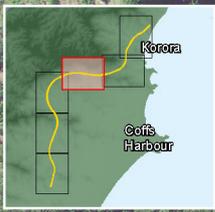


- Legend**
- ▭ Construction footprint - Amendment Report
 - ▭ Construction footprint - EIS
 - Alignment
 - ▭ Construction zone
 - ▭ Potential construction access
 - ▭ Additional potential construction access
 - ▭ Temporary access road
 - Potential ancillary site
 - Revised potential ancillary site
 - Additional potential ancillary site
 - Potential controlled blasting sites
 - Additional potential controlled blasting sites

- Indicative construction sediment basin location
- Modified construction sediment basin location
- - - North Coast Railway
- Watercourse

Coffs Harbour Bypass
 Proposed construction changes
 Figure 3-1-03

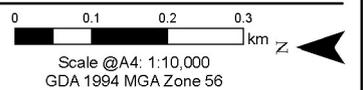


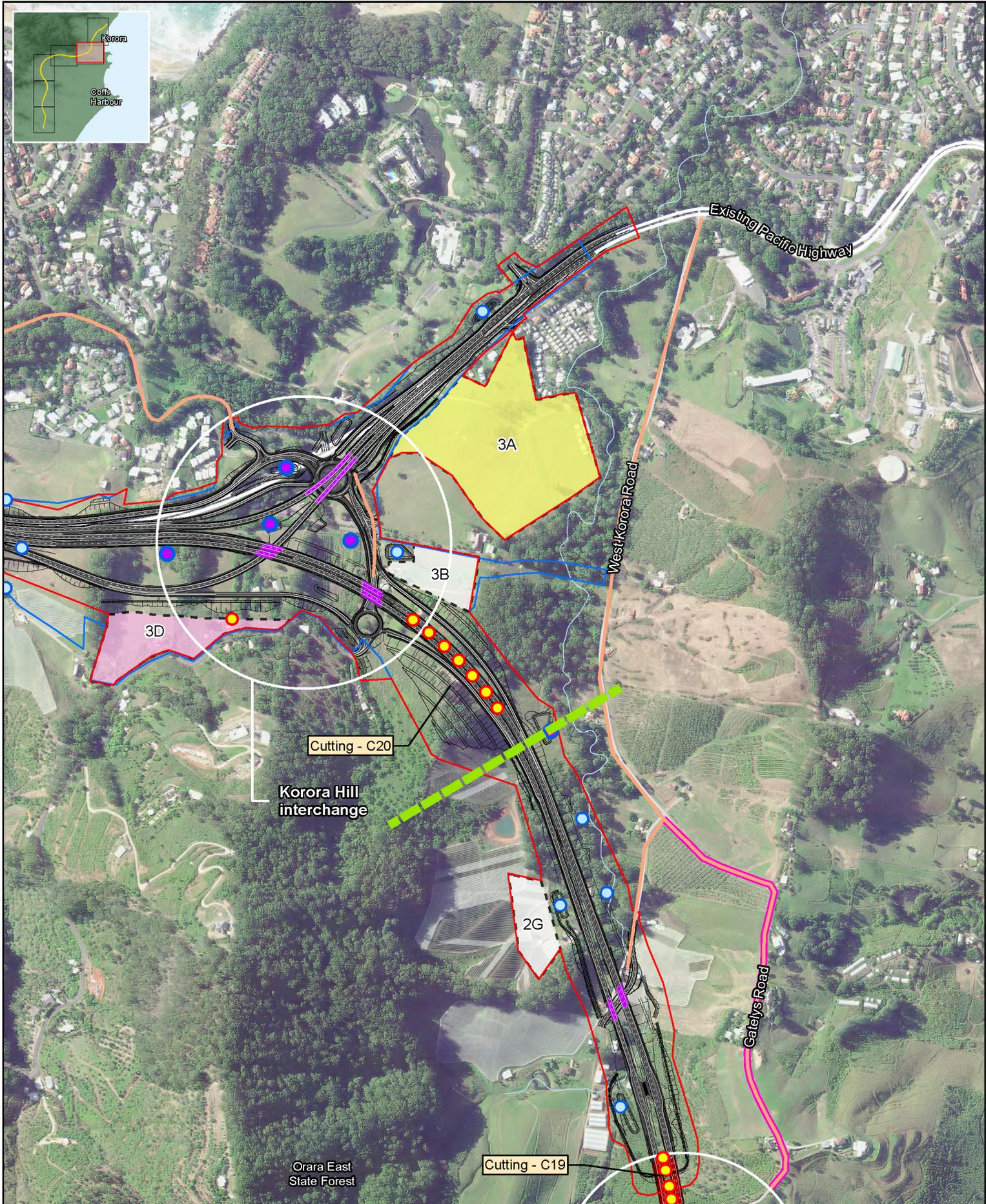


Mackays Road boundary adjustment to capture the change in ownership from private road to public road

Legend					
	Construction footprint - Amendment Report		Potential ancillary site	●	Indicative construction sediment basin location
	Construction footprint - EIS		Revised potential ancillary site	●	Modified construction sediment basin location
	Alignment		Additional potential ancillary site		North Coast Railway
	Construction zone	●	Potential controlled blasting sites	●	Watercourse
	Potential construction access	●	Additional potential controlled blasting sites		
	Additional potential construction access				
	Temporary access road				

Coffs Harbour Bypass
Proposed construction changes
Figure 3-1-04

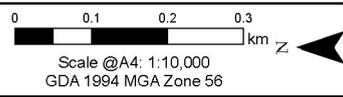


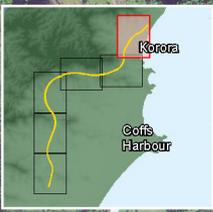


Legend

- | | | |
|---|--|---|
| Construction footprint - Amendment Report | Potential ancillary site | Indicative construction sediment basin location |
| Construction footprint - EIS | Revised potential ancillary site | Modified construction sediment basin location |
| Alignment | Additional potential ancillary site | North Coast Railway |
| Construction zone | Potential controlled blasting sites | Watercourse |
| Potential construction access | Additional potential controlled blasting sites | |
| Additional potential construction access | | |
| Temporary access road | | |

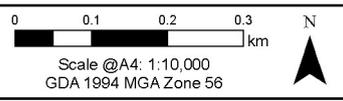
**Coffs Harbour Bypass
Proposed construction changes
Figure 3-1-05**





Legend					
	Construction footprint - Amendment Report		Potential ancillary site	●	Indicative construction sediment basin location
	Construction footprint - EIS		Revised potential ancillary site	●	Modified construction sediment basin location
	Alignment		Additional potential ancillary site	●	Potential controlled blasting sites
	Construction zone	●	Additional potential controlled blasting sites		North Coast Railway
	Potential construction access		Watercourse		
	Additional potential construction access				
	Temporary access road				

Coffs Harbour Bypass
 Proposed construction changes
 Figure 3-1-06



3.2 Additional blasting

The construction methodology for the bulk earthworks on the project has been reassessed based on the amended design and further analysis of existing ground conditions. Excavation of cuttings where deep hard rock is likely to be encountered would likely need controlled blasting. About 15 cuttings were identified in the EIS as potentially needing controlled blasting as part of the excavation process. Further analysis of the existing ground conditions indicates about 21 cuttings would likely need controlled blasting, with indicative locations shown in **Figure 3-1-01** to **Figure 3-1-06**.

Blasting may not occur along the entire cutting at these locations, only where there is hard rock. Rock breaking alternatives such as penetrating cone fracture, hydraulic rock breakers, or a non-explosive demolition agent (chemical expanding compounds) may also be used where blasting is not feasible.

As discussed in Chapter 6, Construction of the EIS, a Blast Management Strategy would be prepared before the start of blasting to identify exact locations. Where a blast location is predicted to have an impact on a sensitive receiver, a series of trials would be carried out at a reduced scale to determine site specific blast response characteristics, site parameters and to define allowable blast sizes to comply with planning approval requirements for vibration and over pressure at the nearest affected sensitive receiver. Management measures, including property condition surveys and safety measures for the travelling and general public, such as safe blast distances and exclusion zones, would be identified within the Blast Management Strategy. Refer to **Section 5.3, Noise and vibration** for further consideration of the additional blasting locations.

3.3 New and revised ancillary sites

Four new construction ancillary sites and two revised construction ancillary sites have been identified for the project. The new and revised potential ancillary areas are described in **Table 3-1** below and potential locations are shown in **Figure 3-1-01** to **Figure 3-1-06**. The reasons for the new and revised construction ancillary sites are summarised below:

- Sites 1A and 3A are new sites which have been included as a result of further consultation since the exhibition of the EIS regarding the possibility of lease arrangements during the construction phase
- Site 1C was included in the EIS however the footprint has changed as a result of the amended Englands Road interchange design
- Site 3D was included in the EIS however the footprint has changed as a result of the amended Korora Hill interchange design
- Site 1J and 3F are new sites which has been included as a result of the property acquisition process.

In addition to these new and amended sites, site 3C was described in the EIS, however this site is no longer proposed as a result of the amended Korora Hill interchange design.

For larger ancillary sites such as sites 1J and 3A, the entire site is unlikely to be used but has been considered for the purposes of the assessment. Final site layout would be confirmed by the construction contractor and would be subject to environmental management measures.

Initial site work in these areas would involve site clearing, installing appropriate environmental controls and providing hardstand areas for storage, parking and access roads. The final use, location and layout would be determined by the construction contractor.

Table 3-1 Potential new and revised ancillary sites and proposed uses

Site	Description of change	Proposed use					
		Main site compound	Secondary site compound	Concrete batch plant	Asphalt batch plant	Crushing plant	Stockpile site
1A	New site	✓	✓	✓	✓	✓	✓
1C	Changed footprint	✓	✓	✓	✓	✓	✓
1J	New site	✓	✓	✓	✓	✓	✓
3A	New site	✓	✓	✓	✓	✓	✓
3D	Changed footprint						✓
3F	New site		✓				✓

For the purpose of this Amendment Report, an assessment of the proposed new and revised ancillary sites has been carried out against the following criteria and documented in **Table 3-2**. These criteria remain unchanged since the EIS.

- a. Be located more than 50 metres from a waterway
- b. Be located within or next to land where the project is being carried out
- c. Have ready access to the road network
- d. Be located to minimise the need for heavy vehicles to travel through residential areas
- e. Be sited on relatively level land
- f. Be separated from nearest residences by at least 200 metres (or at least 300 metres for a temporary batching plant)
- g. Not require vegetation clearing beyond that already required by the project
- h. Not impact on heritage items (including areas of archaeological sensitivity) beyond those already impacted by the project
- i. Not unreasonably affect the land use of nearby properties
- j. Be above the 20-year average recurrence interval (ARI) flood level unless a contingency plan to manage flooding is prepared and implemented
- k. Provide sufficient area for the storage of raw materials to minimise, to the greatest extent practical, the number of deliveries required outside standard construction hours.

Potential impacts from the ancillary sites in relation to nearby residences (noise and vibration), heritage, biodiversity, flooding and traffic are discussed in **Chapter 5, Additional assessment** of this Amendment Report. Measures to mitigate and/or manage potential adverse impacts from ancillary sites are summarised in **Chapter 6, Revised environmental management measures**.

Table 3-2 Assessment of new and revised construction ancillary sites

Criteria	Ancillary site					
	1A (New site)	1C (Changed footprint)	1J (New site)	3A (New site)	3D (Changed footprint)	3F (New site)
a	Yes	No, within 15 m of a water course	No, within 25 m of a water course	No, southern boundary is adjacent to Jordans Creek	Yes	No, adjacent to Pine Brush Creek
b	Yes	Yes	Yes	Yes	Yes	Yes
c	Yes, via Englands Road	Yes, via Englands Road	Yes, via Englands Road	Yes, via Pacific Highway	Yes, via Bruxner Park Road	Yes, via Pacific Highway
d	Yes	Yes	Yes	Yes	Located next to the site but also the nearby residences*	Yes
e	Yes	Yes	Yes	Majority of the site is sloping land.	Sloping land	Yes
f	No, nearest residence about 230 m from the southern boundary. Site is separated from the residence by a 100 m vegetated buffer. Note parts of this site are more than 300 m from this residence.	Yes	No, nearest residence adjacent to western boundary. The nearest residence is about 5 m from the site boundary.	No, residences adjacent to western and eastern boundaries. The nearest residence is about 10 m from the western boundary.	No, nearest residence about 30 m from the western boundary.	No, nearest residence about 80 m from the eastern boundary.

Criteria	Ancillary site					
	1A (New site)	1C (Changed footprint)	1J (New site)	3A (New site)	3D (Changed footprint)	3F (New site)
g	Yes, no additional clearing	Yes, no additional clearing	Yes, no additional clearing	No, some clearing required depending on extents of site used [^]	No, some clearing required depending on extents of site used [^]	No, some clearing required depending on extents of site used [^]
h	Yes, no additional impacts on heritage items	Yes, no additional impacts on heritage items	No, potential impact to heritage site CHB AFT 1, which was previously reported as impacted in the EIS	No, potential impact to heritage site CHB AFT 16	Yes, no additional impacts on heritage items	Yes, no additional impacts on heritage items
i	Yes, not unreasonably affect land use of nearby properties	Yes, not unreasonably affect land use of nearby properties	Yes, not unreasonably affect land use of nearby properties	Yes, not unreasonably affect land use of nearby properties	Yes, not unreasonably affect land use of nearby properties	Yes, not unreasonably affect land use of nearby properties
j	Yes	No. Minor part of the site would be within the 20-year ARI flood level	Yes	No. Minor part of the site would be within the 20-year ARI flood level	No. A small part of the site, about 1.3 ha, would be within the 20-year ARI flood level	Yes
k	Yes	Yes	Yes	Yes	Yes	Yes

* Site 3D is adjacent to the project corridor and access would be provided via Bruxner Park Road, and heavy vehicles would need to travel past residential properties to access the site.

[^] While some clearing would be required, environmental management measure FF14 commits that threatened species habitat will not be cleared for the purposes of ancillary sites

3.4 Revised construction traffic management and access

Two new construction access roads would be needed for the project. These new construction access roads are Buchanans Road and Gatelys Road. Russ Hammond Close would be required for temporary local access during construction. The new construction access roads and the temporary local access road are shown in **Figure 3-1-01** to **Figure 3-1-06** and the Russ Hammond Close connection is shown on **Figure 3-2**.

Buchanans Road would be needed for access to establish the Roberts Hill tunnel southern portal and early tunnelling and establishment works as well as to facilitate service relocations. Buchanans Road does not extend to the construction footprint. Access to the construction footprint from the end of Buchanans Road would be provided via an existing access track on land which is owned by TfNSW.

Gatelys Road would be needed for service relocations in this section of the project and is not anticipated to be required for access to the construction footprint.

A Traffic Management Plan (TMP) would be prepared for the construction of the project including traffic management measures to be employed to manage short-term traffic impacts expected during construction. These measures would be developed in accordance with the Traffic Control at Work Sites Technical Manual (Roads and Maritime Services 2018c). The TMP would also confirm the local roads to be used during construction. Potential impacts on traffic and access for new construction access roads are outlined in **Section 5.2, Traffic and transport**.

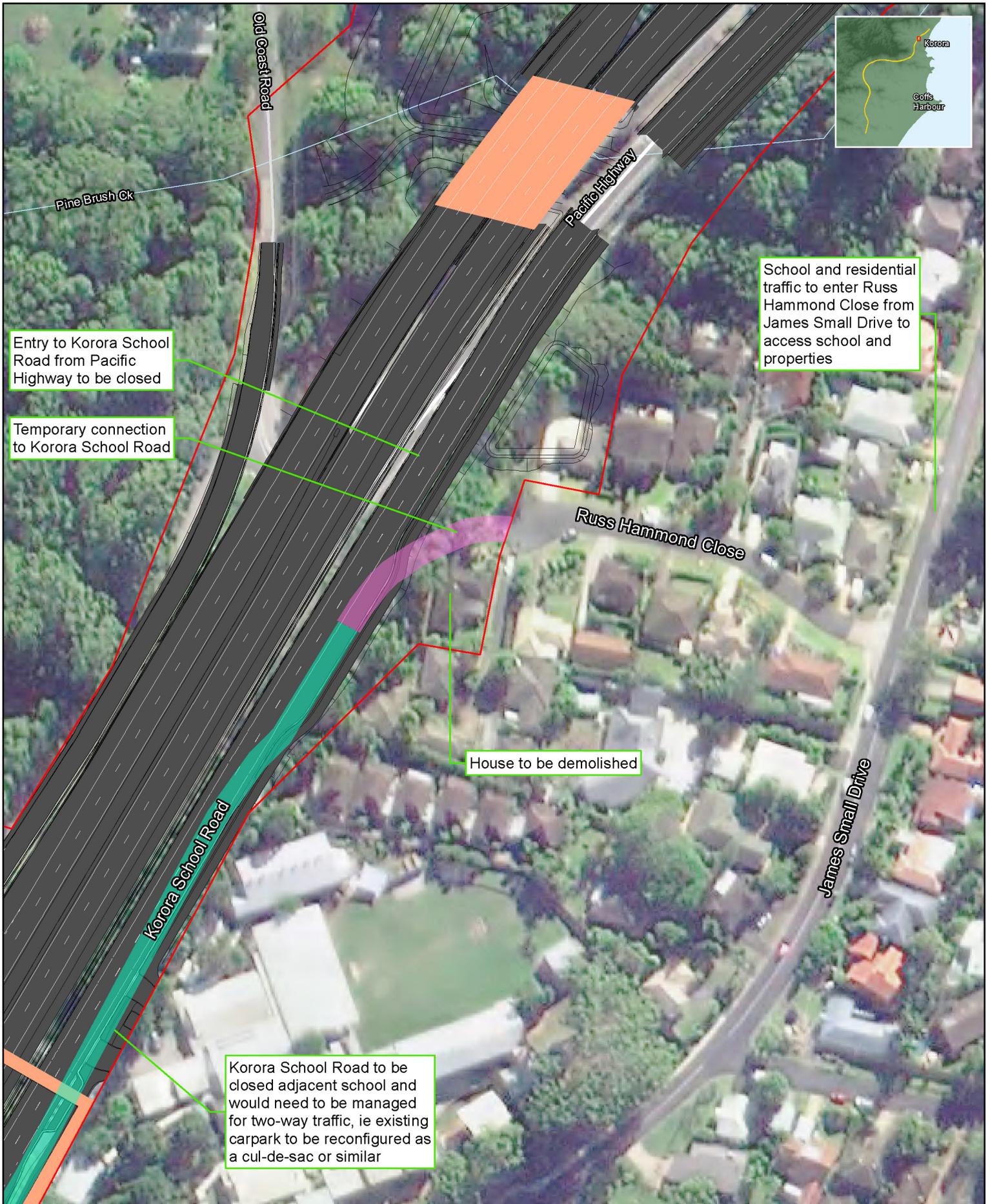
During construction, access to Korora School Road from the existing Pacific Highway would need to be closed and a temporary connection required to maintain access to Kororo Public School and existing residential properties on Korora School Road. The temporary access is proposed via Russ Hammond Close and would involve providing a connection between the cul-de-sac to Korora School Road through TfNSW owned property.

Activities associated with temporary access would likely include:

- Notify residents of the start of work
- Undertake site establishment including demolition and vegetation clearing as required
- Prepare the surface using excavators and other earthmoving equipment
- Place select materials and any gravel base/sub-base and pavement layers as required
- Apply spray seal/asphalt pavement
- Install line marking, signs, guideposts and traffic management devices as required.

The temporary access could be in place for up to 18 months while the service road and bus interchange are constructed and would not be used for construction traffic. Traffic that would use the temporary access includes school traffic (eg staff, deliveries, and parents and carers) and residential access to existing properties on Korora School Road. Korora School Road would be closed adjacent to the school and would be managed for two-way traffic. The existing carpark would need to be reconfigured as a turn-around area.

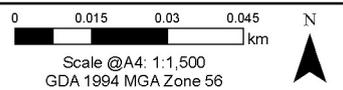
Once the service road becomes operational, the temporary access would be decommissioned to allow for permanent landscaping to be carried out.



Legend

- Construction footprint - Amendment Report
- Temporary access during construction
- Pavement
- Korora School Road
- Bridge

Coffs Harbour Bypass
 Russ Hammond Close connection
 Figure 3-2



3.5 New and revised construction sediment basins

As detailed in Chapter 6, Construction of the EIS (see Section 6.8.3), an erosion and sediment management report (ESMR) was prepared for the project (SEEC 2019) in accordance with Managing Urban Stormwater: Soils and Construction (Landcom 2004). This report details the methods that would be implemented to mitigate and manage potential erosion and sedimentation impacts from the project, including impacts to water quality. Due to the development of the proposed design and construction changes detailed in the Amendment Report, the ESMR has been updated and is provided as Appendix B of the Submissions Report. The ESMR and the associated erosion and sediment control plan have been updated to consider the amended design and submissions made on the EIS.

The construction sediment basins that have resulted in an increased construction footprint are described below and are shown in **Figure 3-1-01** to **Figure 3-1-06**:

- On the eastern side of the project in the vicinity of Shephards Lane (Chainage 16100)
- On the northern side of the project adjacent to the existing North Coast Railway (Chainage 16650)
- On the western side of the project adjacent to the Kororo Nature Reserve (Chainage 21800).

Other construction sediment basins that have been updated to consider the amended design but have not resulted in any amendments to the construction footprint are also shown in **Figure 3-1-01** to **Figure 3-1-06**.



Chapter 4

Consultation

4. Consultation

4.1 Background

As described in Chapter 7, Consultation of the EIS, TfNSW has been investigating the project since 2001 as part of the overall Pacific Highway upgrade program. The consultation undertaken up to and as part of the preparation of the EIS is documented in Chapter 7, Consultation of the EIS. The EIS was exhibited by DPIE from 11 September to 27 October 2019. Further information in relation to the length and purpose of this exhibition period is discussed in Section 4.6, Consultation of the Submissions Report.

This chapter summarises the stakeholder and community engagement activities undertaken for the proposed design and construction changes since the display of the EIS.

4.2 Engagement process and activities

Following the EIS exhibition, a number of proposed design and construction changes discussed in **Chapter 2, Design changes** and **Chapter 3, Construction updates** were displayed to the community from 27 November 2019 to 13 December 2019.

Engagement activities that supported the display included stakeholder and landowner meetings, a community drop-in session, a pop-up display, static displays at CHCC, Harry Bailey Memorial Library and Toormina Library, residential door knocks, social media engagement, advertisements, project email and phone calls, letters and email updates and information on the project website. Further details of key engagement activities are provided in **Table 4-1**.

Table 4-1 Engagement activities

Tool	Dates	Details
Community information display	5 December 2019	<ul style="list-style-type: none"> A community drop-in information session at Coffs Harbour Showgrounds was held from 4pm to 7pm Nine people attended.
Pop-up display	28 November 2019	<ul style="list-style-type: none"> A pop-up information stall was held at Park Beach Plaza from 10am to 2pm Almost 90 people attended.
Project office	25 November to 12 December 2019	<ul style="list-style-type: none"> The project display office at 11a Park Avenue, Coffs Harbour was open from Monday to Thursday, 10am to 4pm More than 80 people visited during the display period.

Tool	Dates	Details
Project update describing the design changes	27 November to 13 December 2019	<ul style="list-style-type: none"> • 12-page printed project update distributed through the project display office, at meetings and briefings and to residents in close proximity to Korora Hill interchange and the bus interchange at Kororo Public School • 30 copies of the project update displayed at CHCC, Harry Bailey Memorial Library and Toormina Library.
Media release to inform the community of the public display period	27 November 2019	<ul style="list-style-type: none"> • Coffs Coast Advocate and Coffs Outlook • Prime 7 and NBN • Triple M Coffs Coast, ABC Coffs Coast, ABC Mid North Coast and 2HC Coffs Coast radio stations.
Residential door-knock to advise adjacent community of the design changes	5 December 2019 and 10 December 2019	<p>More than 30 homes were door-knocked in:</p> <ul style="list-style-type: none"> • Roselands Estate (5 December 2019) regarding the Coramba Road bus stop • Ferntree Place (10 December 2019) regarding the Kororo Public School and Luke Bowen footbridge.
Social media	27 November 2019 and 11 December 2019	<ul style="list-style-type: none"> • Two Facebook paid posts announcing the design changes and directing the Coffs Harbour community to download the project update and “Have Your Say” via the project website • A Facebook paid post reminding the community the “Have Your Say” closes at midnight on 13 December 2019.

Tool	Dates	Details
Face-to-face briefings with key stakeholders	November 2019 – various dates	<ul style="list-style-type: none"> • A briefing with representatives of CHCC (1 November 2019) • A briefing with representatives of Kororo Public School (4 November 2019) • On-site inspection held with representatives from the Regions, Industry, Agriculture and Resources Group, DPIE (RIARG, DPIE and Environment, Energy and Science Group, DPIE (EESG, DPIE) to discuss the proposed design refinements (4 November 2019) • A briefing was held for the Member for Coffs Harbour’s staff (27 November 2019) • A briefing was held for the CHCC Councillors (27 November 2019) • An information display/presentation session was held at Kororo Public School for parents and staff with 25 attendees (28 November 2019).
Meetings with stakeholder and residents to outline the amended design and discuss any submissions received	October 2019 to April 2020	<ul style="list-style-type: none"> • Oz Group Packhouse (24 October 2019 and 27 November 2019) • RFS Mid North Coast Team (28 October 2019 and 25 February 2020) • Pacific Bay Eastern Lands (4 November 2019) • Pacific Bay Western Lands (25 November 2019) • Lindsay Transport (5 December 2019) • Bishop Druitt College (5 December 2019) • TNT (16 December 2019) • Korora School Road residents (16 December 2019) • Ferntree Place residents (18 December 2019) • Handybin (10 February 2020) • Coffs Harbour bypass action group (24 February 2020) • Bus companies including CDC Buses, Busways, Newcombe Coach Lines and Beaumont’s Bus Service (2 and 3 April 2020).
Community Consultative Committee meeting	27 November 2019	<ul style="list-style-type: none"> • A meeting of the Community Consultative Committee was held in Coffs Harbour.

Tool	Dates	Details
Aboriginal focus group (AFG) meeting	10 March 2020 and 30 April 2020	<ul style="list-style-type: none"> A meeting of registered Aboriginal parties (RAPs) for the project was held to provide an update on the project including the design changes. On request of the RAPs, a further meeting was held to discuss the salvage methodologies. Section 5.9, Aboriginal cultural heritage provides further details on the AFG meeting and consultation with RAPs.
Project website updates	Ongoing	<ul style="list-style-type: none"> An interactive web portal is available on the project website which features artists impressions of the design changes compared to the EIS design There were 2075 unique visitors and 5426 page views from 27 November to 15 December 2019.

4.3 Summary of issues raised on the proposed design and construction changes

A total of 31 submissions were received during the display of the proposed design and construction changes. This included one submission from CHCC, two submissions from stakeholders and 28 submissions from community members. A summary of the issues raised and where these issues are addressed in this report is included below. Some issues raised in these submissions were also raised in submissions on the EIS and are not directly related to the proposed design and construction changes. These issues are addressed in the Submissions Report.

In addition to receiving submissions on the proposed design and construction changes, TfNSW undertook additional consultation and engagement with specific community members and stakeholders. A summary of this consultation is included in the subsequent sections.

Key issues raised by stakeholders and the community included:

- Property impacts
- Environmental impacts, including noise, visual, air quality, and biodiversity impacts
- Access and connectivity impacts during construction
- Preference for Coramba Road interchange to be a 'donut' design
- Traffic arrangements around Kororo Public School and bus interchange
- Suggested additional design changes.

These issues were investigated and considered as part of the ongoing development of the project, with design elements and/or environmental management measures incorporated to address concerns raised and reduce potential environmental impacts where reasonable and feasible.

4.3.1 Issues raised by State government agencies

A summary of issues raised by State Government agencies during preparation of the Amendment Report is provided in **Table 4-2**.

Table 4-2 Summary of issues raised by government agencies

Agency	Comments	Where addressed
RIARG, DPIE	The Pine Brush Creek and Williams Creek realignments should maintain the existing waterway length where possible. Requested additional information about the existing waterway lengths, including the likely extent of scour protection for all options.	Section 2.7, Pine Brush Creek and Williams Creek realignment
	The design refinement to replace the bridge over a tributary of Newports Creek (BR 05) to a multi-cell culvert (Chainage 12400) is considered reasonable provided a low flow channel and other fish friendly design features are incorporated into the design.	Section 2.2, North Boambee Valley vertical alignment
EESG, DPIE	It is preferred that any realignment of Pine Brush Creek is minimised as far as is practical.	Section 2.7, Pine Brush Creek and Williams Creek realignment
	General support for the design refinement to replace the bridge over a tributary of Newports Creek (BR 05) to a multi-cell culvert (Chainage 12400) noting the culverts will be designed in accordance with the design principles documented in the EIS.	Section 2.2, North Boambee Valley vertical alignment Section 5.4, Biodiversity Appendix D, Updated threatened species management plan
	Supports the amended Englands Road interchange which allows for a new fauna underpass to be constructed about ten metres north of the existing fauna underpass.	Section 2.1, Englands Road interchange Section 5.4, Biodiversity Appendix D, Updated threatened species management plan
	Supports the inclusion of a cultural salvage component in the Aboriginal heritage management measures and the continued efforts of TfNSW to consult with RAPs. They also encourage TfNSW to be responsive, creative and respectful in all consultation and communication with RAPs.	Appendix G, Updated Aboriginal cultural heritage assessment report

4.3.2 Issues raised by stakeholders

A summary of issues raised by stakeholders following display of the amended design is provided in **Table 4-3**.

Table 4-3 Summary of issues raised by affected stakeholders

Stakeholder group	Comments	Where addressed
Kororo Public School	<ul style="list-style-type: none"> • Supports the design refinements at the bus interchange. • Request for safety, access and amenity improvements to Kororo Public School bus interchange • The main concerns raised by parents related to the duration of construction and access for pick-up and drop-off of school children during construction. 	<p>Section 2.6, Kororo Public School bus interchange and Luke Bowen footbridge</p> <p>Section 3.4, Revised construction traffic management and access</p> <p>Section 5.2, Traffic and transport</p>
Bishop Druitt College	<ul style="list-style-type: none"> • Supports the design refinements • Request updates during construction to notify parents on changed traffic conditions to share in their regular newsletters. 	<p>Chapter 6, Revised environmental management measures</p>
Lindsay Transport	<ul style="list-style-type: none"> • Requested changes to the exit lanes from the depot • Concerns about safety of access to the depot from the south • Concerns about safety of access for trucks from western property access road to Englands Road interchange. 	<p>Issues regarding changes to the exit lanes from the depot and safety of access to the depot are addressed in Section 4.7.9 of the Submissions Report</p> <p>Safety concerns regarding the one-way local access road are addressed by meeting the requirements of Upgrading the Pacific Highway – Design Guidelines (Roads and Maritime Services 2015), Austroads guidelines, Australian Standards, and TfNSW supplementary documents. Additionally, a road safety audit will be undertaken during detailed design.</p>
Bus companies	<ul style="list-style-type: none"> • Supports the design refinements • Concerns with access during construction. 	<p>Section 3.4, Revised construction traffic management and access</p> <p>Section 5.2, Traffic and transport</p> <p>Chapter 6, Revised environmental management measures</p>

Stakeholder group	Comments	Where addressed
RFS Mid North Coast Team	<ul style="list-style-type: none"> Concerns about access to the Solitary RFS shed during construction Agreed on a new shed location near the Korora Hill interchange. 	<p>Section 2.6, Kororo Public School bus interchange and Luke Bowen footbridge</p> <p>Section 5.2, Traffic and transport</p> <p>Chapter 6, Revised environmental management measures</p>
Oz Group Packhouse	<ul style="list-style-type: none"> Concerns about contamination risks, access constraints and land acquisition resulting from the amended Englands Road interchange. 	<p>Section 5.2, Traffic and transport</p> <p>Section 5.6, Land use and property</p> <p>Section 5.7, Agriculture</p> <p>Chapter 6, Revised environmental management measures</p>
TNT	<ul style="list-style-type: none"> Generally supports the design refinements at Englands Road interchange Concerns about access constraints during construction. 	<p>Section 5.2, Traffic and transport</p> <p>Chapter 6, Revised environmental management measures</p>
Handybin	<ul style="list-style-type: none"> Supports the design refinements at Englands Road interchange Concerned about access for their vehicles. 	<p>Section 5.2, Traffic and transport</p> <p>Chapter 6, Revised environmental management measures</p>
Pacific Bay Eastern Lands	<ul style="list-style-type: none"> Supports the amended Korora Hill interchange Request for some amenity and access improvements at the Korora Hill interchange including an alternative access to the development via James Small Drive. 	<p>Additional amenity and access improvements including construction of an alternative access to the development via James Small Drive are considered outside the project scope.</p>
Pacific Bay Western Lands	<ul style="list-style-type: none"> Supports the amended Korora Hill interchange Discussed possible use of land as an ancillary site. 	<p>Section 3.3, New and revised ancillary sites</p>

4.3.3 Issues raised by Coffs Harbour City Council

A summary of issues raised by CHCC following display of the amended design is provided in **Table 4-4**. TfNSW will continue to work with CHCC on the issues raised below.

Table 4-4 Summary of issues raised by CHCC

Issue	Comments	Where addressed
Traffic and transport	As part of the amended Englands Road interchange, TfNSW should consider the upgrade of the Sawtell Road interchange due to safety issues.	Section 3.1.6 of the Submissions Report
	Ensure appropriate speed controls for traffic on the off-ramp of Englands Road interchange.	Section 2.1, Englands Road interchange
	Consider joining the property access road to the roundabout as part of the Englands Road interchange design amendment. This will reduce potential truck access issues.	Connection of the western property access road to the roundabout was undertaken during design development associated with the amended interchange. Due to geometrical constraints and road safety considerations, this option was not considered viable.
	Consider additional upgrades of the Coramba Road bus stop to improve bus movements.	Section 2.3, Coramba Road bus stop
	Concerned about numerous vehicle crashes on James Small Drive near the proposed Korora Hill interchange.	Section 5.2, Traffic and transport Appendix A, Supplementary traffic and transport assessment
	Review the layout of the proposed bus interchange at Kororo Public School to ensure appropriate access and egress at the northern end of the bus bay.	Section 2.6, Kororo Public School bus interchange and Luke Bowen footbridge
	Safety concerns for parents accessing the bus interchange at Kororo Public School.	Section 2.6 Kororo Public School bus interchange and Luke Bowen footbridge Section 5.2, Traffic and transport
Property and land use	TfNSW to confirm the future of the Solitary RFS shed as part of the bus interchange design amendment at Kororo Public School.	Section 2.6, Kororo Public School bus interchange and Luke Bowen footbridge Section 5.2, Traffic and transport Chapter 6, Revised environmental management measures
Flooding	There needs to be a collaborative government approach to flooding issues in the vicinity of the project.	Section 5.10, Flooding and hydrology Section 3.1.11 of the Submissions Report

4.3.4 Issues raised by the community

A summary of issues raised by the community following display of the amended design is provided in **Table 4-5**. Community issues include submissions from CHCC councillors and members of the Coffs Bypass Action Group.

Table 4-5 Summary of issues raised by the community

Stakeholder group	Comments	Where addressed
Individual community members	Request for additional parking and increased turning circles at Kororo Public School bus interchange.	Section 2.6, Kororo Public School bus interchange and Luke Bowen footbridge Section 5.2, Traffic and transport
	Noise, access and parking impacts to the units on Korora School Road.	Section 5.2, Traffic and transport Section 5.3, Noise and vibration Section 3.9 of Submissions Report
	Visual amenity, contamination, noise, air quality, biodiversity, property and land use, and socio-economic impacts of extension of Kororo Public School bus interchange on Fern Tree Place residents.	Section 5.3, Noise and vibration Section 5.4, Biodiversity Section 5.5, Urban design, landscape and visual amenity Section 5.6, Land use and property Section 5.8, Socio-economic Section 5.11, Soil and contamination
	Air quality, safety and traffic impacts from inclusion of traffic lights at Charlesworth Bay Road intersection.	Section 5.2, Traffic and transport As detailed in Section 5.2, Traffic and transport , the upgraded Charlesworth Bay Road intersection would be more efficient when compared to the existing situation. As such, operational air quality impacts from the design change are anticipated to be negligible.

Stakeholder group	Comments	Where addressed
	Lack of shared user path from Charlesworth Bay Road to Korora Hill interchange.	<p>Section 5.2, Traffic and transport</p> <p>As discussed in Section 3.1.6 of the Submissions Report, TfNSW will continue to consult with CHCC on a strategy for pedestrians and cyclists during the development of the detailed design in accordance with environmental management measure TT11 in Chapter 6, Revised environmental management measures.</p>
	Provision of cycle paths along James Small Drive and Korora Bay Road to link with existing cycle paths.	As discussed in Section 4.7.11 of the Submissions Report, provision of pedestrian and cycle paths outside the extents of the project is outside the scope of the project.
	Headlight, noise and safety impacts from the underpass near Fernleigh Avenue.	Section 4.7.8 of Submissions Report
	Request for a donut design for the Coramba Road interchange.	Section 4.4.1 of Submissions Report
	Noise and traffic impacts from Coramba Road interchange on Roselands Estate.	<p>Section 5.3, Noise and vibration Appendix B, Updated noise and vibration assessment</p>
	Increased noise impacts on residents near North Boambee Road.	<p>Section 5.3, Noise and vibration Appendix B, Updated noise and vibration assessment</p>
	Concern that Coramba Road bus stop is too small.	<p>Section 2.3, Coramba Road bus stop</p> <p>Section 5.2, Traffic and transport</p>
	Upgrade of Coramba Road and footpaths/cycleways.	Section 4.7.6 of Submissions Report

Stakeholder group	Comments	Where addressed
	Extend noise barriers on Coramba Road to Nelson Street.	The noise barrier adjacent the Coramba Road interchange has been extended to Roselands Drive (see Section 5.3). Extension to Nelson Street is beyond the scope of the project and outside of the study area of the updated noise and vibration assessment (see Appendix B, Updated noise and vibration assessment).
	The Coramba Road bus stop needs further refinement.	Section 2.3, Coramba Road bus stop Section 5.2, Traffic and transport Appendix A of Appendix E, Supplementary urban design, landscape character and visual impact assessment
	Request to move the project further west away from Coachmans Close to reduce noise and visual amenity impacts.	Section 4.13.2 of Submissions Report
	Flooding, noise and access impacts to properties on the existing highway south of the Englands Road interchange.	Section 5.2, Traffic and transport Section 5.3, Noise and vibration Section 5.10, Flooding and hydrology
	Traffic congestion and access impacts at the Isles Drive Industrial Estate.	Section 5.2, Traffic and transport Chapter 6, Revised environmental management measures
	Suitability of design from property access road to Englands Road interchange.	The one-way local access road has been designed to meet the requirements of Upgrading the Pacific Highway – Design Guidelines (Roads and Maritime Services 2015), Austroads guidelines, Australian Standards, and TfNSW supplementary documents.
	Consider upgrading Sawtell Road interchange due to safety concerns.	Section 4.7.9 of Submissions Report

Stakeholder group	Comments	Where addressed
	Concerned about construction noise impacts on local residents.	Section 5.3, Noise and vibration Appendix B, Updated noise and vibration assessment
	Reduce impacts to koala habitat.	Section 5.4, Biodiversity Appendix C, Updated biodiversity assessment report
	There is a need for an independent review of the noise assessment.	Section 4.8.2 of Submissions Report

4.3.5 Issues raised by the Community Consultative Committee

The project's Community Consultative Committee (CCC) met on 27 November 2019 to discuss the design changes. The purpose of the group is to provide a forum for discussion between TfNSW and representatives of the Coffs Harbour community, stakeholder groups and CHCC on issues directly relating to the project. The feedback from the group on the design changes was generally positive. Further information and a copy of the meeting minutes from the November meeting are available at www.pacifichighway.nsw.gov.au/coffsharbourbypass.

4.4 Future consultation

As discussed in section 7.4 of the EIS, TfNSW will continue to liaise with stakeholders and the community during the detailed design, construction and operation phases of the project.

The aims of ongoing communications and consultation are to provide the community with:

- Accurate and accessible information about the processes and activities associated with the project
- Information in a timely manner
- Appropriate avenues for providing comment or raising concerns and to ensure the community are aware of how to engage with the project team
- A high level of responsiveness to community issues and concerns throughout development and delivery of the project.

Community involvement would continue as part of the construction and delivery of the project. A draft community consultation framework has been prepared (refer to Appendix D of the EIS) and will form the basis for developing the Community Liaison Implementation Plan to guide community and stakeholder involvement during detailed design, construction and leading up to project opening.

TfNSW supports the Australian and NSW government's response to coronavirus (COVID-19) and to ensure the safety of our staff and the Coffs Harbour community, we will be postponing face to face interactions including the closure of the project display office until further notice. During this time, the project team will be contactable on 1800 550 621 or email coffsharbourbypass@rms.nsw.gov.au.