



Warrell Creek to Urunga Upgrading the Pacific Highway

ENVIRONMENTAL ASSESSMENT

VOLUME 1 ENVIRONMENTAL ASSESSMENT

January 2010

ISBN 978-1-921692-63-5

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11. Land use and property

Land use and property is identified as a key issue in the Director-General's requirements. A detailed land use and property assessment for the Proposal was undertaken and is presented in this chapter.

Director-General's requirements	Where addressed in the EA
Land Use and Property – including but not limited to: ■ directly-affected properties and land uses adjacent to the project, including property access, property allotment, land sterilisation and severance; ■ the connectivity (including pedestrian and cycleway opportunities) and contiguity of existing and planned settlements and activity clusters; ■ the operation of Nambucca Valley Quarry south of Warrell Creek; ■ the operation of Forests NSW estate including potential for fragmentation and sterilisation of resources; and ■ the attainment of the objectives of the <i>Mid North Coast Strategy</i> (Department of Planning, March 2009).	Section 11.3.1 Property acquisition Section 11.3.2 Land connectivity and contiguity Section 11.3.3 Land sterilisation and severance Section 11.3.4 Access Section 11.3.5 Planned development (including the <i>Mid North Coast Regional Strategy</i>) Section 11.3.7 Forestry operations (including potential for fragmentation and sterilisation of resources) Section 11.3.9 Extractive industries (Nambucca Valley Quarry)

11.1 Assessment approach

The following land use and property impact assessment combines information from field investigations, council databases and one-on-one and small group consultation with affected land owners and the wider community. The information collected about land uses within the study area was originally obtained and mapped during the route options investigations, updated for the selection of the preferred route and further updated during the preparation of this environmental assessment. Existing zoning and development permissibility, along with strategic land use planning was assessed in consultation with Bellingen and Nambucca Shire Councils.

The approach included the following considerations:

- Existing land uses within the study area.
- Potential land use and property impacts as a result of the Proposal.
- Potential changes to land use.
- Proposed management measures.

The assessment of potential land use and property impacts as a result of the Proposal has been reported for the four sections of the Proposal:

- Section 1 - Allgomera deviation to Nambucca River.
- Section 2 - Nambucca River to North Coast Railway overbridge.
- Section 3 - Nambucca Heads to Ballards Road.
- Section 4 - Ballards Road to Waterfall Way.

11.2 Existing land use

The Proposal is located within the Nambucca and Bellingen local government areas which are characterised by a mix of agricultural land uses, bushland, forests, small settlements and the townships of Macksville, Nambucca Heads and Urunga, which are situated on the Nambucca and Kalang Rivers. The general pattern of land use in the study area is controlled mainly through zoning provisions in the Bellingen Local Environmental Plan 2003 and the Nambucca Local Environmental Plan 1995. Although the provisions of these Local Environmental Plans do not apply in respect of the Proposal (as the Proposal has been declared as critical infrastructure under Part 3A of the Environmental Planning and Assessment Act 1979), they have been considered in the design and location of key features of the Proposal.

The broad land use zones adopted in the Nambucca Local Environment Plan 1995 and Bellingen Local Environment Plan 2003 are shown in Figure 11-1 a-c and Figure 11-2. The state forest management zones are shown in Figure 11-3a and Figure 11-3b and regionally significant farmland in Figure 11-4.

The land use zones under the Nambucca and Bellingen Local Environmental Plans near the Proposal are shown in Table 11-1.

Table 11-1 Zonings

Nambucca Local Environment Plan 1995	Bellingen Local Environment Plan 2003
■ Rural (prime flooding)	■ Secondary agriculture
■ Rural residential	■ Public recreation (state forest)
■ Residential	■ Rural small holdings
■ Public recreation	■ Rural settlement
■ Rural (forestry)	■ Industrial
■ Rural (future urban)	■ Special emphasis

FIGURE 11-1 a| NAMBUCCA LEP ZONINGS

SECTION 1 OF 3

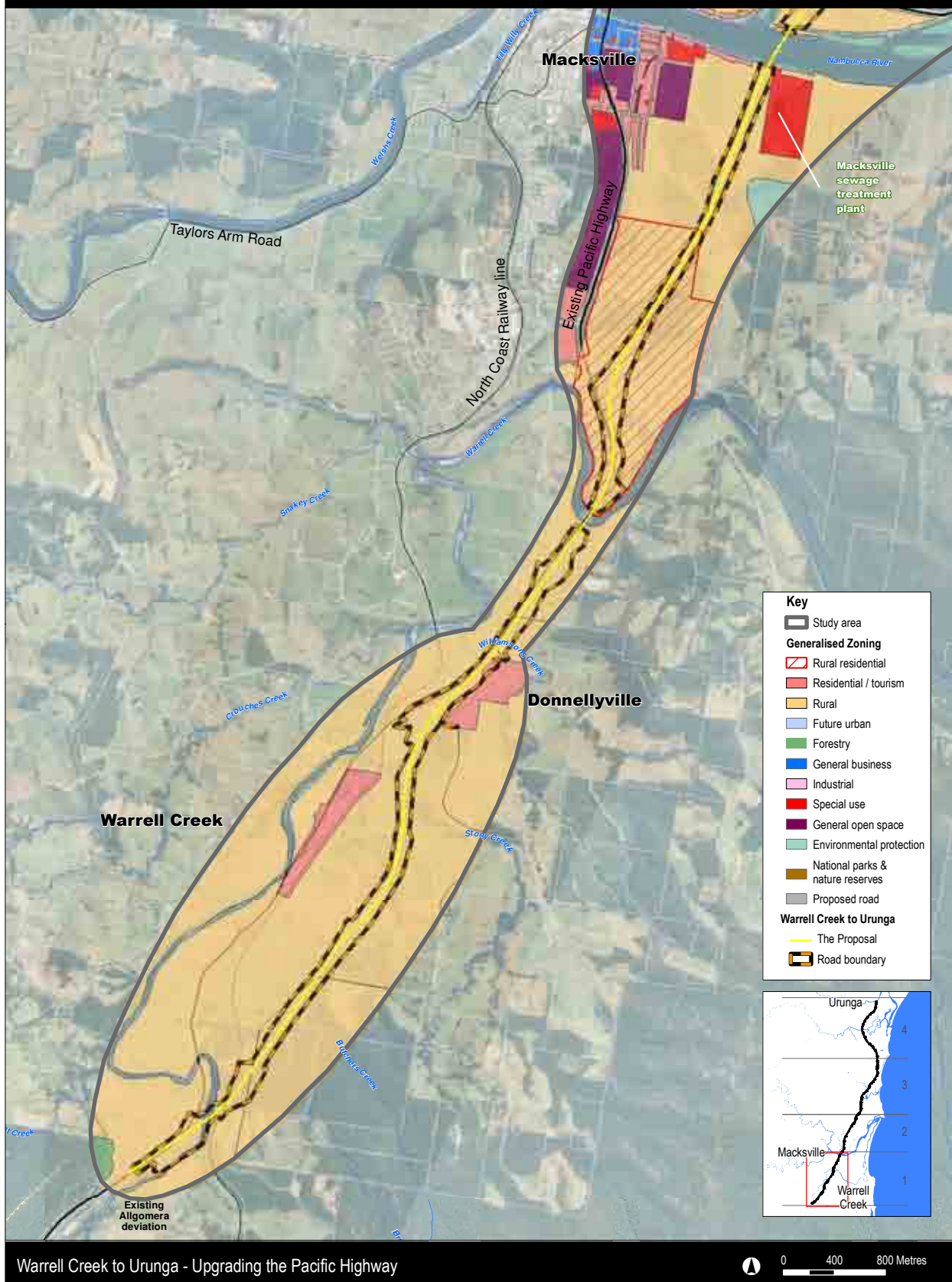


FIGURE 11-1 b| NAMBUCCA LEP ZONINGS

SECTION 2 OF 3

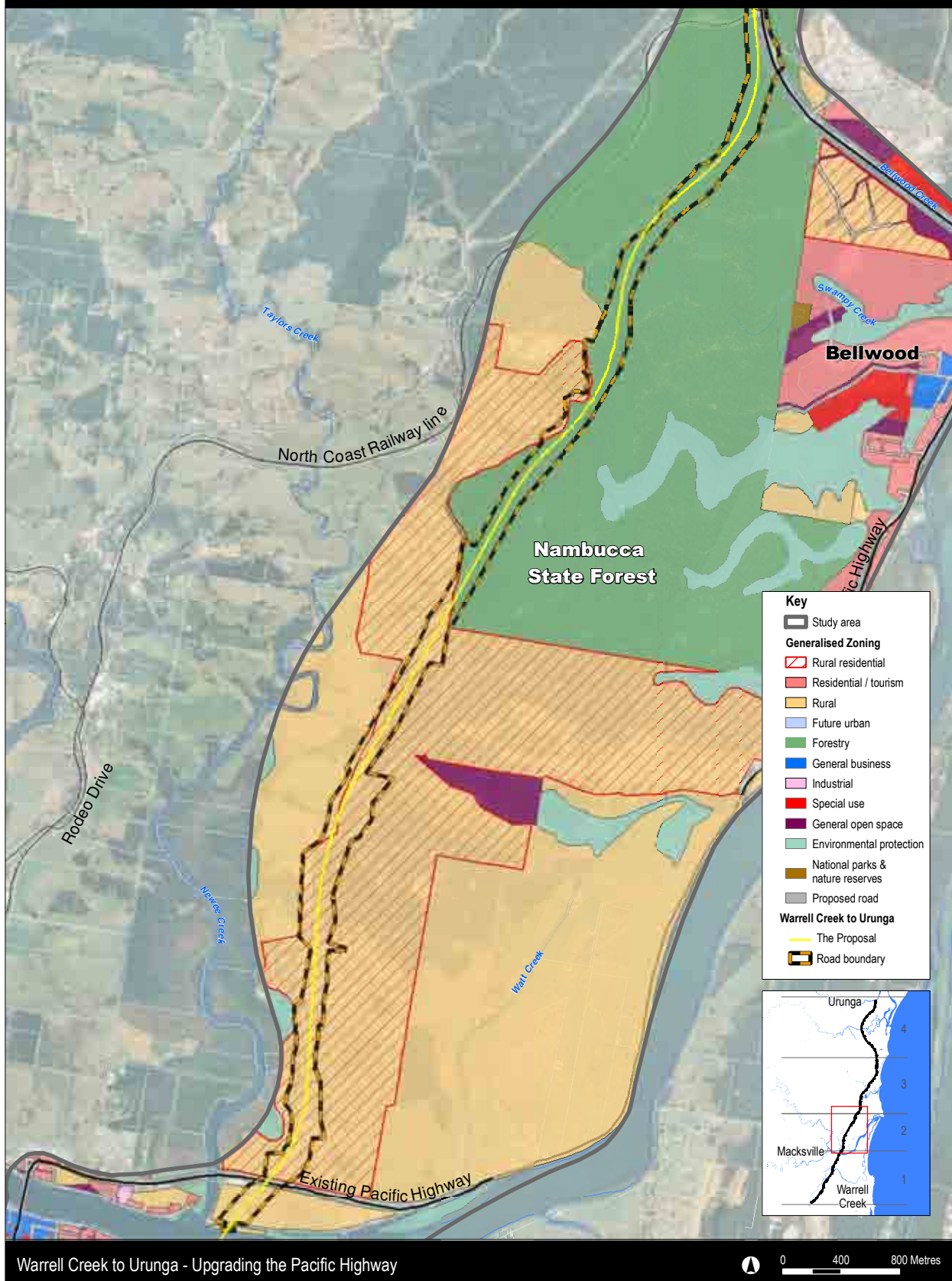


FIGURE 11-1 c | NAMBUCCA LEP ZONINGS

SECTION 3 OF 3

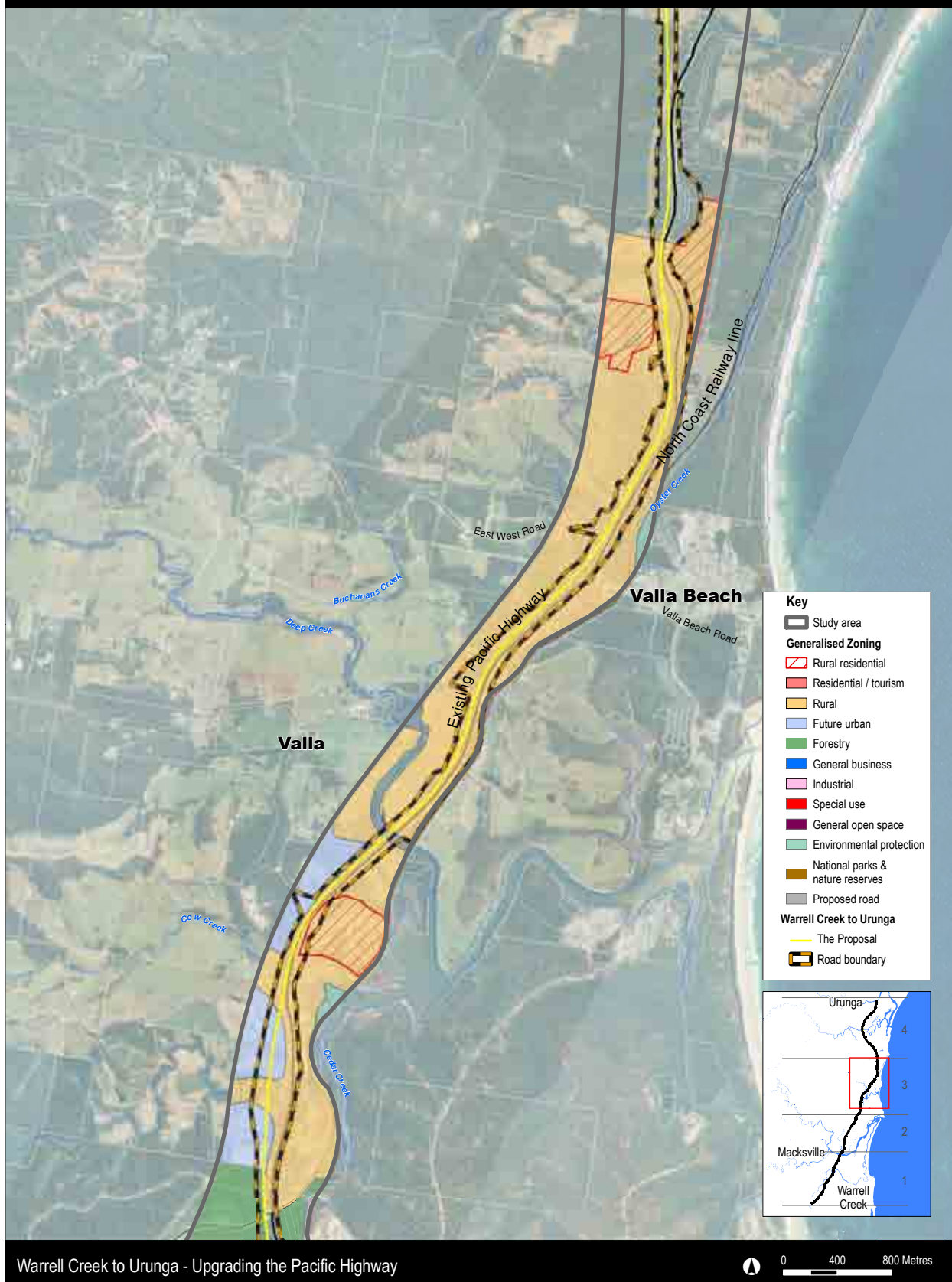


FIGURE 11-2 | BELLINGEN LEP ZONINGS

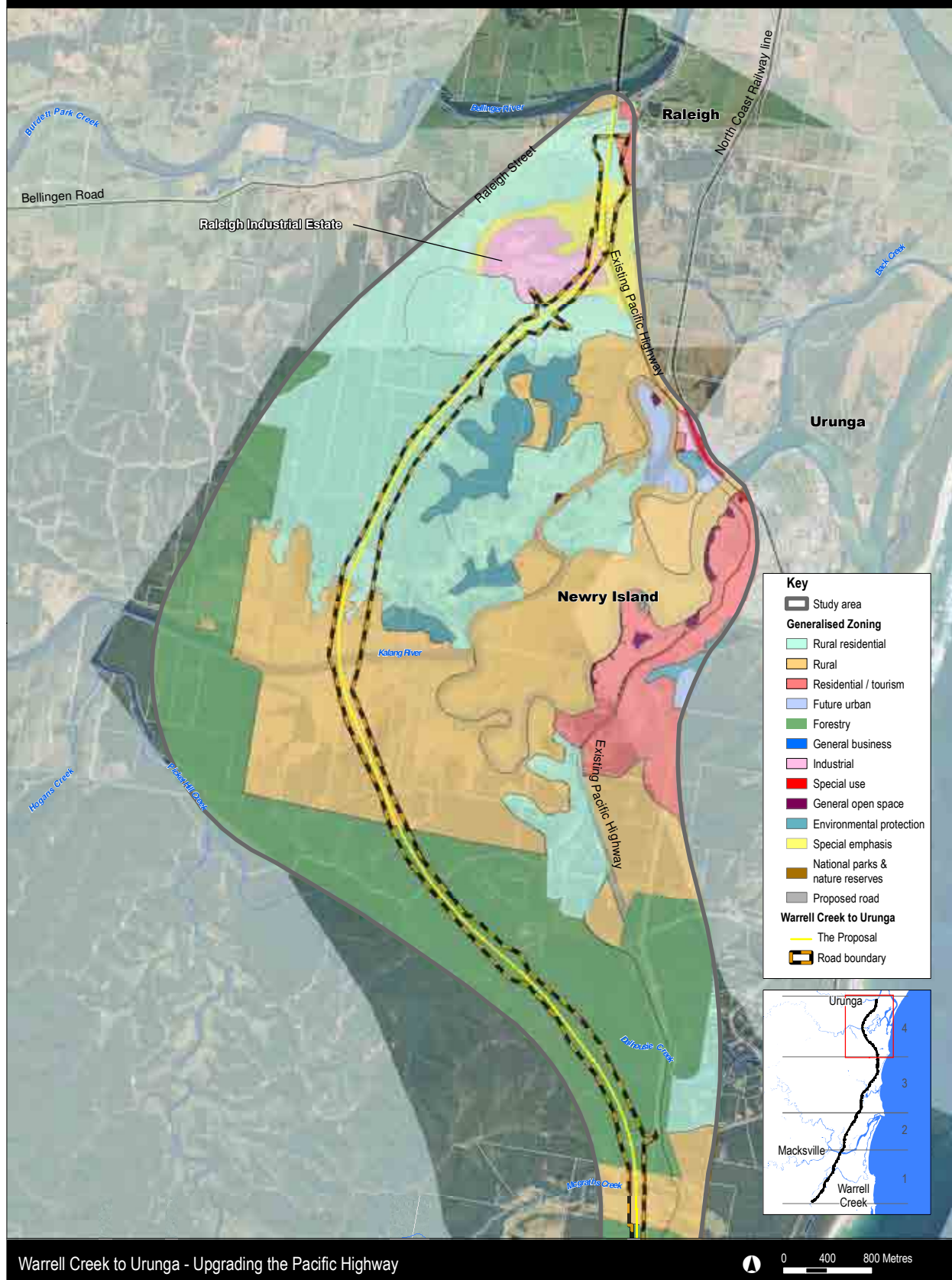


FIGURE 11-3a | STATE FOREST MANAGEMENT ZONES

SECTION 1 OF 2

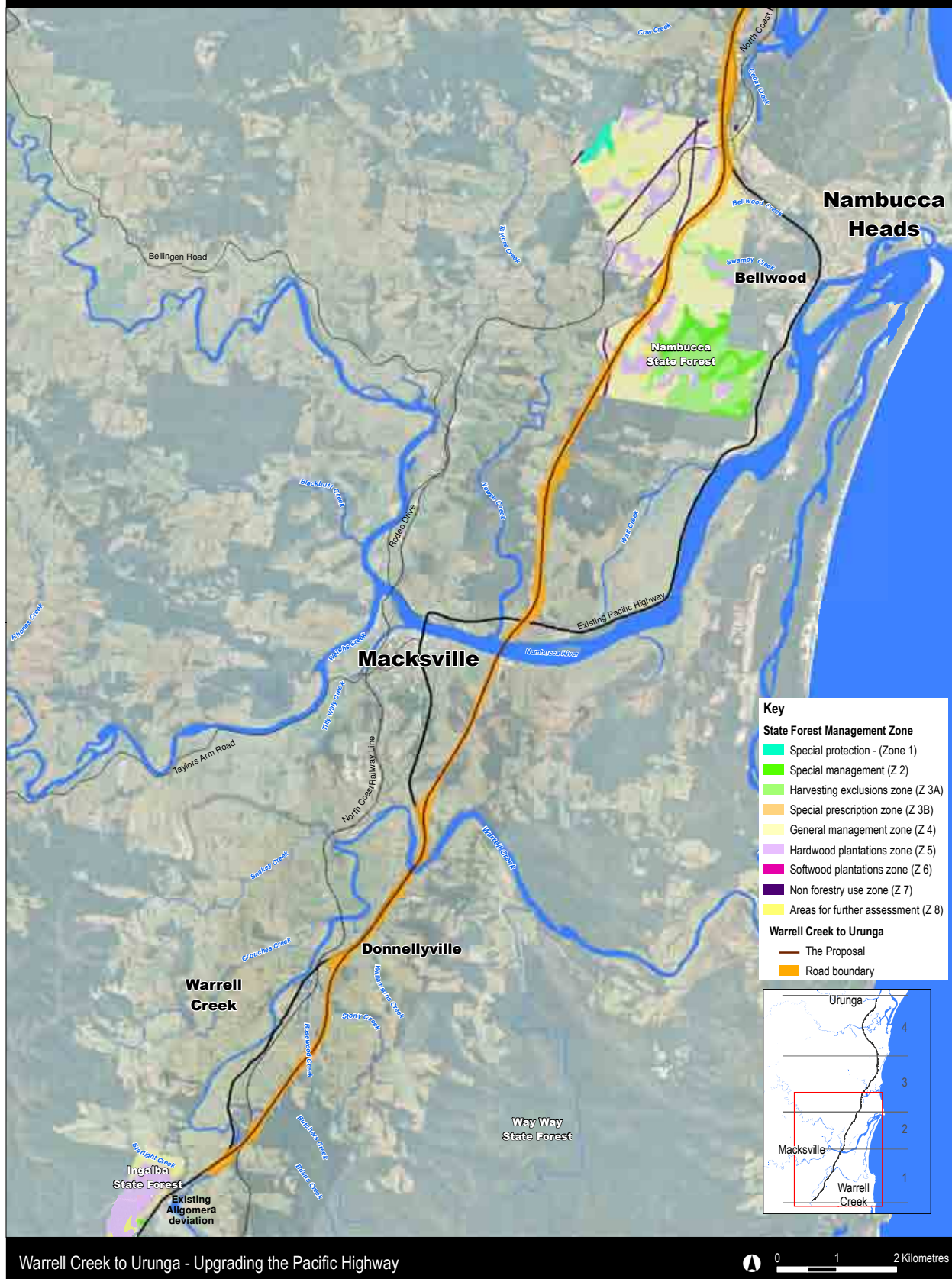


FIGURE 11-3b | STATE FOREST MANAGEMENT ZONES

SECTION 2 OF 2

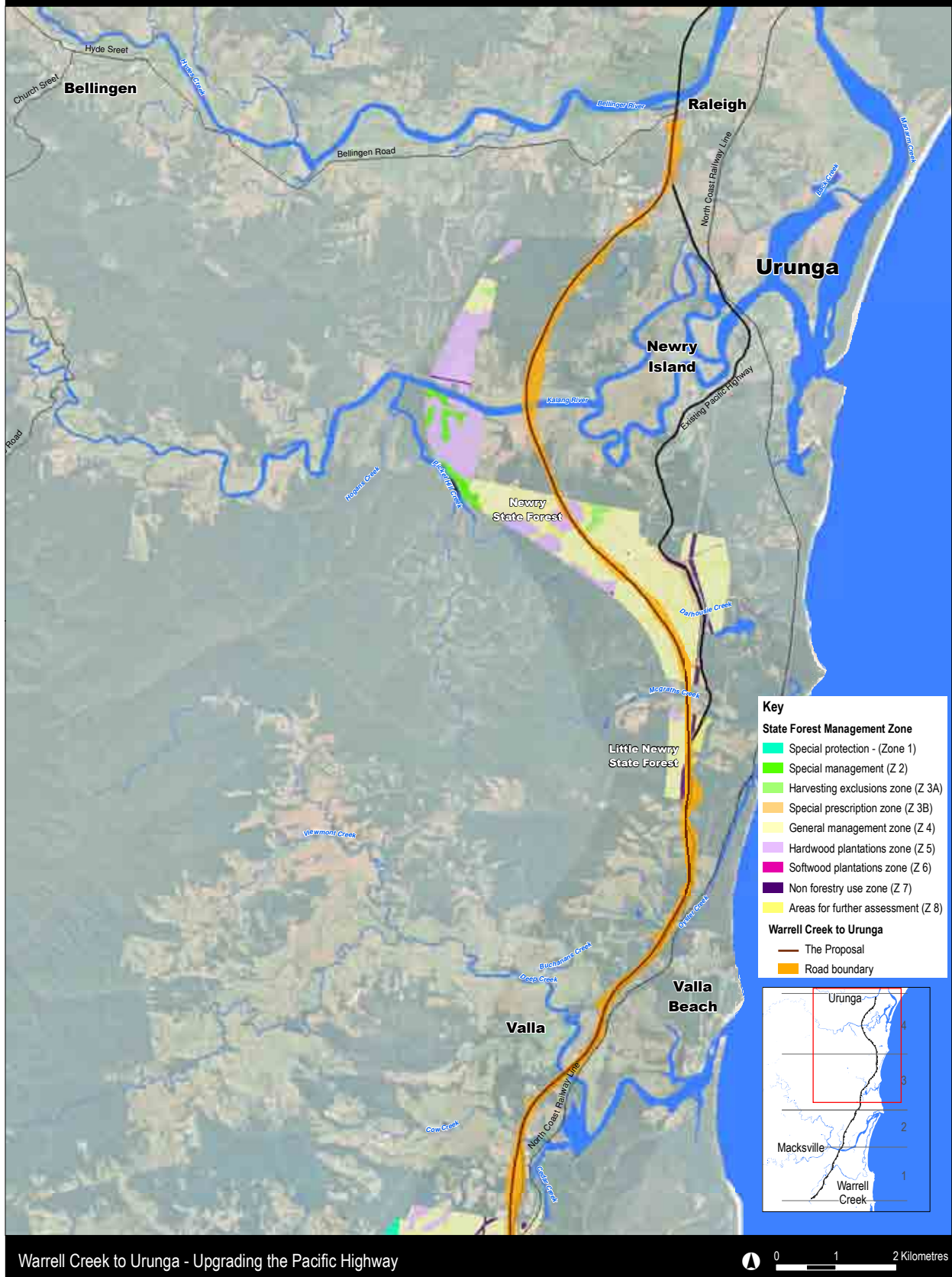
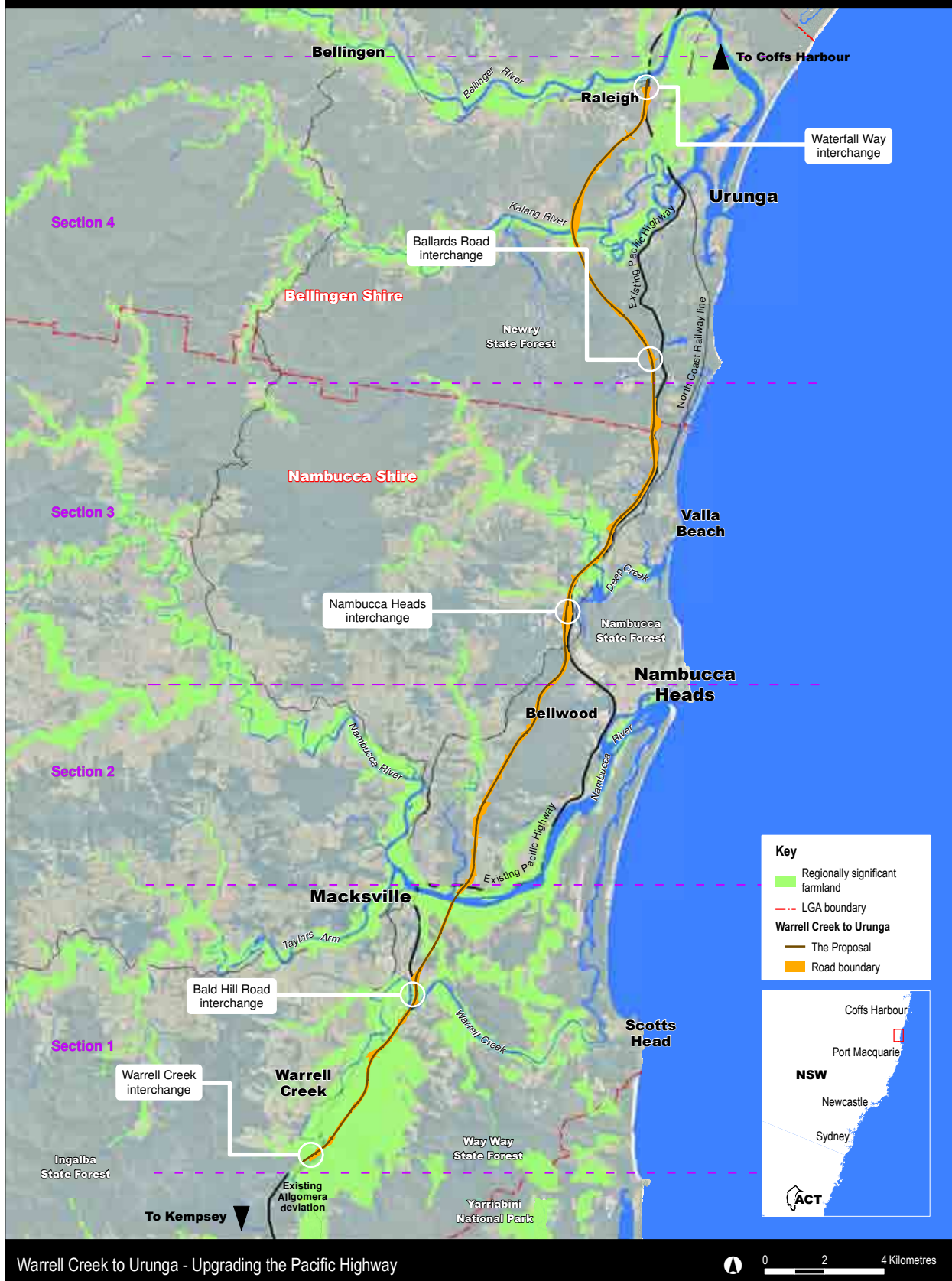


FIGURE 11-4 | REGIONALLY SIGNIFICANT FARMLAND



11.2.1 Section 1 - Allgomera deviation to Nambucca River

The land uses in this section are mixed. South of Warrell Creek the land use is predominantly rural with land used mainly for grazing and limited cultivation.

The rural uses are integrated with the small villages of Warrell Creek and Donnellyville, both of which are located adjacent to the existing highway. An area of rural residential land along O'Dells and Rosewood Roads has become more popular in recent years. The villages of Warrell Creek and Donnellyville have been identified by the Department of Planning as growth areas in the Mid North Coast Regional Strategy 2006–31 (Department of Planning 2009a).

Commercial operations in this area include a fruit stall, a day care facility and a glass repair / supply business.

Two industrial operations are located in the area south of Warrell Creek. Cockburn's Saw Mill is located south of the Warrell Creek village on Cockburns Lane, and the Nambucca Valley Quarry is located adjacent to the existing highway immediately south of Warrell Creek.

Way Way State Forest and Yarrahappini National Park are located to the south-east of Warrell Creek and Ingalba State Forest is situated to the south-west. The main transport uses in this area of Section 1 are the North Coast Railway Line and the existing Pacific Highway.

North of Warrell Creek, the land use becomes more urban as proximity to Macksville increases. Macksville is a key commercial and administrative centre in the Nambucca Shire. The residential areas of Macksville extend east and west of the existing highway. Much of the commercial and administrative development is located along the existing highway and Wallace Street.

Macksville has become a stopping point for some through-traffic because of its location approximately mid-way between Sydney and Brisbane.

Through and local traffic pass through Macksville at slow speeds as a result of general congestion, traffic lights and the narrow lanes associated with the Macksville bridge. As a result of these traffic characteristics, businesses such as service stations and food outlets that service through-traffic have been located alongside the existing highway, whereas commercial outlets, which are used predominantly by the local community, have been located east and west of the existing highway.

Residential land extends east along the Nambucca River on the southern side of Gumma Road (also referred to as River Street), for approximately 1.2 kilometres. Cleared land to the south of this residential land makes up part of the Gumma floodplain and is used predominantly for grazing. The Macksville sewage treatment plant, a council works depot and animal pound are located to the east of the residential land, in the vicinity of the Proposal. Rural residential development is located south of Macksville, along Scotts Head Road and Bald Hill Road, between Snakey Creek and Taylors Arm, and from Irvines Road to Hawks Road, Newee Creek.

The Macksville industrial area is located to the west of the existing highway. The south-western portion of this section has been identified as the 'Macksville and Congarinni Future Urban Areas' in the Nambucca Shire Council 20 Year Structure Plan (Nambucca Shire Council 2008). The Mid North Coast Regional Strategy 2006-31 has extended this future urban area to include the area south of Macksville, along the western side of the existing highway. This proposed growth area incorporates both future urban release areas and proposed employment lands. Areas to the south and east of Macksville have been identified as regionally significant farmland in the Mid North Coast Farmland Mapping Project (Department of Planning 2009b) as shown in Figure 11-4. The regionally significant farmland has been generally constrained to the flatter areas, along the floodplains of Warrell Creek and the Nambucca River, and their tributaries.

The majority of land directly impacted by the Proposal in this section is rural. Land use data provided by Nambucca Shire Council indicate that, based on the road boundary of the Proposal, approximately 66 ha of land classified as 'rural (prime/flooding)' and approximately 38 ha of land classified as 'rural' would be directly impacted.

11.2.2 Section 2 - Nambucca River to North Coast Railway overbridge

The southern part of this section contains mixed uses of limited commercial, residential and rural residential land, along with floodplain grazing land. A marine repair/painting operation is located on the northern banks of the Nambucca River. Additionally, a caravan park is also located in this vicinity. The caravan park includes holiday and permanent tenants. The Nambucca ambulance station is located to the north of the existing highway.

The Nambucca State Forest occupies the majority of the Nambucca River to Nambucca Heads section. The state forest is located predominantly in the northern two-thirds of this section.

Residential and rural residential properties have developed north of the existing highway along Old Coast Road and in Letitia Close. To the west of the Nambucca State Forest, Nambucca Shire Council operates a waste management depot off Old Coast Road. Old Coast Road also provides access to grazing land and rural residential development. Grazing is generally confined to the river flats, with rural residential development occurring on the more elevated land further north.

Additionally, a large area of land, known as Kingsworth Estate, has been developed for residential use west of Bellwood. This is accessible from the existing highway and extends west, almost to Old Coast Road. Some residential areas are also located north of the Nambucca River, generally to the west of the confluence with Newee Creek, west of Gordons Knob Road and on the fringe of Macksville.

The township of Nambucca Heads is situated to the east of the Nambucca State Forest. It is the main tourism destination in the Nambucca Shire. The existing highway currently bypasses the western edge of Nambucca Heads. The townships of Nambucca Heads and Bellwood have been identified as proposed growth areas in the Mid North Coast Regional Strategy extending to the boundaries of the state forest and south along the Nambucca River. The strategy has also identified proposed employment lands at the southern extent of this proposed growth area. A limitation to growth in the area south of Bellwood and Nambucca Heads has been the proximity of the existing highway and associated traffic noise.

The majority of land directly impacted by the Proposal in this section is rural. Land use data provided by Nambucca Shire Council indicate that, based on the road boundary of the Proposal, approximately 70 ha of land classified as 'rural' would be directly impacted.

11.2.3 Section 3 - Nambucca Heads to Ballards Road

The Proposal in the Nambucca Heads to Ballards Road section is constrained by the substantial forestry and nature reserve areas and the steeper topography to the west of the existing highway and the wetland areas to the east. Relatively narrow valleys exist around the creeks including Deep Creek, Oyster Creek and Boggy Creek. These valleys are used for smaller scale agricultural enterprises or are occupied by rural small holdings or dwellings on acreages. A proportion of these valleys have been identified as regionally significant farmland, especially along the floodplain areas of Deep Creek and its tributaries. The zoning throughout this section predominantly comprises rural, with small patches of rural residential. These areas have been classified as regionally significant farmland by the Mid North Coast Farmland Mapping Project in an attempt to protect the region's most significant agricultural land.

Large parts of the southern portion of this section have been identified as the Boggy Creek and Valla Beach future urban areas under the Nambucca Shire Council 20 Year Structure Plan. This has been supported by the Mid North Coast Regional Strategy, with proposed growth areas, future urban release areas and proposed employment lands located on both sides of the existing highway.

The North Coast Railway Line and the existing highway provide the main transport options through this section.

The majority of land directly impacted by the Proposal in this section is rural. Land use data provided by Nambucca Shire Council indicate that, based on the road boundary of the Proposal, approximately 47 ha of land classified as 'rural (prime/flooding)' and approximately 22 ha of land classified as 'rural-future urban' would be directly impacted. Similar data from Bellingen Shire Council indicate that approximately 18 ha of land classified as 'rural-secondary agriculture' would be directly impacted.

11.2.4 Section 4 - Ballards Road to Waterfall Way

This section is characterised by mixed land uses. It is essentially split by the Kalang River creating north and south parts. South of the Kalang River, the land use is dominated by the Newry and Little Newry state forests. Closer to the Kalang River, the land use changes to limited grazing on the river flats.

To the north of the Kalang River, land uses are mixed and characterised by rural and rural residential zones, generally between South Arm Road and the Kalang River. The Raleigh industrial area is located to the north of Short Cut Road.

The town of Urunga is located in the northern part of this section to the east of the existing highway. Urunga is a key tourist destination in the Bellingen Shire. Unlike Macksville, the existing highway bypasses the main street of Urunga, but does go through residential areas to the west of the main town centre. Two service stations, the

Urunga Tourist Information Centre, a substantial holiday caravan park and a series of small roadside motels are located along the existing highway in this area.

Areas around the Urunga and Raleigh industrial estate have been identified in the Bellingen Local Environmental Plan 2003 as urban areas. According to the Bellingen Shire Growth Management Strategy (Bellingen Shire Council 2007), future development within this section is likely to include rural residential development around South Arm Road, development of a new urban area in South Urunga and infill and / or redevelopment in Urunga. The location of this future development is supported through the Department of Planning's Mid North Coast Regional Strategy, which also identifies future employment lands at the confluence of the existing highway and the North Coast Railway line, north of Urunga.

The majority of land directly impacted by the Proposal in this section is either rural or forestry land. Land use data provided by Bellingen Shire Council indicate that, based on the road boundary of the Proposal, approximately 62 ha of land classified as 'rural-small holdings', approximately 37 ha of land classified as rural-secondary agriculture' and approximately 60 ha of land classified as 'rural-forestry' would be directly impacted.

11.3 Potential land use impacts

Potential impacts of the Proposal relating to land use require consideration of the following aspects:

- Property acquisition.
- Land connectivity and contiguity.
- Access arrangements.
- Planned development.
- Forest land.
- Agricultural land.
- Commercial land.
- Residential land
- Land use change.
- Land sterilisation.
- Land severance.
- Contiguity of existing and planned settlements and activity clusters.

There would also be a range of potential land use related amenity impacts, particularly for owners, occupants and operators of properties along and near the Proposal. Land use impacts relating to amenity, such as visual amenity (Chapter 13 – *Visual amenity and design*), noise (Chapter 14 – *Noise and vibration*), and traffic (Chapter 17 – *Traffic and transport*) are discussed in detail in the stated chapters. Social and economic impacts of the Proposal

are discussed in detail in Chapter 12 – *Social and economic impacts* and alterations to existing access arrangements are detailed in Chapter 6 – *Description of the Proposal*.

11.3.1 Property acquisition

Throughout the development of the route options, selection of the preferred route, and the preparation of the concept design and environmental assessment phases of the Proposal, the RTA has held discussions with directly affected landholders (and those living on properties that are wholly or partially within the boundary of the Proposal) with the aim of minimising the impact on the function and amenity of properties. This process has resulted in refinements to the alignment and design of the Proposal in some places to minimise impacts on land use. In rural areas, the aim has been to develop a design that minimises land acquisition, severance and fragmentation of properties by closely following property boundaries, where possible.

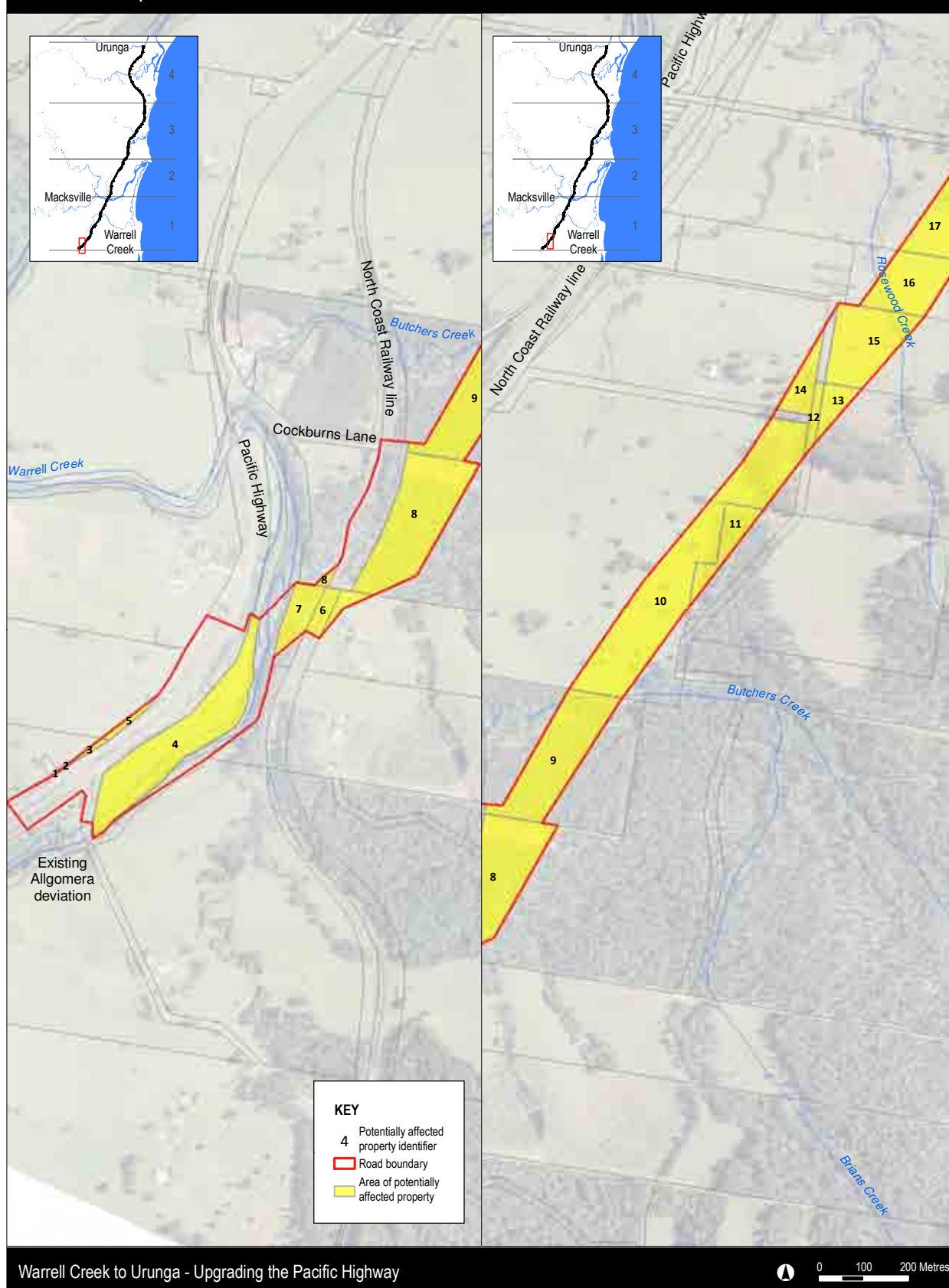
Based on the road boundary shown in Chapter 6 – *Description of the Proposal*, 192 properties would be directly impacted by the Proposal and require total or partial acquisition. Details of the proposed land acquisition and likely impacts on individual properties are shown in Figure 11-5a to Figure 11-5k and summarised in Table 11-2. The boundaries have been derived from a combination of ground survey and cadastral overlay and would be subject to further refinement during detailed design.

Property acquisitions would be subject to negotiation between the landholder and the RTA in accordance with the RTA's Land Acquisitions Policy Statement and the requirements of the Land Acquisition (Just Terms Compensation) Act 1991. It is not expected that acquisitions would result in long-term changes in land use. In some cases, acquired land would be used during construction site activities only. In the case of state forest land required for the Proposal, acquisition or exchange would be undertaken in accordance with the Forestry Act 1916.

11.3.2 Land connectivity and contiguity

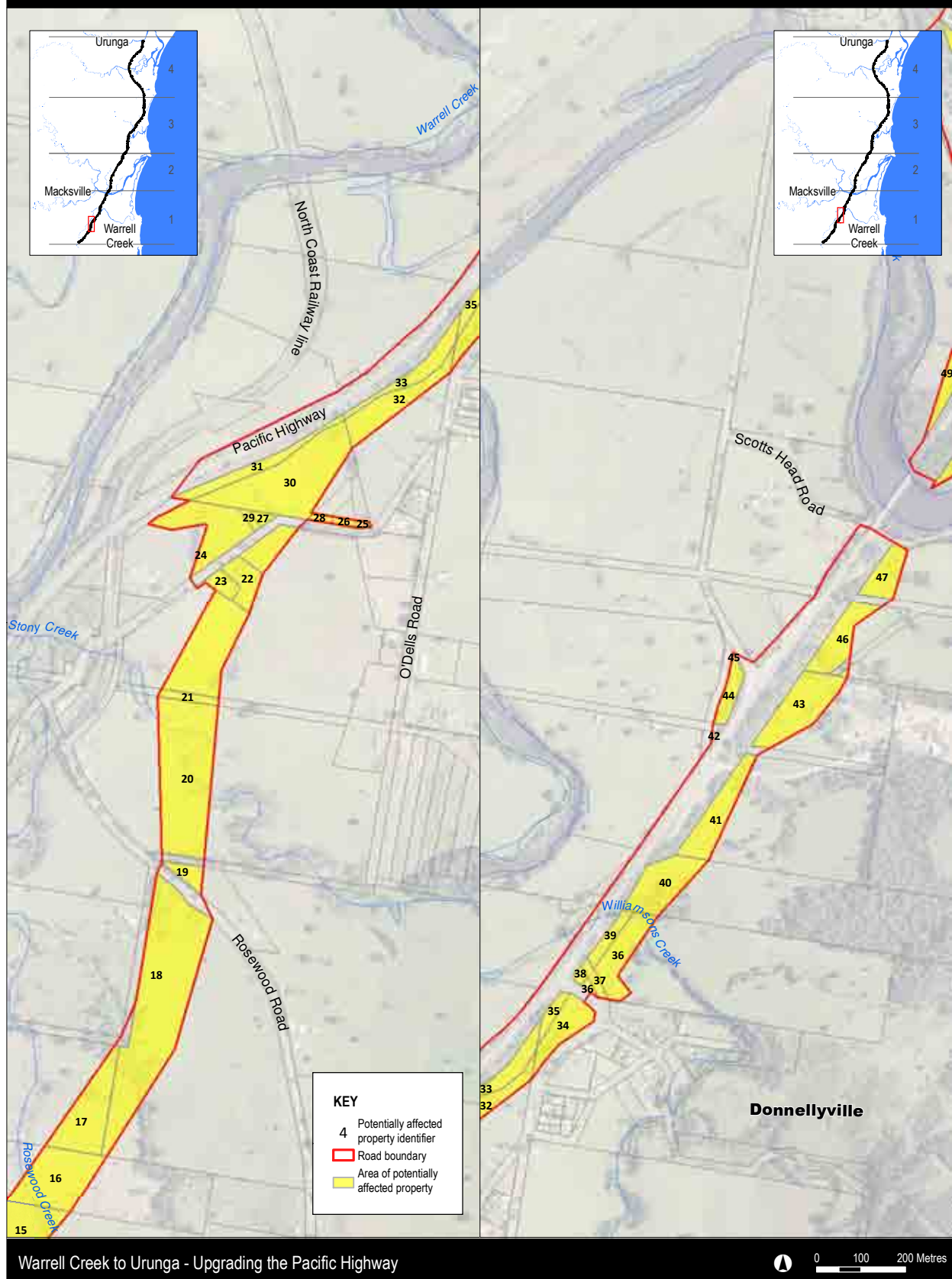
The Proposal has been designed in accordance with the RTA's Upgrading the Pacific Highway, Upgrading Program beyond 2006: Design Guidelines (RTA 2006) which aim to maintain connectivity between communities. The existing highway currently provides a barrier to east-west connectivity. People avoid crossing the highway due to their perception of safety risk. The proposed enhancement of local road connections is expected to improve connectivity by removing the safety risks currently associated with east-west movement across the highway. The existing Pacific Highway would also be maintained for local access and use by cyclists. The proposed overbridges as part of the Proposal have been designed to enhance existing east-west movements across the highway. Access to the Proposal would be gained via the strategic location of key interchanges. Connectivity across the Proposal would be maintained during construction and operation.

FIGURE 11-5a | PROPERTY AFFECTED BY ACQUISITION



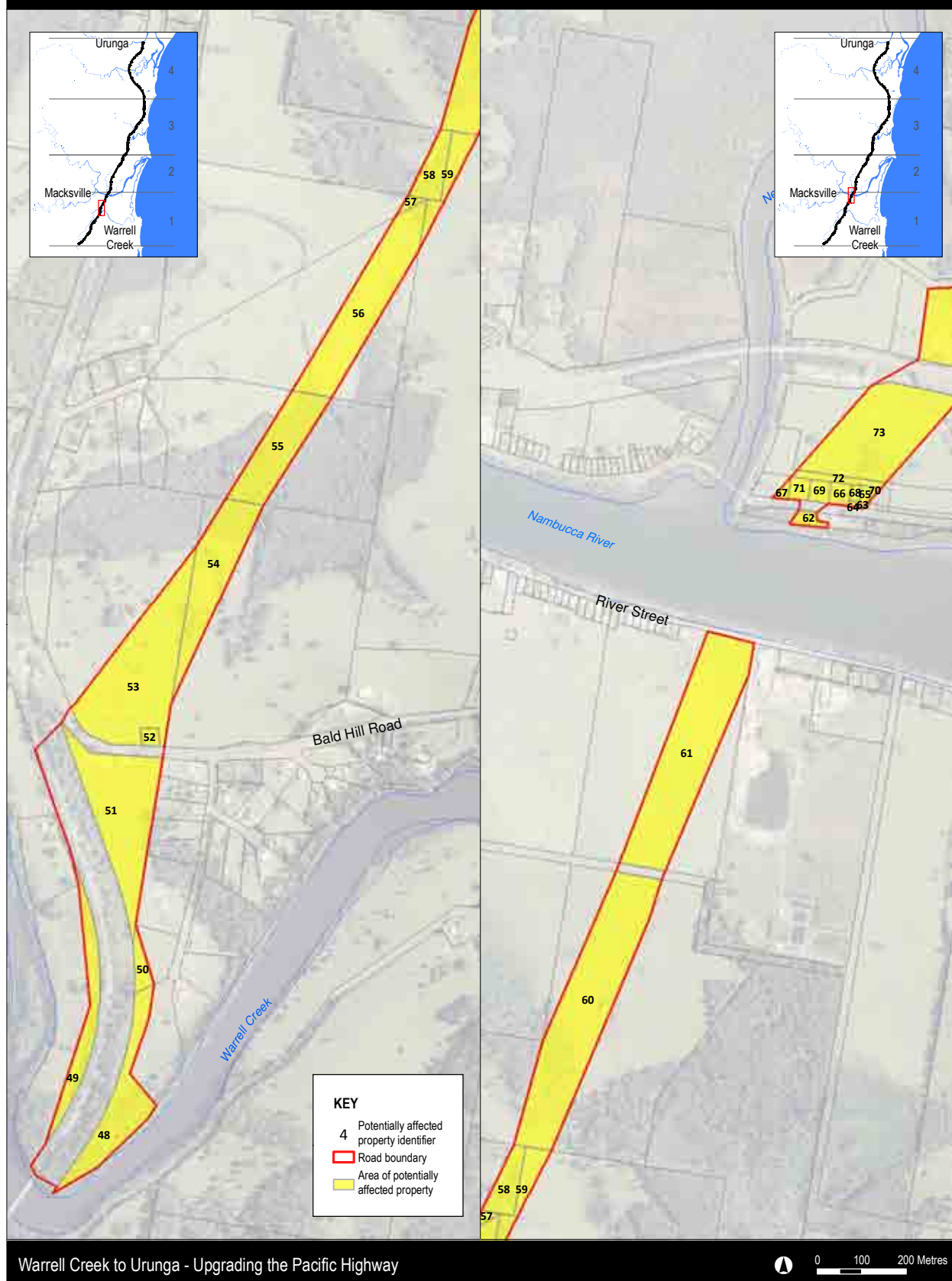
PROPERTY BOUNDARIES ARE APPROXIMATE AND ARE A COMBINATION OF GROUND SURVEY AND CADASTRAL OVERLAY, SUBJECT TO FURTHER REFINEMENT FOLLOWING DETAILED DESIGN.

FIGURE 11-5b | PROPERTY AFFECTED BY ACQUISITION



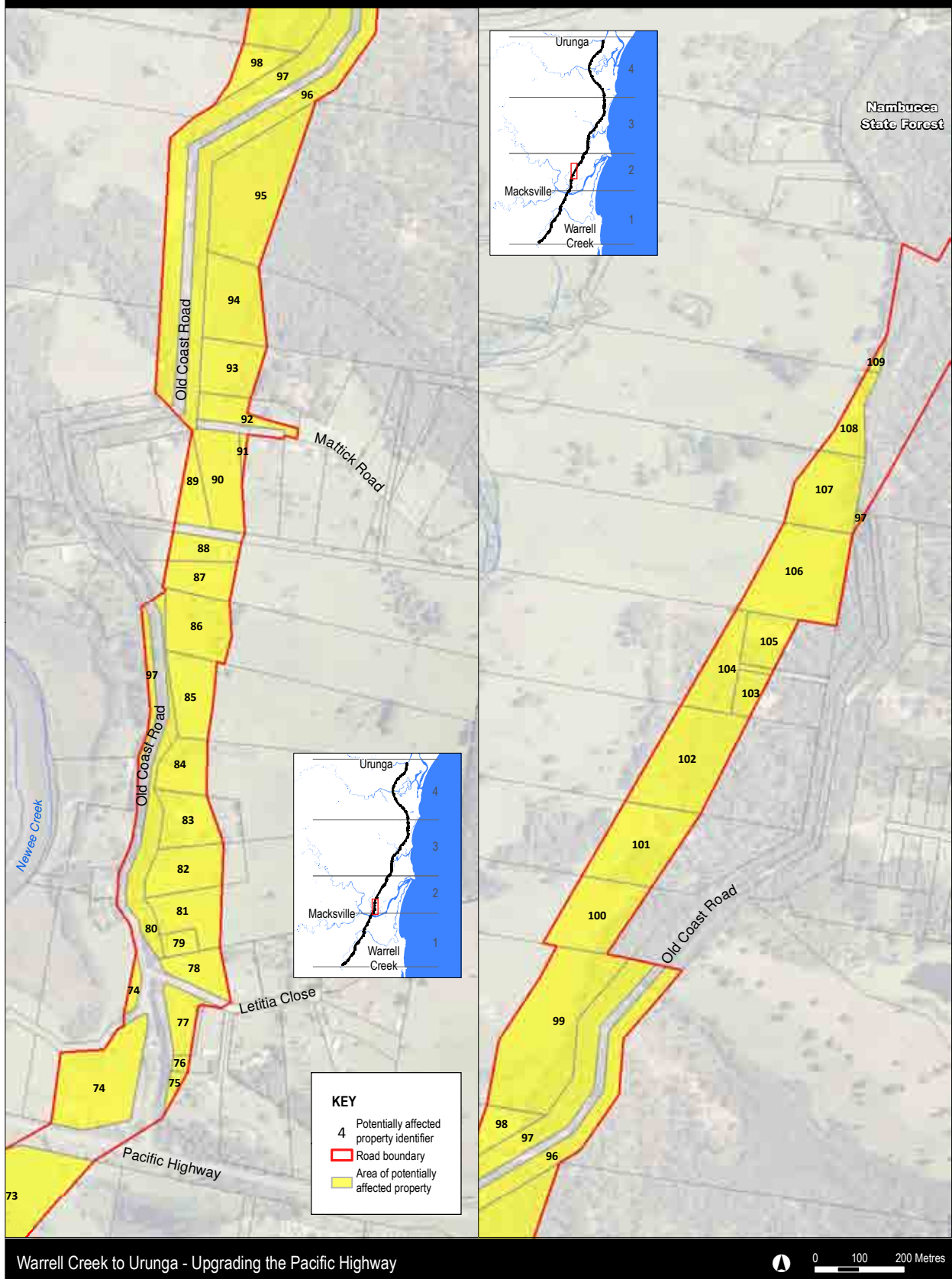
PROPERTY BOUNDARIES ARE APPROXIMATE AND ARE A COMBINATION OF GROUND SURVEY AND CADASTRAL OVERLAY, SUBJECT TO FURTHER REFINEMENT FOLLOWING DETAILED DESIGN.

FIGURE 11-5c | PROPERTY AFFECTED BY ACQUISITION



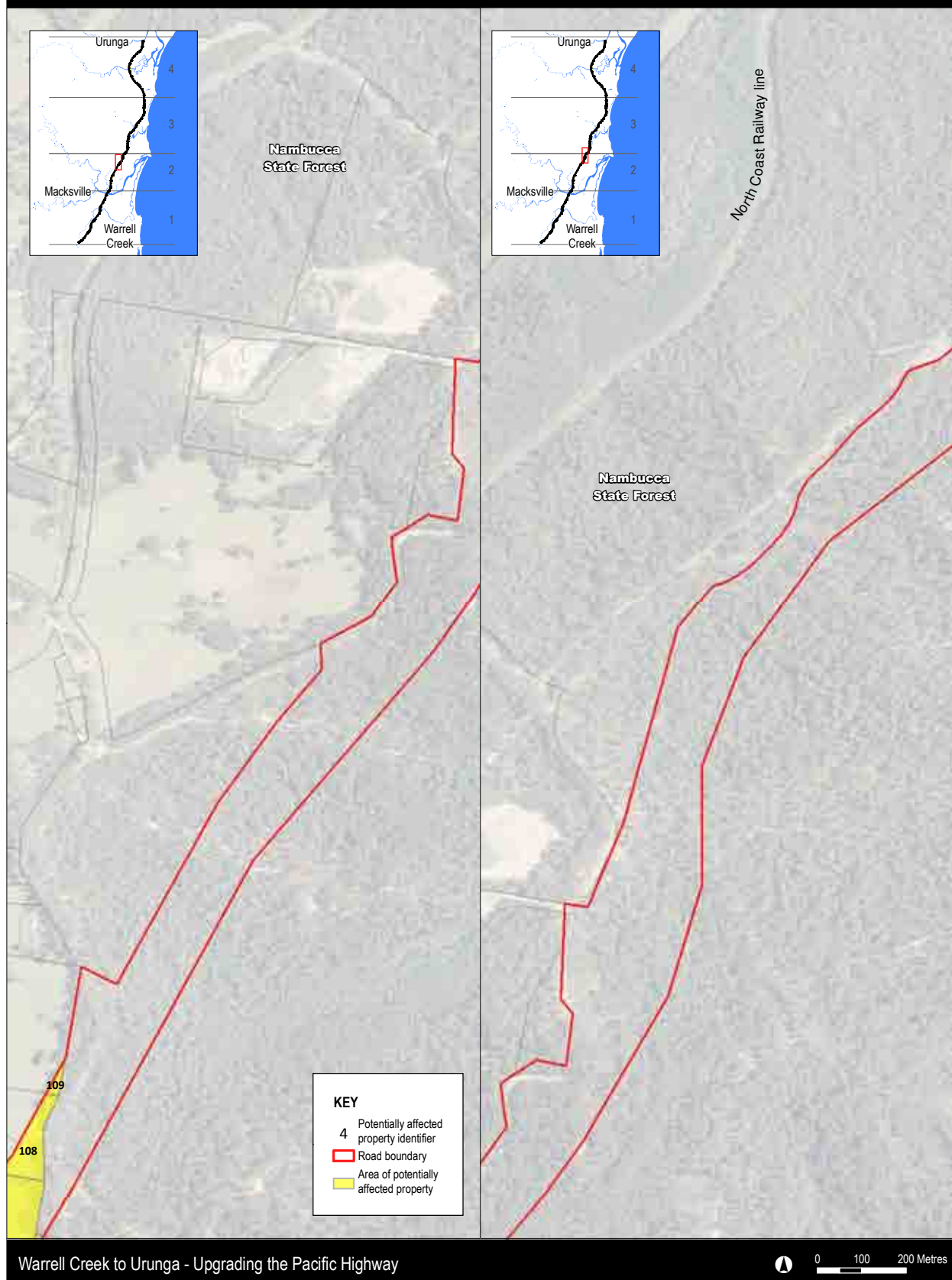
PROPERTY BOUNDARIES ARE APPROXIMATE AND ARE A COMBINATION OF GROUND SURVEY AND CADASTRAL OVERLAY, SUBJECT TO FURTHER REFINEMENT FOLLOWING DETAILED DESIGN.

FIGURE 11-5d | PROPERTY AFFECTED BY ACQUISITION



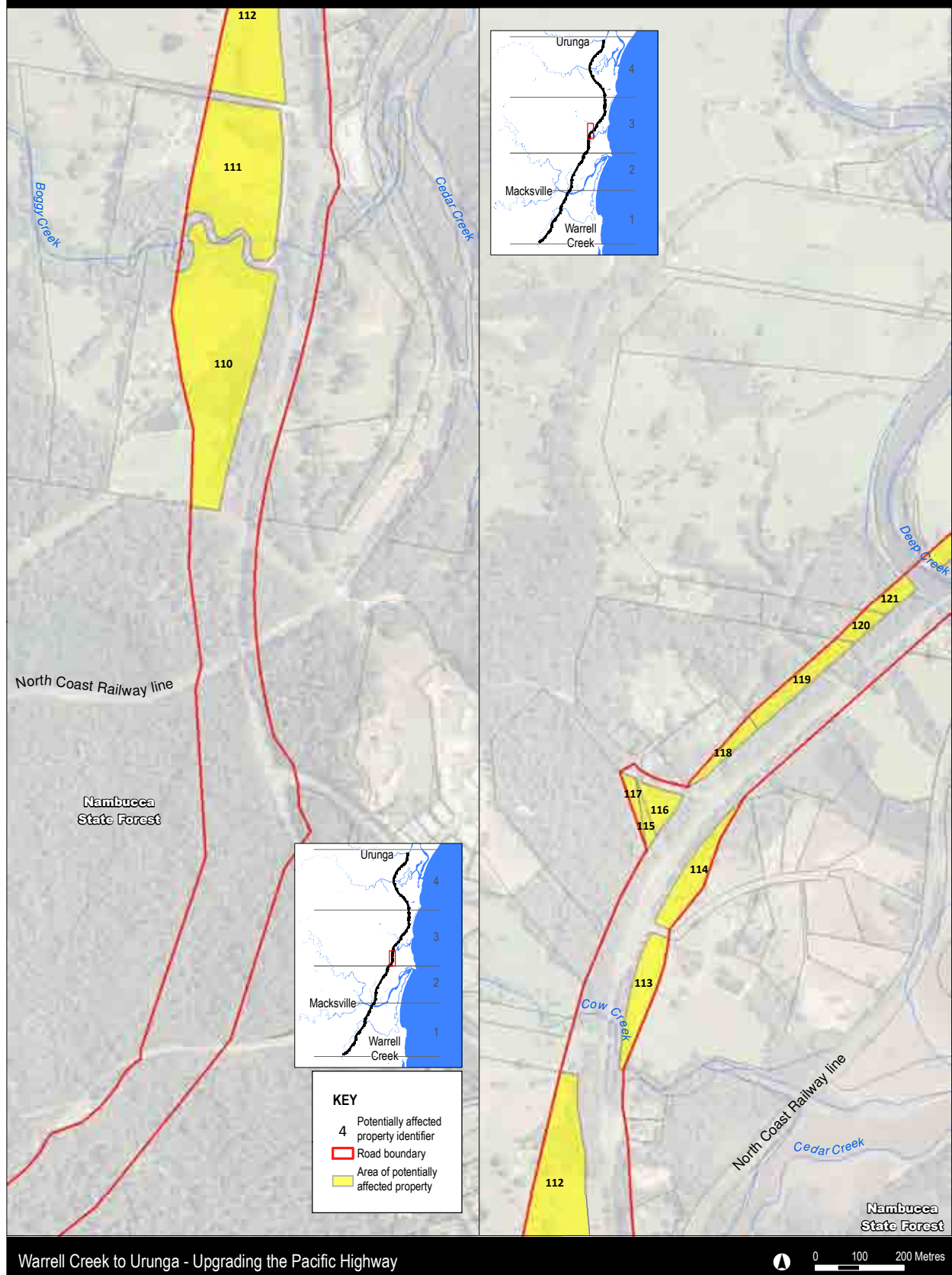
PROPERTY BOUNDARIES ARE APPROXIMATE AND ARE A COMBINATION OF GROUND SURVEY AND CADASTRAL OVERLAY, SUBJECT TO FURTHER REFINEMENT FOLLOWING DETAILED DESIGN.

FIGURE 11-5e | PROPERTY AFFECTED BY ACQUISITION

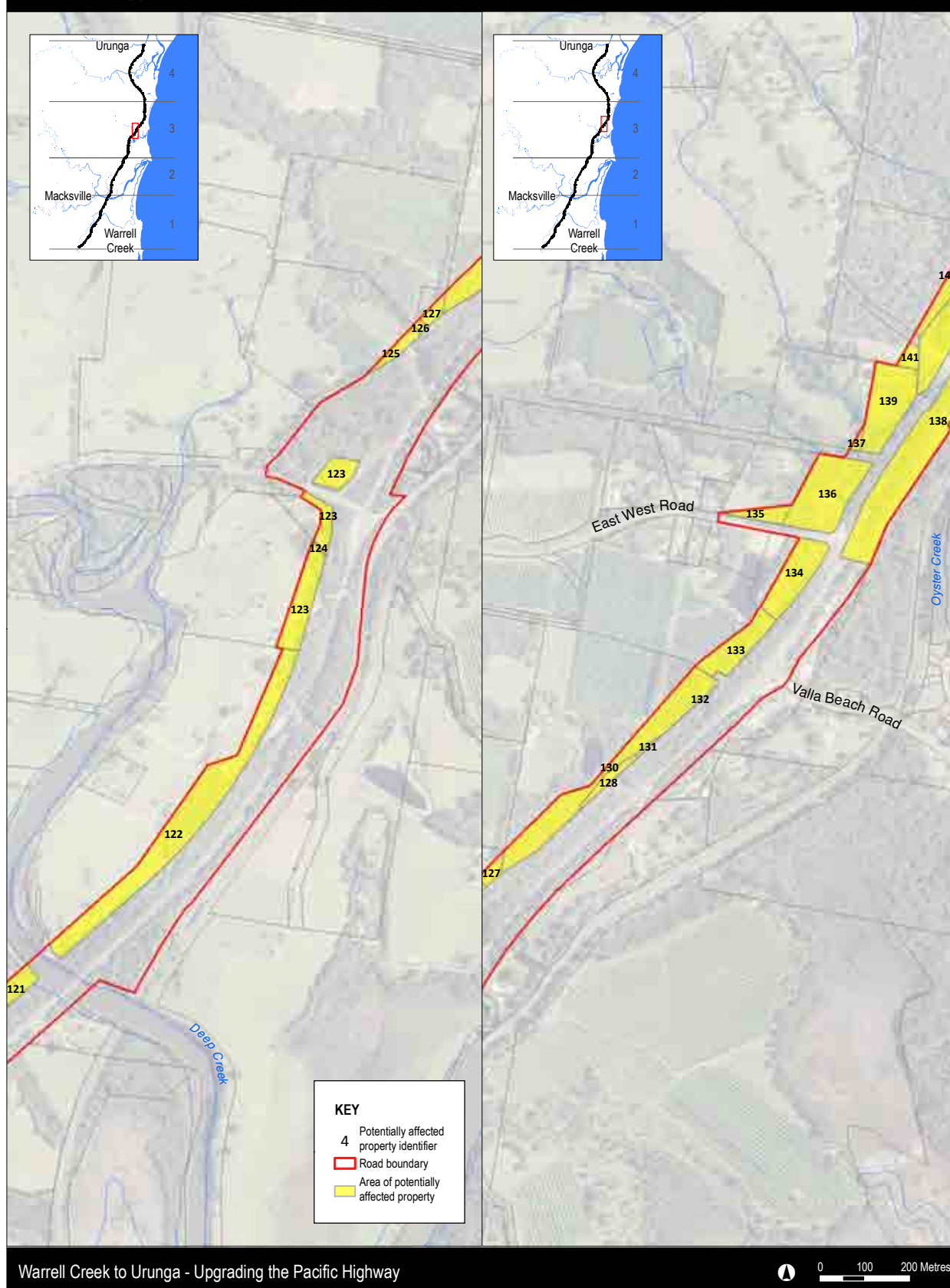


PROPERTY BOUNDARIES ARE APPROXIMATE AND ARE A COMBINATION OF GROUND SURVEY AND CADASTRAL OVERLAY, SUBJECT TO FURTHER REFINEMENT FOLLOWING DETAILED DESIGN.

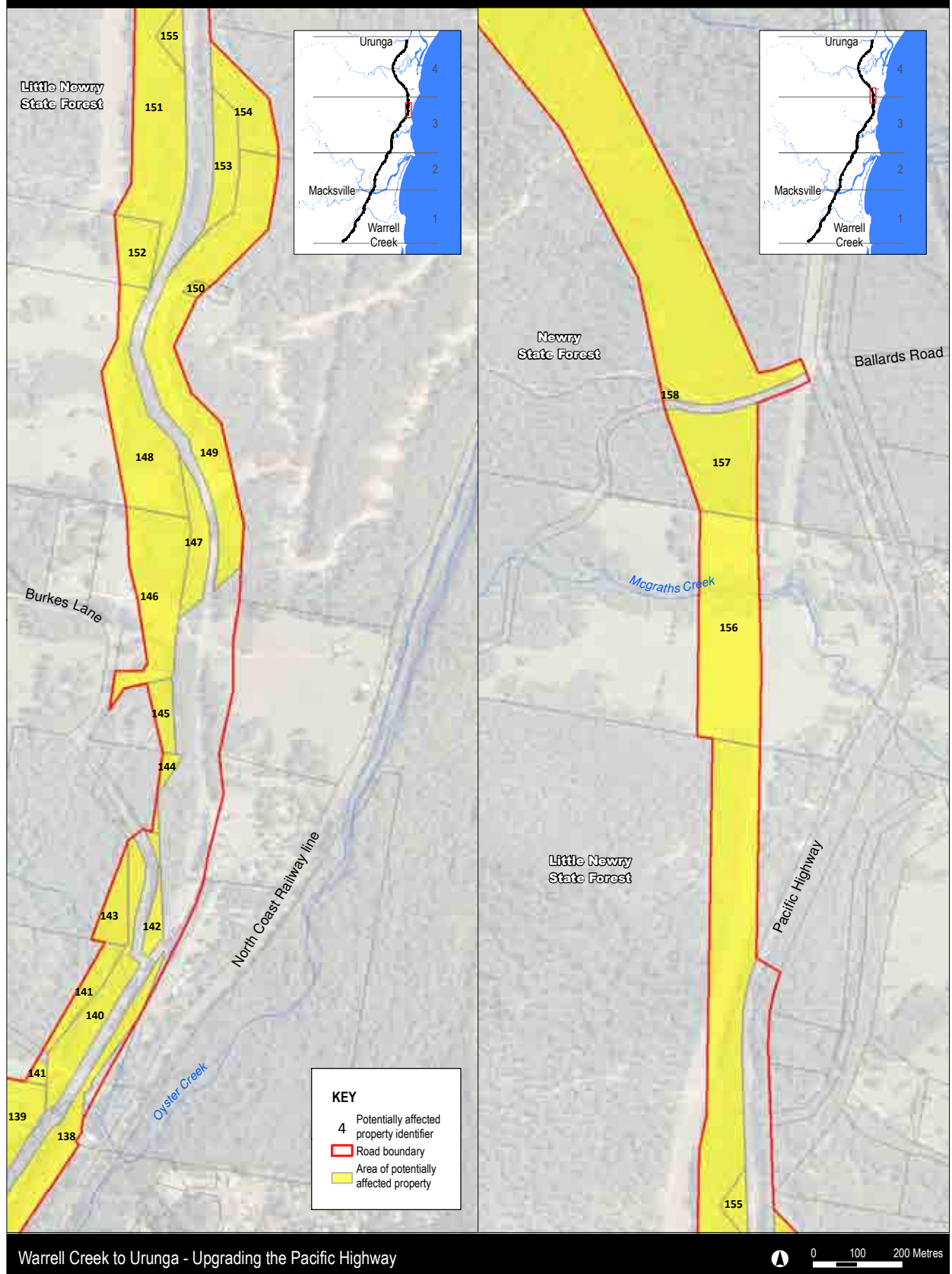
FIGURE 11-5f | PROPERTY AFFECTED BY ACQUISITION



PROPERTY BOUNDARIES ARE APPROXIMATE AND ARE A COMBINATION OF GROUND SURVEY AND CADASTRAL OVERLAY, SUBJECT TO FURTHER REFINEMENT FOLLOWING DETAILED DESIGN.

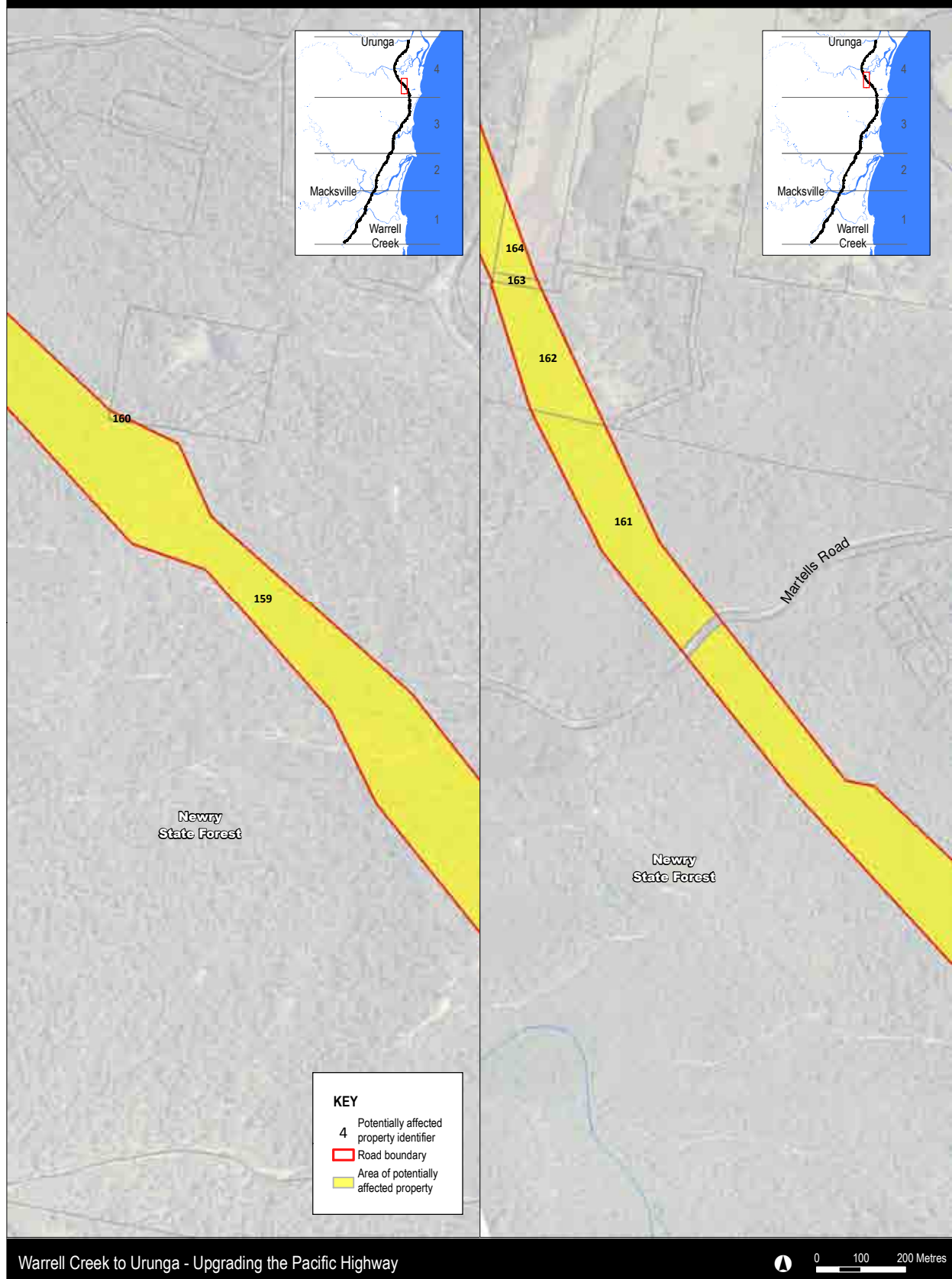
FIGURE 11-5g | PROPERTY AFFECTED BY ACQUISITION

PROPERTY BOUNDARIES ARE APPROXIMATE AND ARE A COMBINATION OF GROUND SURVEY AND CADASTRAL OVERLAY, SUBJECT TO FURTHER REFINEMENT FOLLOWING DETAILED DESIGN.

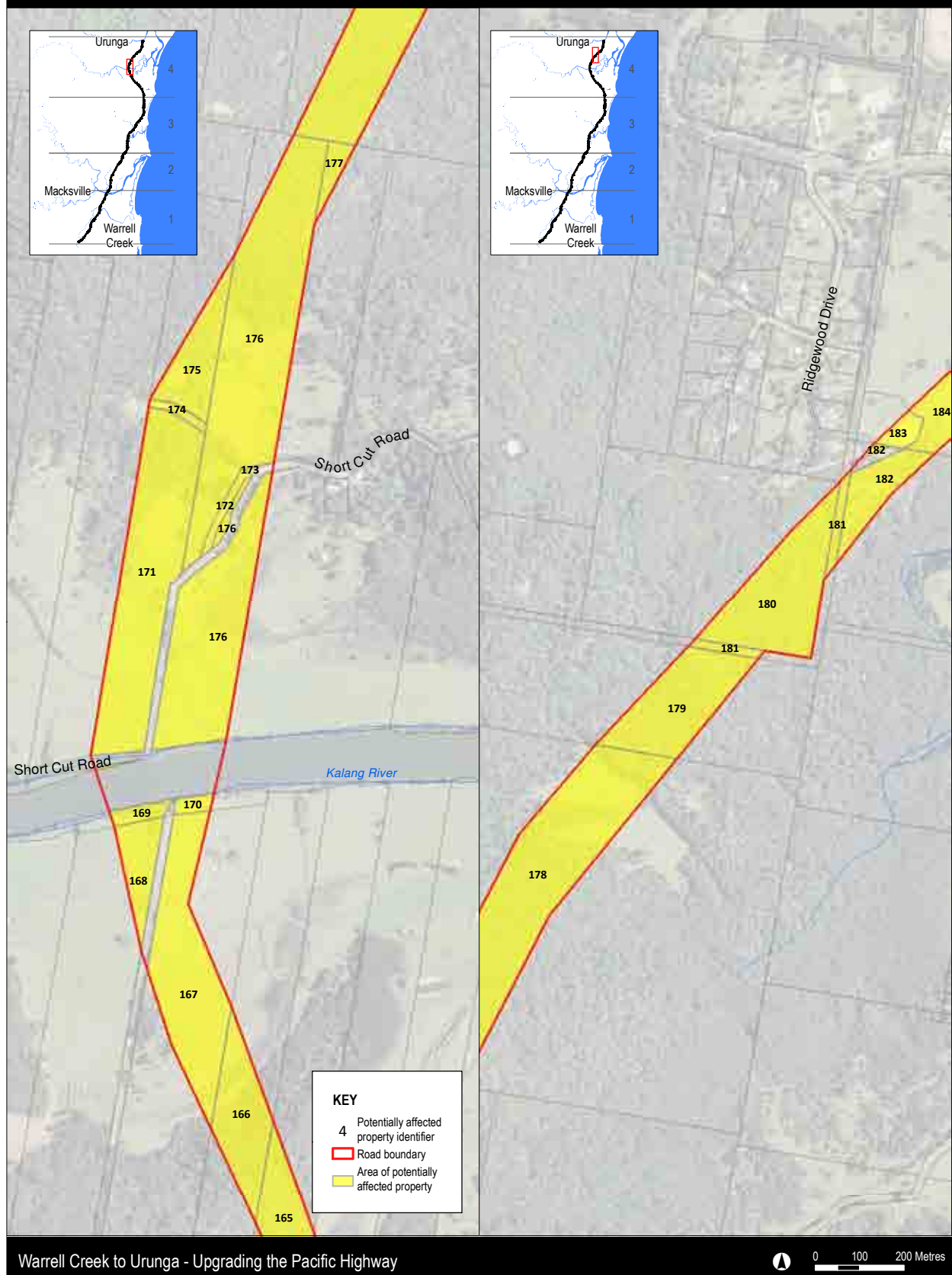
FIGURE 11-5h | PROPERTY AFFECTED BY ACQUISITION

PROPERTY BOUNDARIES ARE APPROXIMATE AND ARE A COMBINATION OF GROUND SURVEY AND CADASTRAL OVERLAY, SUBJECT TO FURTHER REFINEMENT FOLLOWING DETAILED DESIGN.

FIGURE 11-5i | PROPERTY AFFECTED BY ACQUISITION

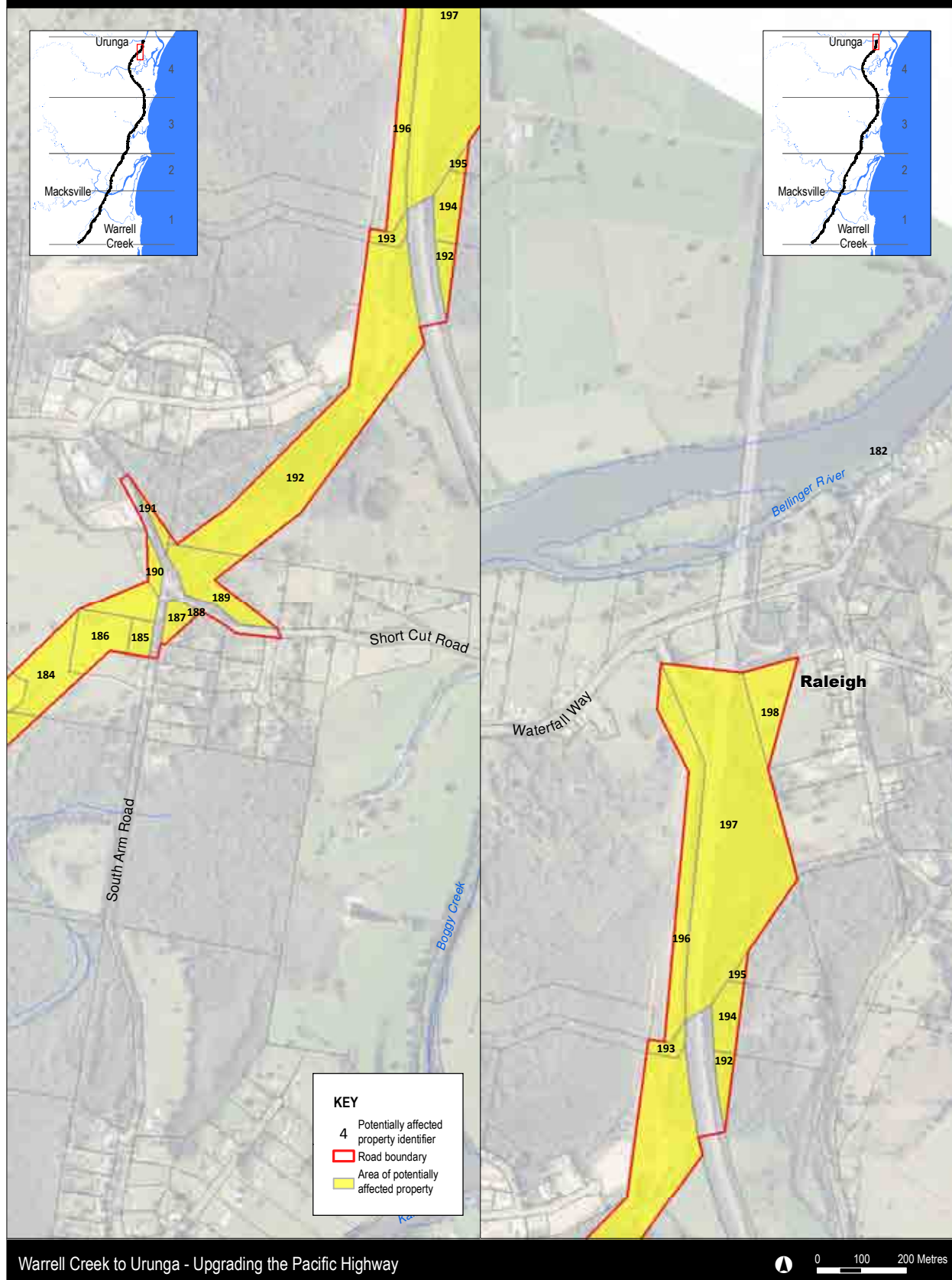


PROPERTY BOUNDARIES ARE APPROXIMATE AND ARE A COMBINATION OF GROUND SURVEY AND CADASTRAL OVERLAY, SUBJECT TO FURTHER REFINEMENT FOLLOWING DETAILED DESIGN.

FIGURE 11-5j | PROPERTY AFFECTED BY ACQUISITION

PROPERTY BOUNDARIES ARE APPROXIMATE AND ARE A COMBINATION OF GROUND SURVEY AND CADASTRAL OVERLAY, SUBJECT TO FURTHER REFINEMENT FOLLOWING DETAILED DESIGN.

FIGURE 11-5k | PROPERTY AFFECTED BY ACQUISITION



PROPERTY BOUNDARIES ARE APPROXIMATE AND ARE A COMBINATION OF GROUND SURVEY AND CADASTRAL OVERLAY, SUBJECT TO FURTHER REFINEMENT FOLLOWING DETAILED DESIGN.

Table 11-2 Properties and land uses directly affected by the Proposal¹

Ref No	Current land use ¹	Total area (ha)	Area within corridor ¹ (ha)	% of total property affected ²		Ref No	Current land use ¹	Total area (ha)	Area within corridor ² (ha)	% of total property affected ¹
1	Rural (Prime/Flooding)	0.09	0.00	1%		101	Rural	18.83	2.97	16%
2	Rural (Prime/Flooding)	0.04	0.01	36%		102	Rural	18.68	3.82	20%
3	Rural (Prime/Flooding)	5.85	0.08	1%		103	Rural	2.01	0.59	29%
4	Rural (Prime/Flooding)	10.47	4.31	41%		104	Rural	19.14	1.77	9%
5	Rural (Prime/Flooding)	13.88	0.16	1%		105	Rural	2.36	1.14	48%
6	Rural (Prime/Flooding)	1.72	0.41	24%		106	Rural	16.70	4.05	24%
7	Rural (Prime/Flooding)	40.49	1.15	3%		107	Rural	15.48	2.43	16%
8	Rural (Prime/Flooding)	78.19	4.22	5%		108	Rural	15.12	1.02	7%
9	Rural	16.12	3.47	22%		109	Rural	19.40	0.13	1%
10	Rural	49.69	7.28	15%		110	Rural (Future Urban)	15.95	8.86	56%
11	Rural	16.27	0.96	6%		111	Rural (Future Urban)	11.36	5.75	51%
12	Rural (Prime/Flooding)	0.62	0.32	51%		112	Rural (Future Urban)	51.00	4.70	9%
13	Rural (Prime/Flooding)	21.46	0.57	3%		113	Rural (Prime/Flooding)	10.71	1.34	12%
14	Rural (Prime/Flooding)	14.25	0.77	5%		114	Rural (Prime/Flooding)	3.23	1.27	39%
15	Rural (Prime/Flooding)	14.09	2.55	18%		115	Rural (Future Urban)	0.21	0.21	100%
16	Rural (Prime/Flooding)	6.59	1.98	30%		116	Rural (Future Urban)	0.59	0.59	100%
17	Rural (Prime/Flooding)	14.88	1.73	12%		117	Rural (Future Urban)	0.28	0.28	100%
18	Rural (Prime/Flooding)	66.04	5.94	9%		118	Rural (Future Urban)	2.39	0.47	20%
19	Rural (Prime/Flooding)	1.54	0.32	20%		119	Rural (Future Urban)	11.72	1.00	9%
20	Rural (Prime/Flooding)	45.02	7.03	16%		120	Rural (Future Urban)	1.90	0.37	20%
21	Rural (Prime/Flooding)	1.78	0.25	14%		121	Rural (Prime/Flooding)	32.33	0.45	1%

Ref No	Current land use ¹	Total area (ha)	Area within corridor ¹ (ha)	% of total property affected ²		Ref No	Current land use ¹	Total area (ha)	Area within corridor ² (ha)	% of total property affected ¹
22	Rural (Prime/Flooding)	0.61	0.61	100%		122	Rural (Prime/Flooding)	18.06	4.16	23%
23	Rural (Prime/Flooding)	0.30	0.30	100%		123	Rural (Prime/Flooding)	10.54	1.93	18%
24	Rural (Prime/Flooding)	4.03	1.62	40%		124	Rural (Prime/Flooding)	0.06	0.01	23%
25	Residential (Village)	0.30	0.04	15%		125	Rural (Prime/Flooding)	8.15	0.28	3%
26	Residential (Village)	0.23	0.09	40%		126	Rural (Prime/Flooding)	10.16	0.06	1%
27	Rural (Prime/Flooding)	0.12	0.12	100%		127	Rural (Prime/Flooding)	0.41	0.19	46%
28	Residential (Village)	0.37	0.08	23%		128	Rural (Prime/Flooding)	0.24	0.24	100%
29	Rural (Prime/Flooding)	0.09	0.09	100%		129	Rural (Prime/Flooding)	0.02	0.02	100%
30	Rural (Prime/Flooding)	12.50	3.27	26%		130	Rural (Prime/Flooding)	12.26	2.56	21%
31	Rural (Prime/Flooding)	0.78	0.78	100%		131	Rural (Prime/Flooding)	0.04	0.04	100%
32	Rural (Prime/Flooding)	12.93	1.23	9%		132	Rural (Prime/Flooding)	0.01	0.01	100%
33	Rural (Prime/Flooding)	0.77	0.77	100%		133	Rural (Prime/Flooding)	9.30	0.96	10%
34	Residential (Village)	0.89	0.89	100%		134	Rural (Prime/Flooding)	2.03	1.21	60%
35	Residential (Village)	0.25	0.25	100%		135	Rural (Prime/Flooding)	2.43	0.34	14%
36	Rural	22.21	1.17	5%		136	Rural (Prime/Flooding)	2.02	2.02	100%
37	Rural (Prime/Flooding)	0.19	0.19	100%		137	Rural (Prime/Flooding)	4.28	0.07	2%
38	Rural (Prime/Flooding)	0.08	0.08	100%		138	Rural (Prime/Flooding)	3.78	3.78	100%
39	Rural	0.36	0.36	100%		139	Rural (Prime/Flooding)	1.64	1.64	100%
40	Rural	12.83	1.37	11%		140	Rural (Prime/Flooding)	2.79	2.72	98%
41	Rural (Prime/Flooding)	9.32	1.30	14%		141	Rural (Prime/Flooding)	8.38	1.17	14%
42	Rural (Prime/Flooding)	0.49	0.02	4%		142	Rural (Prime/Flooding)	0.60	0.60	100%
43	Rural (Prime/Flooding)	4.82	1.65	34%		143	Rural (Prime/Flooding)	11.71	1.00	9%

Ref No	Current land use ¹	Total area (ha)	Area within corridor ¹ (ha)	% of total property affected ²		Ref No	Current land use ¹	Total area (ha)	Area within corridor ² (ha)	% of total property affected ¹
44	Rural (Prime/Flooding)	0.46	0.46	100%		144	Rural (Prime/Flooding)	1.91	0.33	17%
45	Rural (Prime/Flooding)	0.01	0.01	100%		145	Rural (Prime/Flooding)	2.20	0.72	33%
46	Rural (Prime/Flooding)	6.47	1.05	16%		146	Rural (Prime/Flooding)	6.97	4.25	61%
47	Rural (Prime/Flooding)	6.04	0.72	12%		147	Rural (Prime/Flooding)	1.34	1.34	100%
48	Rural	4.33	2.42	56%		148	Rural (Prime/Flooding)	48.65	4.55	9%
49	Rural	11.86	1.60	13%		149	Rural (Prime/Flooding)	7.99	7.98	100%
50	Rural	1.10	0.38	34%		150	NA	0.33	0.13	39%
51	Rural	4.20	4.20	100%		151	Rural - Secondary agriculture	188.03	15.05	8%
52	Rural	0.16	0.16	100%		152	Rural - Secondary agriculture	31.08	1.32	4%
53	Rural	16.33	5.46	33%		153	NA	1.62	1.62	100%
54	Rural	20.01	2.92	15%		154	Rural - Secondary agriculture	7.51	1.85	25%
55	Rural	13.29	2.35	18%		155	Rural - Forestry	0.53	0.53	100%
56	Rural	14.06	3.89	28%		156	Rural - Secondary agriculture	47.39	7.06	15%
57	Rural	13.03	0.11	1%		157	Rural - Forestry	12.82	3.90	30%
58	Rural (Prime/Flooding)	0.80	0.80	100%		158	Rural - Forestry	77.20	0.09	0%
59	Rural (Prime/Flooding)	55.96	0.75	1%		159	Rural - Forestry	1133.76	49.05	4%
60	Rural (Prime/Flooding)	21.19	6.93	33%		160	Rural - Forestry	8.18	0.06	1%
61	Rural (Prime/Flooding)	17.34	6.15	35%		161	Rural - Forestry	137.10	6.96	5%
62	Rural (Prime/Flooding)	0.53	0.20	38%		162	Rural - Secondary agriculture	13.74	3.87	28%
63	Rural (Prime/Flooding)	0.03	0.02	73%		163	Rural - Secondary agriculture	1.12	0.21	19%
64	Rural (Prime/Flooding)	0.03	0.03	100%		164	Rural - Secondary agriculture	16.37	0.85	5%
65	Rural (Prime/Flooding)	0.09	0.08	100%		165	Rural - Secondary agriculture	16.17	2.86	18%
66	Rural (Prime/Flooding)	0.22	0.22	100%		166	Rural - Secondary agriculture	16.57	3.44	21%

Ref No	Current land use ¹	Total area (ha)	Area within corridor ¹ (ha)	% of total property affected ²		Ref No	Current land use ¹	Total area (ha)	Area within corridor ² (ha)	% of total property affected ¹
67	Rural (Prime/Flooding)	0.40	0.09	22%		167	Rural - Secondary agriculture	24.26	6.82	28%
68	Rural (Prime/Flooding)	0.08	0.08	100%		168	Rural - Secondary agriculture	23.47	1.63	7%
69	Rural (Prime/Flooding)	0.22	0.22	100%		169	Rural - Secondary agriculture	1.83	0.46	25%
70	Rural (Prime/Flooding)	0.17	0.04	22%		170	Rural - Secondary agriculture	0.79	0.31	40%
71	Rural (Prime/Flooding)	0.23	0.23	100%		171	Rural - Secondary agriculture	9.60	9.59	100%
72	Rural (Prime/Flooding)	1.92	0.32	16%		172	Rural - Small holdings	0.40	0.40	100%
73	Rural (Prime/Flooding)	19.75	4.40	22%		173	Rural - Small holdings	0.03	0.03	100%
74	Rural	10.24	3.80	37%		174	Rural - Small holdings	0.29	0.29	100%
75	Rural	2.10	0.20	10%		175	Rural - Small holdings	6.45	2.51	39%
76	Rural	0.99	0.17	17%		176	Rural - Small holdings	21.71	20.49	94%
77	Rural	1.03	0.91	88%		177	Rural - Small holdings	10.27	0.59	6%
78	Rural	1.06	1.06	100%		178	Rural - Small holdings	64.95	13.19	20%
79	Rural	0.40	0.40	100%		179	Rural - Small holdings	20.29	4.34	21%
80	Rural	2.47	2.09	84%		180	Rural - Small holdings	21.16	5.50	26%
81	Rural	11.90	1.59	13%		181	Rural - Small holdings	2.09	0.76	37%
82	Rural	2.13	1.66	78%		182	Rural - Small holdings	16.41	1.97	12%
83	Rural	2.06	1.48	72%		183	Rural - Residential	1.39	0.51	37%
84	Rural	10.46	1.24	12%		184	Rural - Residential	15.70	2.64	17%
85	Rural	10.11	1.70	17%		185	Rural - Residential	0.41	0.41	100%
86	Rural	10.11	2.04	20%		186	Rural - Residential	2.07	1.33	64%
87	Rural	10.61	1.19	11%		187	Rural - Residential	0.60	0.45	74%
88	Rural	1.56	0.86	55%		188	Rural - Residential	0.60	0.02	4%

Ref No	Current land use ¹	Total area (ha)	Area within corridor ¹ (ha)	% of total property affected ²		Ref No	Current land use ¹	Total area (ha)	Area within corridor ² (ha)	% of total property affected ¹
89	Rural	2.07	0.89	43%		189	Rural - Residential	3.33	1.81	54%
90	Rural	2.00	2.00	100%		190	Rural - Residential	0.59	0.30	50%
91	Rural	2.00	0.11	6%		191	Industrial	2.06	0.23	11%
92	Rural	1.43	0.92	65%		192	Environmental protection - Special emphasis	40.77	9.82	24%
93	Rural	4.07	1.61	39%		193	Environmental protection - Special emphasis	3.68	0.32	9%
94	Rural	6.94	2.42	35%		194	Environmental protection - Special emphasis	4.39	0.87	20%
95	Rural	61.37	4.61	8%		195	Environmental protection - Special emphasis	2.89	0.13	5%
96	Rural	13.34	4.85	36%		196	Environmental protection - Special emphasis	47.81	3.10	6%
97		13.95	6.97	50%		197	Rural - Small holdings	13.20	12.32	93%
98		20.11	0.93	5%		198	Residential - Village Area	1.46	1.46	100%
99		39.89	5.84	15%						
100		16.08	2.48	15%		Total		3516.09	450.95	

¹Information obtained from Nambucca and Bellingen Shire Councils' land use data.

² Area calculation and potential land requirements are indicative only and subject to further refinement following the detailed design

The maintenance of contiguity between existing and planned settlements and activity clusters, for example the Macksville central business district and its surrounds, has influenced the development and design of the Proposal. The existing Pacific Highway, which connects current townships and urban centres in the region, would be maintained to provide connectivity between existing settlements. Planned settlements in the area have been focused on the infill and expansion of existing activity clusters, which include development and services which are generally grouped in one geographical area. These future areas would be serviced by the existing Pacific Highway and, regionally, by the Proposal.

The location of interchanges along the Proposal have been planned to support local and regional contiguity between activity clusters. The proposed future growth areas to the south and south-west of Macksville would be serviced by the interchange at Bald Hill Road, which would link to the existing Pacific Highway to provide access to the main township and the Macksville and Congarinni future urban areas. The Nambucca Heads interchange would provide direct access to the proposed Boggy Creek future urban release area and employment lands to the north-west of Nambucca Heads. This interchange would also be important for ensuring that this area maintains its connection to the main township of Nambucca Heads. The interchange at Ballards Road and the upgraded existing Waterfall Way interchange would provide regional connectivity to and from the Urunga township and service the growing areas of Valla Beach, and south of Urunga.

11.3.3 Land sterilisation and severance

The Proposal has been designed to minimise the potential for sterilisation and severance of land as far as possible, by either closely following property boundaries or providing a means of access between separated portions of land. For example, at Warrell Creek the Proposal generally traverses along the boundaries of existing properties south of Rosewood Road to minimise severance and land sterilisation.

Farm access underpasses may be provided, where possible, to allow stock, machinery and farm vehicles to pass underneath the Proposal.

The extent of sterilisation and severance impacts would be confirmed during detailed design. The RTA would consult with all directly affected land holders on how to best minimise the impact on the function and amenity of their land use arising from any land sterilisation or severance. Consideration would be given to acquiring any sterilised or severed sections of land, in accordance with the RTA's Land Acquisition Policy Statement.

11.3.4 Access

11.3.4.1 Private property

The Proposal would result in both temporary and permanent changes to property access arrangements. If required, temporary access during construction or permanent alternative access to private properties would be provided in consultation with the affected land owners.

11.3.4.2 Local Access

The potential impact of the Proposal on the local road network has been an important consideration in the development of the concept design. The local access strategy for the Proposal is described in Chapter 6 – *Description of the Proposal*.

In addition, the existing Pacific Highway, which connects current townships and urban centres in the region, would be retained for local access. Where necessary, local access roads would be constructed next to the Proposal to accommodate local traffic and provide individual property access.

The reduced number of road and access connections to the Proposal may result in some instances in longer travel distances to and from some properties. The Proposal is “controlled access” motorway standard. Access to the Proposal is generally only provided at the interchanges. The rationalisation of access points would result in improved safety conditions along the highway and safer east-west connections across the highway. Access across the Proposal would be provided at strategic locations via overpasses and underpasses. The locations of the overpasses and underpasses are described in Section 6.4.3.

11.3.4.3 Pedestrian and cycleway opportunities

The Proposal would allow for pedestrians and cyclists to use the existing highway under much lower traffic conditions than currently experienced, providing a safer walking or cycling environment.

The Proposal provides footpaths on the Mattick Road, Nambucca Heads interchange and East West Road overbridges. The provision of footpaths at these locations would allow pedestrians to safely walk over the new highway.

11.3.5 Planned development (including the *Mid North Coast Regional Strategy*)

Land use change in the vicinity of the Proposal is subject to strategic planning initiatives and statutory controls prepared by Bellingen and Nambucca Shire Councils, the Department of Planning and other agencies. The Proposal would provide vital transport infrastructure which supports local and regional economic development in the future and has been developed with consideration given to existing strategic planning documents.

Table 11-3 details the response of the Proposal to the aims of the Mid North Coast Regional Strategy. In addition, the following documents are considered further below:

- *Mid North Coast Regional Farmland Mapping Project 2009.*
- *Bellingen Shire Growth Management Strategy 2007.*
- *Nambucca Shire Draft 20-Year Structure Plan 2008.*

Table 11-3 Response of Proposal to the *Mid North Coast Regional Strategy*

Relevant Aims	Response
Protect high value environments including significant coastal lakes, aquifers, threatened species, vegetation communities and habitat corridors by ensuring the new urban development avoids these important areas and their catchments.	Considerable planning has been undertaken in the development of the Proposal to protect high value environments, as detailed in Chapter 10 – <i>Flora and Fauna</i> . While native vegetation, including a small percentage of wetland and mangroves would be lost as a result of the Proposal, the majority of vegetation to be removed is located within state forests and private properties within Section 4 of the Proposal. Habitat compensation and rehabilitation measures would mitigate anticipated habitat fragmentation and wildlife corridor impacts. As detailed in Chapter 13 – <i>Visual amenity and design</i> , the Proposal has been designed to enhance motorists experience of areas of high scenic quality, such as the bridge over the Nambucca River.
Protect the coast and the character of coastal villages by limiting growth to the agreed growth areas of towns and villages leaving greenbelts between settlements.	
Limit development in places constrained by coastal processes, flooding, wetlands, important primary industry land and landscapes of high scenic and conservation value.	
Encourage the growth and redevelopment of the Regions' four major regional centres and six major towns as a means of protecting sensitive coastal and natural environments and strengthening the economic and administrative functions of these centres as well as meeting increased housing density targets.	The main future growth areas identified by the Department of Planning, in consultation with Nambucca and Bellingen Shire Councils, are located around the current town centres of Macksville, Nambucca Heads, Scotts Head and Urunga, with minor proposed development to occur at Raleigh, Warrell Creek and Donnellyville. The Proposal would facilitate access to these growing communities and also between regional and major town centres. The Proposal facilitates access to existing and future planned industrial areas through the location of interchanges (e.g. Boggy Creek and the proposed Nambucca Heads Interchange).
Direct new rural residential development to areas close to existing settlements away from the coast.	
Cater for a minimum housing demand of 59,600 new dwellings by 2031 to accommodate the forecast population increase of 94,000 and any anticipated growth beyond this figure arising from increased development pressures in the Region.	
Ensure an adequate supply of land exists to support economic growth and the capacity for an additional 48,500 jobs in the Region by protecting existing commercial and employment areas and securing sufficient land to support new employment opportunities.	
Protect the cultural and Aboriginal heritage values and visual character of rural and coastal towns and villages and surrounding landscapes.	As detailed in Chapter 15 – <i>Aboriginal heritage</i> , subsurface testing of PAD sites has been undertaken providing substantial information regarding the sensitivity of the PADs identified and has provided opportunities to refine the route or develop suitable mitigation measures. As detailed in Chapter 13 – <i>Visual amenity and design</i> , the Proposal has been designed to generally be consistent with the existing landscape character areas and these would remain unchanged as a result of the Proposal.

The Bellingen Shire Growth Management Strategy recognises that much of the traffic through the area relies heavily on the Pacific Highway (and New England Highway to the west) and substantial road upgrading works will be required to achieve an acceptable road standard. Bellingen Shire Council has recognised that the Proposal would minimise the traffic constraint on the land to the south of the existing residential zone at Urunga.

Access to the two areas identified within the Nambucca Shire Council 20 Year Structure Plan as future urban areas (in the vicinity of Boggy Creek and Valla Beach and the Macksville and Congarinni Future Urban Areas) have been considered in the location of proposed interchanges.

The Bellingen Shire Growth Management Strategy also acknowledges the need for the future development of pedestrian and bicycle facilities. This goal would be supported by the Proposal as the existing Pacific Highway would be retained for local access. Overbridges and underpasses have also been incorporated into the Proposal at key locations to maintain access across the new highway. Bellingen Shire Council could have greater scope to provide these facilities on the existing highway with the expected diversion of the majority of through-traffic onto the Proposal.

11.3.6 Agriculture

The Mid North Coast Farmland Mapping Project (Department of Planning 2009) identifies 'regionally significant farmland' on the Mid North Coast. Regionally significant farmland refers to land that is capable of sustained use for agricultural production with a reasonable level of inputs and which has the potential to contribute substantially to the regional economy. The Mid North Coast Regional Strategy aims to ensure that high quality farmland or regionally significant farmland within the region are protected from settlement encroachment as these areas in the past have been lost to urban or rural residential development and future population growth is likely to create more pressure on farmland.

Based on the road boundary of the Proposal, it has been estimated that approximately 134 hectares of regionally significant farmland would be directly affected by the Proposal. This is based on clearing an area of up to 10 metres from the edge of the construction footprint. The regionally significant farmland affected by the Proposal is primarily located within the Nambucca River floodplain (see Figure 11-4).

Although several large agricultural operations and important areas of fertile land and high country would be affected by the Proposal, the viability and operational capacity of agricultural businesses would generally not be detrimentally affected as only 0.06 per cent of regionally significant farmland as mapped by the Mid North Coast Farmland Mapping Project would be affected by the Proposal.

Land use mapping obtained from the Nambucca Shire Council indicates that approximately 109 ha and 114 ha of land classified as 'rural' and 'rural (prime/flooding)' respectively would be directly impacted. Land use mapping obtained from the Bellingen Shire Council indicates that approximately 62 ha and 55 ha of land classified as 'rural-small holdings' and 'rural-secondary agriculture' respectively would be directly impacted. These areas include land mapped as regionally significant farmland. Other issues for agricultural land uses affected by the Proposal include:

- Maintaining good quality pasture for grazing (including retention of water supply).
- Access to high ground for stock refuge during flood events.
- Retention of shade trees for stock.

Consultation has occurred with affected property owners involved in agricultural activities to identify the above issues on a farm operation basis rather than on a property basis. The concept design has considered these issues and been refined in areas to retain critical water supply dams and livestock shade trees. Consultation with affected property owners would continue through detailed design.

11.3.7 Forestry

11.3.7.1 Operations (including potential for fragmentation and sterilisation of resources)

The Proposal would require the acquisition of approximately 145 hectares of state forest land. Table 11-4 and Table 11-5 respectively provide details of state forest land in Nambucca State Forest and the Newry/Little Newry state forests likely to be affected by the Proposal (10 metre buffer).

Table 11-4 Approximate area (and proportion) of the Nambucca State Forest affected by the Proposal

Forestry Management Zone	Total area (hectares)	Area affected ¹ (hectares)	Proportion affected ¹
1 (dedicated reserve / special protection)	15.40	0	0%
2 (informal reserve (special management))	158.59	0	0%
3a (informal reserve (harvest exclusions))	220.25	0.56	0.25%
3b (special prescription)	21.35	4.32	20.22%
4 (general management native forest)	957.55	53.42	5.58%
5 (hardwood plantations)	174.13	4.81	2.76%
6 (softwood plantations)	0	0	0%
7 (non forestry use)	35.74	3.11	8.70%
8 (areas for further assessment)	147.34	5.34	3.62%
Total	1,730.34	71.55	4.13%

¹ - Area calculation and proportion are indicative only and subject to further refinement following the detailed design

Table 11-5 Approximate area (and proportion) of the Newry/Little Newry state forests affected by the Proposal

Forestry Management Zone	Total area (hectares)	Area affected ¹ (hectares)	Proportion affected ¹
1 (dedicated reserve / special protection)	0	0	0%
2 (informal reserve (special management))	228.60	0	0%
3a (informal reserve (harvest exclusions))	294.28	0	0%
3b (special prescription)	13.19	0.03	0.21%
4 (general management native forest)	2,021.29	51.64	2.55%
5 (hardwood plantations)	1,095.33	4.88	0.45%
6 (softwood plantations)	0	0	0%
7 (non forestry use)	30.78	2.02	6.57%
8 (areas for further assessment)	448.64	115.40	3.43%
Total	4,132.10	73.97	1.79%

¹ - Area calculation and proportion are indicative only and subject to further refinement following the detailed design

The area of Nambucca State Forest affected by the Proposal is approximately 71.5 hectares, which equates to approximately 4.1 per cent of the total area of the forest. The area of Newry and Little Newry state forests affected by the Proposal is approximately 74 hectares, which equates to approximately 1.8 per cent of the total area of those forests.

Forestry Management Zones 3b, 4, 5 and in some cases, Zone 8 are considered to be forest harvesting zones (Managing our forests sustainably: Forest management Zoning in NSW State Forests Operational Circular 99/10 (State Forests 1999)). The total area of forest harvesting zones affected by the Proposal in the Nambucca State Forest and the Newry and Little Newry State Forests is 62.55 hectares (28.6 per cent) and 56.55 hectares (3.2 per cent) respectively.

Based on the proportion of the forest harvesting zones directly affected by the Proposal, it is not anticipated that there would be significant long term impact on timber production activities or the viability of forestry businesses nor would there be fragmentation or sterilisation of forestry resources.

The RTA would, in consultation with Forests NSW, ensure that access to state forest land is available for removal of any harvestable timber within the footprint of the Proposal prior to commencement of construction, or an arrangement could developed where harvest could occur pre-land transfer.

11.3.7.2 Access to State Forests

There has been ongoing development of the design for the Proposal to ensure retention of access arrangements and to minimise the separation and fragmentation of areas of state forest. The design development process resulted in the Proposal design described in Chapter 6 - *Description of the Proposal*. It includes the provision of connections to existing forestry access tracks off Old Coast Road into Nambucca State Forest.

The Proposal would maintain key access arrangements to the state forests for forest management purposes. Specifically, the Proposal provides for continued access at principal haulage routes that service the Nambucca State Forest, and also includes some adjustment to access tracks within the state forest to rationalise access and to improve road safety at the junctions with Old Coast Road and the highway.

Arrangements for future access into the state forests have been discussed with Forests NSW. The Department confirmed that the proposed access designed for the state forests would be suitable. The Proposal would not alter existing access arrangements into the Nambucca and Newry/Little Newry state forests. Access would be via Old Coast Road and off existing connections with the existing highway respectively. As appropriate access has been provided to the state forests, no sterilisation and fragmentation to resources would occur. Access to and within state forest land would also be retained for forestry operations, fire management activities and recreation purposes.

11.3.8 Industrial and commercial

No existing businesses on industrial zoned land would need to be acquired as a result of the Proposal. Based on the road boundary provided in Chapter 6 – *Description of the Proposal*, the Proposal would directly impact upon approximately 5.5 hectares of land which is zoned for industrial uses. This impact is within the Raleigh industrial

area, although this land is not currently used for industrial purposes. The existing Macksville sewage treatment plant, Nambucca Macadamia Nut Farm Pty Ltd (Nambucca Macadamia Nut Farm) and Cockburn's Saw Mill would not be directly impacted by the Proposal. The project team has consulted with the owners of the saw mill on a number of occasions, and has been advised that the forest through which the Proposal passes is not currently used for logging, although it may potentially be used for future logging.

Concern was raised in submissions for the preferred route about the effects on the Nambucca Macadamia Nut Farm. The Nambucca Macadamia Nut Farm is located off Upper Warrell Road to the west of the existing Pacific Highway. Since the Proposal is located to the east of the existing highway at Macksville, the nut farm would not be directly affected by the Proposal. An interchange would be located less than one kilometre from the Nambucca Macadamia Nut Farm property, providing access to a more efficient means of transport than the existing highway, improving access for the ongoing viability of this company, which exports its products internationally.

With the exception of businesses such as service stations, motels and caravan parks, most existing commercial land uses located in the region are not dependent upon highway through-traffic. Although existing motels and caravan parks in the region would most likely experience some decline in direct highway trade as a result of the Proposal, they could also benefit from the associated improvements in amenity, such as reduced traffic and noise impacts.

Potential local employment opportunities are expected to be established in the proposed employment lands identified in the Mid North Coast Regional Strategy at Raleigh, south-west of Macksville and at Boggy Creek. These areas would be adequately serviced through the proposed interchanges at Bald Hill Road, Nambucca Heads and Raleigh.

The Proposal would facilitate improved intra-regional travel to employment areas outside the study area, such as Coffs Harbour and Kempsey. Anecdotal evidence suggests that the opening of the Proposal would mean that areas north of and including Valla Beach and Nambucca Heads could provide attractive commuter suburbs for Coffs Harbour.

The resulting economic and residential development in the region could subsequently lead to the generation of growth in local job creation in sectors such as retail, health, education, housing construction and other services.

11.3.9 Extractive industries (including Nambucca Valley Quarry)

Extractive industries are reliant on access to major arterial roads to access markets and suppliers, and to avoid the need to use local roads and subsequent conflicts with local amenity. They require relatively direct, but controlled access to major arterial roads.

The Nambucca Valley Quarry is located adjacent to the existing highway, directly south of Warrell Creek. This is an operating hard rock quarry for unprocessed construction materials. The project team has held discussions with the quarry operators to determine the future development of the quarry and potential access arrangements to the Proposal that would enable the ongoing efficient operation of the quarry. As a direct result of this consultation, an underpass has been provided to enable quarry trucks to exit the quarry, travel under the Proposal and gain access

to Scotts Head Road. Trucks would then use the existing Scotts Head Road/existing highway intersection to travel north or south along the bypassed sections of highway, or to the Bald Hill Road or Warrell Creek interchanges to access the Proposal. Although the Proposal would bring the edge of the road boundary within 20 metres of the edge of the quarry, the future resources for the quarry would not be affected by the Proposal.

11.3.10 Construction stage impacts

The main land use impacts that may occur during the construction phase of the Proposal would relate to property and local access and the establishment of construction compounds. Some land would be acquired outside the operational road corridor for temporary construction access and ancillary facilities. Preliminary locations for major work sites and ancillary construction facilities are detailed in Chapter 6 – *Description of the Proposal*. It is unlikely that all sites would be used. However, it is necessary to provide flexibility in work site locations for the construction contractor(s). The establishment of these facilities would temporarily affect the land use of the chosen sites, although these impacts would be short term.

Access would be maintained to all private properties during construction. If temporary changes to access were required, these would be provided in consultation with the affected land owners.

11.3.11 Allgomera deviation to Nambucca River

The key areas of land use change in this section of the Proposal are:

- Change from rural and rural residential land use east of the Warrell Creek village area to a road transport corridor with rural and rural residential land uses either side.
- Potential change in the Warrell Creek village and Donnellyville from a village divided by a heavily trafficked two-lane road to a village with better amenity, improved access and the potential to enhance the diversity of business and residential development.
- Change from rural floodplain grazing south of the Nambucca River to a road transport corridor with rural use either side.
- Potential change in the Macksville town centre with the removal of much of the through-traffic and heavy vehicles.

While there would be changes in land use, the predominant land uses are expected to remain unchanged across this section.

Rural and rural residential uses would still continue east of the Warrell Creek village and south of the Nambucca River and the urban areas of Warrell Creek and Macksville would remain consistent, albeit with less through and heavy vehicle traffic.

11.3.12 Nambucca River to North Coast Railway Overbridge

The key areas of land use change in this section of the Proposal are:

- There would be some change in land use where state forest land would change to road corridor. The road corridor through the state forest is adjacent to an existing local road (Old Coast Road).
- Nambucca Shire Council has identified a future urban area in the vicinity of Boggy Creek, between Valla Beach and Nambucca Heads. The proposed interchange located at Boggy Creek Road has been located to provide access to this area.

11.3.13 Nambucca Heads to Ballards Road

The key areas of land use change in this section of the Proposal are:

- The Proposal runs adjacent to the existing highway for the majority of this section. As a result, the land use is not expected to change, apart from the wider road transport corridor.
- Impacts on the Little Newry State Forest would be minimal, as the route passes close to the existing transmission line and existing highway. Impacts on the viability of forestry operations would not be significant.
- North of Little Newry State Forest, the Proposal passes through regionally significant farmland currently used for grazing. There would be impacts on the productive capacity of this land, however this would not be significant at a regional level.
- The Ballards road interchange would have a positive land use impact on Valla Beach and through Urunga. Without it, northbound traffic would continue through Urunga and rejoin the new highway at the Waterfall Way interchange.

11.3.14 Ballards Road to Waterfall Way interchange

The key areas of land use change in this section of the proposal are:

- Change from state forest, rural and rural residential to a road transport corridor.
- Impacts would occur to land zoned for industrial purposes to the east of the existing Raleigh industrial area. However, as this land is already constrained by topography, impacts of the Proposal on industrial development and land use would be minimal.

11.3.15 Summary of potential land use and property impacts

While there would be changes in land use, the predominant land uses are expected to remain unchanged across the length of the Proposal.

The Proposal would result in the total or partial acquisition of 192 properties (approximately 365 ha), 145 hectares of state forest land (including 31.8 per cent of forest harvesting zones) and approximately 134 hectares (0.08 per cent) of regionally significant farmland.

Access arrangements have been designed to ensure that future land uses are not severed. The Proposal would not affect the development of the proposed future residential release areas, and may assist the establishment and ongoing viability of the proposed industrial and employment land areas through improved regional and inter-regional access. Interchange locations have been designed to facilitate access to key future development areas such as the proposed Boggy Creek industrial/commercial area and the residential land release area at Valla Beach. They have also been designed to facilitate access to tourist destinations such as Urunga, Valla Beach, Nambucca Heads and Scotts Head. The existing highway would be maintained as the local network, ensuring the continuation of local access to all areas in the study area.

At a regional level, the Proposal would service an increased number of travellers, workers and freight moving safely to, between and through the Warrell Creek to Urunga areas. This would assist in facilitating growth in the region through improved access to the region's growing communities and centres consistent with the aims of the Mid North Coast Regional Strategy.

11.4 Management of impacts

11.4.1 Proposed management measures

Potential impacts to property and land use have been avoided as far as potential throughout the route options development and refinement of the concept design. Where potential impacts were unable to be avoided, elements have been included in the concept design to minimise the impact. These include:

- Five grade-separated interchanges that have been strategically located along the route to complement the major existing and planned urban land use areas of the study area.
- A local access road network that extends the full length of the Proposal.
- Refinement to local roads where they are crossed by the Proposal so as to maintain the function of the local network in serving land use either side of the route.
- Adjustments to numerous internal property access arrangements where they are directly affected by the Proposal.
- Acquisition of the whole or part of properties affected by the Proposal in accordance with the RTA's *Land Acquisition Policy Statement*.
- Vehicular underpasses as described in Chapter 6 – *Description of the Proposal*.

These elements would be further refined during detailed design, in consultation with relevant property owners.

In addition, the RTA would adopt the following mitigation and management measures relating to land use and property impacts, which have been incorporated into the Appendix D – *Draft Statement of Commitments*:

- Forests NSW would have access to areas of state forest land identified for acquisition by the RTA to remove any harvestable timber within the footprint of the Proposal prior to commencement of construction.

- In consultation with Forests NSW, access to and within state forest land adjacent to the Proposal would be retained for forestry operations, fire management activities and recreation purposes.
- Property access would be maintained for the duration of construction. Temporary access requirements would be assessed in consultation with affected landholders.
- Advance notification would be given to property owners on proposed construction activities in the locality and any altered access arrangements.

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